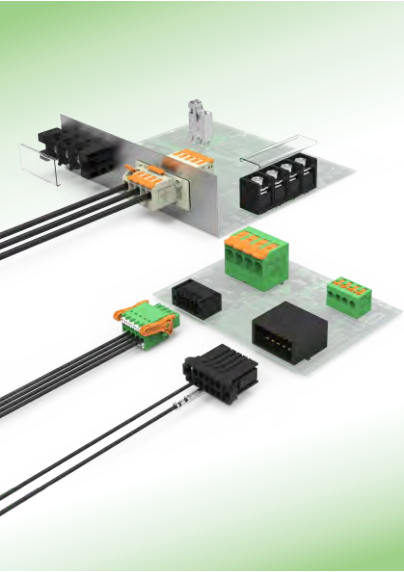




Automation

**DEGSON**

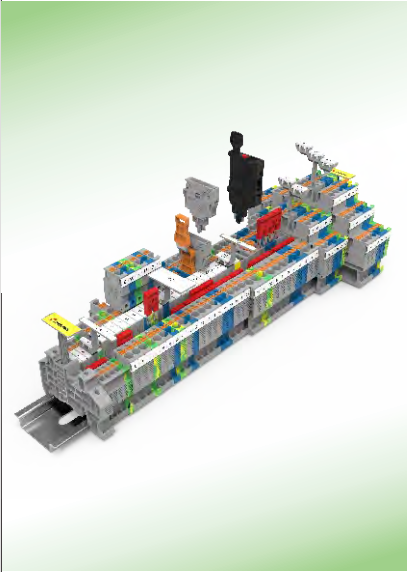
Device Connection Technology



DEGSON PTE. LTD.
ISO9001 ISO14001 ISO45001 ISO80079-34 ISO/TS22163 IATF16949

**DEGSON**

DIN Rail Terminal Blocks



DEGSON PTE. LTD.
ISO9001 ISO14001 ISO45001 ISO80079-34 ISO/TS22163 IATF16949

**DEGSON**

Heavy Duty Connector



DEGSON PTE. LTD.
ISO9001 ISO14001 ISO45001 ISO80079-34 ISO/TS22163 IATF16949

**DEGSON**

High Voltage & EV Charging System



NINGBO DEGSON EMOBILITY CONNECTIVITY CO.,LTD.
ISO9001 ISO14001 IATF16949

**DEGSON**

Interface Electronics



DEGSON PTE. LTD.
ISO9001 ISO14001 ISO45001 ISO80079-34 ISO/TS22163 IATF16949

**DEGSON**

Circular Connectors



DEGSON PTE. LTD.
ISO9001 ISO14001 ISO45001 ISO80079-34 ISO/TS22163 IATF16949

**DEGSON**

DEGSON PTE. LTD.
Add: 2 Venture Drive#08-07 Vision
Exchange Singapore 608526
www.degson.com

The catalog is for reference purpose only and details are base on company's specifications

Tel: +0065-69808477
E-mail: sale@degson.com



DEGSON website



LINKEDIN

ATP 24-E02



ISO9001 ISO14001 ISO45001 ISO80079-34 ISO/TS22163 IATF16949

IRIS DNV US CE RoHS REACH

Brief Introduction

Founded in 1990, DEGSON is well known as a comprehensive industrial solution provider, with UL-CTDP, VDE-TDAP and CNAS approved laboratory. DEGSON has passed ISO9001, ISO14001, ISO45001, ISO80079-34, ISO/TS22163 and IATF16949 Management System, and is a national high-tech enterprise.

DEGSON is engaged in supplying highly reliable and durable products to serve global customers. The company has a market-leading capability of mould processing, automatic manufacturing and advanced testing. DEGSON has the complete engineering ability to support global customers with the professional customization solution and value-added service.

DEGSON products are widely recognized in China, the USA, Germany, the UK, Italy, Spain, Turkey, Japan, South Korea, Singapore, etc. totally hundred countries and regions. DEGSON supply high quality products and provide professional services globally in the industry sectors likely industrial automation, instrument, electric power, railway, marine and offshore, new energy, E-bike industrial elevator, lighting, security, machinery, etc. The company won the recognition from partners among Fortune 500 and industry leading enterprises.

Based on the core values of "Clients First, Win-win Strategy, Responsibility Integrity, Excellence Pursuit", DEGSON continuously integrates professional technical resources, R&D innovation, product manufacturing and technology application capabilities. Relying on global sales network, DEGSON aims to supply series of multiple varieties of high-quality products and services. We provide global customers with professional and quick connected application solutions, help customers continue to create value. DEGSON is making contributions to creating a smart and interconnected world.



DEGSON全球生产基地/研发中心 DEGSON Global Production Base and R&D Center



高新区工厂
High-tech zone site



越南工厂
Vietnam site



南京竞争力中心
Nanjing R&D Center



洛阳研发中心
Luoyang R&D Center

DEGSON产品销往全球100多个国家和地区
DEGSON products are very popular more than 100 countries and areas.



UL-CTDP (USA), VDE-TDAP (Germany) and CNAS labs

Strategic cooperation with UL and VDE



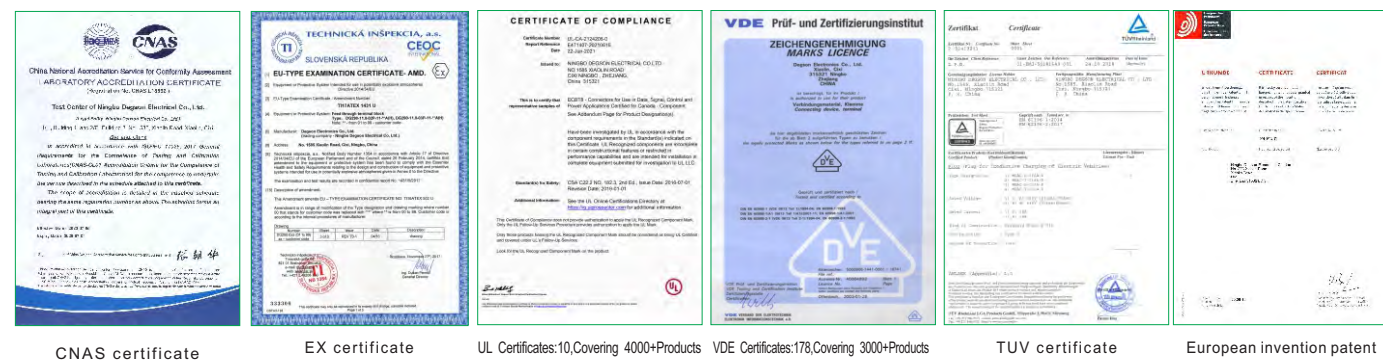
① The general manager of UL global energy & technology division visit our company



② Sven Ohrke, President of VDE global services, comes to DEGSON to discuss strategic cooperation



③ VDE Laboratory Accreditation: In July 2010, VDE Issued the "VDE Authorized Laboratory" Certificate to DEGSON's laboratory.
UL laboratory accreditation: UL formally issued "UL WTDP" certification to DEGSON in March 2013.
On April, 2016, UL-CTDP.
On December, 2016, VDE-TDAP.
On January, 2017, Pass IRIS system audit.



CONTENTS



DF50 series I/O 01-43



DF58 series I/O 44-67



DF20 series I/O 69-105



DFH67 Fieldbus High performance IP67 I/O 106-159



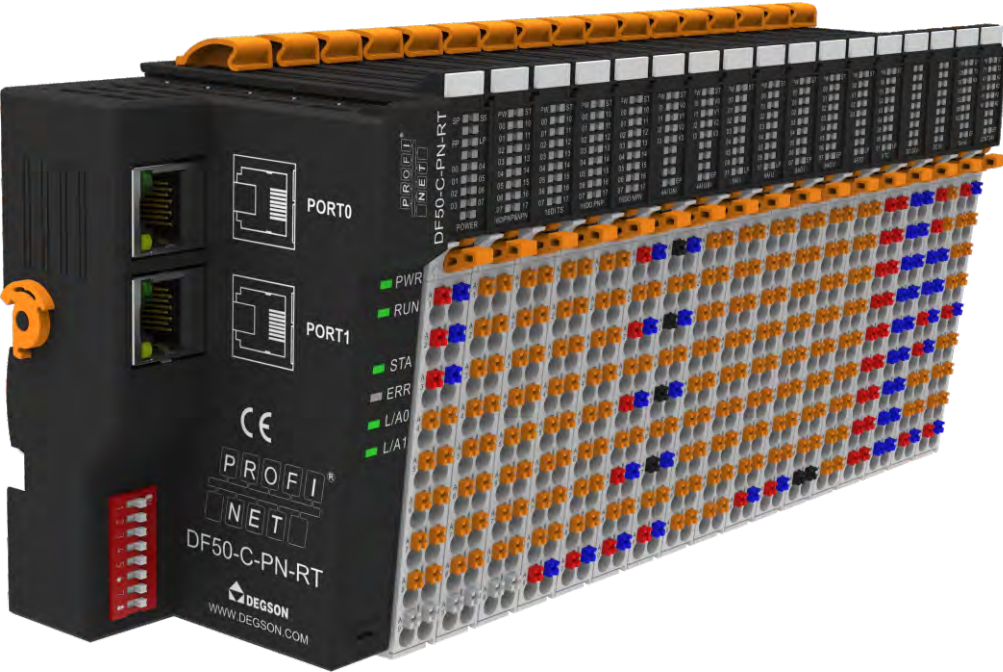
DSW Series Unmanaged switch 160-170



JB Series Junction Box 171-212

DF50 series I/O

DF50 Series I/O Modules



Small

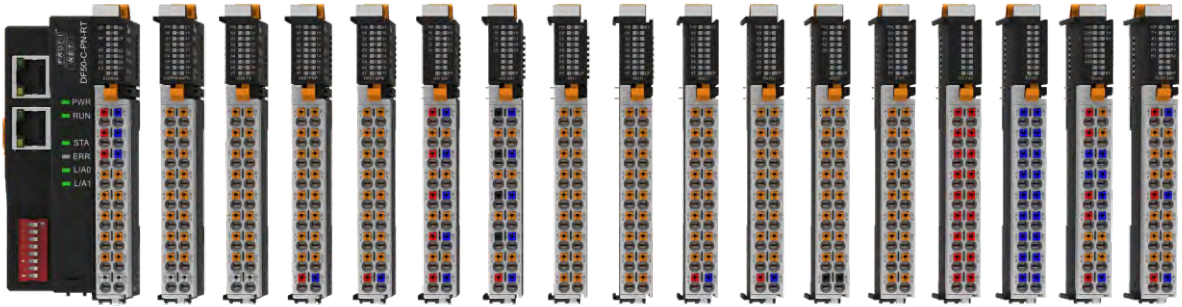


Compact



Convenient

- The DF50 series I/O system is a new upgrade to the DF20 series
- Comprehensively improve I/O performance and compatibility
- Tool free use, greatly improving convenience
- The bus coupler supports 32 modules without the need for a power module



Bus coupler

I/O module

Bus coupler

- The bus coupler comes with 8 digital inputs
- Supports multiple industrial Ethernet bus protocols
- The bus coupler support 32 modules

Tool free

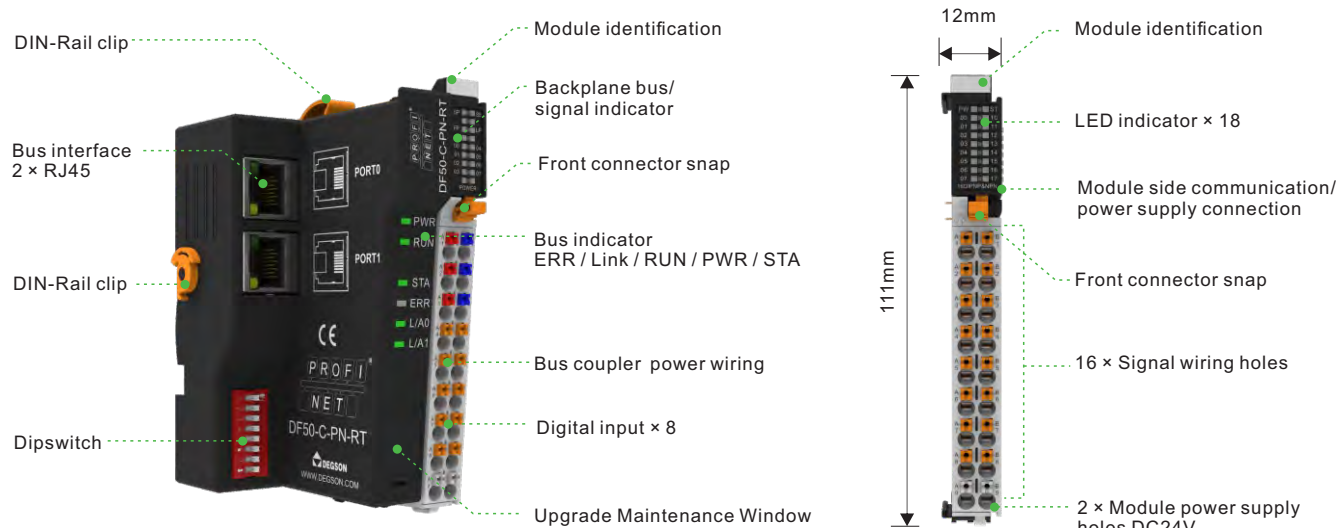
- No tools required for module installation and disassembly
- No tools required to install and remove front connectors
- No tools required for wiring and dismantling

I/O module

- The I/O signal is independently powered, no need to add power module
- Digital input compatible with both PNP and NPN signals
- The analog input/output module is compatible with current and voltage, supports multiple ranges and each channel can be independently selected, and supports 2, 3, and 4 wire connection methods

Appearance

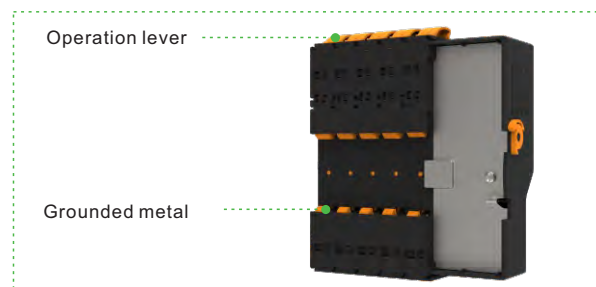
- 12mm ultra-thin volume, sharp blade shape
- The module has an identification system
- The module is grounded through the back metal connection DIN-rail
- Distinguish wiring holes with different functions by color



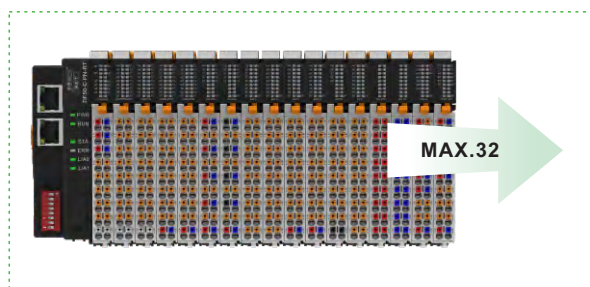
- PUSH-IN, no tools required for wire connection and disassembly



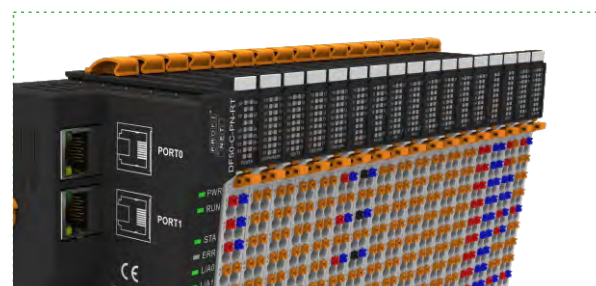
- Pluggable front connector



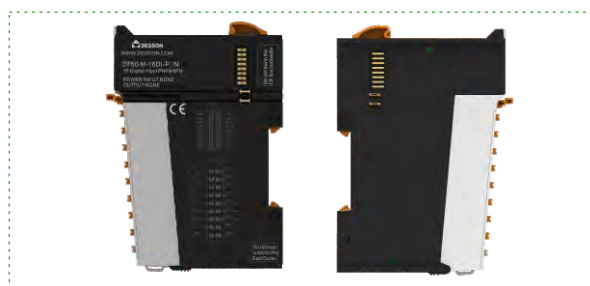
- Tool free manual operation lever
- The module is grounded through the back metal connection DIN-rail



- Bus coupler can support up to 32 modules



- Module has identification
- The module indicator system contains information such as signals, power, faults ...



- Communication between modules through side connecting finger
- Module power supply is connected through side metal clips

Model	Functionality	Coupler Support Module List				
		DF50-C-PN-RT	DF50-C-EC	DF50-C-EN-IP	DF50-C-MD-TCP	DF50-C-CC-FB
Digital Module						
DF50-M-16DI-P/N	16DI,NPN/PNP	✓	✓	✓	✓	✓
DF50-M-16DI-P/N-TS	16DI,NPN/PNP including counting function	✓	✓	✓	✓	✗
DF50-M-32DI-P/N	32DI,NPN/PNP	✓	✓	✓	✓	✓
DF50-M-4DO-R	4DO Relay Output	✓	✓	✓	✓	✓
DF50-M-16DO-N	16DO NPN Output, Short-Circuit Protection	✓	✓	✓	✓	✓
DF50-M-16DO-P	16DO PNP Output, Short-Circuit Protection	✓	✓	✓	✓	✓
DF50-M-4DO-P-2A	4DO PNP Output	✓	✓	✓	✓	✓
DF50-M-32DO-N	32DO NPN Output, Short-Circuit Protection	✓	✓	✓	✓	✓
DF50-M-32DO-P	32DO PNP Output, Short-Circuit Protection	✓	✓	✓	✓	✓
DF50-M-16DI-16DO-N	16DI+16DO NPN	✓	✓	✓	✓	✓
DF50-M-16DI-16DO-P	16DI+16DO PNP	✓	✓	✓	✓	✓
Analog Module						
DF50-M-8AI-U-4	8AI, Voltage, 16bit accuracy	✓	✓	✓	✓	✓
DF50-M-8AI-I-5	8AI, current, 16bit accuracy	✓	✓	✓	✓	✓
DF50-M-4AI-UI-6	4AI, voltage/current, 16bit accuracy	✓	✓	✓	✓	✓
DF50-M-4RTD-PT	4-channel RTD thermocouple module	✓	✓	✓	✓	✓
DF50-M-8TC	8-channel TC thermocouple module	✓	✓	✓	✓	✓
DF50-M-8AO-U-4	8AO, Voltage, 16bit accuracy	✓	✓	✓	✓	✓
DF50-M-8AO-I-5	8AO, Current, 16bit accuracy	✓	✓	✓	✓	✓
DF50-M-4AO-UI-6	4AO, voltage/current, 16bit accuracy	✓	✓	✓	✓	✓
Protocol Converter						
DF50-M-1COM-232/485/422	Serial Modules	✓	✓	✓	✗	✓
DF50-M-4IOL	IO-LINK Master Module	✓	✓	✗	✗	✗
Pulse counting/output						
DF50-M-2CNT-PIL-5	2-channel counting module input (5V)	✓	✓	✓	✓	✓
DF50-M-2CNT-PIL-24	2-channel counter module input (24V)	✓	✓	✓	✓	✓
Auxiliary Modules						
DF50-M-DC-U-0	0V Power Supply Common Terminal	✓	✓	✓	✓	✓
DF50-M-DC-U-24	24V Power Common Terminal	✓	✓	✓	✓	✓

PROFINET Bus coupler

CE RoHS

DF50-C-PN-RT

Pin Definition

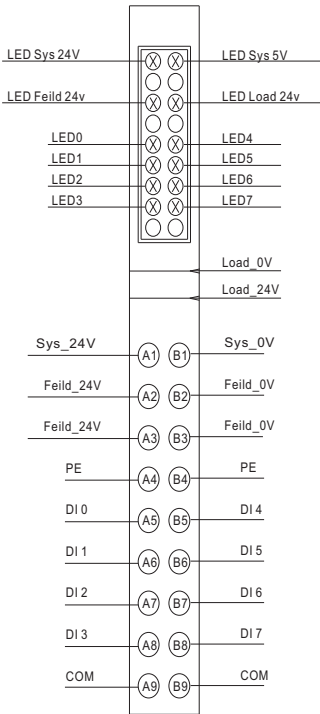
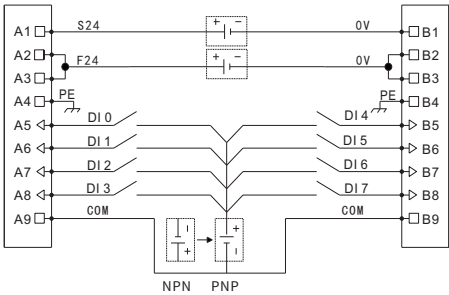


PROFINET, 2 RJ45, extensible 32 modules, 24VDC

Features

- With a power module.
- LED display working status, alarm and bus fault prompt.
- Two PROFINET interface (RJ45,10/100Mbps).
- With Media Redundancy Protocol.

Wiring Diagram



COM is the common terminal of DI0~DI7, connected to 24V is NPN, and connected to 0V is PNP

Specification		Digital Inputs Specification	
Product	DF50-C-PN-RT	Number of channels	8
Communication protocol	PROFINET	Data size	1 Byte
Transmission rate	10/100Mbps, full duplex	Signal type	NPN & PNP
Transmission distance	100 meters	"0" signal voltage	<5V
PDO data	1024 bytes	"1" signal voltage	>11V
Number of extensible modules	32	Connection type	1-line
Address mapping	Yes	Reverse protection	Yes
Address setting	PROFINET specification	Isolation method	Photoelectric isolation
Transmission medium	Class 5 twisted pair cable	Fault diagnosis	Yes
Isolation method	Electrical isolation	Typical input current	0.6mA
Features	RT, conforming to Class C, MRP, automatic addressing/topology detection	Fault diagnosis	2.3mA
		Typical input current	2.1mA
Alarm function	Diagnostic alarm, process alarm, plug and unplug connector alarm	Fault diagnosis	2.4mA
		Filtering time	0.2ms-40ms configurable
Minimum cycle time	1ms	Hardware response time	200us

PROFINET Bus coupler

CE RoHS

Product DF50-C-PN-RT

Power Supply Parameters

Connection type	PUSH-IN type terminal block
Working voltage	24V DC +20 %/ -15 %
Working current	Max. 1.5A
Maximum area of wire	1.5mm²
Maximum area of wire (AWG)	AWG16
The minimum area of a wire	0.14mm²
The minimum area of a wire (AWG)	AWG26
Strip length	8...10mm
Internal system rated voltage	5VDC
Internal system rated current	2.5A
Output power supply voltage	24V(20.4VDC~28.8VDC)
Output power supply current	0.75A

Mechanical Structure

Protection grade	IP20
Size(H X W X D)	111mm X 48mm X 75mm
Installation type	35mm DIN

Work Environment

Working temperature	-25...60°C
Storage temperature	-40...85°C
Relative humidity	5...95%RH(non-condensing)

LED Status Indicator

PWR	Green: Power is working
RUN	Green: I/O system is running
STA	Blinking green: The module is working
ERR	Red: An error occurred between I/O system and module
L/A0	Green : PORT 1 connected successfully.
	Green blinking : Port 1 has data communication.
L/A1	Green : PORT 2 connected successfully.
	Green blinking : Port 2 has data communication.
Sys 24v	Green:The system power input is normal
Sys 5v	Green: The system power output is normal
Feild 24v	Green:Load power input is normal
Load 24v	Green: The load power output is normal

EtherCAT Bus coupler



DF50-C-EC

Pin Definition

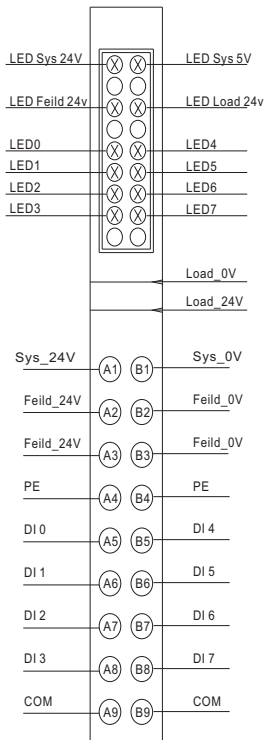
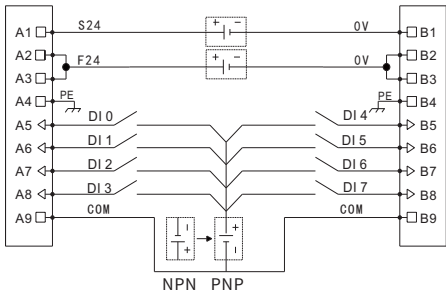


EtherCAT, 2 RJ45, extensible 32 modules, 24VDC

Features

- With a power module.
- LED display working status, alarm and bus fault prompt.
- Two EtherCAT interface (RJ45,100Mbps).

Wiring Diagram



COM is the common terminal of DI0~DI7, connected to 24V is NPN, and connected to 0V is PNP

Specification

Product	DF50-C-EC
Communication protocol	EtherCAT
Transmission rate	10/100Mbps, full duplex
Transmission distance	100 meters
PDO data	1024 bytes
Number of extensible modules	32
Address mapping	Yes
Address setting	EtherCAT specification, DIP switch
Transmission medium	Class 5 twisted pair cable
Isolation method	Electrical isolation
Minimum cycle time	1ms
Alarm function	Diagnostic alarm, process alarm, plug and unplug connector alarm
Connection type	2 X RJ45, with switch function

Digital Inputs Specification

Number of channels	8
Data size	1 Byte
Signal type	NPN & PNP
"0" signal voltage	<5V
"1" signal voltage	>11V
Connection type	1-line
Reverse protection	Yes
Isolation method	Photoelectric isolation
Fault diagnosis	Yes
Typical input current	0.6mA
Fault diagnosis	2.3mA
Typical input current	2.1mA
Fault diagnosis	2.4mA
Filtering time	0.2ms-40ms configurable
Hardware response time	200us

EtherCAT Bus coupler



Product

DF50-C-EC

Power Supply Parameters

Connection type	PUSH-IN type terminal block
Working voltage	24V DC +20 %/ -15 %
Working current	Max. 1.5A
Maximum area of wire	1.5mm²
Maximum area of wire (AWG)	AWG16
The minimum area of a wire	0.14mm²
The minimum area of a wire (AWG)	AWG26
Strip length	8...10mm
Internal system rated voltage	5VDC
Internal system rated current	2.5A
Output power supply voltage	24V(20.4VDC~28.8VDC)
Output power supply current	0.75A

Mechanical

Protection grade	IP20
Size(H X W X D)	111mm X 48mm X 75mm
Installation type	35mm DIN

Work Environment

Working temperature	-25...60°C
Storage temperature	-40...85°C
Relative humidity	5...95%RH(non-condensing)

LED Status Indicator

PWR	Green: Power is working
RUN	Green: I/O system is running
STA	Blinking green: The module is working
ERR	Red: An error occurred between I/O system and module
L/A0	Green : PORT 1 connected successfully. Green blinking : Port 1 has data communication.
L/A1	Green : PORT 2 connected successfully. Green blinking : Port 2 has data communication.
Sys 24v	Green:The system power input is normal
Sys 5v	Green: The system power output is normal
Feild 24v	Green:Load power input is normal
Load 24v	Green: The load power output is normal

CC-Link IE Field Basic Bus coupler



DF50-C-CC-FB

Pin Definition

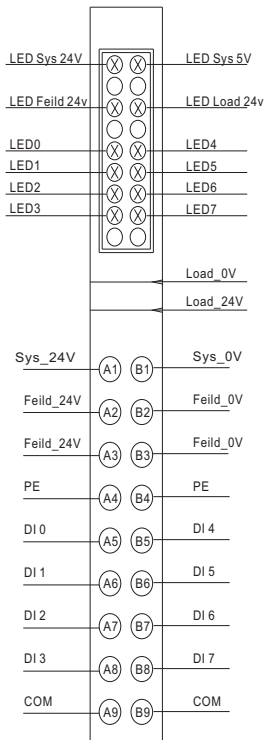
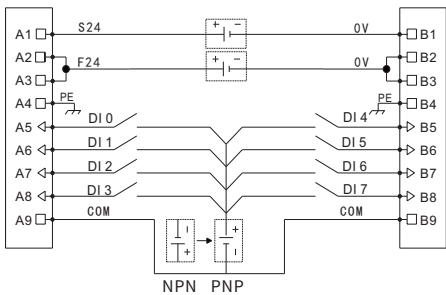


CC-Link IE Field Basic, 2 RJ45, extensible 32 modules, 24VDC

Features

- With a power module.
- LED display working status, alarm and bus fault prompt.
- Two CC-Link IE Field Basic interface (RJ45, 100Mbps).

Wiring Diagram



COM is the common terminal of DI0~DI7, connected to 24V is NPN, and connected to 0V is PNP

Specification			Digital Inputs Specification	
Product	DF50-C-CC-FB		Number of channels	8
Communication protocol	CC-Link IE Field Basic		Data size	1 Byte
Transmission rate	10/100Mbps, full duplex		Signal type	NPN & PNP
Transmission distance	100 meters		"0" signal voltage	<5V
Number of logical stations	1~4		"1" signal voltage	>11V
Maximum data volume	RX, RY	4×64 bits	Connection type	1-line
	RWr, RWw	4×32 Words	Reverse protection	Yes
Number of extensible modules	32		Isolation method	Photoelectric isolation
Address mapping	Yes		Fault diagnosis	Yes
Address setting	CC-Link IE Field Basic specification, DIP switch		Typical input current	0.6mA
Transmission medium	Class 5 twisted pair cable		Fault diagnosis	2.3mA
Isolation method	Electrical isolation		Typical input current	2.1mA
Alarm function	Diagnostic alarm, process alarm		Fault diagnosis	2.4mA
			Filtering time	0.2ms-40ms configurable
Connection type	2 X RJ45, with switch function		Hardware response time	200us

CC-Link IE Field Basic Bus coupler



Product

DF50-C-CC-FB

Power Supply Parameters

Connection type	PUSH-IN type terminal block
Working voltage	24V DC +20 %/ -15 %
Working current	Max. 1.5A
Maximum area of wire	1.5mm²
Maximum area of wire (AWG)	AWG16
The minimum area of a wire	0.14mm²
The minimum area of a wire (AWG)	AWG26
Strip length	8...10mm
Internal system rated voltage	5VDC
Internal system rated current	2.5A
Output power supply voltage	24V(20.4VDC~28.8VDC)
Output power supply current	0.75A

Mechanical

Protection grade	IP20
Size(H X W X D)	111mm X 48mm X 75mm
Installation type	35mm DIN

Work Environment

Working temperature	-25...60°C
Storage temperature	-40...85°C
Relative humidity	5...95%RH(non-condensing)

LED Status Indicator

PWR	Green: Power is working
RUN	Green: I/O system is running
STA	Blinking green: The module is working
ERR	Red: An error occurred between I/O system and module
L/A0	Green : PORT 1 connected successfully.
	Green blinking : Port 1 has data communication.
L/A1	Green : PORT 2 connected successfully.
	Green blinking : Port 2 has data communication.
FP	Green: Load power input is normal
LP	Green: Load power output is normal
SP	Green: System power input is normal
S5	Green: System power output is normal

Ethernet/IP Bus coupler



DF50-C-EN-IP

Pin Definition

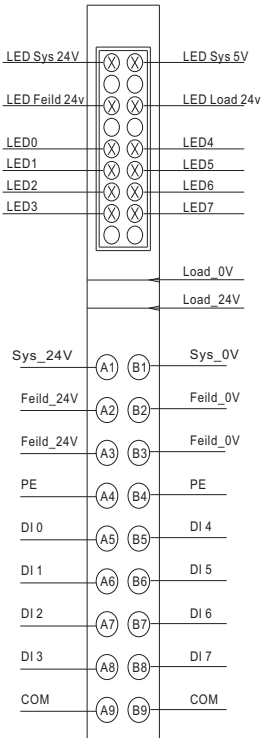
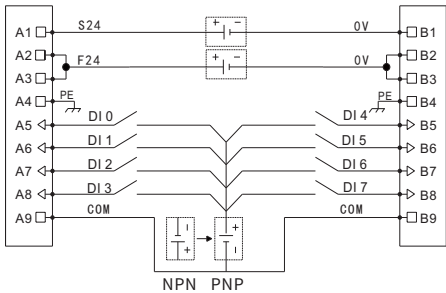


Ethernet/IP, 2 RJ45, extensible 32 modules, 24VDC

Features

- With a power module.
- LED display working status, alarm and bus fault prompt.
- Two Ethernet/IP interface (RJ45, 100Mbps).

Wiring Diagram



COM is the common terminal of DI0~DI7, connected to 24V is NPN, and connected to 0V is PNP

Specification

Product	DF50-C-EN-IP
Communication protocol	Ethernet/IP
Transmission rate	10/100Mbps, full duplex
Transmission distance	100 meters
PDO data	1024 bytes
Number of extensible modules	32
Address mapping	Yes
Address setting	Ethernet/IP specification
Transmission medium	Class 5 twisted pair cable
Isolation method	Electrical isolation
Minimum cycle time	1ms
Alarm function	Diagnostic alarm, process alarm
Connection type	2 X RJ45, with switch function

Digital Inputs Specification

Number of channels	8
Data size	1 Byte
Signal type	NPN & PNP
"0" signal voltage	<5V
"1" signal voltage	>11V
Connection type	1-line
Reverse protection	Yes
Isolation method	Photoelectric isolation
Fault diagnosis	Yes
Typical input current	0.6mA
Fault diagnosis	2.3mA
Typical input current	2.1mA
Fault diagnosis	2.4mA
Filtering time	0.2ms-40ms configurable
Hardware response time	200us

Ethernet/IP Bus coupler



Product

DF50-C-EN-IP

Power Supply Parameters

Connection type	PUSH-IN type terminal block
Working voltage	24V DC +20 %/ -15 %
Working current	Max. 1.5A
Maximum area of wire	1.5mm²
Maximum area of wire (AWG)	AWG16
The minimum area of a wire	0.14mm²
The minimum area of a wire (AWG)	AWG26
Strip length	8...10mm
Internal system rated voltage	5VDC
Internal system rated current	2.5A
Output power supply voltage	24V(20.4VDC~28.8VDC)
Output power supply current	0.75A

Mechanical

Protection grade	IP20
Size(H X W X D)	111mm X 48mm X 75mm
Installation type	35mm DIN

Work Environment

Working temperature	-25...60°C
Storage temperature	-40...85°C
Relative humidity	5...95%RH(non-condensing)

LED Status Indicator

PWR	Green: Power is working
RUN	Green: I/O system is running
STA	Blinking green: The module is working
ERR	Red: An error occurred between I/O system and module
L/A0	Green : PORT 1 connected successfully. Green blinking : Port 1 has data communication.
L/A1	Green : PORT 2 connected successfully. Green blinking : Port 2 has data communication.
FP	Green: Load power input is normal
LP	Green: Load power output is normal
SP	Green: System power input is normal
S5	Green: System power output is normal

ModbusTCP Bus coupler



DF50-C-MD-TCP

Pin Definition

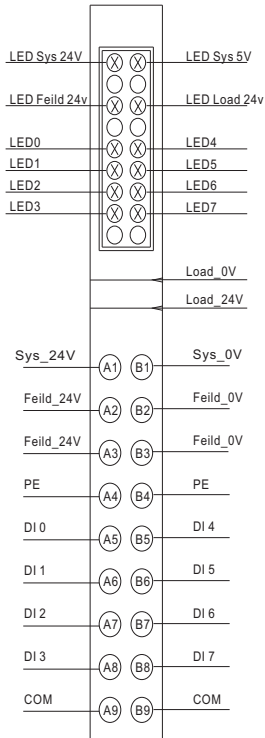
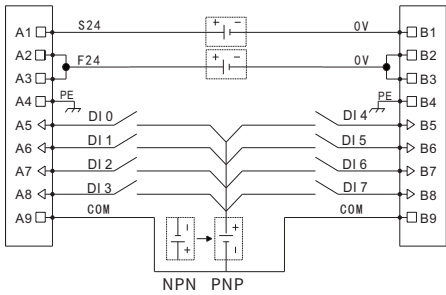


ModbusTCP, 2 RJ45, extensible 32 modules, 24VDC

Features

- With a power module.
- LED display working status, alarm and bus fault prompt.
- Two ModbusTCP interface (RJ45,100Mbps).

Wiring Diagram



COM is the common terminal of DI0~DI7, connected to 24V is NPN, and connected to 0V is PNP

Specification

Product	DF50-C-MD-TCP
Communication protocol	ModbusTCP
Transmission rate	10/100Mbps, full duplex
Transmission distance	100 meters
PDO data	1024 bytes
Number of extensible modules	32
Address mapping	Yes
Address setting	ModbusTCP specification
Transmission medium	Class 5 twisted pair cable
Isolation method	Electrical isolation
Minimum cycle time	1ms
Alarm function	Diagnostic alarm, process alarm
Connection type	2 X RJ45, with switch function

Digital Inputs Specification

Number of channels	8
Data size	1 Byte
Signal type	NPN & PNP
"0" signal voltage	<5V
"1" signal voltage	>11V
Connection type	1-line
Reverse protection	Yes
Isolation method	Photoelectric isolation
Fault diagnosis	Yes
Typical input current	0.6mA
Fault diagnosis	2.3mA
Typical input current	2.1mA
Fault diagnosis	2.4mA
Filtering time	0.2ms-40ms configurable
Hardware response time	200us

ModbusTCP Bus coupler



Product

DF50-C-MD-TCP

Power Supply Parameters

Connection type	PUSH-IN type terminal block
Working voltage	24V DC +20 %/ -15 %
Working current	Max. 1.5A
Maximum area of wire	1.5mm²
Maximum area of wire (AWG)	AWG16
The minimum area of a wire	0.14mm²
The minimum area of a wire (AWG)	AWG26
Strip length	8...10mm
Internal system rated voltage	5VDC
Internal system rated current	2.5A
Output power supply voltage	24V(20.4VDC~28.8VDC)
Output power supply current	0.75A

Mechanical

Protection grade	IP20
Size(H X W X D)	111mm X 48mm X 75mm
Installation type	35mm DIN

Work Environment

Working temperature	-25...60°C
Storage temperature	-40...85°C
Relative humidity	5...95%RH(non-condensing)

LED Status Indicator

PWR	Green: Power is working
RUN	Green: I/O system is running
STA	Blinking green: The module is working
ERR	Red: An error occurred between I/O system and module
L/A0	Green : PORT 1 connected successfully. Green blinking : Port 1 has data communication.
L/A1	Green : PORT 2 connected successfully. Green blinking : Port 2 has data communication.
FP	Green: Load power input is normal
LP	Green: Load power output is normal
SP	Green: System power input is normal
S5	Green: System power output is normal

Digital input module



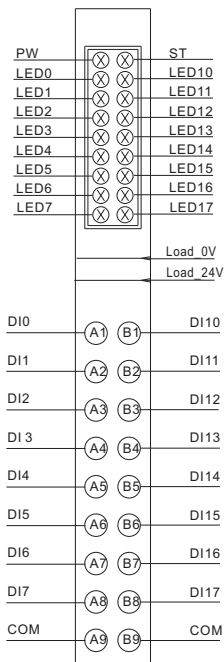
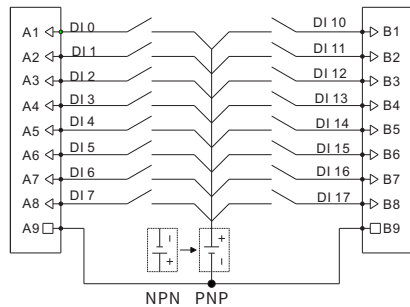
DF50-M-16DI-P/N

Pin Definition



Digital input module, 16 ports, PNP, 24VDC

Wiring Diagram



COM is the common terminal of DI0-DI17, connected to 24V is NPN, and connected to 0V is PNP

Specification		Power Supply Parameters	
Product	DF50-M-16DI-P/N	Connection type	PUSH-IN type terminal block
Number of channels	16	Working voltage	24V DC +20 %/ -15 %
Data size	2 Byte	System feed current	<30mA
Signal type	NPN & PNP	Maximum area of wire	1.5mm²
"0" signal voltage	>11V	Maximum area of wire (AWG)	AWG16
"1" signal voltage	<5V	The minimum area of a wire	0.14mm²
Connection type	1-line, Type 1/Type 3, Refer to IEC 61131-2	The minimum area of a wire (AWG)	AWG26
Reverse protection	Yes	Strip length	8...10mm
Isolation method	Photoelectric isolation	Mechanical Structure	
Fault diagnosis	Yes	Protection grade	IP20
Typical input current	0.6mA	Size(H X W X D)	111mm X 12mm X 75mm
Fault diagnosis	2.3mA	Installation type	35mm DIN
Typical input current	2.1mA	Work Environment	
Fault diagnosis	2.4mA	Working temperature	-25...60°C
Filtering time	0.2ms-40ms configurable,	Storage temperature	-40...85°C
Hardware response time	200us	Relative humidity	5...95%RH(non-condensing)

Digital input module



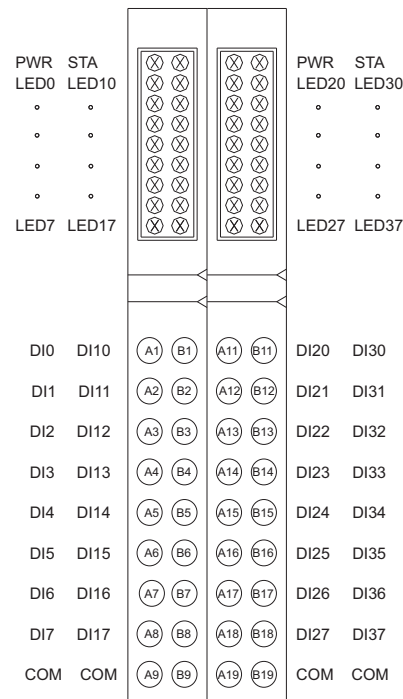
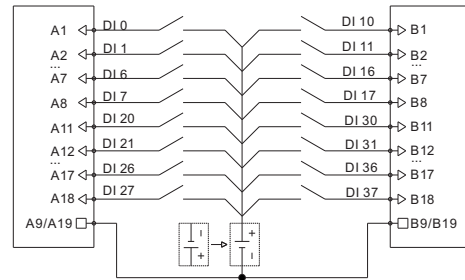
DF50-M-32DI-P/N

Pin Definition



Digital input module, 32-channel input, NPN & PNP, 24VDC

Wiring Diagram



Specification		Power Supply Parameters	
Product	DF50-M-32DI-P/N	Connection type	PUSH-IN type terminal block
Number of channels	32	Working voltage	24V DC +20 %/ -15 %
Signal type	NPN & PNP	Maximum area of wire	1.5mm²
"off" signal voltage	Voltage difference <5VDC	Maximum area of wire (AWG)	AWG16
"on" signal voltage	Voltage difference > 11VDC	The minimum area of a wire	0.14mm²
Data size	4 Byte	The minimum area of a wire (AWG)	AWG26
Connection type	1-line	Strip length	8...10mm
Reverse protection	Yes	Mechanical Structure	
Isolation method	Photoelectric isolation	Protection grade	IP20
Fault diagnosis	Yes	Size(H X W X D)	111mm X 24mm X 75mm
Switching frequency (resistive)	100Hz	Installation type	35mm DIN
Switching frequency (lamp)	10Hz	Work Environment	
Switching frequency (inductive)	0.2Hz	Working temperature	-25...60°C
Response time of protection circuit	< 100µs	Storage temperature	-40...85°C
Filtering time	0-40ms configurable	Relative humidity	5...95%RH(non-condensing)

Digital input counting module



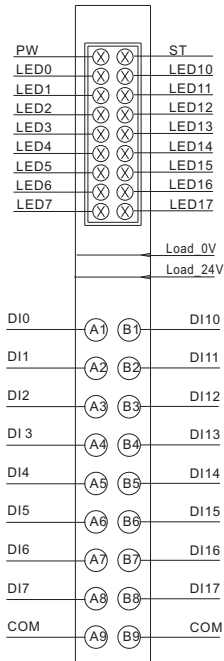
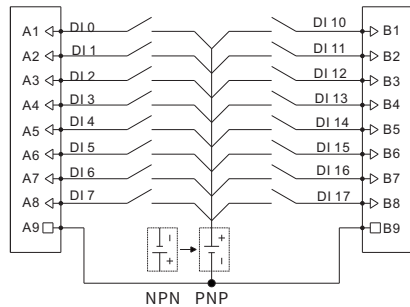
DF50-M-16DI-P/N-TS

Pin Definition



Digital input module, 16 ports+Low speed counting, PNP, 24VDC

Wiring Diagram



COM is the common terminal of DI0~DI17, connected to 24V is NPN, and connected to 0V is PNP

Specification

Product	DF50-M-16DI-P/N-TS
Number of channels	16
Data size	2 Byte
Signal type	NPN & PNP
"0" signal voltage	>11V
"1" signal voltage	<5V
Connection type	1-line, Type 1/Type 3, Refer to IEC 61131-2
Reverse protection	Yes
Isolation method	Photoelectric isolation
Fault diagnosis	Yes
Typical input current	0.6mA
Fault diagnosis	2.3mA
Typical input current	2.1mA
Fault diagnosis	2.4mA
Filtering time	0.2ms-40ms configurable,
Hardware response time	200us
Count mode	Rising edge counting, falling edge counting, double-sided edge counting, configurable
Counting range	0-4294967296
Maximum counting frequency	500Hz

Power Supply Parameters

Connection type	PUSH-IN type terminal block
Working voltage	24V DC +20 %/-15 %
System feed current	<30mA
Maximum area of wire	1.5mm ²
Maximum area of wire (AWG)	AWG16
The minimum area of a wire	0.14mm ²
The minimum area of a wire (AWG)	AWG26
Strip length	8...10mm

Mechanical Structure

Protection grade	IP20
Size(H X W X D)	111mm X 12mm X 75mm
Installation type	35mm DIN

Work Environment

Working temperature	-25...60°C
Storage temperature	-40...85°C
Relative humidity	5...95%RH(non-condensing)

Digital output module



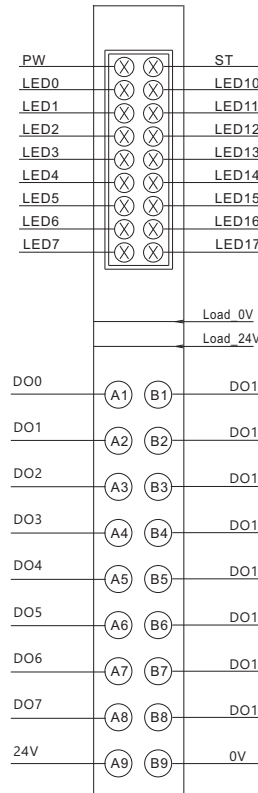
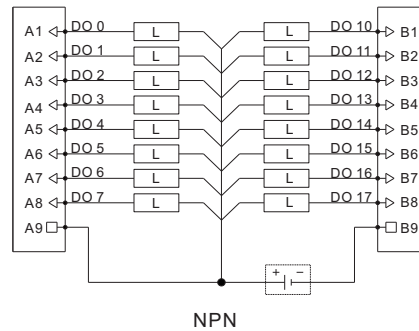
DF50-M-16DO-N

Pin Definition



Digital output module, 16 ports, NPN, 24VDC

Wiring Diagram



Specification

Product	DF50-M-16DO-N
Number of channels	16
Data size	2 Byte
Signal type	NPN
"0" signal voltage	High-impedance state
"1" signal voltage	0V DC
Connection type	1-line
Reverse protection	Yes
Isolation method	Photoelectric isolation
Switching Frequency (resistance/lamp load)	<1000Hz
Switching Frequency (Inductive load)	<0.2Hz
Response Time of the Protection Circuit	<100μs
Output current per channel(MAX)	500 mA
Load type	Inductive (7.2W/point, 24W/module), resistive (0.5A/point, 4A/module), light (5W/point, 18W/module)

Power Supply Parameters

Connection type	PUSH-IN type terminal block
Working voltage	24V DC +20 %/-15 %
System feed current	<75mA
Maximum area of wire	1.5mm ²
Maximum area of wire (AWG)	AWG16
The minimum area of a wire	0.14mm ²
The minimum area of a wire (AWG)	AWG26
Strip length	8...10mm

Mechanical Structure

Protection grade	IP20
Size(H X W X D)	111mm X 12mm X 75mm
Installation type	35mm DIN

Work Environment

Working temperature	-25...60°C
Storage temperature	-40...85°C
Relative humidity	5...95%RH(non-condensing)

Digital output module

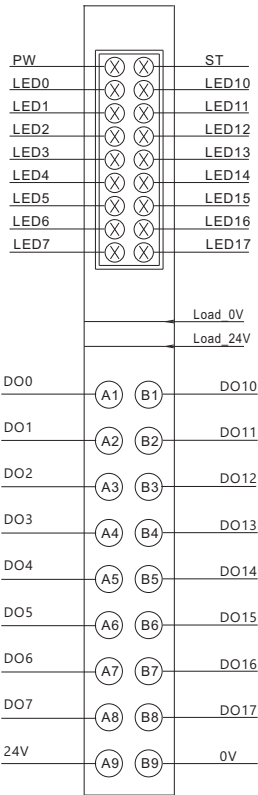
CE RoHS

DF50-M-16DO-P

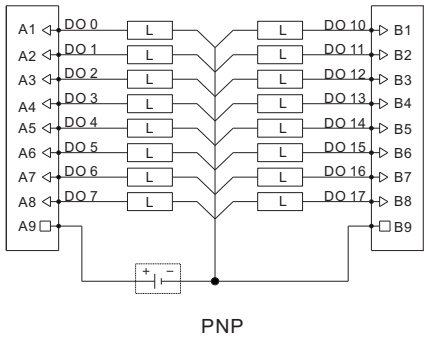
Pin Definition



Digital output module, 16 ports, PNP, 24VDC



Wiring Diagram



PNP

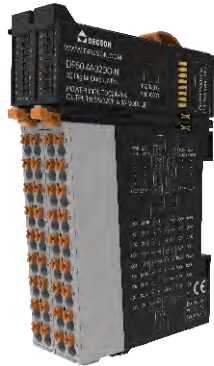
Specification		Power Supply Parameters	
Product	DF50-M-16DO-P	Connection type	PUSH-IN type terminal block
Number of channels	16	Working voltage	24V DC +20 %/ -15 %
Data size	2 Byte	System feed current	<75mA
Signal type	PNP	Maximum area of wire	1.5mm²
"0" signal voltage	High-impedance state	Maximum area of wire (AWG)	AWG16
"1" signal voltage	24V DC	The minimum area of a wire	0.14mm²
Connection type	1-line	The minimum area of a wire (AWG)	AWG26
Reverse protection	Yes	Strip length	8...10mm
Isolation method	Photoelectric isolation	Mechanical Structure	
Switching Frequency (resistance/lamp load)	<1000Hz	Protection grade	IP20
Switching Frequency (Inductive load)	<0.2Hz	Size(H X W X D)	111mm X 12mm X 75mm
Response Time of the Protection Circuit	< 100µs	Installation type	35mm DIN
Output current per channel(MAX)	500 mA	Work Environment	
Load type	Inductive (7.2W/point, 24W/module), resistive (0.5A/point, 4A/module), light (5W/point, 18W/module)	Working temperature	-25...60°C
		Storage temperature	-40...85°C
		Relative humidity	5...95%RH(non-condensing)

Digital output module

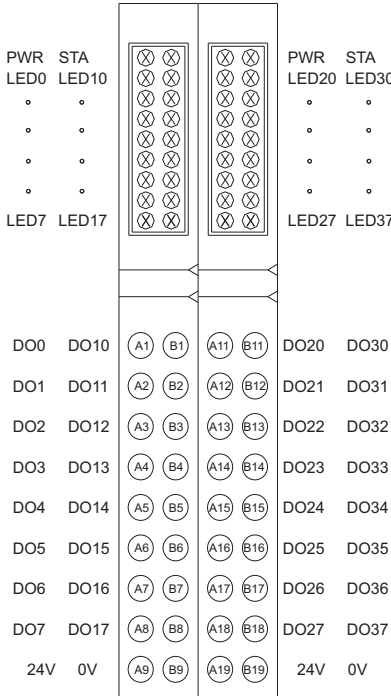
CE RoHS

DF50-M-32DO-N

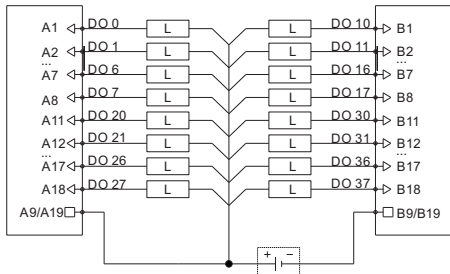
Pin Definition



Digital output module, 32-channel output, NPN, 24VDC



Wiring Diagram



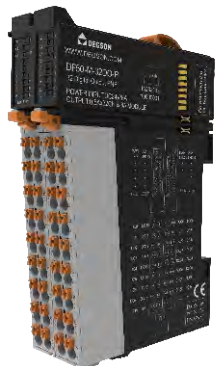
Specification		Power Supply Parameters	
Product	DF50-M-32DO-N	Connection type	PUSH-IN type terminal block
Number of channels	32	Working voltage	24V DC +20 %/ -15 %
Signal type	NPN	Maximum area of wire	1.5mm²
"off" signal voltage	High resistance state	Maximum area of wire (AWG)	AWG16
"on" signal voltage	0V DC	The minimum area of a wire	0.14mm²
Data size	4 Byte	The minimum area of a wire (AWG)	AWG26
Connection type	1-line	Strip length	8...10mm
Reverse protection	Yes	Mechanical Structure	
Overcurrent protection	Yes	Protection grade	IP20
Short circuit protection	Yes	Size(H X W X D)	111mm X 24mm X 75mm
Isolation method	Photoelectric isolation	Installation type	35mm DIN
Fault diagnosis	Yes	Work Environment	
Switching frequency (resistive)	100Hz	Working temperature	-25...60°C
Switching frequency (lamp)	10Hz	Storage temperature	-40...85°C
Switching frequency (inductive)	0.2Hz	Relative humidity	5...95%RH(non-condensing)
Response time of protection circuit	< 100µs		
Maximum output current per channel	500 mA		

Digital output module



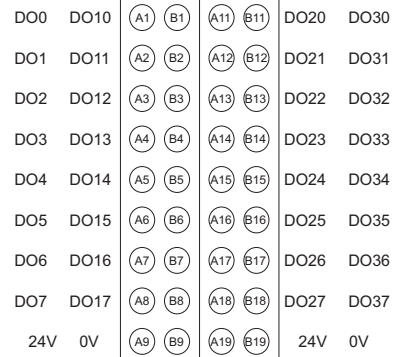
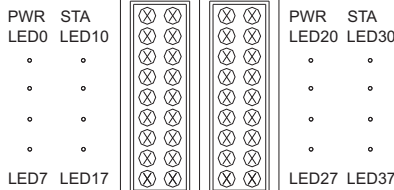
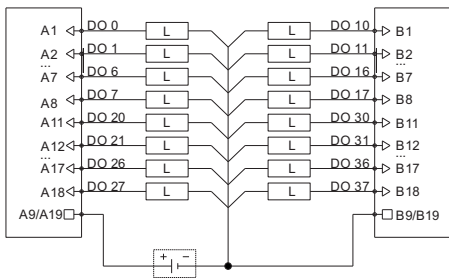
DF50-M-32DO-P

Pin Definition



Digital output module, 32-channel output, PNP, 24VDC

Wiring Diagram



Digital input output module



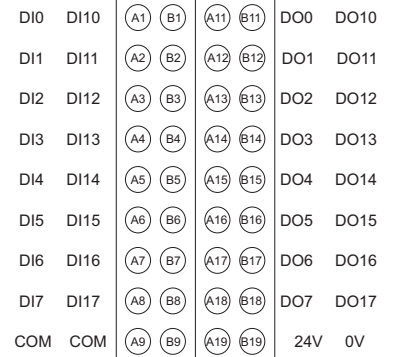
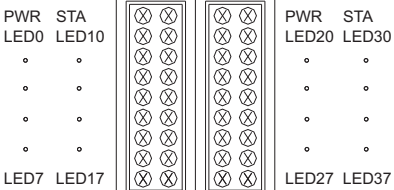
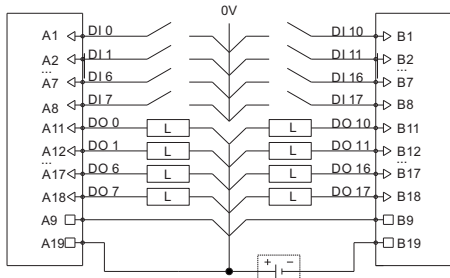
DF50-M-16DI-16DO-N

Pin Definition



Digital input output module, 16-channel input+16-channel output, NPN, 24VDC

Wiring Diagram



Specification		Power Supply Parameters	
Product	DF50-M-32DO-P	Connection type	PUSH-IN type terminal block
Number of channels	32	Working voltage	24V DC +20 %/ -15 %
Signal type	PNP	Maximum area of wire	1.5mm²
*off" signal voltage	High resistance state	Maximum area of wire (AWG)	AWG16
*on" signal voltage	24V DC	The minimum area of a wire	0.14mm²
Data size	4 Byte	The minimum area of a wire (AWG)	AWG26
Connection type	1-line	Strip length	8...10mm
Reverse protection	Yes	Mechanical Structure	
Overcurrent protection	Yes	Protection grade	IP20
Short circuit protection	Yes	Size(H X W X D)	111mm X 24mm X 75mm
Isolation method	Photoelectric isolation	Installation type	35mm DIN
Fault diagnosis	Yes	Work Environment	
Switching frequency (resistive)	100Hz	Working temperature	-25...60°C
Switching frequency (lamp)	10Hz	Storage temperature	-40...85°C
Switching frequency (inductive)	0.2Hz	Relative humidity	5...95%RH(non-condensing)
Response time of protection circuit	< 100µs		
Maximum output current per channel	500 mA		

Specification		Power Supply Parameters	
Product	DF50-M-16DI-16DO-N	Connection type	PUSH-IN type terminal block
Number of channels	16-channel input+16-channel output	Working voltage	24V DC +20 %/ -15 %
Signal type	NPN	Maximum area of wire	1.5mm²
*off" signal voltage	Voltage difference <5VDC	Maximum area of wire (AWG)	AWG16
*on" signal voltage	Voltage difference > 11VDC	The minimum area of a wire	0.14mm²
Data size	4 Byte	The minimum area of a wire (AWG)	AWG26
Connection type	1-line	Strip length	8...10mm
Reverse protection	Yes	Mechanical Structure	
Isolation method	Photoelectric isolation	Protection grade	IP20
Fault diagnosis	Yes	Size(H X W X D)	111mm X 24mm X 75mm
Switching frequency (resistive)	100Hz	Installation type	35mm DIN
Switching frequency (lamp)	10Hz	Work Environment	
Switching frequency (inductive)	0.2Hz	Working temperature	-25...60°C
Response time of protection circuit	< 100µs	Storage temperature	-40...85°C
Maximum output current per channel	500 mA	Relative humidity	5...95%RH(non-condensing)
Filtering time	0-40ms configurable		

Digital input output module



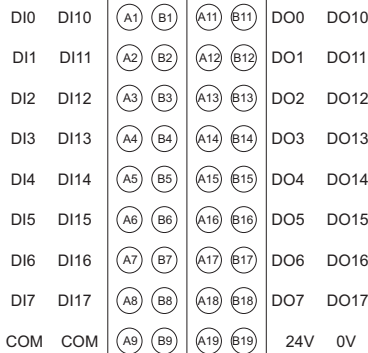
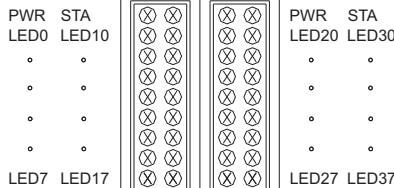
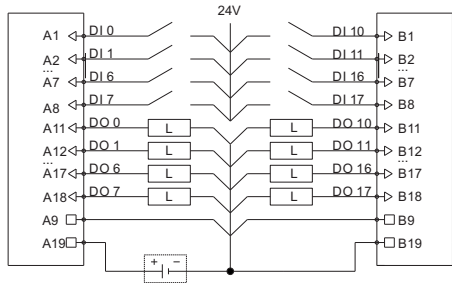
DF50-M-16DI-16DO-P

Pin Definition



Digital input output module,
16-channel input+16-channel output, PNP, 24VDC

Wiring Diagram



Relay output module



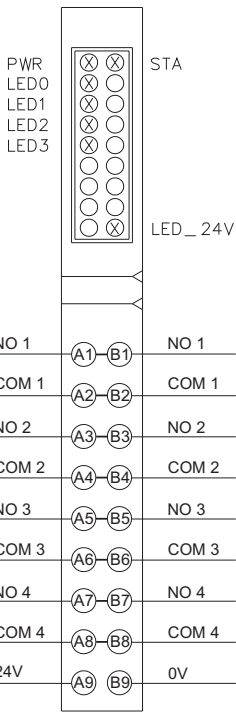
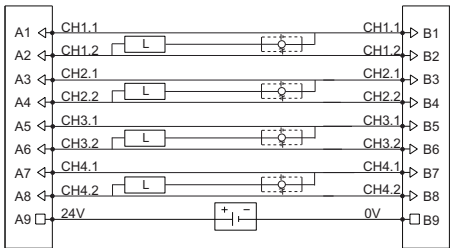
DF50-M-4DOR

Pin Definition



Relay output module, 4 channels

Wiring Diagram



Specification	
Product	DF50-M-16DI-16DO-P
Number of channels	16-channel input+16-channel output
Signal type	PNP
*off" signal voltage	Voltage difference <5VDC
*on" signal voltage	Voltage difference > 11VDC
Data size	4 Byte
Connection type	1-line
Reverse protection	Yes
Isolation method	Photoelectric isolation
Fault diagnosis	Yes
Switching frequency (resistive)	100Hz
Switching frequency (lamp)	10Hz
Switching frequency (inductive)	0.2Hz
Response time of protection circuit	< 100µs
Maximum output current per channel	500 mA
Filtering time	0-40ms configurable

Power Supply Parameters	
Connection type	PUSH-IN type terminal block
Working voltage	24V DC +20 %/ -15 %
Maximum area of wire	1.5mm²
Maximum area of wire (AWG)	AWG16
The minimum area of a wire	0.14mm²
The minimum area of a wire (AWG)	AWG26
Strip length	8...10mm
Mechanical Structure	
Protection grade	IP20
Size(H X W X D)	111mm X 24mm X 75mm
Installation type	35mm DIN
Work Environment	
Working temperature	-25...60°C
Storage temperature	-40...85°C
Relative humidity	5... 95%RH(non-condensing)

Specification	
Product	DF50-M-4DOR
Number of channels	4
Contact type	N.O. Contacts
Maximum output current	Single-channel output maximum current: 5A, module output maximum current: 20A
Maximum switching voltage	250VAC/30VDC
Switching frequency	30Hz
Response time of the protection circuit	< 100µs
Leakage current	Maximum value: 0uA
Output impedance	<200mΩ
Output delay	OFF to ON :Max.100us, ON to OFF :Max.150us
Protective function	Over-temperature shutdown: 125°C typical
Load type	Resistive (5A/point, 20A/module)

Power Supply Parameters	
Connection type	PUSH-IN type terminal block
Working voltage	24V DC +20 %/ -15 %
Maximum area of wire	1.5mm²
Maximum area of wire (AWG)	AWG16
The minimum area of a wire	0.14mm²
The minimum area of a wire (AWG)	AWG26
Strip length	8...10mm
Mechanical Structure	
Protection grade	IP20
Size(H X W X D)	111mm X 12mm X 75mm
Installation type	35mm DIN
Work Environment	
Working temperature	-25...60°C
Storage temperature	-40...85°C
Relative humidity	5... 95%RH(non-condensing)

Digital output module

CE RoHS

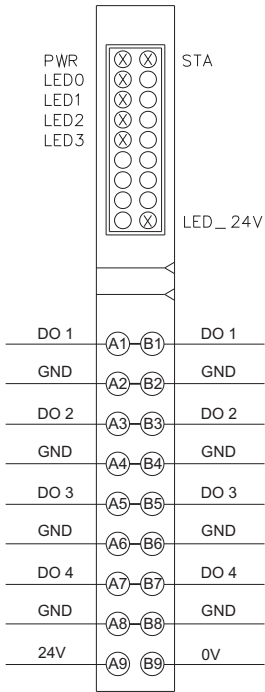
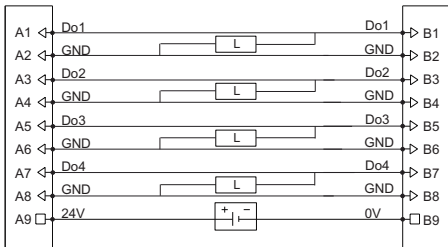
DF50-M-4DO-P-2A

Pin Definition



Digital output module, 4-channel, PNP, 24VDC

Wiring Diagram



Specification	
Product	DF50-M-4DO-P-2A
Number of channels	4
Signal type	PNP
"off" signal voltage	High resistance state
"on" signal voltage	24V DC
Data size	1 Byte
Connection type	1-line
Switching frequency (resistive)	100Hz
Switching frequency (lamp)	10Hz
Switching frequency (inductive)	0.2Hz
Response time of protection circuit	< 100µs
Maximum output current per channel	2A
Leakage current	Maximum value: 0.18uA
Hardware response time	100us/100us
Output impedance	<200mΩ
Output delay time	OFF to ON :Max. 100us, ON to OFF :Max. 150us
Protection function	Over-temperature shutdown: 135°C typical
	Overcurrent protection: 4A, 2A typical
	Support short circuit protection
Load type	Inductive (7.2W/point, 24W/module), Resistive (0.5A/point, 4A/module), Lamp (5W/point, 18W/module)

Power Supply Parameters	
Connection type	PUSH-IN type terminal block
Working voltage	24V DC +20 %/ -15 %
Maximum area of wire	1.5mm²
Maximum area of wire (AWG)	AWG16
The minimum area of a wire	0.14mm²
The minimum area of a wire (AWG)	AWG26
Strip length	8...10mm
Mechanical Structure	
Protection grade	IP20
Size(H X W X D)	111mm X 12mm X 75mm
Installation type	35mm DIN
Work Environment	
Working temperature	-25...60°C
Storage temperature	-40...85°C
Relative humidity	5...95%RH(non-condensing)

Digital output module

CE RoHS

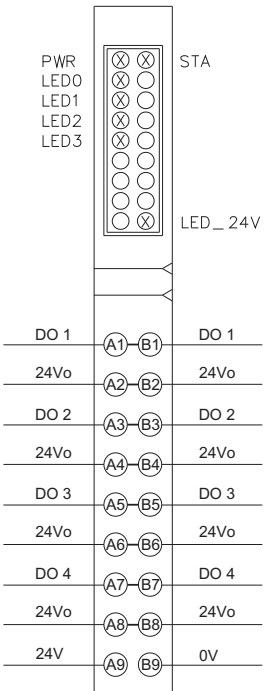
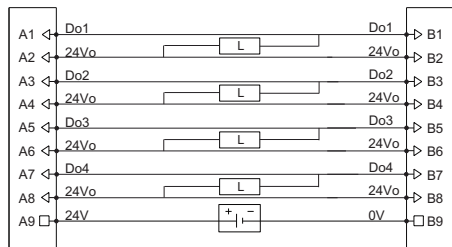
DF50-M-4DO-N-2A

Pin Definition



Digital output module, 4-channel, NPN, 24VDC

Wiring Diagram



Specification	
Product	DF50-M-4DO-N-2A
Number of channels	4
Signal type	NPN
"off" signal voltage	High resistance state
"on" signal voltage	0 DC
Data size	1 Byte
Connection type	1-line
Switching frequency (resistive)	100Hz
Switching frequency (lamp)	10Hz
Switching frequency (inductive)	0.2Hz
Response time of protection circuit	< 100µs
Maximum output current per channel	2A
Leakage current	Maximum value: 0.18uA
Hardware response time	100us/100us
Output impedance	<200mΩ
Output delay time	OFF to ON :Max. 100us, ON to OFF :Max. 150us
Protection function	Over-temperature shutdown: 135°C typical
	Overcurrent protection: 4A, 2A typical
	Support short circuit protection
Load type	Inductive (7.2W/point, 24W/module), Resistive (0.5A/point, 4A/module), Lamp (5W/point, 18W/module)

Power Supply Parameters	
Connection type	PUSH-IN type terminal block
Working voltage	24V DC +20 %/ -15 %
Maximum area of wire	1.5mm²
Maximum area of wire (AWG)	AWG16
The minimum area of a wire	0.14mm²
The minimum area of a wire (AWG)	AWG26
Strip length	8...10mm
Mechanical Structure	
Protection grade	IP20
Size(H X W X D)	111mm X 12mm X 75mm
Installation type	35mm DIN
Work Environment	
Working temperature	-25...60°C
Storage temperature	-40...85°C
Relative humidity	5...95%RH(non-condensing)

Analog input module

CE RoHS

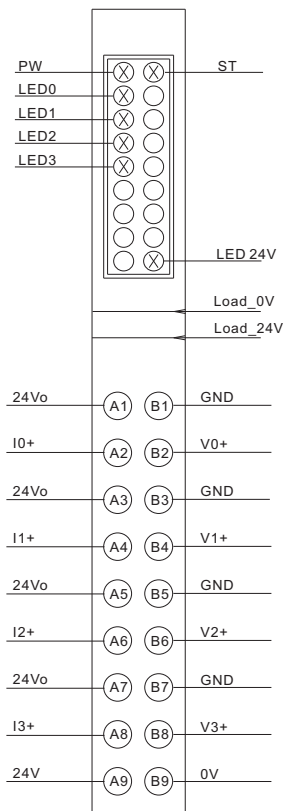
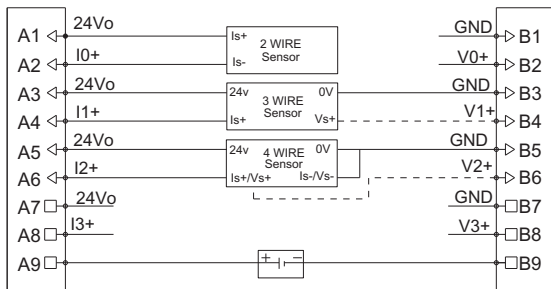
DF50-M-4AI-UI-6

Pin Definition



Analog input module, 4 channels, voltage type, current type

Wiring Diagram



Specification		Power Supply Parameters	
Product	DF50-M-4AI-UI-6	Connection type	PUSH-IN type terminal block
Number of channels	4	Working voltage	24V DC +20 %/-15 %
Data size	8 Byte	System feed current	<100mA
Voltage test range	±10V, 0-10V, 2-10V, ±5V, 0-5V, 1-5V	Maximum area of wire	1.5mm²
Current test range	0-20mA, 4-20mA	Maximum area of wire (AWG)	AWG16
Connection type	2/3/4-line	The minimum area of a wire	0.14mm²
Reverse protection	Yes	The minimum area of a wire (AWG)	AWG26
Isolation method	Magnetic isolation	Strip length	8...10mm
Fault diagnosis	Yes	Mechanical Structure	
Diagnostic reporting	Yes	Protection grade	IP20
Resolution	16 Bit	Size(H X W X D)	111mm X 12mm X 75mm
Signal type	/	Installation type	35mm DIN
Filter parameter configuration	/	Work Environment	
Input accuracy	±0.20%	Working temperature	-25...60°C
Conversion time	60us/channel	Storage temperature	-40...85°C
Sampling time	4-channel 250us	Relative humidity	5...95%RH(non-condensing)

Analog input module

CE RoHS

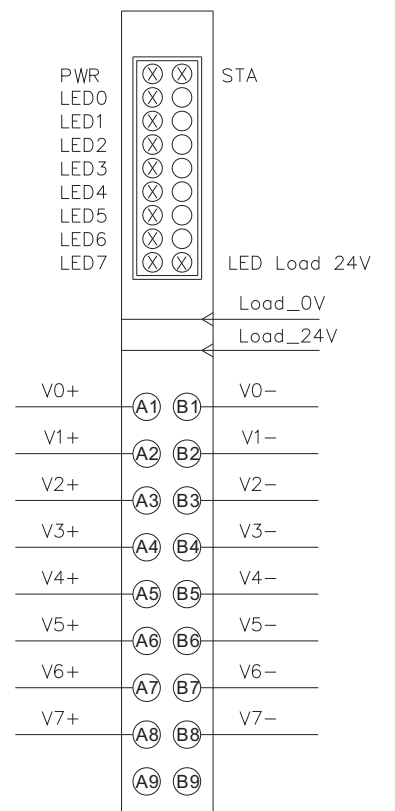
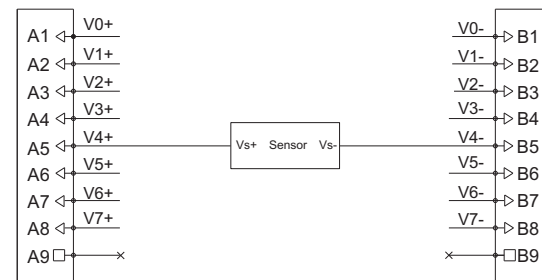
DF50-M-8AI-U-4

Pin Definition



Analog input module, 8 channels, voltage type

Wiring Diagram



Specification		Power Supply Parameters	
Product	DF50-M-8AI-U-4	Connection type	PUSH-IN type terminal block
Number of channels	8	Working voltage	24V DC +20 %/-15 %
Data size	16 Byte	System feed current	<100mA
Voltage test range	±10V, 0-10V, 2-10V, ±5V, 0-5V, 1-5V	Maximum area of wire	1.5mm²
Connection type	2-line	Maximum area of wire (AWG)	AWG16
Reverse protection	Yes	The minimum area of a wire	0.14mm²
Isolation method	Magnetic isolation	The minimum area of a wire (AWG)	AWG26
Fault diagnosis	Yes	Strip length	8...10mm
Diagnostic reporting	Yes	Mechanical Structure	
Resolution	16 Bit	Protection grade	IP20
Signal type	Single-ended	Size(H X W X D)	111mm X 12mm X 75mm
Filter parameter configuration	The software filtering time can be configured through the upper computer	Installation type	35mm DIN
Input accuracy	±0.20%	Work Environment	
Conversion time	60us/channel	Working temperature	-25...60°C
Sampling time	8-channel 500us	Storage temperature	-40...85°C
		Relative humidity	5...95%RH(non-condensing)

Analog input module



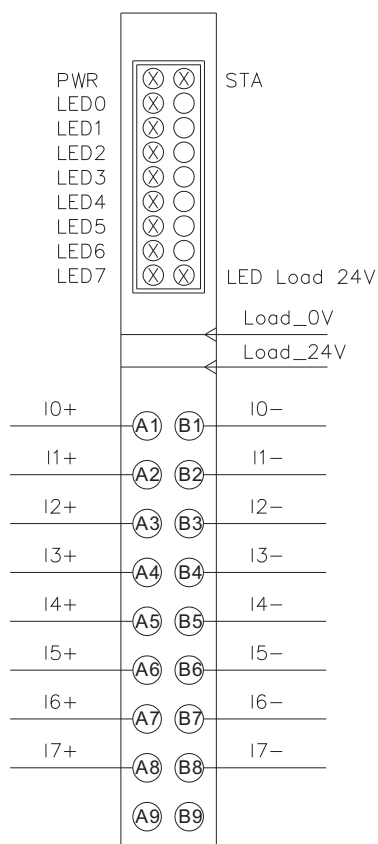
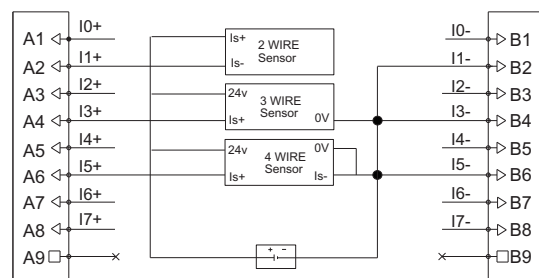
DF50-M-8AI-I-5

Pin Definition



Analog input module, 8 channels, current type

Wiring Diagram



Specification		Power Supply Parameters	
Product	DF50-M-8AI-I-5	Connection type	PUSH-IN type terminal block
Number of channels	8	Working voltage	24V DC +20 % / -15 %
Data size	16 Byte	System feed current	<100mA
Current test range	0-20mA, 4-20mA	Maximum area of wire	1.5mm²
Connection type	2-line	Maximum area of wire (AWG)	AWG16
Reverse protection	Yes	The minimum area of a wire	0.14mm²
Isolation method	Magnetic isolation	The minimum area of a wire (AWG)	AWG26
Fault diagnosis	Yes	Strip length	8...10mm
Diagnostic reporting	Yes	Mechanical Structure	
Resolution	16 Bit	Protection grade	IP20
Signal type	Single-ended	Size(H X W X D)	111mm X 12mm X 75mm
Filter parameter configuration	The software filtering time can be configured through the upper computer	Installation type	35mm DIN
		Work Environment	
Input accuracy	±0.20%	Working temperature	-25...60°C
Conversion time	60us/channel	Storage temperature	-40...85°C
Sampling time	8-channel 500us	Relative humidity	5...95%RH(non-condensing)

Analog output module



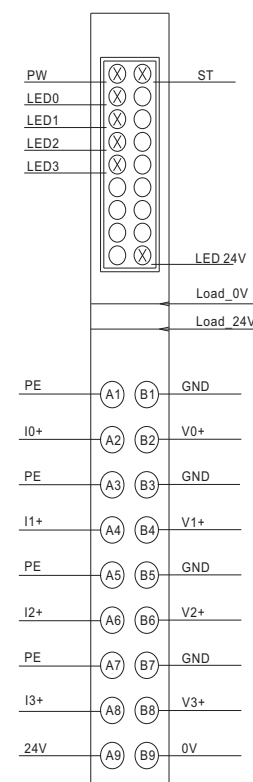
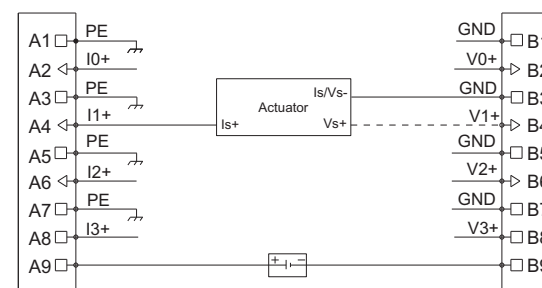
DF50-M-4AO-UI-6

Pin Definition



Analog output module, 4 channels, voltage type, current type

Wiring Diagram



Specification		Power Supply Parameters	
Product	DF50-M-4AO-UI-6	Connection type	PUSH-IN type terminal block
Number of channels	4	Working voltage	24V DC +20 % / -15 %
Data size	8 Byte	System feed current	<100mA
Voltage output range	±10V, 0-10V, 2-10V, ±5V, 0-5V, 1-5V	Maximum area of wire	1.5mm²
Current output range	0-20mA, 4-20mA	Maximum area of wire (AWG)	AWG16
Signal type	Single-ended	The minimum area of a wire	0.14mm²
Connection type	2/3/4-line	The minimum area of a wire (AWG)	AWG26
Overcurrent protection	Yes	Strip length	8...10mm
Isolation method	Magnetic isolation	Mechanical Structure	
Fault diagnosis	Yes	Protection grade	IP20
Resolution	16 Bit	Size(H X W X D)	111mm X 12mm X 75mm
Output accuracy	±0.50%	Installation type	35mm DIN
		Work Environment	
Temperature coefficient	<30 ppm/K	Working temperature	-25...60°C
Independent channel configuration	Yes	Storage temperature	-40...85°C
Conversiontime	60us/channel	Relative humidity	5...95%RH(non-condensing)

Analog output module



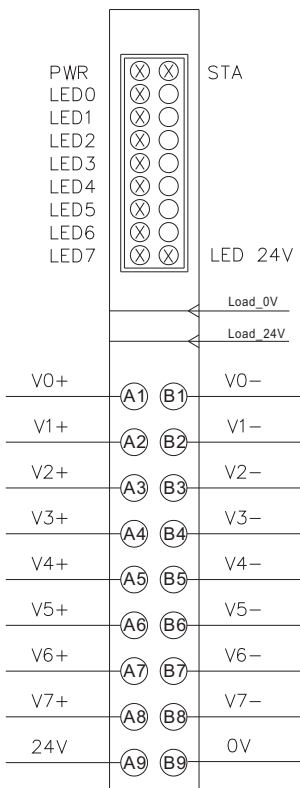
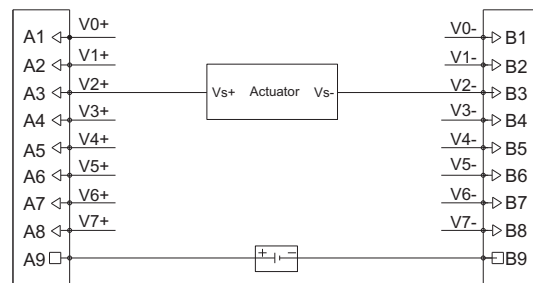
DF50-M-8AO-U-4

Pin Definition



Analog output module, 8 channels, voltage type

Wiring Diagram



Specification		Power Supply Parameters	
Product	DF50-M-8AO-U-4	Connection type	PUSH-IN type terminal block
Number of channels	8	Working voltage	24V DC +20 %/ -15 %
Data size	16 Byte	System feed current	<100mA
Voltage output range	±10V, 0-10V, 2-10V, ±5V, 0-5V, 1-5V	Maximum area of wire	1.5mm²
Signal type	Single-ended	Maximum area of wire (AWG)	AWG16
Connection type	2-line	The minimum area of a wire	0.14mm²
Overcurrent protection	Yes	The minimum area of a wire (AWG)	AWG26
Isolation method	Magnetic isolation	Strip length	8...10mm
Fault diagnosis	Yes	Mechanical Structure	
Resolution	16 Bit	Protection grade	IP20
Output accuracy	±0.50%	Size(H X W X D)	111mm X 12mm X 75mm
Temperature coefficient	<30 ppm/K	Installation type	35mm DIN
Independent channel configuration	Yes	Work Environment	
Conversiontime	60us/channel	Working temperature	-25...60°C
		Storage temperature	-40...85°C
		Relative humidity	5... 95%RH(non-condensing)

Analog output module



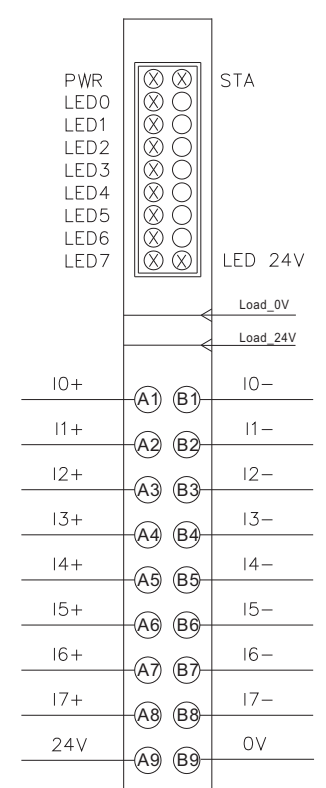
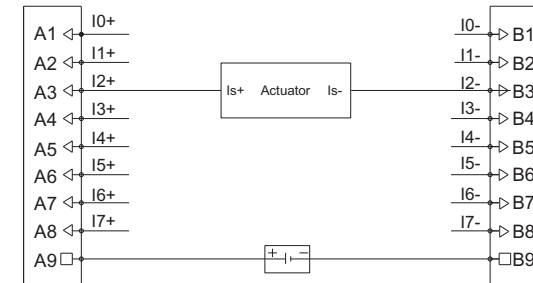
DF50-M-8AO-I-5

Pin Definition



Analog output module, 8 channels, current type

Wiring Diagram



Specification		Power Supply Parameters	
Product	DF50-M-8AO-I-5	Connection type	PUSH-IN type terminal block
Number of channels	8	Working voltage	24V DC +20 %/ -15 %
Data size	16 Byte	System feed current	<100mA
Current output range	0-20mA, 4-20mA	Maximum area of wire	1.5mm²
Signal type	Single-ended	Maximum area of wire (AWG)	AWG16
Connection type	2-line	The minimum area of a wire	0.14mm²
Overcurrent protection	Yes	The minimum area of a wire (AWG)	AWG26
Isolation method	Magnetic isolation	Strip length	8...10mm
Fault diagnosis	Yes	Mechanical Structure	
Resolution	16 Bit	Protection grade	IP20
Output accuracy	±0.50%	Size(H X W X D)	111mm X 12mm X 75mm
Temperature coefficient	<30 ppm/K	Installation type	35mm DIN
Independent channel configuration	Yes	Work Environment	
Conversiontime	60us/channel	Working temperature	-25...60°C
		Storage temperature	-40...85°C
		Relative humidity	5... 95%RH(non-condensing)

Temperature module

CE RoHS

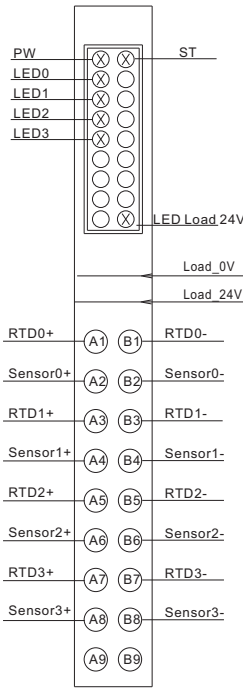
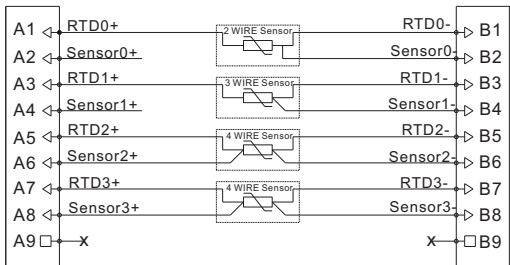
DF50-M-4RTD-PT

Pin Definition



Thermal Resistance (RTD) measurement module, 16 bit resolution, 4 channels

Wiring Diagram



Specification		Power Supply Parameters	
Product	DF50-M-4RTD-PT	Connection type	PUSH-IN type terminal block
Number of channels	4	Working voltage	24V DC +20 %/ -15 %
Data size	8 Byte	System feed current	<100mA
Signal type	Thermal resistance	Maximum area of wire	1.5mm²
Signal type	Pt100, Pt200, Pt500, Pt1000, Ni100, Ni120, Ni200, Ni500, Ni1000, Cu10, 40 Ω, 80 Ω, 150 Ω, 300 Ω, 500 Ω, 1 kΩ, 2 kΩ, 4 kΩ	Maximum area of wire (AWG)	AWG16
		The minimum area of a wire	0.14mm²
Connection type	2/3/4-line	The minimum area of a wire (AWG)	AWG26
Reverse protection	Yes	Strip length	8...10mm
Isolation method	Magnetic isolation between each channel and the field layer, and there is no isolation between channels	Mechanical Structure	
Fault diagnosis	Yes	Protection grade	IP20
Resolution	16bit, 0.1°C/ each number	Size(H X W X D)	111mm X 12mm X 75mm
Frequency interference suppression	50Hz 60Hz 400Hz	Installation type	35mm DIN
Diagnosis	Disconnection, Parameter assignment error	Work Environment	
Process alarm	Upper/Lower limit, per channel	Working temperature	-25...60°C
Temperature coefficient	±50ppm/K max.	Storage temperature	-40...85°C
Measuring range	Thermal resistance	Relative humidity	5... 95%RH(non-condensing)
Precision	*max. 0.2 % FSR / 0.3 % FSR for Ni sensors / 0.6 % FSR for Cu10		
Conversion time	100-800ms, configurable		

Temperature module

CE RoHS

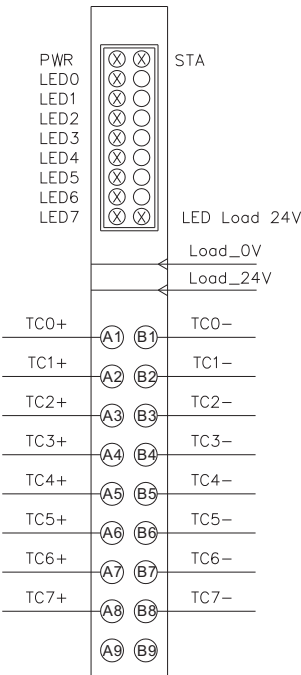
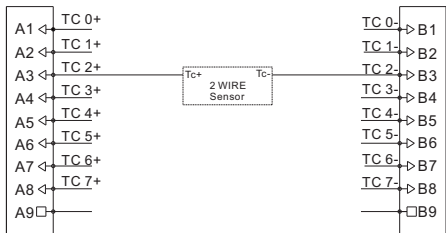
DF50-M-8TC

Pin Definition



Thermocouple (TC) measurement module, 16 bit resolution, 8 channels

Wiring Diagram



Specification		Power Supply Parameters	
Product	DF50-M-8TC	Connection type	PUSH-IN type terminal block
Number of channels	8	Working voltage	24V DC +20 %/ -15 %
Data size	16 Byte	System feed current	<100mA
Signal type	Thermocouple	Maximum area of wire	1.5mm²
Signal type	K, E, T, J, B, S, R, N, C, L	Maximum area of wire (AWG)	AWG16
Cold End compensation	Internal and external (accuracy ≤3K)	The minimum area of a wire	0.14mm²
Diagnosis	Yes	The minimum area of a wire (AWG)	AWG26
Temperature coefficient	≤ 50 ppm/K	Strip length	8...10mm
Connection type	2-line	Mechanical Structure	
Reverse protection	Yes	Protection grade	IP20
Isolation method	Magnetic isolation	Size(H X W X D)	111mm X 12mm X 75mm
Fault diagnosis	Yes	Installation type	35mm DIN
Internal Resistance	/	Work Environment	
Resolution	16bit, 0.1°C/ resolution	Working temperature	-25...60°C
Frequency interference suppression	10Hz 50Hz 60Hz 400Hz	Storage temperature	-40...85°C
Diagnosis	Disconnection, Parameter assignment error	Relative humidity	5... 95%RH(non-condensing)
Process alarm	Upper/Lower limit, per channel		
Temperature coefficient	±0.5%		
Measuring range	-270°C ~ 1370°C		
Precision	± 0.3%		
Conversion time	125ms		

Pulse counting module

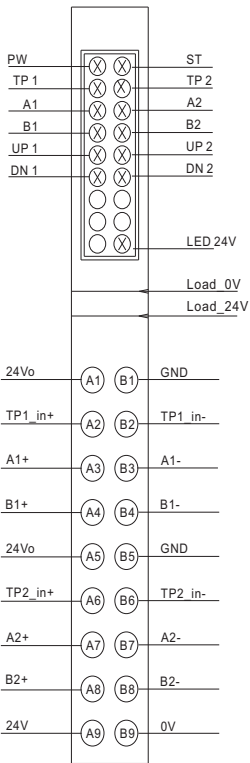


DF50-M-2CNT-PIL-24

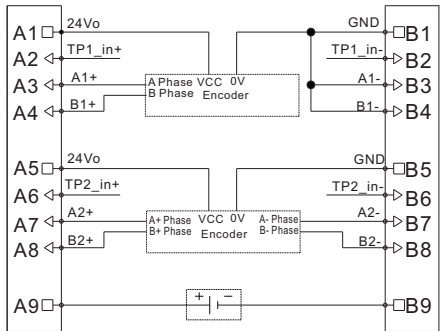
Pin Definition



24V Pulse counting module,2 channel



Wiring Diagram



Specification	
Product	DF50-M-2CNT-PIL-24
Maximum frequency count	1Mhz
Number of channels	2
Data size	20 Byte
Input signal type	Incremental encoder AB or pulse/direction signal
Input signal type	24V DC
Input connection type	2-line / 4-line
Filtering time	0.01 to 1 ms
Reverse protection	Yes
Isolation method	Isolate from the field layer optocoupler
Fault diagnosis	Yes, us response, error code can be queried by upper computer
Resolution	32 Bit
Precision	±1 pulse

Power Supply Parameters	
Connection type	PUSH-IN type terminal block
System feed current	<100mA
Maximum area of wire	1.5mm²
Maximum area of wire (AWG)	AWG16
The minimum area of a wire	0.14mm²
The minimum area of a wire (AWG)	AWG26
Strip length	8...10mm
Mechanical Structure	
Protection grade	IP20
Size(H X W X D)	111mm X 12mm X 75mm
Installation type	35mm DIN
Work Environment	
Working temperature	-25...60°C
Storage temperature	-40...85°C
Relative humidity	5... 95%RH(non-condensing)

Pulse counting module

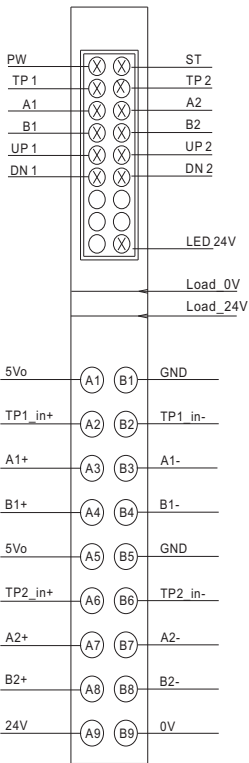


DF50-M-2CNT-PIL-5

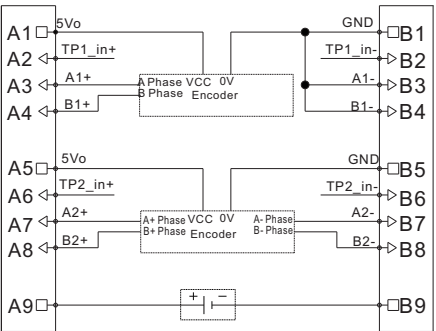
Pin Definition



5V Pulse counting module,2 channel



Wiring Diagram



Specification	
Product	DF50-M-2CNT-PIL-5
Maximum frequency count	1Mhz
Number of channels	2
Data size	20 Byte
Input signal type	Incremental encoder AB or pulse/direction signal
Input signal type	5V DC
Input connection type	2-line / 4-line
Filtering time	0.01 to 1 ms
Reverse protection	Yes
Isolation method	Isolate from the field layer optocoupler
Fault diagnosis	Yes, us response, error code can be queried by upper computer
Resolution	32 Bit
Precision	±1 pulse

Power Supply Parameters	
Connection type	PUSH-IN type terminal block
System feed current	<100mA
Maximum area of wire	1.5mm²
Maximum area of wire (AWG)	AWG16
The minimum area of a wire	0.14mm²
The minimum area of a wire (AWG)	AWG26
Strip length	8...10mm
Mechanical Structure	
Protection grade	IP20
Size(H X W X D)	111mm X 12mm X 75mm
Installation type	35mm DIN
Work Environment	
Working temperature	-25...60°C
Storage temperature	-40...85°C
Relative humidity	5... 95%RH(non-condensing)

Serial communication module

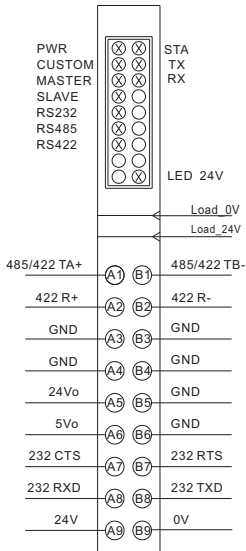
CE RoHS

DF50-M-1COM-232/485/422

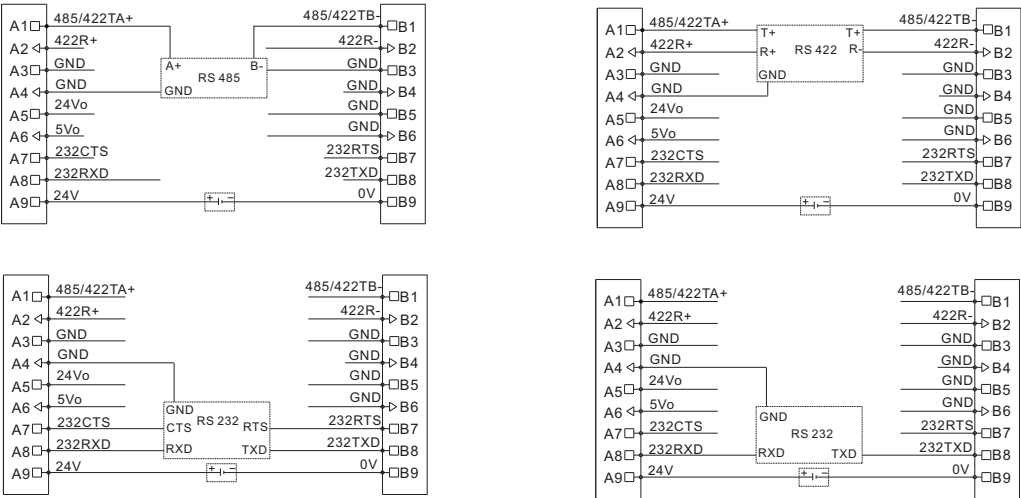
Pin Definition



Serial communication module, 1 channel



Wiring Diagram



Specification

Product	DF50-M-1COM-232/485/422
Interface	RS232/RS485/RS422
Number of channels	1
Agreement	Modbus RTU Free protocol transparent mode
BAUD	1200bps - 256000bps
Data bits	7bit / 8bit
Check bit	None / Even / Odd
Stop bit	1bit / 2bit
Maximum data frame length	64byte
Termination resistor	Built in 120 Qterminal resistor
Firmware upgrade function	Support

Serial communication module

CE RoHS

Product

DF50-M-1COM-232/485/422

Power Supply Parameters

Connection type	PUSH-IN type terminal block
System feed current	<100mA
Maximum area of wire	1.5mm²
Maximum area of wire (AWG)	AWG16
The minimum area of a wire	0.14mm²
The minimum area of a wire (AWG)	AWG26
Strip length	8...10mm

Mechanical Structure

Protection grade	IP20
Size(H X W X D)	111mm X 12mm X 75mm
Installation type	35mm DIN

Work Environment

Working temperature	-25...60°C
Storage temperature	-40...85°C
Relative humidity	5... 95%RH(non-condensing)

LED Status Indicator

PW	Green: Internal bus power supply is normal
ST	Power on stage: green on: module initialization abnormal, green off: module initialization normal Operation phase: Green flashing: The internal bus of the module is working normally, green off: The internal bus of the module is working abnormally
COM	On: Input signal valid Off: Input signal invalid
MST	On: Input signal valid Off: Input signal invalid
SLV	On: Input signal valid Off: Input signal invalid
232	In 232 mode, on: connection normal off: connection abnormal
485	In 485 mode, on: connection normal off: connection abnormal
422	In 422 mode, on: connection normal off: connection abnormal
TS	Flashing: Normal communication transmission Off: Abnormal communication transmission
RX	Flashing: normal communication reception Off: abnormal communication reception
EP	On: External power supply normal Off: External power supply normal

Voltage distribution module



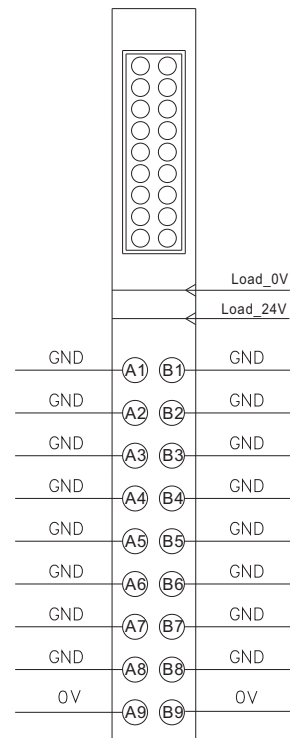
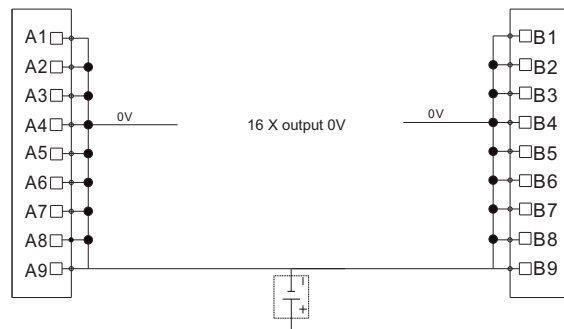
DF50-M-DC-U-0

Pin Definition



Voltage distribution module, 16 channel 0VDC

Wiring Diagram



Specification		Mechanical Structure	
Product	DF50-M-DC-U-0	Protection grade	IP20
Number of channels	16	Size(H X W X D)	111mm X 12mm X 75mm
Power Supply Parameters		Installation type	35mm DIN
Connection type	PUSH-IN type terminal block	Work Environment	
System feed current	<100mA	Working temperature	-25...60°C
Maximum area of wire	1.5mm²	Storage temperature	-40...85°C
Maximum area of wire (AWG)	AWG16	Relative humidity	5...95%RH(non-condensing)
The minimum area of a wire	0.14mm²		
The minimum area of a wire (AWG)	AWG26		
Strip length	8...10mm		

Voltage distribution module



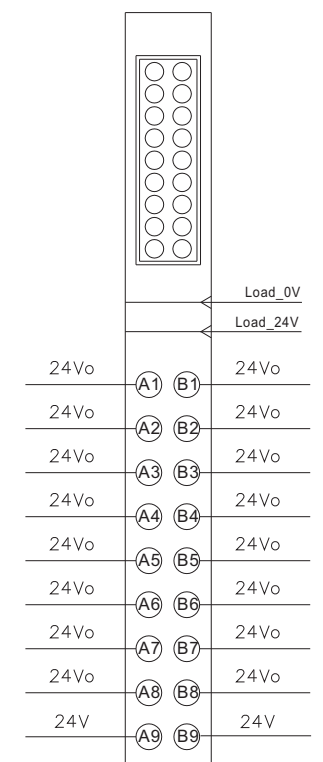
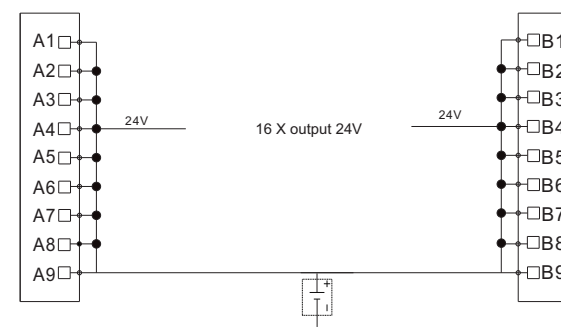
DF50-M-DC-U-24

Pin Definition



Voltage distribution module, 16 channel 24VDC

Wiring Diagram



Specification		Mechanical Structure	
Product	DF50-M-DC-U-24	Protection grade	IP20
Number of channels	16	Size(H X W X D)	111mm X 12mm X 75mm
Power Supply Parameters		Installation type	35mm DIN
Connection type	PUSH-IN type terminal block	Work Environment	
System feed current	<100mA	Working temperature	-25...60°C
Maximum area of wire	1.5mm²	Storage temperature	-40...85°C
Maximum area of wire (AWG)	AWG16	Relative humidity	5...95%RH(non-condensing)
The minimum area of a wire	0.14mm²		
The minimum area of a wire (AWG)	AWG26		
Strip length	8...10mm		

IO-Link communication modules

CE RoHS

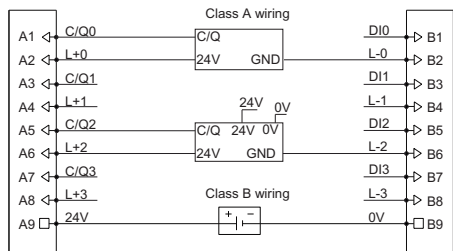
DF50-M-4IOL

Pin Definition

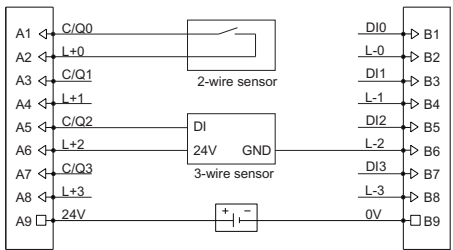


IO-Link communication module, 4 channels

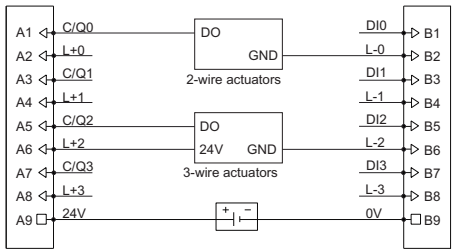
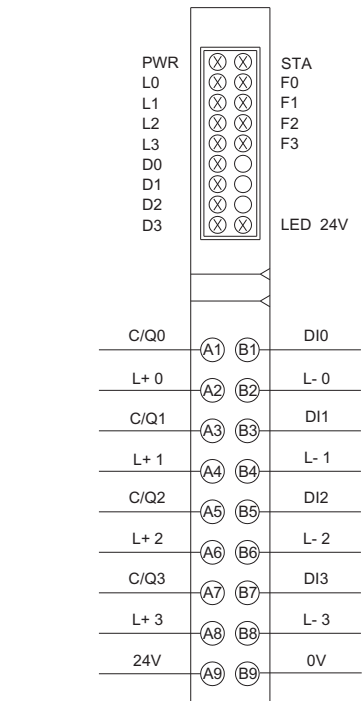
Wiring Diagram



C/Q for IO-Link Mode Wiring Diagrams



Wiring when C/Q is DI



Wiring when C/Q is DO

Specification		IO-Link Input Mode	
Product	DF50-M-4IOL	Connection type	3-line/5-line
Number of channels	4	Port type	A type
Digital Input Mode		Digital Output Mode	
Input description	When the IO-Link port is set to DI	Output description	When the IO-Link port is set to DO
Input type	PNP	Output type	PNP
Connect system	3-line	Connection method	Push-in
Input Voltage	24 V DC	Connect system	2, 3-line
"0" signal	-0.3 V DC ... 8 V DC	Rated output voltage	24 V DC
"1" signal	12.9 V DC ... 24.3 V DC	Rated current per channel	500 mA

IO-Link communication modules

CE RoHS

Product DF50-M-4IOL

Power Supply Parameters

Connection type	PUSH-IN type terminal block
Working voltage	24V DC +20 %/ -15 %
Maximum area of wire	1.5mm²
Maximum area of wire (AWG)	AWG16
The minimum area of a wire	0.14mm²
The minimum area of a wire (AWG)	AWG26
Strip length	8...10mm

Mechanical Structure

Protection grade	IP20
Size(H X W X D)	111mm X 12mm X 75mm
Installation type	35mm DIN

Work Environment

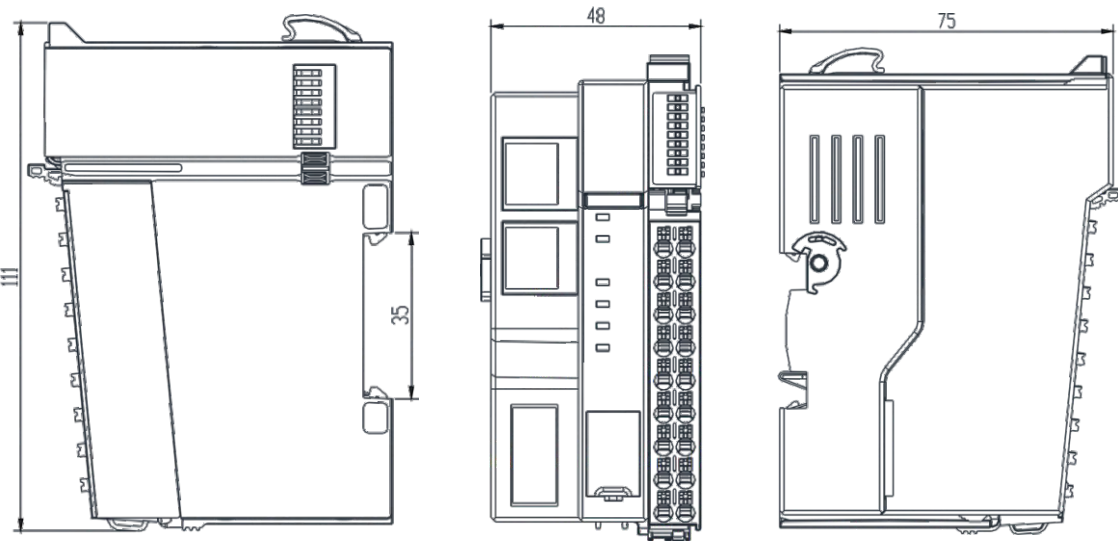
Working temperature	-25...60°C
Storage temperature	-40...85°C
Relative humidity	5...95%RH(non-condensing)

LED Status Indicator

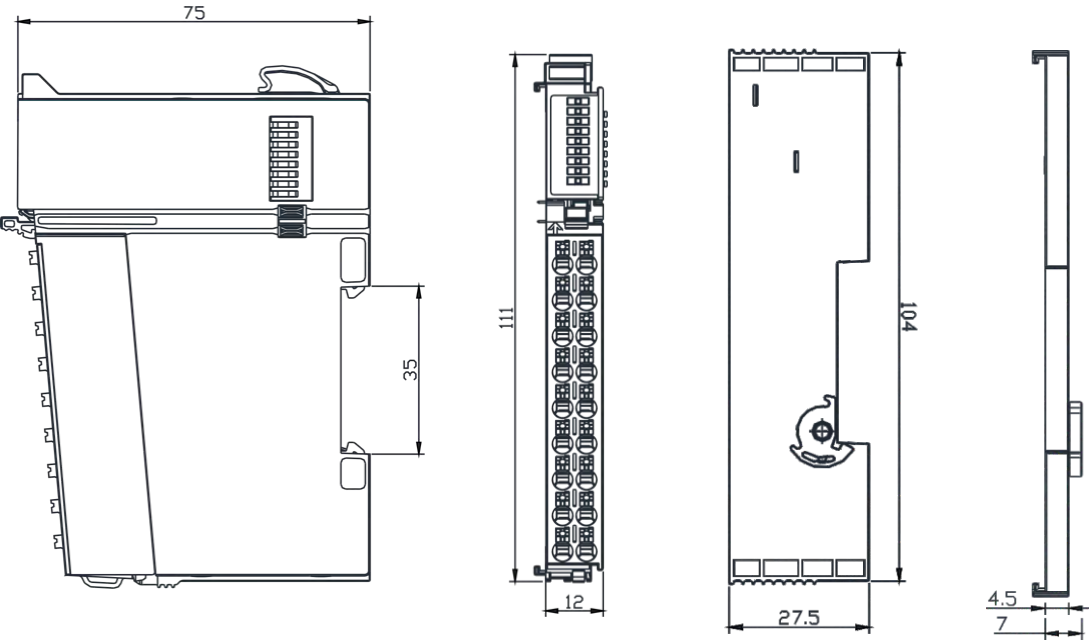
PW	Green: Internal bus power supply is normal, green off: The internal bus of the module is working abnormally
ST	Power on stage: green on: module initialization abnormal, green off: module initialization normal
	Operation phase: Green flashing: The internal bus of the module is working normally, green off: The internal bus of the module is working abnormally
L0~L3	Green on: the corresponding channel IO-LINK normal communication, green flash: the corresponding channel does not have IO-LINK slave access, green off: the corresponding channel is not configured as IO-LINK mode
F0~F3	Red light: the corresponding channel reports an error, red off: the corresponding channel does not report an error
D0~D3	Green on: DI input valid signal, green off: DI no input valid signal
EP	On: External power supply normal Off: External power supply normal

DF50 series dimension

DF50 series bus coupler dimension



DF50 series I/O module & Terminal cover dimension



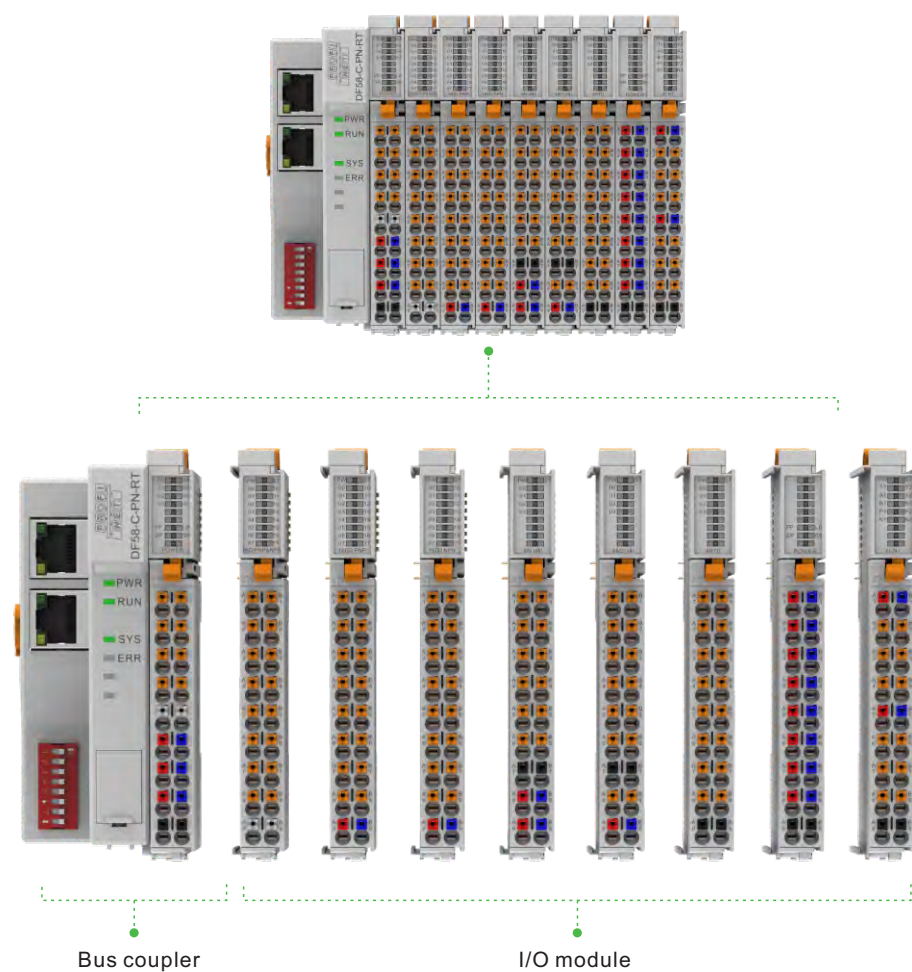
DF58 series I/O



-  Small
-  Compact
-  Convenient

- The DF58 series I/O system adopts 100M backplane bus for high-speed response to requirements
- Comprehensively improve I/O performance and compatibility
- Tool free use, greatly improving convenience
- The bus coupler supports 32 modules, and only when there are more than 16 extension modules, an additional power module is required

DF58 Series I/O Modules



Bus coupler

- The bus coupler comes with 8 digital inputs
- Supports multiple industrial Ethernet bus protocols
- 100M high-speed backplane bus, supporting up to 32 modules
- 16 modules do not require additional power modules; 17-32 modules require an additional power module

Tool free

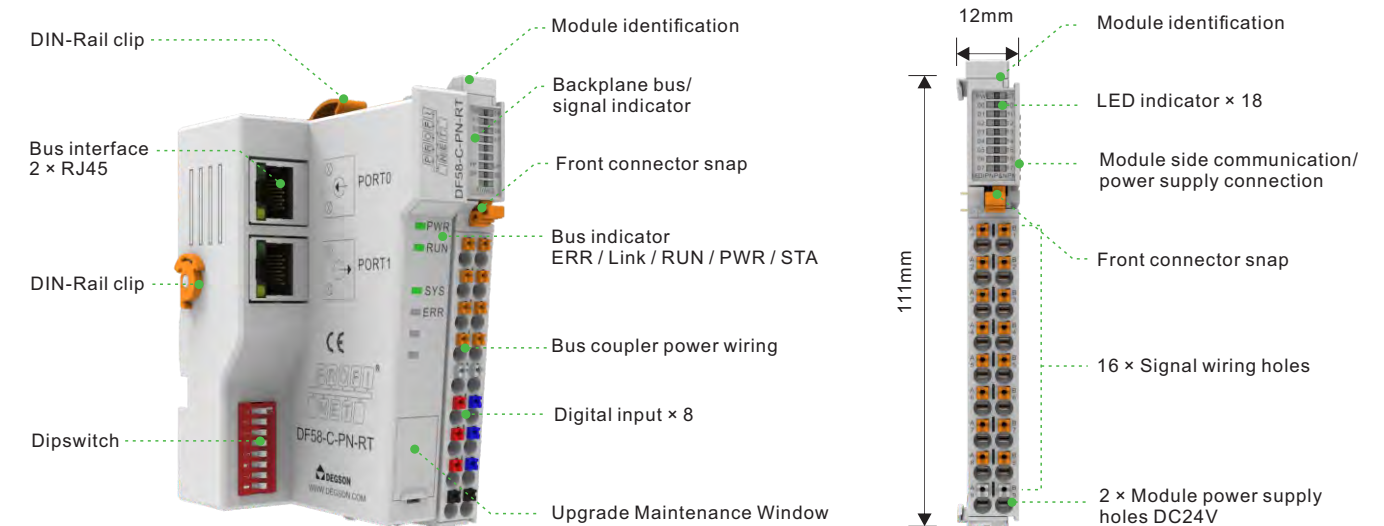
- No tools required for module installation and disassembly
- No tools required to install and remove front connectors
- No tools required for wiring and dismantling

I/O module

- Digital input compatible with both PNP and NPN signals
- The analog input/output module is compatible with current and voltage, supports multiple ranges and each channel can be independently selected, and supports 2, 3, and 4 wire connection methods

Appearance

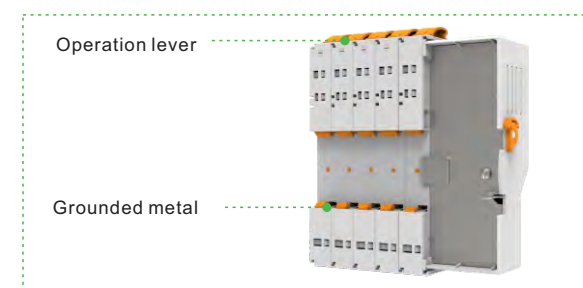
- 12mm ultra-thin volume, sharp blade shape
- The module has an identification system
- The module is grounded through the back metal connection DIN-rail
- Distinguish wiring holes with different functions by color



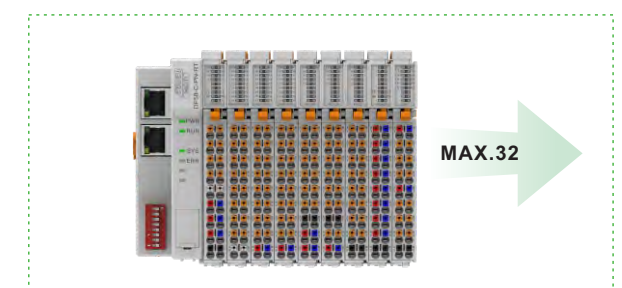
- PUSH-IN, no tools required for wire connection and disassembly



- Pluggable front connector



- Tool free manual operation lever
- The module is grounded through the back metal connection DIN-rail



- Bus coupler can support up to 32 modules



- Module has identification
- The module indicator system contains information such as signals, power, faults ...



- Communication between modules through side connecting finger
- Module power supply is connected through side metal clips

PROFINET Bus coupler



DF58-C-PN-RT

Pin Definition

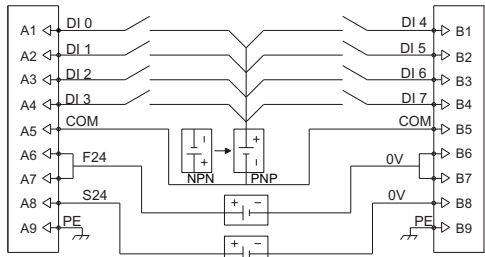


PROFINET, 2 RJ45, extensible 32 modules, 24VDC

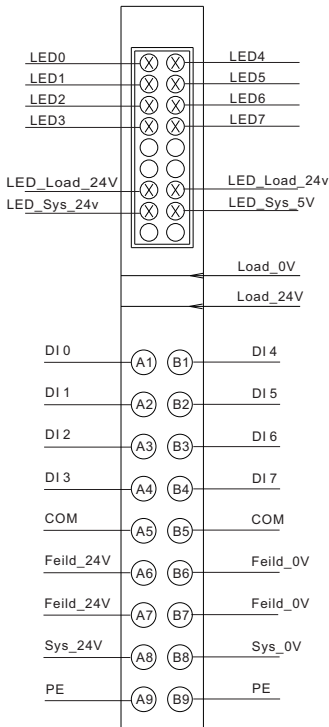
Features

- With a power module.
- LED display working status, alarm and bus fault prompt.
- Two PROFINET interface (RJ45,10/100Mbps).
- With Media Redundancy Protocol.

Wiring Diagram



COM is the common terminal of DI0~DI7, connected To 24V is NPN, and connected to 0V is PNP



Specification	
Product	DF58-C-PN-RT
Communication protocol	PROFINET
Transmission rate	100Mbps, full duplex
Transmission distance	100 meters
PDO data	512 bytes
Number of extensible modules	32
Address mapping	Yes
Address setting	PROFINET specification
Transmission medium	Class 5 twisted pair cable
Isolation method	Electrical isolation
Features	RT, conforming to Class C, MRP, automatic addressing/topology detection
Alarm function	Diagnostic alarm, process alarm, plug and unplug connector alarm
Minimum cycle time	1ms

Digital Inputs Specification	
Number of channels	8
Data size	1 Byte
Signal type	NPN & PNP
"0" signal voltage	<5V
"1" signal voltage	>15V
Connection type	1-line
Reverse protection	Yes
Isolation method	Photoelectric isolation
Fault diagnosis	Yes
Typical input current	0.678mA
Fault diagnosis	4.07mA
Typical input current	2.46mA
Fault diagnosis	4.7mA
Filtering time	No filtering, 0.25ms, 0.5ms, 1ms (factory setting), 2ms, 4ms, 8ms, 16ms, 32ms
Hardware response time	100us

PROFINET Bus coupler



Product DF58-C-PN-RT

Power Supply Parameters

Connection type	PUSH-IN type terminal block
Working voltage	24V DC +20 %/ -15 %
Working current	0.35A ~ 6A
Maximum area of wire	1.5mm²
Maximum area of wire (AWG)	AWG16
The minimum area of a wire	0.14mm²
The minimum area of a wire (AWG)	AWG26
Strip length	8...10mm
Supply system voltage	5VDC
Supply system current	Max.2A
Supply load voltage	24V...36VDC
Supply load current (MAX)	10A

Mechanical Structure

Protection grade	IP20
Size(H X W X D)	111mm X 48mm X 75mm
Installation type	35mm DIN

Work Environment

Working temperature	-25...60°C
Storage temperature	-40...85°C
Relative humidity	5...95%RH(non-condensing)

LED Status Indicator

PWR	Green: Power is working
RUN	Green: I/O system is running
SYS	Blinking green: The module is working
ERR	Red: An error occurred between I/O system and module
LED Sys 24v	Green:The system power is working(24V)
LED Load 24V	Green: The load power is working
LED Sys 5V	Green:The system power is working(5V)

EtherCAT Bus coupler



DF58-C-EC

Pin Definition

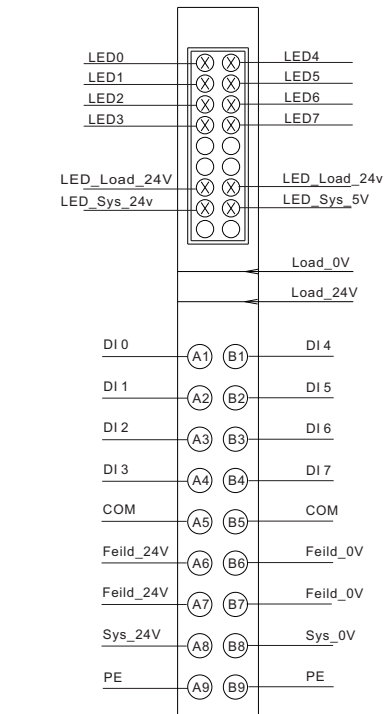
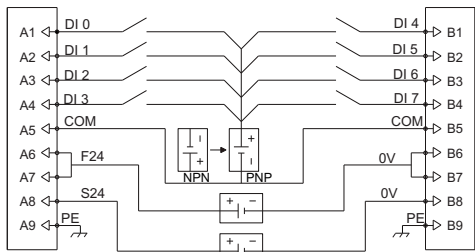


EtherCAT, 2 RJ45, extensible 32 modules, 24VDC

Features

- With a power module.
- LED display working status, alarm and bus fault prompt.
- Two EtherCAT interface (RJ45, 100Mbps).

Wiring Diagram



COM is the common terminal of DI0~DI7, connected To 24V is NPN, and connected to 0V is PNP

Specification		Digital Inputs Specification	
Product	DF58-C-EC	Number of channels	8
Communication protocol	EtherCAT	Data size	1 Byte
Transmission rate	100Mbps, full duplex	Signal type	NPN & PNP
Transmission distance	100 meters	"0" signal voltage	<5V
PDO data	1024 bytes	"1" signal voltage	>15V
Number of extensible modules	32	Connection type	1-line
Address mapping	Yes	Reverse protection	Yes
Address setting	EtherCAT specification, DIP switch	Isolation method	Photoelectric isolation
Transmission medium	Class 5 twisted pair cable	Fault diagnosis	Yes
Isolation method	Electrical isolation	Typical input current	0.678mA
Alias range	1~254	Fault diagnosis	4.07mA
		Typical input current	2.46mA
Alarm function	Diagnostic alarm, process alarm, plug and unplug connector alarm	Fault diagnosis	4.7mA
		Filtering time	No filtering, 0.25ms, 0.5ms, 1ms (factory setting), 2ms, 4ms, 8ms, 16ms, 32ms
Connection type	2 X RJ45, with switch function	Hardware response time	100us

EtherCAT Bus coupler



Product

DF58-C-EC

Power Supply Parameters

Connection type	PUSH-IN type terminal block
Working voltage	24V DC +20 %/ -15 %
Working current	0.35A ~ 6A
Maximum area of wire	1.5mm²
Maximum area of wire (AWG)	AWG16
The minimum area of a wire	0.14mm²
The minimum area of a wire (AWG)	AWG26
Strip length	8...10mm
Supply system voltage	5VDC
Supply system current	Max.2A
Supply load voltage	24V...36VDC
Supply load current (MAX)	10A

Mechanical Structure

Protection grade	IP20
Size(H X W X D)	111mm X 48mm X 75mm
Installation type	35mm DIN

Work Environment

Working temperature	-25...60°C
Storage temperature	-40...85°C
Relative humidity	5...95%RH(non-condensing)

LED Status Indicator

PWR	Green: Power is working
RUN	Green: I/O system is running
SYS	Blinking green: The module is working
ERR	Red: An error occurred between I/O system and module
LED Sys 24v	Green:The system power is working(24V)
LED Load 24V	Green: The load power is working
LED Sys 5V	Green:The system power is working(5V)

CC-LINK IE Field Basic Bus coupler

CE RoHS

DF58-C-CC-FB

Pin Definition

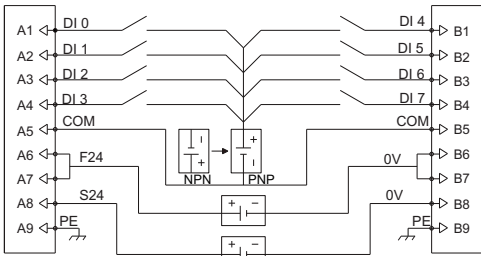


CC-LINK IE Field Basic, 2 RJ45, extensible 32 modules, 24VDC

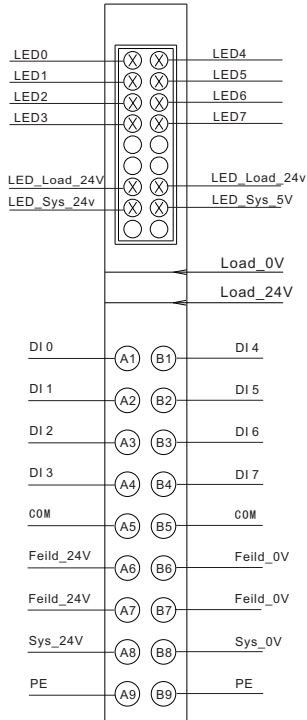
Features

- With a power module.
- LED display working status, alarm and bus fault prompt.
- CC-LINK IE Field Basic interface (RJ45,10/100Mbps).

Wiring Diagram



COM is the common terminal of DI0~DI7, connected To 24V is NPN, and connected to 0V is PNP



Specification		Digital Inputs Specification	
Product	DF58-C-CC-FB	Number of channels	8
Communication protocol	CC-LINK IE Field Basic	Data size	1 Byte
Transmission rate	100Mbps, full duplex	Signal type	NPN & PNP
Transmission distance	100 meters	"0" signal voltage	<5V
PDO data	576 bytes	"1" signal voltage	>15V
Number of extensible modules	32	Connection type	1-line
Address mapping	Yes	Reverse protection	Yes
Address setting	CC-LINK IE Field Basic specification, DIP switch	Isolation method	Photoelectric isolation
Transmission medium	Class 5 twisted pair cable	Fault diagnosis	Yes
Isolation method	Electrical isolation	Typical input current	0.678mA
Address range	1~254	Fault diagnosis	4.07mA
		Typical input current	2.46mA
Alarm function	Diagnostic alarm, process alarm, plug and unplug connector alarm	Fault diagnosis	4.7mA
		Filtering time	No filtering, 0.25ms, 0.5ms, 1ms (factory setting), 2ms, 4ms, 8ms, 16ms, 32ms
Connection type	2 X RJ45, with switch function	Hardware response time	100us

CC-LINK IE Field Basic Bus coupler

CE RoHS

Product DF58-C-CC-FB

Power Supply Parameters

Connection type	PUSH-IN type terminal block
Working voltage	24V DC +20 %/ -15 %
Working current	0.35A ~ 6A
Maximum area of wire	1.5mm²
Maximum area of wire (AWG)	AWG16
The minimum area of a wire	0.14mm²
The minimum area of a wire (AWG)	AWG26
Strip length	8...10mm
Supply system voltage	5VDC
Supply system current	Max3A
Supply load voltage	24V...36VDC
Supply load current (MAX)	10A

Mechanical Structure

Protection grade	IP20
Size(H X W X D)	111mm X 48mm X 75mm
Installation type	35mm DIN

Work Environment

Working temperature	-25...60°C
Storage temperature	-40...85°C
Relative humidity	5...95%RH(non-condensing)

LED Status Indicator

PWR	Green: Power is working
RUN	Green: I/O system is running
SYS	Blinking green: The module is working
ERR	Red: An error occurred between I/O system and module
LED Sys 24v	Green:The system power is working(24V)
LED Load 24V	Green: The load power is working
LED Sys 5V	Green:The system power is working(5V)

Modbus TCP/IP Bus coupler



DF58-C-MD-TCP

Pin Definition

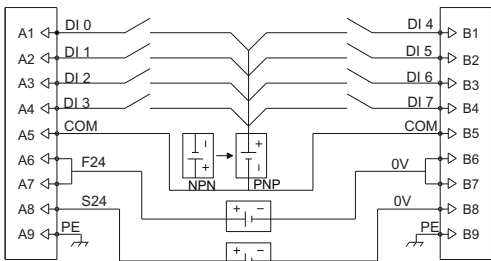


Modbus TCP/IP, 1 RJ45, extensible 16 modules, 24VDC

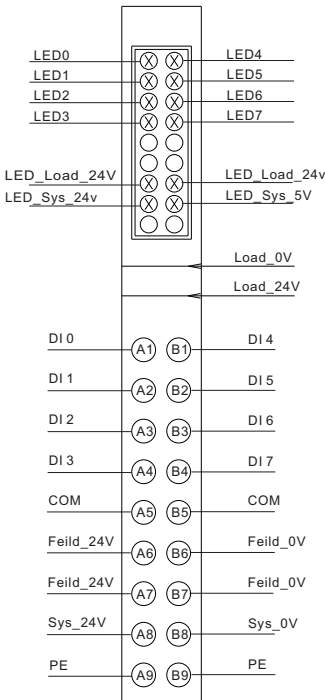
Features

- With a power module.
- LED display working status, alarm and bus fault prompt.
- Modbus TCP/IP interface (RJ45, 10/100Mbps)

Wiring Diagram



COM is the common terminal of DI0~DI7, connected To 24V is NPN, and connected to 0V is PNP



Specification

Product	DF58-C-MD-TCP
Communication protocol	Modbus TCP/IP
Transmission rate	100Mbps, full duplex
Transmission distance	100 meters
PDO data	1024 bytes
Number of extensible modules	32
Address mapping	Yes
Address setting	Modbus TCP/IP specification, DIP switch
Transmission medium	Class 5 twisted pair cable
Isolation method	Electrical isolation
Address range	1~254
Alarm function	Diagnostic alarm, process alarm, plug and unplug connector alarm
Support Modbus function	02,03,05,06,15,16

Digital Inputs Specification

Number of channels	8
Data size	1 Byte
Signal type	NPN & PNP
"0" signal voltage	<5V
"1" signal voltage	>15V
Connection type	1-line
Reverse protection	Yes
Isolation method	Photoelectric isolation
Fault diagnosis	Yes
Typical input current	0.678mA
Fault diagnosis	4.07mA
Typical input current	2.46mA
Fault diagnosis	4.7mA
Filtering time	No filtering, 0.25ms, 0.5ms, 1ms (factory setting), 2ms, 4ms, 8ms, 16ms, 32ms
Hardware response time	100us

Modbus TCP/IP Bus coupler



Product

DF58-C-MD-TCP

Power Supply Parameters

Connection type	PUSH-IN type terminal block
Working voltage	24V DC +20 %/ -15 %
Working current	0.35A ~ 6A
Maximum area of wire	1.5mm²
Maximum area of wire (AWG)	AWG16
The minimum area of a wire	0.14mm²
The minimum area of a wire (AWG)	AWG26
Strip length	8...10mm
Supply system voltage	5VDC
Supply system current	Max3A
Supply load voltage	24V...36VDC
Supply load current (MAX)	10A

Mechanical Structure

Protection grade	IP20
Size(H X W X D)	111mm X 48mm X 75mm
Installation type	35mm DIN

Work Environment

Working temperature	-25...60°C
Storage temperature	-40...85°C
Relative humidity	5...95%RH(non-condensing)

LED Status Indicator

PWR	Green: Power is working
RUN	Green: I/O system is running
SYS	Blinking green: The module is working
ERR	Red: An error occurred between I/O system and module
LED Sys 24v	Green:The system power is working(24V)
LED Load 24V	Green: The load power is working
LED Sys 5V	Green:The system power is working(5V)

EtherNet/IP Bus coupler



DF58-C-EN-IP

Pin Definition

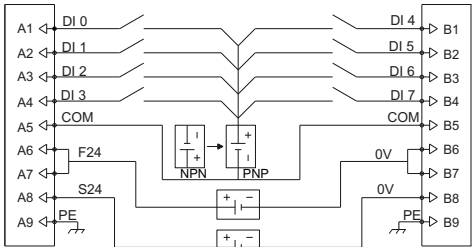


EtherNet/IP, 2 RJ45, extensible 32 modules, 24VDC

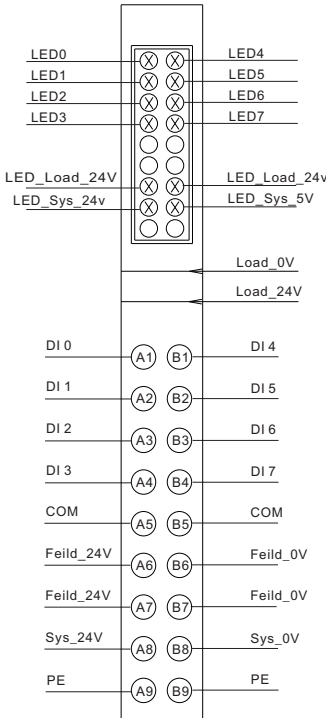
Features

- With a power module.
- LED display working status, alarm and bus fault prompt.
- Two EtherNet/IP interface (RJ45, 10/100Mbps).

Wiring Diagram



COM is the common terminal of DI0~DI7, connected To 24V is NPN, and connected to 0V is PNP



Specification	
Product	DF58-C-EN-IP
Communication protocol	EtherNet/IP
Transmission rate	100Mbps, full duplex
Transmission distance	100 meters
PDO data	1024 bytes
Number of extensible modules	32
Address mapping	Yes
Address setting	EtherNet/IP specification, DIP switch
Transmission medium	Class 5 twisted pair cable
Isolation method	Electrical isolation
Minimum cycle time	1ms
Alarm function	Diagnostic alarm, process alarm, plug and unplug connector alarm

EtherNet/IP Bus coupler



Product DF58-C-EN-IP

Power Supply Parameters

Connection type	PUSH-IN type terminal block
Working voltage	24V DC +20 %/ -15 %
Working current	0.35A ~ 6A
Maximum area of wire	1.5mm²
Maximum area of wire (AWG)	AWG16
The minimum area of a wire	0.14mm²
The minimum area of a wire (AWG)	AWG26
Strip length	8...10mm
Supply system voltage	5VDC
Supply system current	Max3A
Supply load voltage	24V...36VDC
Supply load current (MAX)	10A

Mechanical Structure

Protection grade	IP20
Size(H X W X D)	111mm X 48mm X 75mm
Installation type	35mm DIN

Work Environment

Working temperature	-25...60°C
Storage temperature	-40...85°C
Relative humidity	5...95%RH(non-condensing)

LED Status Indicator

PWR	Green: Power is working
RUN	Green: I/O system is running
SYS	Blinking green: The module is working
ERR	Red: An error occurred between I/O system and module
LED Sys 24v	Green:The system power is working(24V)
LED Load 24V	Green: The load power is working
LED Sys 5V	Green:The system power is working(5V)

Digital input module



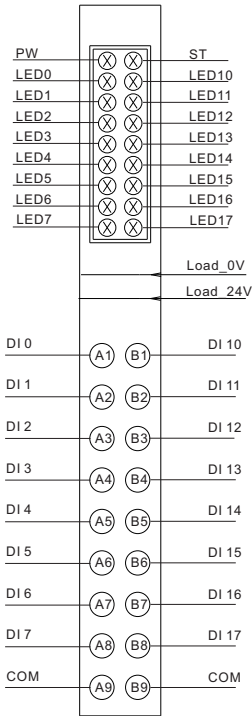
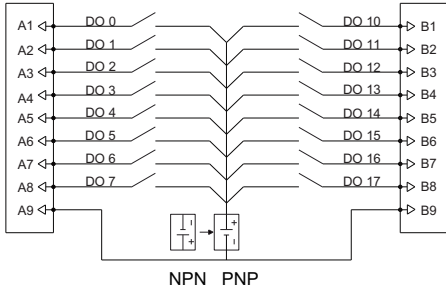
DF58-M-16DI-P/N

Pin Definition



Digital input module, 16 ports, PNP/NPN,24VDC

Wiring Diagram



COM is the common terminal of DI0~DI7, connected To 24V is NPN, and connected to 0V is PNP

Specification		Power Supply Parameters	
Product	DF58-M-16DI-P/N	Connection type	PUSH-IN type terminal block
Number of channels	16	Working voltage	24V DC +20 %/ -15 %
Data size	2 Byte	System feed current	<15mA
Signal type	NPN & PNP	Maximum area of wire	1.5mm²
"0" signal voltage	<5V	Maximum area of wire (AWG)	AWG16
"1" signal voltage	>15V	The minimum area of a wire	0.14mm²
Connection type	1-line	The minimum area of a wire (AWG)	AWG26
Reverse protection	Yes	Strip length	8...10mm
Isolation method	Photoelectric isolation	Mechanical Structure	
Fault diagnosis	Yes	Protection grade	IP20
Typical input current	0.678mA	Size(H X W X D)	111mm X 12mm X 75mm
Fault diagnosis	4.07mA	Installation type	35mm DIN
Typical input current	2.46mA	Work Environment	
Fault diagnosis	4.7 mA	Working temperature	-25...60°C
Filtering time	No filtering, 0.25ms, 0.5ms, 1ms (factory setting), 2ms, 4ms, 8ms, 16ms, 32ms,	Storage temperature	-40...85°C
Hardware response time	100us	Relative humidity	5...95%RH(non-condensing)

Digital output module



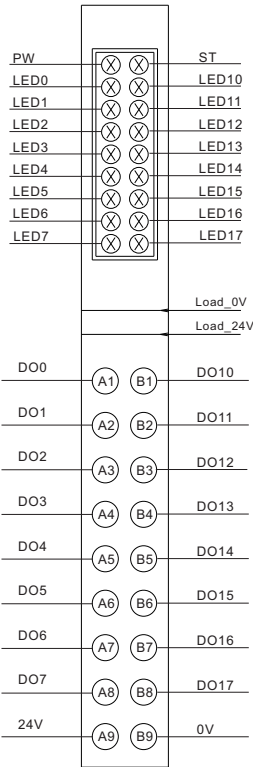
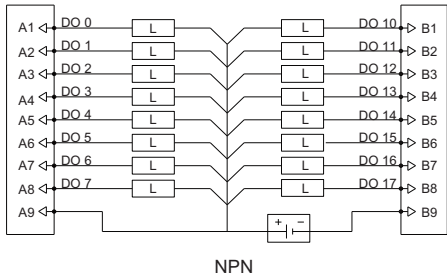
DF58-M-16DO-N

Pin Definition



Digital output module, 16 ports, NPN, 24VDC

Wiring Diagram



Specification		Power Supply Parameters	
Product	DF58-M-16DO-N	Connection type	PUSH-IN type terminal block
Number of channels	16	Working voltage	24V DC +20 %/ -15 %
Data size	2 Byte	System feed current	<75mA
Signal type	NPN	Maximum area of wire	1.5mm²
"0" signal voltage	high-impedance state	Maximum area of wire (AWG)	AWG16
"1" signal voltage	0V DC	The minimum area of a wire	0.14mm²
Connection type	1-line	The minimum area of a wire (AWG)	AWG26
Reverse protection	Yes	Strip length	8...10mm
Isolation method	Photoelectric isolation	Mechanical Structure	
Switching Frequency (resistance/lamp load)	<1000Hz	Protection grade	IP20
Switching Frequency (Inductive load)	<0.2Hz	Size(H X W X D)	111mm X 12mm X 75mm
Response Time of the Protection Circuit	< 100µs	Installation type	35mm DIN
Output current per channel(MAX)	500 mA	Work Environment	
Load type	Inductance, resistance, lamp	Working temperature	-25...60°C
		Storage temperature	-40...85°C
		Relative humidity	5...95%RH(non-condensing)

Digital output module



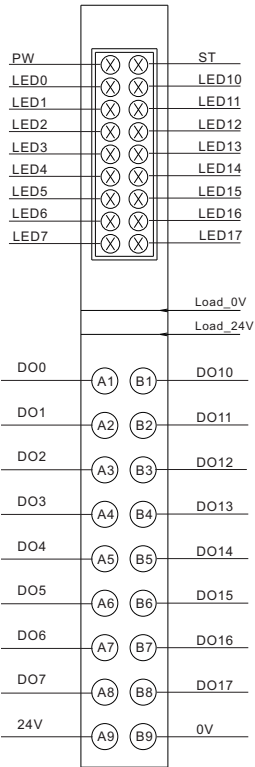
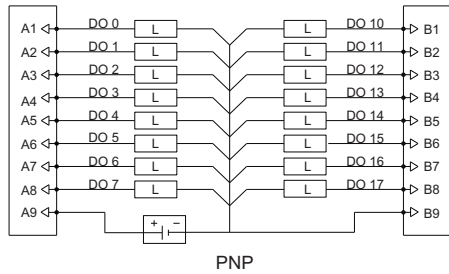
DF58-M-16DO-P

Pin Definition



Digital output module, 16 ports, PNP, 24VDC

Wiring Diagram



Specification		Power Supply Parameters	
Product	DF58-M-16DO-P	Connection type	PUSH-IN type terminal block
Number of channels	16	Working voltage	24V DC +20 %/ -15 %
Data size	2 Byte	System feed current	<75mA
Signal type	PNP	Maximum area of wire	1.5mm²
"0" signal voltage	High-impedance state	Maximum area of wire (AWG)	AWG16
"1" signal voltage	24V DC	The minimum area of a wire	0.14mm²
Connection type	1-line	The minimum area of a wire (AWG)	AWG26
Reverse protection	Yes	Strip length	8...10mm
Isolation method	Photoelectric isolation	Mechanical Structure	
Switching Frequency (resistance/lamp load)	<1000Hz	Protection grade	IP20
Switching Frequency (inductive load)	<0.2Hz	Size(H X W X D)	111mm X 12mm X 75mm
Response Time of the Protection Circuit	< 100µs	Installation type	35mm DIN
Output current per channel(MAX)	500 mA	Work Environment	
Load type	Inductance, resistance, lamp	Working temperature	-25...60°C
		Storage temperature	-40...85°C
		Relative humidity	5...95%RH(non-condensing)

Analog input module



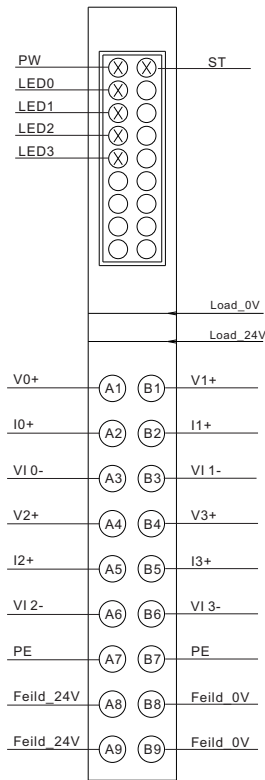
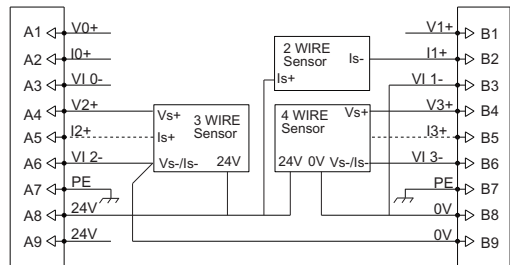
DF58-M-4AI-UI-6

Pin Definition



Analog input module, 4 channels, voltage type, current type

Wiring Diagram



Specification		Power Supply Parameters	
Product	DF58-M-4AI-UI-6	Connection type	PUSH-IN type terminal block
Number of channels	4	Working voltage	24V DC +20 %/ -15 %
Data size	8 Byte	System feed current	<120mA
Voltage test range	±10V, 0-10V, 2-10V, ±5V, 0-5V, 1-5V	Maximum area of wire	1.5mm²
Current test range	±20mA, 0-20mA, 4-20mA	Maximum area of wire (AWG)	AWG16
Connection type	2/3/4-line	The minimum area of a wire	0.14mm²
Reverse protection	Yes	The minimum area of a wire (AWG)	AWG26
Isolation method	Magnetic isolation	Strip length	8...10mm
Fault diagnosis	Yes	Mechanical Structure	
Internal Resistance	>450KΩ	Protection grade	IP20
Resolution	16 Bit	Size(H X W X D)	111mm X 12mm X 75mm
Signal type	difference	Installation type	35mm DIN
Conversion digital quantity range configuration	Default configuration (- 27648 to 27648), support ± 32000	Work Environment	
Precision	0.20%	Working temperature	-25...60°C
Conversion time	400us/channel	Storage temperature	-40...85°C
Sampling rate	20-300Hz (Configuration)	Relative humidity	5...95%RH(non-condensing)

Analog output module



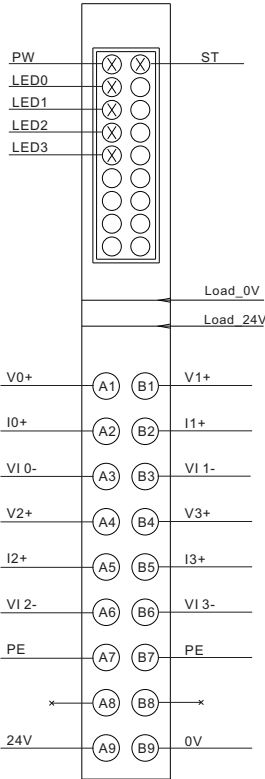
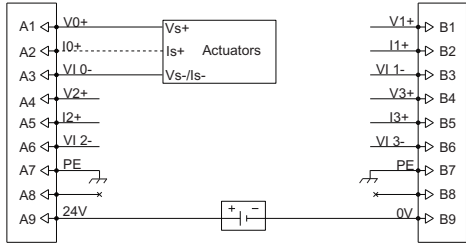
DF58-M-4AO-UI-6

Pin Definition



Analog output module, 4 channels, voltage type, current type

Wiring Diagram



Specification		Power Supply Parameters	
Product	DF58-M-4AO-UI-6	Connection type	PUSH-IN type terminal block
Number of channels	4	Working voltage	24V DC +20 %/ -15 %
Data size	8 Byte	System feed current	<110mA
Voltage output range	±10V, 0-10V, 2-10V, ±5V, 0-5V, 1-5V	Maximum area of wire	1.5mm²
Current output range	±20mA, 0-20mA, 4-20mA	Maximum area of wire (AWG)	AWG16
Signal type	Differential signal	The minimum area of a wire	0.14mm²
Connection type	2/3/4-line	The minimum area of a wire (AWG)	AWG26
Overcurrent protection	Yes	Strip length	8...10mm
Isolation method	Magnetic isolation	Mechanical Structure	
Fault diagnosis	Yes	Protection grade	IP20
Resolution	16 Bit	Size(H X W X D)	111mm X 12mm X 75mm
Precision	0.10%	Installation type	35mm DIN
Load type	Sensibility, resistance, tolerance	Work Environment	
Conversion digital quantity range configuration	Default configuration (- 27684 to 27684), support ± 32000	Working temperature	-25...60°C
Conversion time	150us/channel	Storage temperature	-40...85°C
		Relative humidity	5...95%RH(non-condensing)

Temperature module



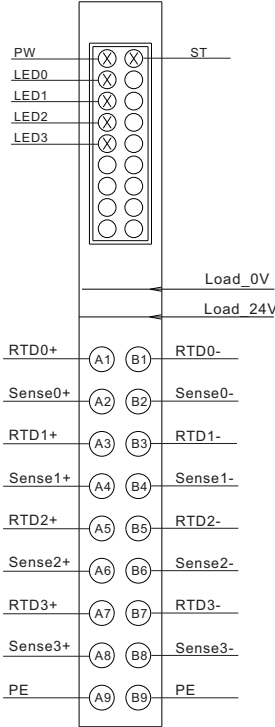
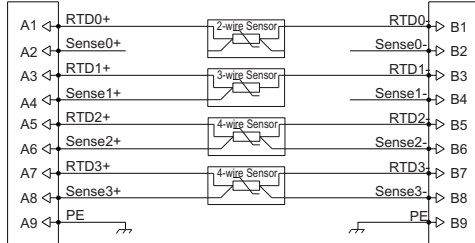
DF58-M-4RTD-PT

Pin Definition



Thermal Resistance (RTD) measurement module, 16 bit resolution, 4 channels

Wiring Diagram



Specification		Power Supply Parameters	
Product	DF58-M-4RTD-PT	Connection type	PUSH-IN type terminal block
Number of channels	4	Working voltage	24V DC +20 %/ -15 %
Data size	8 Byte	System feed current	<100mA
Signal type	Thermal resistance	Maximum area of wire	1.5mm²
Signal type	Pt100, Pt200, Pt500, Pt1000, Ni100, Ni120, Ni 200, Ni500, Ni1000, Cu10, 40 Ω, 80 Ω, 150 Ω,300 Ω, 500 Ω, 1 kΩ, 2 kΩ, 4 kΩ	Maximum area of wire (AWG)	AWG16
Connection type	2/3/4-line	The minimum area of a wire	0.14mm²
Reverse protection	Yes	The minimum area of a wire (AWG)	AWG26
Isolation method	Magnetic isolation between each channel and the field layer, and isolation between channels	Strip length	8...10mm
Fault diagnosis	Yes	Mechanical Structure	
Resolution	16bit,0.1°C/ each number	Protection grade	IP20
Frequency interference suppression	10Hz 50Hz 60Hz 400Hz	Size(H X W X D)	111mm X 12mm X 75mm
Diagnosis	Disconnection, Parameter assignment error	Installation type	35mm DIN
Process alarm	Upper/Lower limit, per channel	Work Environment	
Temperature coefficient	±50ppm/K max.	Working temperature	-25...60°C
Internal resistance	>500Ω	Storage temperature	-40...85°C
Precision	'max. 0.2 % FSR / 0.3 % FSR for Ni sensors / 0.6 % FSR for Cu10	Relative humidity	5...95%RH(non-condensing)
Conversion time	100ms/4 channels		

Pulse counting module

CE RoHS

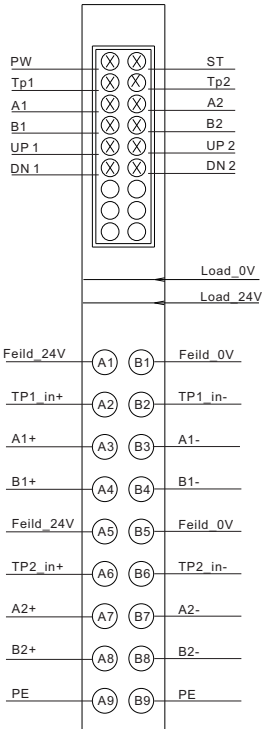
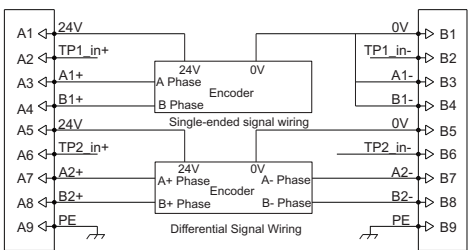
DF58-M-2CNT-PIL-24

Pin Definition



24VPulse counting module,2 port,24V

Wiring Diagram



NPN, TP1_in+ — Load_24V, TP1_in- — Signal
PNP, TP1_in+ — Signal, TP1_in- — Load_0V

Specification		Power Supply Parameters	
Product	DF58-M-2CNT-PIL-24	Connection type	PUSH-IN type terminal block
Maximum frequency count	1Mhz	Working voltage	24V DC +20 %/ -15 %
Number of channels	2	System feed current	<100mA
Data size	20 Byte	Maximum area of wire	1.5mm²
Input signal type	Incremental encoder AB or pulse/direction signal	Maximum area of wire (AWG)	AWG16
Input signal type	24V DC	The minimum area of a wire	0.14mm²
Input connection type	2-Line / 4-Line	The minimum area of a wire (AWG)	AWG26
Filtering time	0.01 to 1 ms	Strip length	8...10mm
Reverse protection	Yes	Mechanical Structure	
Isolation method	Isolate from the field layer optocoupler	Protection grade	IP20
Fault diagnosis	Yes, us response, error code can be queried by upper computer	Size(H X W X D)	111mm X 12mm X 66.8mm
		Installation type	35mm DIN
Resolution	32 Bit	Work Environment	
Precision	±1 pulse	Working temperature	-25...60℃
		Storage temperature	-40...85℃
		Relative humidity	5...95%RH(non-condensing)

System power supply module

CE RoHS

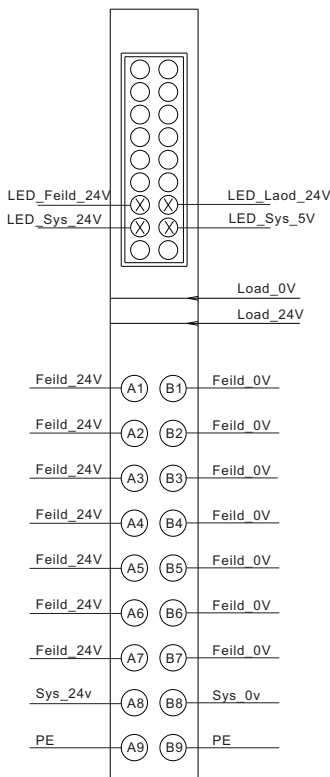
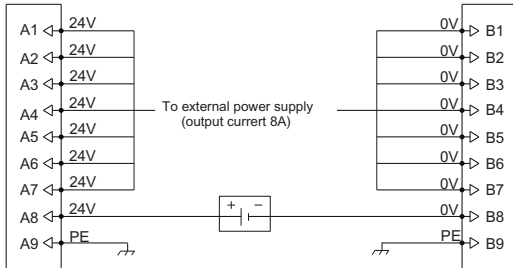
DF58-M-DC-U-5

Pin Definition



System power supply module, 24VDC to 5VDC

Wiring Diagram



Specification		Power Supply Parameters	
Product	DF58-M-DC-U-5	Connection type	PUSH-IN type terminal block
Number of channels	1	Working voltage	24V DC +20 %/ -15 %
Isolation method	System power supply to site power supply: isolation module	Reverse power protection	YES
Mechanical Structure		Supply system voltage	5VDC
Protection grade	IP20	Supply system current	Max.2A@5V
Size(H X W X D)	111mm X 12mm X 66.8mm	Supply load voltage	24V DC +20 %/ -15 %
Installation type	35mm DIN	Supply load current (MAX)	10A
Work Environment		Maximum area of wire	1.5mm²
Working temperature	-25...60°C	Maximum area of wire (AWG)	AWG16
Storage temperature	-40...85°C	The minimum area of a wire	0.14mm²
Relative humidity	5...95%RH(non-condensing)	The minimum area of a wire (AWG)	AWG26
		Strip length	8...10mm

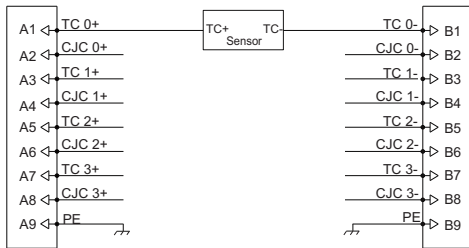
DF58-M-4TC

Pin Definition

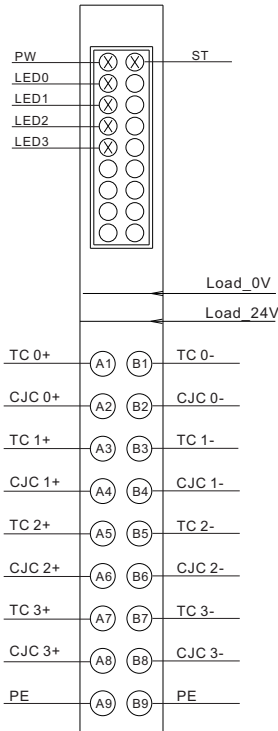


Thermocouple (TC) measurement module,
16 bit resolution, 4 channels

Wiring Diagram



CJC is the NTC compensation interface



Specification		Power Supply Parameters	
Product	DF58-M-4TC	Connection type	PUSH-IN type terminal block
Number of channels	4	Working voltage	24V DC +20 %/ -15 %
Data size	8 Byte	System feed current	<100mA
Signal type	Thermal resistance	Maximum area of wire	1.5mm ²
Signal type	E(-200 ~ 1000°C), S(-50 ~ 1,768°C), J(210 ~ 1,200°C), T(-200 ~ 400°C), K(-200 ~ 1,372°C), B(-50 ~ 1,820°C), N(-200 ~ 1300°C), C(0 ~ 2,315°C), R(-50 ~ 1,768°C), L(-200 ~ 900°C), U(-200 ~ 600°C)	Maximum area of wire (AWG)	AWG16
		The minimum area of a wire	0.14mm ²
Connection type	2/3/4-line	The minimum area of a wire (AWG)	AWG26
Reverse protection	Yes	Strip length	8...10mm
Isolation method	Magnetic isolation between each channel and the field layer, and isolation between channels	Mechanical Structure	
		Protection grade	IP20
Fault diagnosis	Yes	Size(H X W X D)	111mm X 12mm X 75mm
Resolution	16bit, 0.1°C/ each number	Installation type	35mm DIN
Frequency interference suppression	10Hz 50Hz 60Hz 400Hz	Work Environment	
Diagnosis	Disconnection, Parameter assignment error	Working temperature	-25...60°C
Process alarm	Upper/Lower limit, per channel	Storage temperature	-40...85°C
Temperature coefficient	≤50ppm/K .	Relative humidity	5...95%RH(non-condensing)
Internal resistance	>500Ω		
Precision	*max. 0.2 % FSR / 0.3 % FSR for Ni sensors / 0.6 % FSR for Cu10		
Conversion time	36.... 240ms, adjustable		

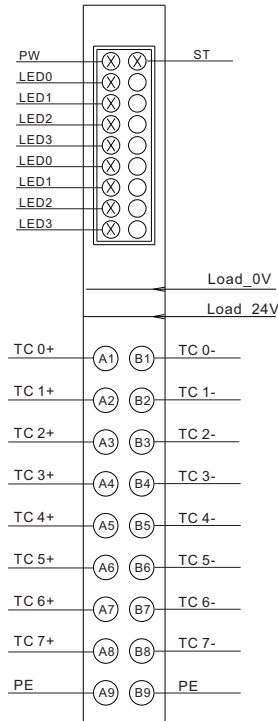
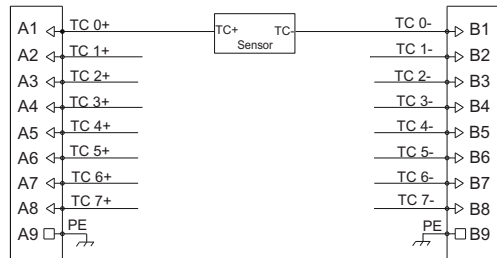
DF58-M-8TC

Pin Definition



Thermocouple (TC) measurement module,
16 bit resolution, 8 channels

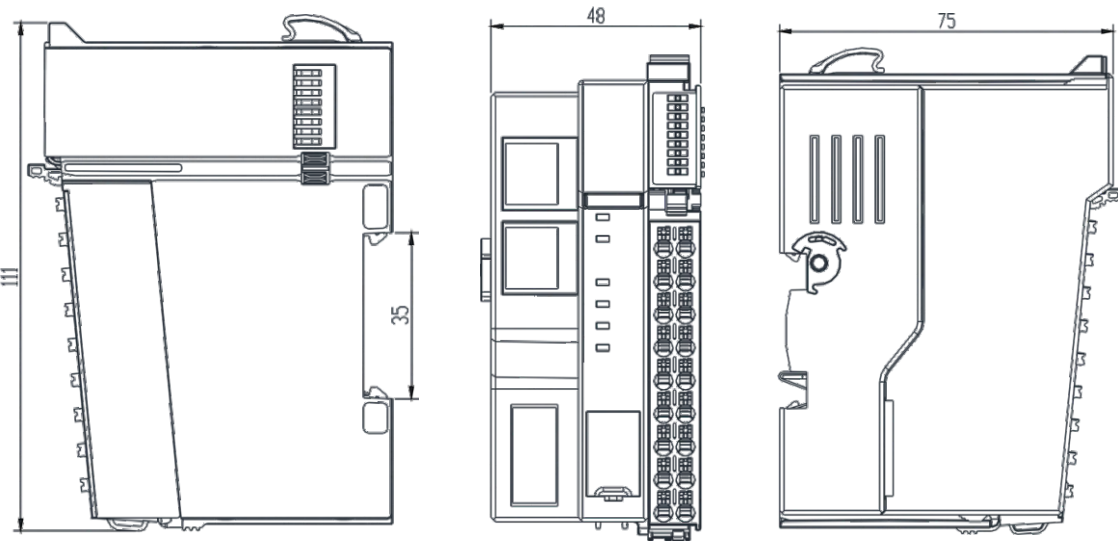
Wiring Diagram



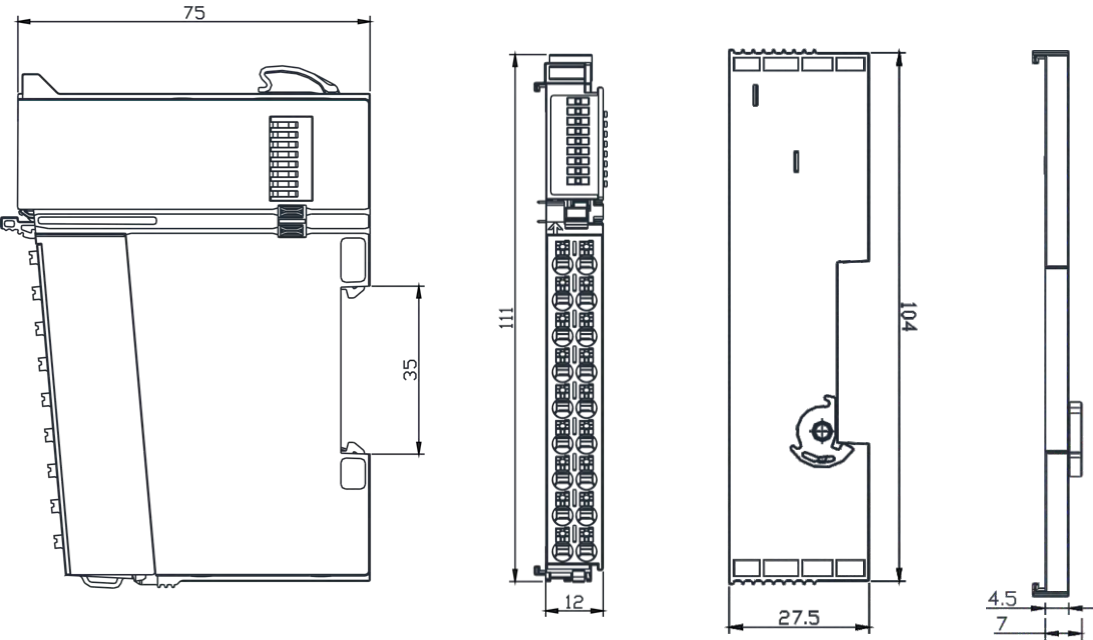
Specification		Power Supply Parameters	
Product	DF58-M-8TC	Connection type	PUSH-IN type terminal block
Number of channels	4	Working voltage	24V DC +20 %/ -15 %
Data size	16 Byte	System feed current	<100mA
Signal type	Thermal resistance	Maximum area of wire	1.5mm ²
Signal type	E(-200 ~ 1000°C), S(-50 ~ 1,768°C), J(210 ~ 1,200°C), T(-200 ~ 400°C), K(-200 ~ 1,372°C), B(-50 ~ 1,820°C), N(-200 ~ 1300°C), C(0 ~ 2,315°C), R(-50 ~ 1,768°C), L(-200 ~ 900°C), U(-200 ~ 600°C)	Maximum area of wire (AWG)	AWG16
		The minimum area of a wire	0.14mm ²
Connection type	2-line	The minimum area of a wire (AWG)	AWG26
Reverse protection	Yes	Strip length	8...10mm
Isolation method	Magnetic isolation between each channel and the field layer, and isolation between channels	Mechanical Structure	
		Protection grade	IP20
Fault diagnosis	Yes	Size(H X W X D)	111mm X 12mm X 75mm
Resolution	16bit, 0.1°C/ each number	Installation type	35mm DIN
Frequency interference suppression	10Hz 50Hz 60Hz 400Hz	Work Environment	
Diagnosis	Disconnection, Parameter assignment error	Working temperature	-25...60°C
Process alarm	Upper/Lower limit, per channel	Storage temperature	-40...85°C
Temperature coefficient	≤50ppm/K .	Relative humidity	5...95%RH(non-condensing)
Internal resistance	>500Ω		
Precision	*max. 0.2 % FSR / 0.3 % FSR for Ni sensors / 0.6 % FSR for Cu10		
Conversion time	36.... 240ms, adjustable		

DF58 series dimension

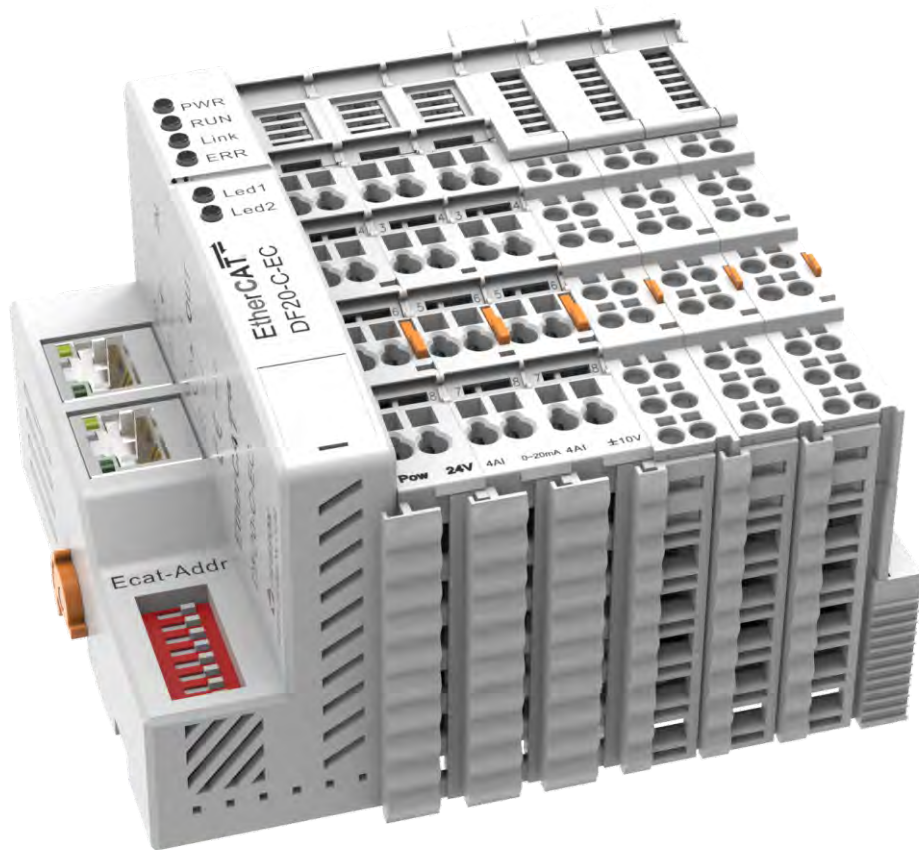
DF58 series bus coupler dimension



DF58 series I/O module & Terminal cover dimension



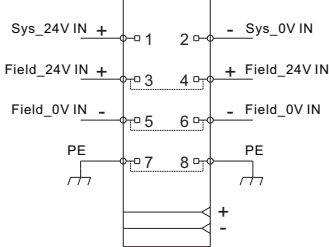
DF20 series I/O



- The DF20 series I/O system is the first generation I/O product
- Long term stable and reliable on-site application performance
- Pull back spring wiring, high vibration resistance
- The bus coupler supports 32 modules, all modules are powered from the side, and power modules are configured as needed
- Supports PROFINET, EtherCAT, EtherNet/IP, Modbus TCP/IP, CC-LINK IE Field Basic bus protocols

Model	Functionality	Coupler Support Module List				
		DF20-C-PN-RT-V10	DF20-C-EC	DF20-C-EN-IP	DF20-C-MD-TCP-V1	DF20-C-CC-FB
Digital Module						
DF20-M-8DI-N	8-Channel Digital Input Module, NPN Type	✓	✓	✓	✓	✓
DF20-M-8DI-P	8 Channel Digital Input Module, PNP Type	✓	✓	✓	✓	✓
DF20-M-16DI-N	16 Channel Digital Input Module, NPN Type	✓	✓	✓	✓	✓
DF20-M-16DI-P	16 Channel Digital Input Module, PNP Type	✓	✓	✓	✓	✓
DF20-M-32DI-N	32 Channel Digital Input Module, NPN Type	✓	✓	✓	✓	✓
DF20-M-32DI-P	32 Channel Digital Input Module, PNP Type	✓	✓	✓	✓	✓
DF20-M-4DO-R	4 Channel Relay Output, 5A	✓	✓	✓	✓	✓
DF20-M-8DO-N	8 Channel Digital Output Module, NPN Type	✓	✓	✓	✓	✓
DF20-M-8DO-P	8 Channel Digital Output Module, PNP Type	✓	✓	✓	✓	✓
DF20-M-16DO-N	16 Channel Digital Output Module, NPN Type	✓	✓	✓	✓	✓
DF20-M-16DO-P	16 Channel Digital Output Module, PNP Type	✓	✓	✓	✓	✓
DF20-M-32DO-N	32 Channel Digital Output Module, NPN Type	✓	✓	✓	✓	✓
DF20-M-32DO-P	32-Channel Digital Output Module, PNP Type	✓	✓	✓	✓	✓
DF20-M-8DIO-N	8-Channel Digital Input + 8-Channel Digital Output, NPN Type	✓	✓	✓	✓	✓
DF20-M-8DIO-P	8-channel digital input + 8-channel digital output, PNP type	✓	✓	✓	✓	✓
Analog Module						
DF20-M-4AI-U-0	4-channel analog input, voltage type, ±10V, 16bit	✓	✓	✓	✓	✓
DF20-M-4AI-U-1	4-channel analog input, voltage type, 0-10V, 16bit	✓	✓	✓	✓	✓
DF20-M-4AI-I-2	4-channel analog input, current type, 0-20ma, 16bit	✓	✓	✓	✓	✓
DF20-M-4AI-I-3	4-channel analog input, current type, 4-20ma, 16bit	✓	✓	✓	✓	✓
DF20-M-4AI-U-4	4-channel analog input, voltage type, ±10V/±5V/0-10V/2-10V/0-5V/1-5V,16bit	✓	✓	✓	✓	✓
DF20-M-8AI-U-4	8-channel analog input, voltage type, ±10V/±5V/0-10V/2-10V/0-5V/1-5V,16bit	✓	✓	✓	✓	✓
DF20-M-4AI-I-5	4-channel analog input, current type, 0-20ma/4-20ma,16bit	✓	✓	✓	✓	✓
DF20-M-8AI-I-5	8-channel analog input, current type,0-20ma/4-20ma,16bit	✓	✓	✓	✓	✓
DF20-M-2LC-S-5	2-channel analog input, Wheatstone bridge/pressure transducer type	✓	✓	✓	✓	✓
DF20-M-2RTD-PT	2-channel analog input, RTD type	✓	✓	✓	✓	✓
DF20-M-4RTD-PT	4-channel analog input, RTD Type	✓	✓	✓	✓	✓
DF20-M-4TC-KETJ	4-channel analog input, Thermocouple Type	✓	✓	✓	✓	✓
DF20-M-8TC-KETJ	8-channel analog input, Thermocouple Type	✓	✓	✓	✓	✓
DF20-M-4AO-U-0	4-channel analog output, voltage type, ±10V, 16bit	✓	✓	✓	✓	✓
DF20-M-4AO-U-1	4-channel analog output, voltage type, 0-10V, 16bit	✓	✓	✓	✓	✓
DF20-M-4AO-I-2	4-channel analog output, current type, 0-20ma, 16bit	✓	✓	✓	✓	✓
DF20-M-4AO-I-3	4-channel analog output, current type, 4-20ma, 16bit	✓	✓	✓	✓	✓

Model	Functionality	Coupler Support Module List				
		DF20-C-PN-RT-V10	DF20-C-EC	DF20-C-EN-IP	DF20-C-MD-TCP-V1	DF20-C-CC-FB
Analog Module						
DF20-M-4AO-U-4	4-channel analog output, voltage type, ±10V/±5V/0-10V/2-10V/0-5V/1-5V,16bit	✓	✓	✓	✓	✓
DF20-M-8AO-U-4	8-channel analog output, voltage type, ±10V/±5V/0-10V/2-10V/0-5V/1-5V,16bit	✓	✓	✓	✓	✓
DF20-M-4AO-I-5	4-channel analog output, current type, 0-20ma/4-20ma, 16bit	✓	✓	✓	✓	✓
DF20-M-8AO-I-5	8-channel analog output, current type, 0-20ma/4-20ma, 16bit	✓	✓	✓	✓	✓
Protocol Converter						
DF20-M-1COM-232/485/422	1-channel 485/232/422 communication module, supports FreeRun and Modbus RTU mode	✓	✓	✓	✗	✓
DF20-M-4IOL	4-channel IO-LINK communication module, support MASTER mode	✓	✓	✗	✗	✗
Pulse Counting / Output						
DF20-M-1CNT-EL-5	1 Channel Count Input, Incremental Encoder, 5V	✓	✓	✓	✓	✓
DF20-M-1CNT-EL-4	1 Channel Count Input, Incremental Encoder, 24V	✓	✓	✓	✓	✓
DF20-M-2CNT-PIL-5	2-Channel Pulse Count Input, 5V	✓	✓	✓	✓	✓
DF20-M-2CNT-PIL-4	2-Channel Count Input, Incremental Encoder, 24V	✓	✓	✓	✓	✓
DF20-M-2CNT-EL-5	2 Channel Count Input, Incremental Encoder or Pulse Direction, 5V	✓	✓	✓	✓	✓
DF20-M-2CNT-EL-4	2 Channel Count Input, Incremental Encoder or Pulse Direction, 24V	✓	✓	✓	✓	✓
DF20-M-1CNT-ELP-5	1 Channel Position Compare Trigger, Incremental Encoder Input, 422 Level Trigger Output, 5V	✓	✗	✗	✗	✗
DF20-M-2PWM	2-channel pulse output, support driver pointing and positioning function, support PWM output	✓	✓	✓	✓	✓
Auxiliary Modules						
DF20-M-DC-UD-5	Power extension module, system power 5V/2A, power 24V/8A	✓	✓	✓	✓	✓
DF20-M-DC-U-24	Power 24V distribution module	✓	✓	✓	✓	✓
DF20-M-DC-U-0	Power 0V distribution module	✓	✓	✓	✓	✓

PROFINET Bus coupler		CE RoHS	
DF20-C-PN-RT-V10		Wiring Diagram	
			
PROFINET, 2 RJ45, extensible 32 modules, 24VDC		DF20-C-PN-RT-V10	
Specification		Power Supply Parameters	
Product	DF20-C-PN-RT-V10	Connection type	Spring terminal blocks
Communication protocol	PROFINET	Working voltage	24V DC +20 %/ -15 %
Transmission rate	10/100Mbps, full duplex	Current without load	<350mA
Transmission distance	100 meters	Maximum area of wire	2.5mm²
PDO data	1024 bytes	Maximum area of wire (AWG)	AWG14
Number of extensible modules	32	The minimum area of a wire	0.2mm²
Address mapping	Yes	The minimum area of a wire (AWG)	AWG28
Address setting	PROFINET specification	Strip length	8...9mm
Transmission medium	Class 5 twisted pair cable	Supply system voltage	5VDC
Isolation method	Electrical isolation	Supply system current	2A
Features	RT, conforming to Class C, MRP, automatic addressing/topology detection	Supply load voltage	24V...32VDC
		Supply load current (MAX)	5A
Alarm function	Diagnostic alarm, process alarm, plug and unplug connector alarm	Work Environment	
Minimum cycle time	1ms	Working temperature	-25...60°C
Mechanical Structure		Storage temperature	-40...85°C
Protection grade	IP20	Relative humidity	5... 95%RH(non-condensing)
Size(H X W X D)	100mm X 48mm X 69mm		
Installation type	35mm DIN		

EtherCAT Bus coupler

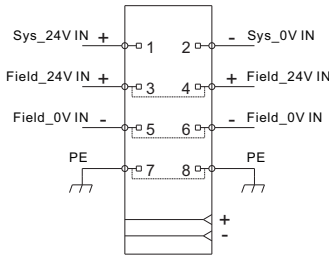
CERoHS

DF20-C-EC

Wiring Diagram



EtherCAT, 2 RJ45, extensible 31 modules, 24VDC



DF20-C-EC

Specification		Power Supply Parameters	
Product	DF20-C-EC	Connection type	Spring terminal blocks
Communication protocol	EtherCAT	Working voltage	24V DC +20 %/ -15 %
Connection type	2 X RJ45, with switch function	Current without load	<150mA
Transmission rate	10/100Mbps, full duplex	Maximum area of wire	2.5mm²
Transmission distance	100 meters	Maximum area of wire (AWG)	AWG14
PDO data	1024 bytes	The minimum area of a wire	0.2mm²
Number of extensible modules	31	The minimum area of a wire (AWG)	AWG28
Address mapping	Yes	Strip length	8...9mm
Address setting	EtherCAT specification, DIP switch	Supply system voltage	5VDC
Alias range	1~254	Supply system current	Max.0.6A
Transmission medium	Class 5 twisted pair cable	Supply load voltage	24V...32VDC
Isolation method	Electrical isolation	Supply load current (MAX)	5A
Mechanical Structure		Work Environment	
Protection grade	IP20	Working temperature	-25...60℃
Size(H X W X D)	100mm X 48mm X 69mm	Storage temperature	-40...85℃
Installation type	35mm DIN	Relative humidity	5... 95%RH(non-condensing)

EtherNet/IP Bus coupler

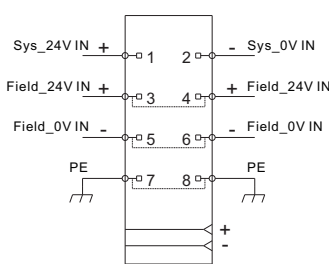
CERoHS

DF20-C-EN-IP

Wiring Diagram



EtherNet/IP, 2 RJ45, extensible 32 modules, 24VDC



DF20-C-EN-IP

Specification		Power Supply Parameters	
Product	DF20-C-EN-IP	Connection type	Spring terminal blocks
Communication protocol	EtherNet/IP	Working voltage	24V DC +20 %/ -15 %
Transmission rate	10/100Mbps, full duplex	Current without load	<350mA
Transmission distance	100 meters	Maximum area of wire	2.5mm²
PDO data	1024 bytes	Maximum area of wire (AWG)	AWG14
Number of extensible modules	32	The minimum area of a wire	0.2mm²
Address mapping	yes	The minimum area of a wire (AWG)	AWG28
Address setting	EtherNet/IP specification, DIP switch	Strip length	8...9mm
Transmission medium	Class 5 twisted pair cable	Supply system voltage	5VDC
Isolation method	Electrical isolation	Supply system current	Max.0.4A
Alarm function	Diagnostic alarm, process alarm, plug and unplug connector alarm	Supply load voltage	24V...32VDC
Minimum cycle time	1ms	Supply load current (MAX)	5A
Mechanical Structure		Work Environment	
Protection grade	IP20	Working temperature	-25...60℃
Size(H X W X D)	100mm X 48mm X 69mm	Storage temperature	-40...85℃
Installation type	35mm DIN	Relative humidity	5... 95%RH(non-condensing)

Modbus TCP/IP Bus coupler

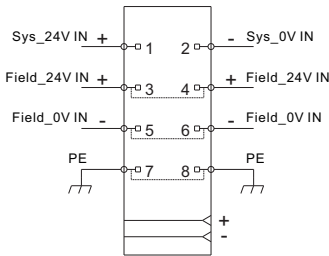


DF20-C-MD-TCP-V1

Wiring Diagram



Modbus TCP/IP, 1 RJ45, extensible 16 modules, 24VDC



DF20-C-MD-TCP-V1

Specification		Power Supply Parameters	
Product	DF20-C-MD-TCP-V1	Connection type	Spring terminal blocks
Communication protocol	Modbus TCP/IP	Working voltage	24V DC +20 %/ -15 %
Transmission rate	10/100Mbps	Current without load	<150mA
Transmission distance	100 meters	Maximum area of wire	2.5mm²
PDO data	1024 bytes	Maximum area of wire (AWG)	AWG14
Number of extensible modules	16	The minimum area of a wire	0.2mm²
Support Modbus function	02,03,05,06,15,16	The minimum area of a wire (AWG)	AWG28
Address mapping	Yes	Strip length	8...9mm
Address setting	Modbus TCP/IP specification, DIP switch	Supply system voltage	5VDC
Address range	2~253	Supply system current	Max.0.6A
Transmission medium	Class 5 twisted pair cable	Supply load voltage	24V...32VDC
Isolation method	Electrical isolation	Supply load current (MAX)	5A
Mechanical Structure		Work Environment	
Protection grade	IP20	Working temperature	-25...60°C
Size(H X W X D)	100mm X 48mm X 69mm	Storage temperature	-40...85°C
Installation type	35mm DIN	Relative humidity	5... 95%RH(non-condensing)

CC-LINK IEFB IP20 I/O System

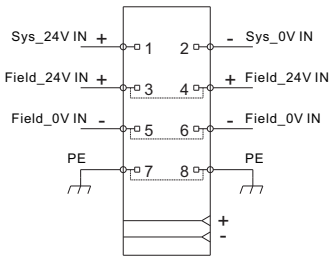


DF20-C-CC-FB

Wiring Diagram



CC-LINK IE Field Basic, 1 RJ45, expandable 32 modules, 24VDC



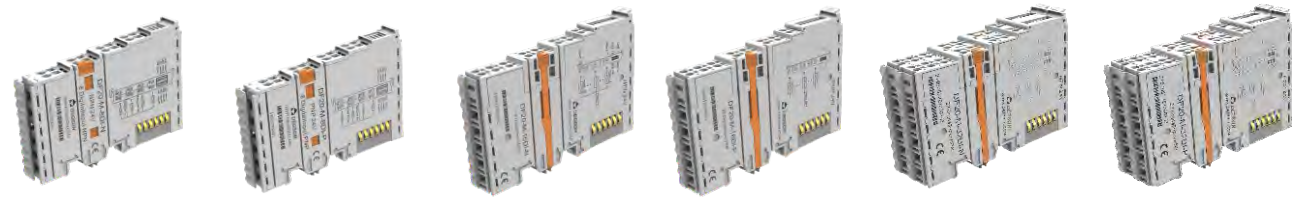
DF20-C-CC-FB

Specification			Power Supply Parameters	
Product	DF20-C-CC-FB		Connection type	Spring terminal blocks
Communication protocol	CC-LINK IE Field Basic		Working voltage	24V DC +20 %/ -15 %
Transmission rate	10/100Mbps		Current without load	<150mA
Transmission distance	100 meters		Maximum area of wire	2.5mm²
Maximum data volume	RX, RY	4×64 bits	Maximum area of wire (AWG)	AWG14
	RWr, RWw	4×32 Words	The minimum area of a wire	0.2mm²
Number of extensible modules	32		The minimum area of a wire (AWG)	AWG28
Address mapping	Yes		Strip length	8...9mm
Address setting	CC-LINK IE Field Basic specification, DIP switch		Supply system voltage	5VDC
Address range	1~253		Supply system current	Max.0.6A
Transmission medium	Class 5 twisted pair cable		Supply load voltage	24V...32VDC
Isolation method	Electrical isolation		Supply load current (MAX)	5A
Mechanical Structure			Work Environment	
Protection grade	IP20		Working temperature	-25...60°C
Size(H X W X D)	100mm X 48mm X 69mm		Storage temperature	-40...85°C
Installation type	35mm DIN		Relative humidity	5... 95%RH(non-condensing)

Digital input module

CE RoHS

DF20-M-8DI-N	DF20-M-8DI-P	DF20-M-16DI-N	DF20-M-16DI-P	DF20-M-32DI-N	DF20-M-32DI-P
--------------	--------------	---------------	---------------	---------------	---------------



NPN , 24VDC Digital input module, 8 ports, NPN, 24VDC	PNP , 24VDC Digital input module, 8 ports, PNP, 24VDC	NPN , 24VDC Digital input module, 16 ports, NPN, 24VDC	PNP , 24VDC Digital input module, 16 ports, PNP, 24VDC	NPN , 24VDC Digital input module, 32 ports, NPN, 24VDC	PNP , 24VDC Digital input module, 32 ports, PNP, 24VDC
---	---	--	--	--	--

Specification						
Product	DF20-M-8DI-N	DF20-M-8DI-P	DF20-M-16DI-N	DF20-M-16DI-P	DF20-M-32DI-N	DF20-M-32DI-P
Number of channels	8		16		32	
Data size	1 Byte		2 Byte		4 Byte	
Signal type	NPN	PNP	NPN	PNP	NPN	PNP
"0" signal voltage	18V...32V	0V...4V	18V...32V	0V...4V	18V...32V	0V...4V
"1" signal voltage	0V...4V	18V...32V	0V...4V	18V...32V	0V...4V	18V...32V
Connection type	1-line					
Reverse protection	Yes					
Isolation method	Photoelectric isolation					
Fault diagnosis	Yes					
Typical input current	3mA					
Filtering time	0.3ms					
Precision	0.20%					

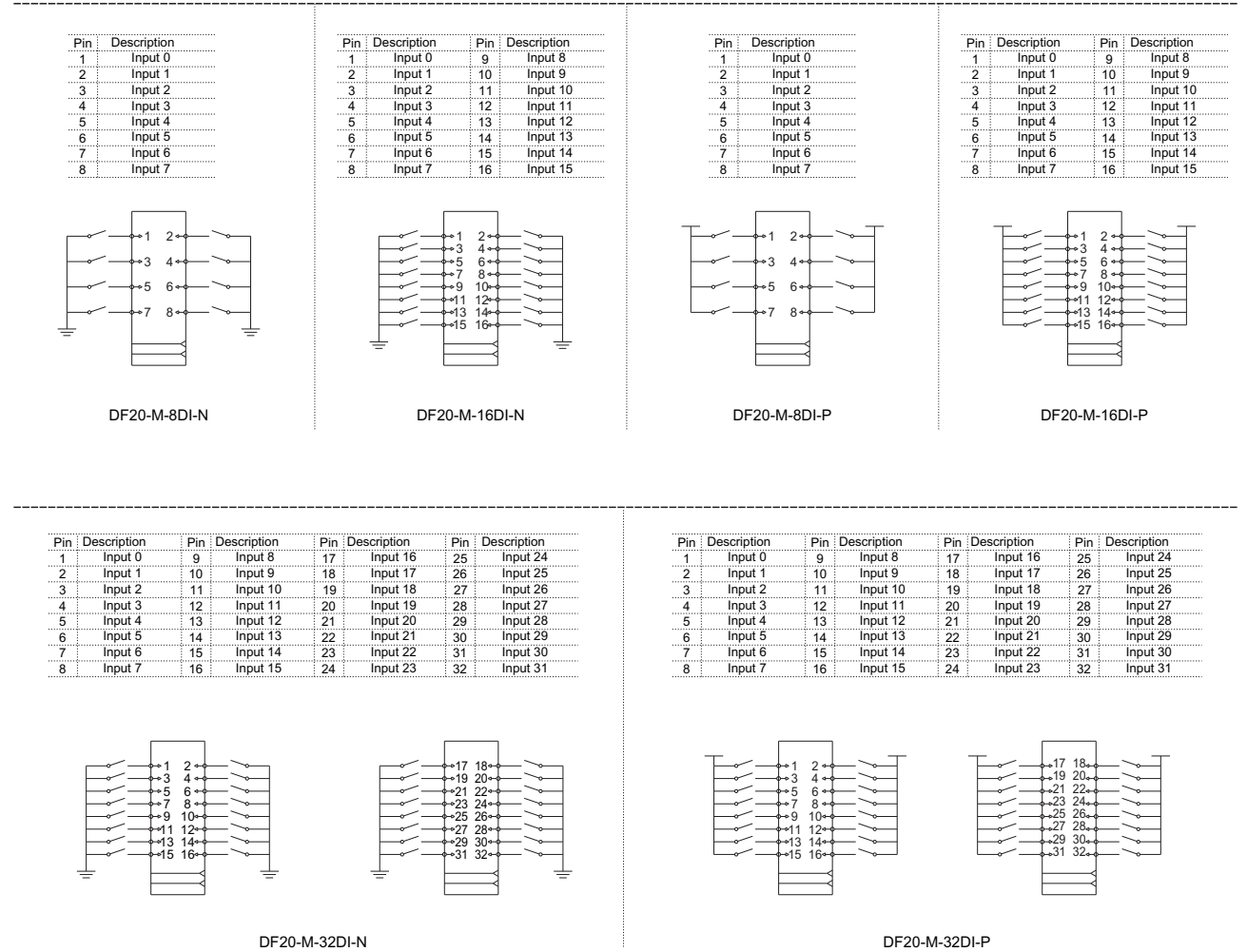
Power Supply Parameters			
Connection type	Spring terminal blocks		
Working voltage	24V DC +20 % / -15 %		
System feed current	<14mA	<15mA	<30mA
Maximum area of wire	2.5mm²	1.5mm²	
Maximum area of wire (AWG)	AWG14	AWG16	
The minimum area of a wire	0.2mm²	0.2mm²	
The minimum area of a wire (AWG)	AWG28	AWG28	
Strip length	8...9mm	8...9mm	

Digital input module

CE RoHS

Product	DF20-M-8DI-N	DF20-M-8DI-P	DF20-M-16DI-N	DF20-M-16DI-P	DF20-M-32DI-N	DF20-M-32DI-P
---------	--------------	--------------	---------------	---------------	---------------	---------------

Mechanical Structure		
Protection grade	IP20	
Size(H X W X D)	100mm X 12mm X 69mm	100mm X 24mm X 69mm
Installation type	35mm DIN	
Work Environment		
Working temperature	-25...60°C	
Storage temperature	-40...85°C	
Relative humidity	5... 95%RH(non-condensing)	
LED Status Indicator		
Channel light	Green: The input signal of each channel is working.	
Wiring Diagram		



Digital output module

CE RoHS

DF20-M-8DO-N DF20-M-8DO-P DF20-M-16DO-N DF20-M-16DO-P DF20-M-32DO-N DF20-M-32DO-P



NPN , 24VDC Digital output module, 8 ports, NPN, 24VDC	PNP , 24VDC Digital output module, 8 ports, PNP, 24VDC	NPN , 24VDC Digital output module, 16 ports, NPN, 24VDC	PNP , 24VDC Digital output module, 16 ports, PNP, 24VDC	NPN , 24VDC Digital output module, 32 ports, NPN, 24VDC	PNP , 24VDC Digital output module, 32 ports, PNP, 24VDC
--	--	---	---	---	---

Specification						
Product	DF20-M-8DO-N	DF20-M-8DO-P	DF20-M-16DO-N	DF20-M-16DO-P	DF20-M-32DO-N	DF20-M-32DO-P
Number of channels	8		16		32	
Data size	1 Byte		2 Byte		4 Byte	
Signal type	NPN	PNP	NPN	PNP	NPN	PNP
"0" signal voltage	High-impedance state	High-impedance state	High-impedance state	High-impedance state	High-impedance state	High-impedance state
"1" signal voltage	0V DC	24V DC	0V DC	24V DC	0V DC	24V DC
Connection type	1-line					
Reverse protection	Yes					
Isolation method	Photoelectric isolation					
Switching Frequency (resistance/lamp load)	<1000Hz					
Switching Frequency (Inductive load)	<0.2Hz					
Response Time of the Protection Circuit	< 100μs					
Output current per channel(MAX)	500 mA					
Load type	Inductance, resistance, lamp					

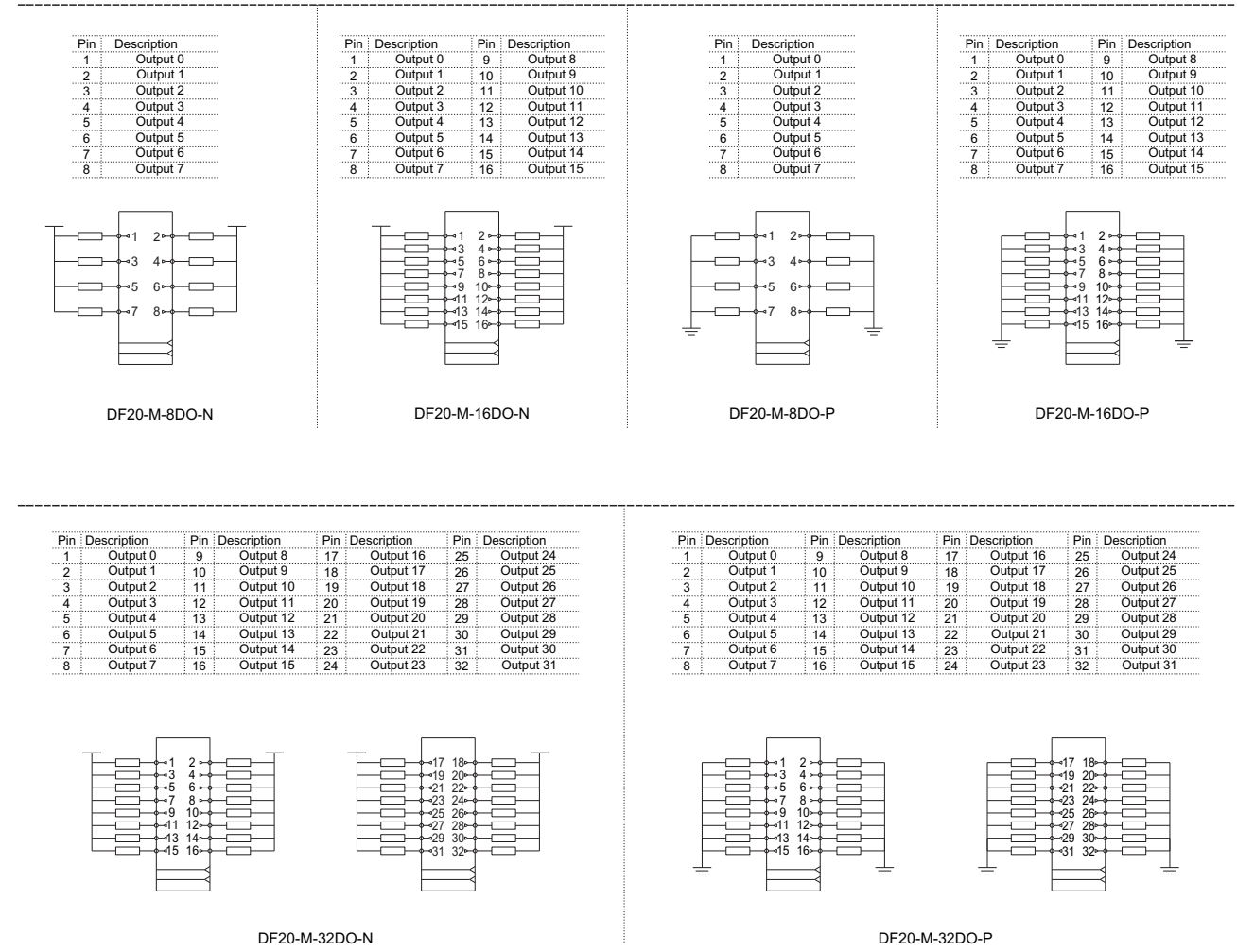
Power Supply Parameters			
Connection type	Spring terminal blocks		
Working voltage	24V DC +20 % / - 15 %		
System feed current	<50mA	<75mA	<100mA
Maximum area of wire	2.5mm²	1.5mm²	
Maximum area of wire (AWG)	AWG14	AWG16	
The minimum area of a wire	0.2mm²	0.2mm²	
The minimum area of a wire (AWG)	AWG28	AWG28	
Strip length	8...9mm	8...9mm	

Digital output module

CE RoHS

Product	DF20-M-8DO-N	DF20-M-8DO-P	DF20-M-16DO-N	DF20-M-16DO-P	DF20-M-32DO-N	DF20-M-32DO-P
---------	--------------	--------------	---------------	---------------	---------------	---------------

Mechanical Structure	
Protection grade	IP20
Size(H X W X D)	100mm X 12mm X 69mm 100mm X 24mm X 69mm
Installation type	35mm DIN
Work Environment	
Working temperature	-25...60°C
Storage temperature	-40...85°C
Relative humidity	5... 95%RH(non-condensing)
LED Status Indicator	
Channel light	Green: The output signal of each channel is working.
Wiring Diagram	

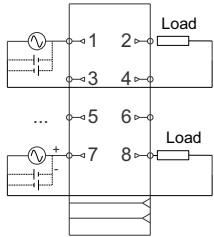


Relay output module



DF20-M-4DO-R

Wiring Diagram



Relay output module, 4 ports, 24VDC

DF20-M-4DO-R

Specification		Power Supply Parameters	
Product	DF20-M-4DO-R	Product	DF20-M-4DO-R
Number of channels	4	Connection type	Spring terminal blocks
Data size	1 Byte	Working voltage	24V DC +20 %/ -15 %
Contact type	N.O. Contacts	System feed current	<60mA
Connection type	2-line	Maximum area of wire	1.5mm²
Reverse protection	Yes	Maximum area of wire (AWG)	AWG16
Isolation method	Photoelectric isolation	The minimum area of a wire	0.2mm²
OFF to ON	MAX.10ms	The minimum area of a wire (AWG)	AWG28
ON to OFF	Max.5ms	Strip length	8...9mm
Response Time of the Protection Circuit	< 100µs	Mechanical Structure	
Output current per channel(MAX)	5A	Protection grade	IP20
Load type	Inductance, resistance, lamp	Size(H X W X D)	100mm X 12mm X 67mm
		Installation type	35mm DIN
		Work Environment	
		Working temperature	-25...75°C
		Storage temperature	-40...85°C
		Relative humidity	5... 95%RH(non-condensing)

Digital input output module



DF20-M-8DIO-N

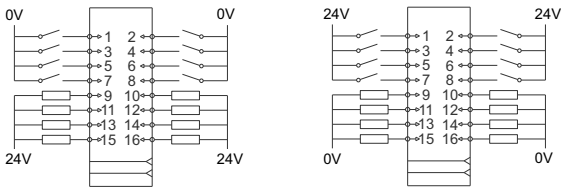
DF20-M-8DIO-P

Wiring Diagram



Digital input output module, 8 ports, NPN, 24VDC

Digital input output module, 8 ports, PNP, 24VDC



DF20-M-8DIO-N

DF20-M-8DIO-P

Specification			Power Supply Parameters		
Product	DF20-M-8DIO-N	DF20-M-8DIO-P	Product	DF20-M-8DIO-N	DF20-M-8DIO-P
Number of channels	16		Connection type	Spring terminal blocks	
Data size	1 Byte		Working voltage	24V DC +20 %/ -15 %	
Signal type	NPN	PNP	System feed current	<60mA	
"0" signal voltage	High-impedance state	High-impedance state	Maximum area of wire	1.5mm²	
"1" signal voltage	0V DC	24V DC	Maximum area of wire (AWG)	AWG16	
Connection type	1-line		The minimum area of a wire	0.2mm²	
Reverse protection	Yes		The minimum area of a wire (AWG)	AWG28	
Output Parameter			Strip length	8...9mm	
Isolation method	Photoelectric isolation		Mechanical Structure		
Switching Frequency (resistance/lamp load)	<1000Hz		Protection grade	IP20	
Switching Frequency (Inductive load)	<0.2Hz		Size(H X W X D)	100mm X 12mm X 67mm	
Response Time of the Protection Circuit	< 100μs		Installation type	35mm DIN	
Output current per channel(MAX)	500 mA		Work Environment		
Load type	Inductance, resistance, lamp		Working temperature	-25...75℃	
			Storage temperature	-40...85℃	
			Relative humidity	5... 95%RH(non-condensing)	

Analog input module



DF20-M-4AI-U-0

DF20-M-4AI-U-1

DF20-M-4AI-U-4

DF20-M-8AI-U-4



Analog input module,4 ports, -10...10V, voltage type

Analog input module,4 ports,0...10V,voltage type

Analog input module, 4 ports, (0...+10V)(-10...+10V), voltage type

Analog input module, 8 ports, (0...+10V)(-10...+10V),voltage type

Specification

Product	DF20-M-4AI-U-0	DF20-M-4AI-U-1	DF20-M-4AI-U-4	DF20-M-8AI-U-4
Number of channels	4			8
Data size	8 Byte			16 Byte
Measuring range	Voltage U (-10... 10 V)	Voltage U (0... 10 V)	Voltage U (0...+10V) (-10...+10V)	Voltage U (0...+10V)(-10...+10V)
Signal type	Differential signal			
Connection type	2-line			
Reverse protection	Yes			
Isolation method	Magnetic isolation			
Fault diagnosis	Yes			
Internal resistance	>450KΩ			
Resolution	16 Bit			
Measuring range (Profinet/Ethernet IP)	(-10...+10V): -27648~27648	(0...+10V): 0~27648	(0...+10V): 0~27648 (-10...+10V): -27648~27648	(0...+10V): 0~27648 (-10...+10V): -27648~27648
Measuring range(Others)	(-10...+10V): -32768~32767	(0...+10V): 0~65535	(0...+10V): 0~32767 (-10...+10V): -32768~32767	(0...+10V) : 0~32767 (-10...+10V) : -32768~32767
Precision	0.20%			
Conversion time	< 1ms			
Sampling rate	20-300Hz (Configuration)			

Power Supply Parameters

Connection type	Spring terminal blocks	
Working voltage	24V DC +20 %/ -15 %	
System feed current	<120mA	<200mA
Maximum area of wire	2.5mm²	1.5mm²
Maximum area of wire (AWG)	AWG14	AWG16
The minimum area of a wire	0.2mm²	0.2mm²
The minimum area of a wire (AWG)	AWG28	AWG28
Strip length	8...9mm	8...9mm

Analog input module



Product

DF20-M-4AI-U-0

DF20-M-4AI-U-1

DF20-M-4AI-U-4

DF20-M-8AI-U-4

Mechanical Structure

Protection grade	IP20
Size(H X W X D)	100mm X 12mm X 69mm
Installation type	35mm DIN

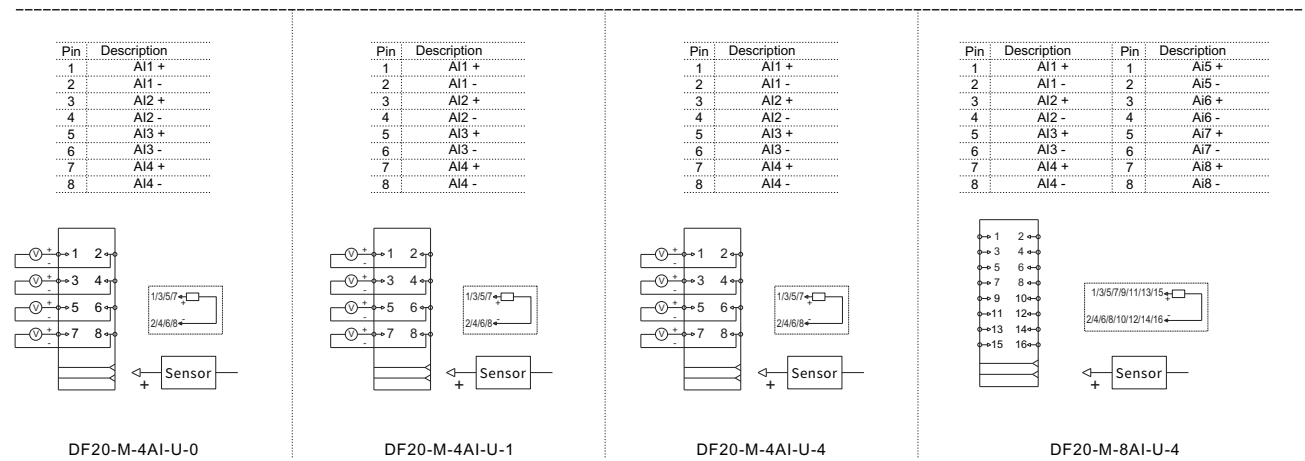
Work Environment

Working temperature	-25...60°C
Storage temperature	-40...85°C
Relative humidity	5... 95%RH(non-condensing)

LED Status Indicator

LED1	Green : Power is working
LED2	Green blinks : I/O system and modules working properly

Wiring Diagram



Analog input module



DF20-M-4AI-I-2

DF20-M-4AI-I-3

DF20-M-4AI-I-5

DF20-M-8AI-I-5



Analog input module, 4 ports, 0...20mA, current type

Analog input module, 4 ports, 4...20mA, current type

Analog input module, 4 ports, (0...20mA)(4...20mA), current type

Analog input module, 8 ports, (0...20mA)(4...20mA), current type

Specification

Product	DF20-M-4AI-I-2	DF20-M-4AI-I-3	DF20-M-4AI-I-5	DF20-M-8AI-I-5
Number of channels	4			8
Data size	8 Byte			16 Byte
Measuring range	Current(0...20ma)	Current(4...20ma)	Current I(0...20mA)(4...20mA)	Current I(0...20mA)(4...20mA)
Signal type	Differential signal			
Connection type	2-line			
Reverse protection	Yes			
Isolation method	Magnetic isolation			
Fault diagnosis	Yes			
Internal Resistance	100Ω			
Resolution	16 Bit			
Measuring range(Profinet/Ethernet IP)	(0...20ma)0~27648	(4...20ma)0~27648	(0/4...20ma)0~27648	(0/4...20ma)0~27648
Measuring range(Others)	(0...20ma)0~65535	(4...20ma)0~65535	(0/4...20ma)0~65535	(0/4...20ma)0~65535
Precision	0.20%/±50ppm/K max.			
Conversion time	< 1ms			
Sampling rate	20-300Hz (Configuration)			

Power Supply Parameters

Connection type	Spring terminal blocks		
Working voltage	24V DC +20 %/ -15 %		
System feed current	<120mA		<200mA
Maximum area of wire	2.5mm²		1.5mm²
Maximum area of wire (AWG)	AWG14		AWG16
The minimum area of a wire	0.2mm²		0.2mm²
The minimum area of a wire (AWG)	AWG28		AWG28
Strip length	8...9mm		8...9mm

Analog input module



Product

DF20-M-4AI-I-2

DF20-M-4AI-I-3

DF20-M-4AI-I-5

DF20-M-8AI-I-5

Mechanical Structure

Protection grade	IP20
Size(H X W X D)	100mm X 12mm X 69mm
Installation type	35mm DIN

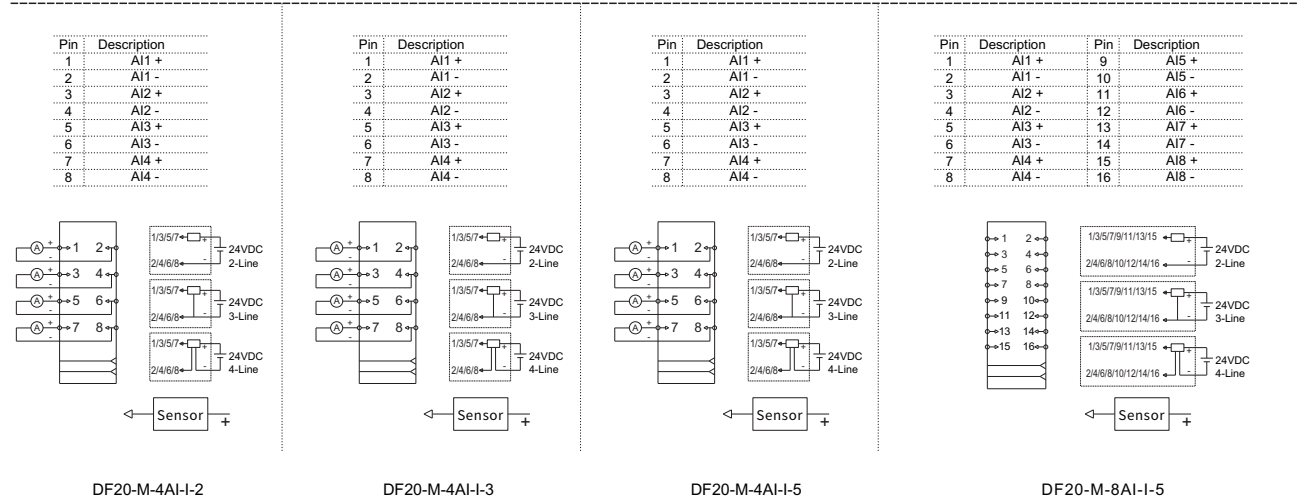
Work Environment

Working temperature	-25...60°C
Storage temperature	-40...85°C
Relative humidity	5... 95%RH(non-condensing)

LED Status Indicator

LED1	Green : Power is working
LED2	Green blinks : I/O system and modules working properly

Wiring Diagram



Analog output module



DF20-M-4AO-U-0

DF20-M-4AO-U-1

DF20-M-4AO-U-4

DF20-M-4AO-I-2

DF20-M-4AO-I-3

DF20-M-4AO-I-5



Analog output module, 4 ports,
-10... 10V, voltage type

Analog output module, 4 ports,
0... 10V, voltage type

Analog output module, 4 ports,
-10...+10V, 0... 10V, voltage type

Analog output module, 4 ports,
0... 20 mA, current type

Analog output module, 4 ports,
4... 20 mA, current type

Analog output module, 4 ports,
0... 20mA, 4... 20 mA, current type

Specification

Product	DF20-M-4AO-U-0	DF20-M-4AO-U-1	DF20-M-4AO-U-4	DF20-M-4AO-I-2	DF20-M-4AO-I-3	DF20-M-4AO-I-5
Number of channels	4					
Data size	8 Byte					
Signal type	Differential signal					
Connection type	2-line					
Overcurrent protection	Yes					
Isolation method	Magnetic isolation					
Fault diagnosis	Yes					
Resolution	16 Bit					
Precision	0.10%					
Measuring range (Profinet/Ethernet IP)	(-10...+10V)-27648~27648	(0...+10V):0~27648	(0...+10V): 0~27648 (-10...+10V): -27648~27648	(0..20ma)0~27648	(4..20ma)0~27648	(0/4..20ma)0~27648
Measuring range(Others)	(-10...+10V)-32768~32767	(0...+10V): 0~65535	(0...+10V): 0~32767 (-10...+10V): -32768~32767	(0..20ma)0~65535	(4..20ma)0~65535	(0/4..20ma)0~65535
Temperature coefficient	<20 ppm					
Conversiontime	≤ 1ms					
Load impedance	>1KΩ			<500Ω		

Power Supply Parameters

Connection type	Spring terminal blocks	
Working voltage	24V DC +20 %/ -15 %	
System feed current	<200mA	<400mA
Maximum area of wire	2.5mm²	
Maximum area of wire (AWG)	AWG14	
The minimum area of a wire	0.2mm²	
The minimum area of a wire (AWG)	AWG28	
Strip length	8...9mm	

Analog output module



Product

DF20-M-4AO-U-0

DF20-M-4AO-U-1

DF20-M-4AO-U-4

DF20-M-4AO-I-2

DF20-M-4AO-I-3

DF20-M-4AO-I-5

Mechanical Structure

Protection grade	IP20
Size(H X W X D)	100mm X 12mm X 69mm
Installation type	35mm DIN

Work Environment

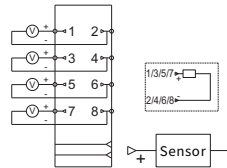
Working temperature	-25...60°C
Storage temperature	-40...85°C
Relative humidity	5... 95%RH(non-condensing)

LED Status Indicator

LED1	Green : Power is working
LED2	Green blinks : I/O system and modules working properly

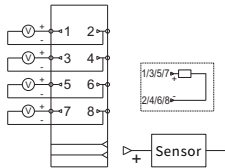
Wiring Diagram

Pin	Description
1	AO1 +
2	AO1 -
3	AO2 +
4	AO2 -
5	AO3 +
6	AO3 -
7	AO4 +
8	AO4 -



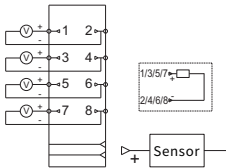
DF20-M-4AO-U-0

Pin	Description
1	AO1 +
2	AO1 -
3	AO2 +
4	AO2 -
5	AO3 +
6	AO3 -
7	AO4 +
8	AO4 -



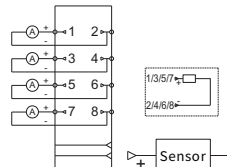
DF20-M-4AO-U-1

Pin	Description
1	AO1 +
2	AO1 -
3	AO2 +
4	AO2 -
5	AO3 +
6	AO3 -
7	AO4 +
8	AO4 -



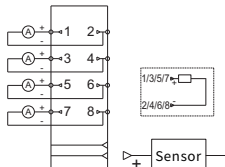
DF20-M-4AO-U-4

Pin	Description
1	AO1 +
2	AO1 -
3	AO2 +
4	AO2 -
5	AO3 +
6	AO3 -
7	AO4 +
8	AO4 -



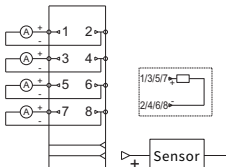
DF20-M-4AO-I-2

Pin	Description
1	AO1 +
2	AO1 -
3	AO2 +
4	AO2 -
5	AO3 +
6	AO3 -
7	AO4 +
8	AO4 -



DF20-M-4AO-I-3

Pin	Description
1	AO1 +
2	AO1 -
3	AO2 +
4	AO2 -
5	AO3 +
6	AO3 -
7	AO4 +
8	AO4 -



DF20-M-4AO-I-5

Analog output module



DF20-M-8AO-U-4



Analog output module, 8 ports,
-10...+10V,0... 10V,voltage type

DF20-M-8AO-1-5



Analog output module, 8 ports,
0...20mA,4... 20 mA,current type

Specification

Product	DF20-M-8AO-U-4	DF20-M-8AO-1-5
Number of channels	8	
Data size	8 Byte	
Signal type	Differential signal / Single-Ended	
Connection type	2-line	
Overcurrent protection	Yes	
Isolation method	Magnetic isolation	
Fault diagnosis	Yes	
Resolution	16 Bit	
Precision	0.10%	
Measuring range (Profinet/Ethernet IP)	(0...+10V): 0~27648 (-10...+10V): -27648~27648	(0/4...20ma)0~27648
Measuring range(Others)	(0...+10V): 0~32767 (-10...+10V): -32768~32767	(0/4...20ma)0~65535
Temperature coefficient	<20 ppm	
Conversiontime	≤ 1ms	
Load impedance	>1KΩ	<500Ω

Power Supply Parameters

Connection type	Spring terminal blocks	
Working voltage	24V DC +20 %/ -15 %	
System feed current	<400mA	<800mA
Maximum area of wire	2.5mm²	
Maximum area of wire (AWG)	AWG14	
The minimum area of a wire	0.2mm²	
The minimum area of a wire (AWG)	AWG28	
Strip length	8...9mm	

Analog output module



Product

DF20-M-8AO-U-4

DF20-M-8AO-1-5

Mechanical Structure

Protection grade	IP20
Size(H X W X D)	100mm X 12mm X 67mm
Installation type	35mm DIN

Work Environment

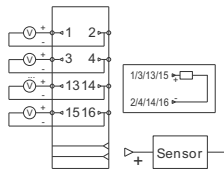
Working temperature	-25...75°C
Storage temperature	-40...85°C
Relative humidity	5... 95%RH(non-condensing)

LED Status Indicator

LED1	Green: Signal on Channel 1.
LED2	Green: Signal on Channel 2.
LED3	Green: Signal on Channel 3.
LED4	Green: Signal on Channel 4.
LED5	Green: Signal on Channel 5.
LED6	Green: Signal on Channel 6.
LED7	Green: Signal on Channel 7.
LED8	Green: Signal on Channel 8.
PWR	Green: Power is working.
L/A	Green: I/O system and modules working properly.

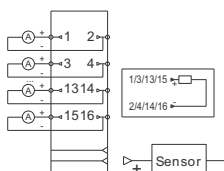
Wiring Diagram

Pin	Description
1	AO1 +
2	AO1 -
3	AO2 +
4	AO2 -
13	AO7 +
14	AO7 -
15	AO8 +
16	AO8 -



DF20-M-8AO-U-4

Pin	Description
1	AO1 +
2	AO1 -
3	AO2 +
4	AO2 -
13	AO7 +
14	AO7 -
15	AO8 +
16	AO8 -



DF20-M-8AO-1-5

Temperature module



DF20-M-2RTD-PT

DF20-M-4RTD-PT

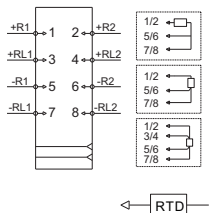
Wiring Diagram



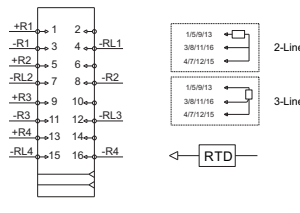
Thermal Resistance (RTD) measurement module, 16 bit resolution, 2 channels



Thermal Resistance (RTD) measurement module, 16 bit resolution, 4 channels



DF20-M-2RTD-PT



DF20-M-4RTD-PT

Specification

Product	DF20-M-2RTD-PT	DF20-M-4RTD-PT
Number of channels	2	4
Data size	4 Byte	8 Byte
Signal type	Thermal resistance	
Signal type	PT100, PT1000	
Connection type	2/3/4-line	2/3-line
Reverse protection	Yes	
Isolation method	Magnetic isolation	
Fault diagnosis	Yes	
Resolution	16bit,0.1°C/ each number	
Frequency interference suppression	10Hz 50Hz 60Hz 400Hz	
Diagnosis	Disconnection, Parameter assignment error	
Process alarm	Upper/Lower limit, per channel	
Temperature coefficient	±50ppm/K max.	
Measuring range	-200°C ~ 850°C	
Precision	±0.3%	
Conversion time	150ms	200ms

Power Supply Parameters

Product	DF20-M-2RTD-PT	DF20-M-4RTD-PT
Connection type	Spring terminal blocks	
Working voltage	24V DC +20 %/ -15 %	
System feed current	<60mA	<100mA
Maximum area of wire	2.5mm²	1.5mm²
Maximum area of wire (AWG)	AWG14	AWG16
The minimum area of a wire	0.2mm²	0.2mm²
The minimum area of a wire (AWG)	AWG28	AWG28
Strip length	8...9mm	8...9mm

Mechanical Structure

Protection grade	IP20
Size(H X W X D)	100mm X 12mm X 69mm
Installation type	35mm DIN

Work Environment

Working temperature	-25...60°C
Storage temperature	-40...85°C
Relative humidity	5... 95%RH(non-condensing)

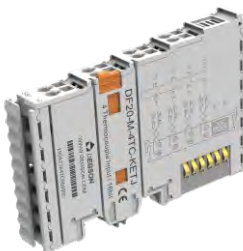
Temperature module



DF20-M-4TC-KETJ

DF20-M-8TC-KETJ

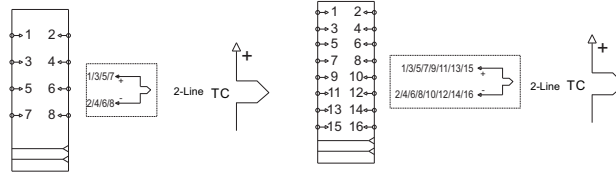
Wiring Diagram



Thermocouple (TC) module, 4 inputs, 16 bit resolution



Thermocouple (TC) module, 8 inputs, 16 bit resolution



DF20-M-4TC-KETJ

DF20-M-8TC-KETJ

Specification

Product	DF20-M-4TC-KETJ	DF20-M-8TC-KETJ
Number of channels	4	8
Data size	8 Byte	16 Byte
Signal type	Thermocouple	
Signal type	E(-30~900°C), J(-210~1200°C) T(-270~400°C), K(-30~1370°C)	
Cold End compensation	Internal and external (accuracy ≤3K)	
Diagnosis	Yes	
Temperature coefficient	≤ 50 ppm/K	
Connection type	2-line	
Reverse protection	Yes	
Isolation method	Magnetic isolation	
Fault diagnosis	Yes	
Internal Resistance	/	
Resolution	16bit,0.1°C/ resolution	
Frequency interference suppression	10Hz 50Hz 60Hz 400Hz	
Diagnosis	Disconnection, Parameter assignment error	
Process alarm	Upper/Lower limit, per channel	
Temperature coefficient	±0.5%	
Measuring range	-270°C ~ 1370°C	
Precision	± 0.3%	
Conversion time	125ms	

Power Supply Parameters

Product	DF20-M-2RTD-PT	DF20-M-4RTD-PT
Connection type	Spring terminal blocks	
Working voltage	24V DC +20 %/ -15 %	
System feed current	<70mA	<100mA
Maximum area of wire	2.5mm²	1.5mm²
Maximum area of wire (AWG)	AWG14	AWG16
The minimum area of a wire	0.2mm²	0.2mm²
The minimum area of a wire (AWG)	AWG28	AWG28
Strip length	8...9mm	8...9mm

Mechanical Structure

Protection grade	IP20
Size(H X W X D)	100mm X 12mm X 69mm
Installation type	35mm DIN

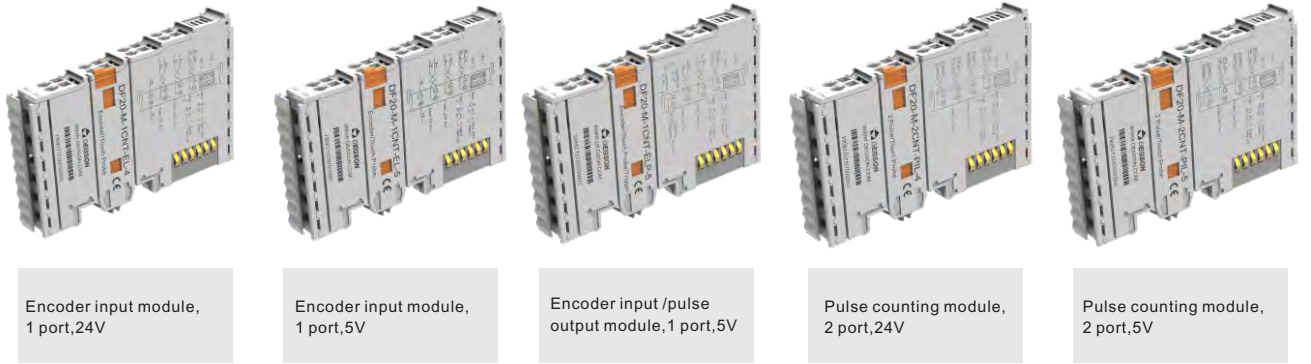
Work Environment

Working temperature	-25...60°C
Storage temperature	-40...85°C
Relative humidity	5... 95%RH(non-condensing)

Pulse Counting Module

CERoHS

DF20-M-1CNT-EL-4DF20-M-1CNT-EL-5DF20-M-1CNT-ELP-5DF20-M-2CNT-PIL-4DF20-M-2CNT-PIL-5

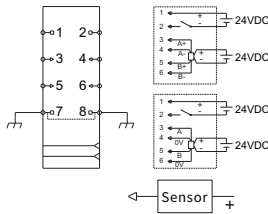


Specification					
Product	DF20-M-1CNT-EL-4	DF20-M-1CNT-EL-5	DF20-M-1CNT-ELP-5	DF20-M-2CNT-PIL-4	DF20-M-2CNT-PIL-5
Maximum frequency count	1Mhz	1Mhz	1Mhz	1Mhz	1Mhz
Number of channels	1			2	
Data size	12 Byte			28 Byte	
Input signal type	Incremental encoder			Pulse signal	
Input signal type	24V DC	5V DC	5V DC	24V DC	5V DC
Input connection type	4-line			2-line	
Output signal type	/	/	422 type	/	
Reverse protection	Yes				
Isolation method	Magnetic isolation				
Fault diagnosis	Yes				
Resolution	32 Bit				
Precision	±1 pulse				

Power Supply Parameters					
Connection type	Spring terminal blocks				
System feed current	<30mA	<30mA	<200mA	<30mA	<30mA
Maximum area of wire	2.5mm²				
Maximum area of wire (AWG)	AWG14				
The minimum area of a wire	0.2mm²				
The minimum area of a wire (AWG)	AWG28				
Strip length	8...9mm				

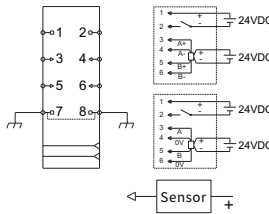
Pulse Counting Module					CE	RoHS
Product	DF20-M-1CNT-EL-4	DF20-M-1CNT-EL-5	DF20-M-1CNT-ELP-5	DF20-M-2CNT-PIL-4	DF20-M-2CNT-PIL-5	
Mechanical Structure						
Protection grade	IP20					
Size(H X W X D)	100mm X 12mm X 69mm					
Installation type	35mm DIN					
Work Environment						
Working temperature	-25...60℃					
Storage temperature	-40...85℃					
Relative humidity	5... 95%RH(non-condensing)					
LED Status Indicator						
LED1	Green : Power is working					
LED2	Green blinks : I/O system and modules working properly					
Wiring Diagram						

Pin	Description	Notes
1	24V	NPN:1=24V,2=signal
2	0V	PNP:1=signal,2=0V...
3	ENCA+ / ENCA	
4	ENCA- / 0V	
5	ENCB+ / ENCB	
6	ENCB- / 0V	
7	PE	
8	PE	



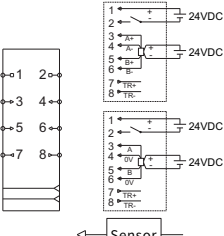
DF20-M-1CNT-EL-4

Pin	Description	Notes
1	24V	NPN:1=24V,2=signal
2	0V	PNP:1=signal,2=0V...
3	ENCA+ / ENCA	
4	ENCA- / 0V	
5	ENCB+ / ENCB	
6	ENCB- / 0V	
7	PE	
8	PE	



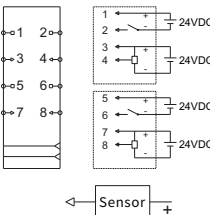
DF20-M-1CNT-EL-5

Pin	Description	Notes
1	24V	NPN:1=24V,2=signal
2	0V	PNP:1=signal,2=0V...
3	ENCA+ / ENCA	
4	ENCA- / 0V	
5	ENCB+ / ENCB	
6	ENCB- / 0V	
7	RS422_TR_out+	
8	RS422_TR_out-	



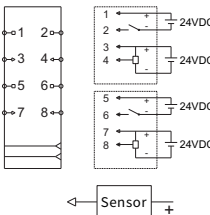
DF20-M-1CNT-ELP-5

Pin	Description	Notes
1	24V	NPN:1=24V,2=signal
2	0V	PNP:1=signal,2=0V...
3	Signal1_24V	
4	Signal1	
5	24V	NPN:5=24V,6=signal
6	0V	PNP:5=signal,6=0V...
7	Signal2_24V	
8	Signal2	



DF20-M-2CNT-PIL-4

Pin	Description	Notes
1	24V	NPN:1=24V,2=signal
2	0V	PNP:1=signal,2=0V...
3	Signal1_24V	
4	Signal1	
5	24V	NPN:5=24V,6=signal
6	0V	PNP:5=signal,6=0V...
7	Signal2_24V	
8	Signal2	



DF20-M-2CNT-PIL-5

Pulse Counting Module



DF20-M-2CNT-EL-4



Pulse counting module,
2 port,24V

DF20-M-2CNT-EL-5



Pulse counting module,
2 port,5V

Specification

Product	DF20-M-2CNT-EL-4	DF20-M-2CNT-EL-5
Maximum frequency count	1Mhz	1Mhz
Number of channels	2	
Data size	28 Byte	
Input signal type	Pulse signal / Incremental encoder	
Input signal type	24V DC	5V DC
Input connection type	2-line / 4-line	
Output signal type	/	
Reverse protection	Yes	
Isolation method	Magnetic isolation	
Fault diagnosis	Yes	
Resolution	32 Bit	
Precision	±1 pulse	

Power Supply Parameters

Connection type	Spring terminal blocks		
System feed current	<30mA		
Maximum area of wire	2.5mm²		
Maximum area of wire (AWG)	AWG14		
The minimum area of a wire	0.2mm²		
The minimum area of a wire (AWG)	AWG28		
Strip length	8...9mm		

Pulse Counting Module



Product

DF20-M-2CNT-EL-4

DF20-M-2CNT-EL-5

Mechanical Structure

Protection grade

IP20

Size(H X W X D)

100mm X 12mm X 67mm

Installation type

35mm DIN

Work Environment

Working temperature

-25...75°C

Storage temperature

-40...85°C

Relative humidity

5... 95%RH(non-condensing)

LED Status Indicator

PWR

Green: Internal bus power supply is normal

STA

Power on stage: green on: module initialization abnormal, green off: module initialization normal

Operation phase: Green flashing: The internal bus of the module is working normally, green off: The internal bus of the module is working abnormally

TP1/TP2

On: Input signal valid Off: Input signal invalid

A1/A2

On: Input signal valid Off: Input signal invalid

B1/B2

On: Input signal valid Off: Input signal invalid

UP1/UP2

On: encoder rotates in the forward direction
Off: the encoder is stationary or rotating in the opposite direction

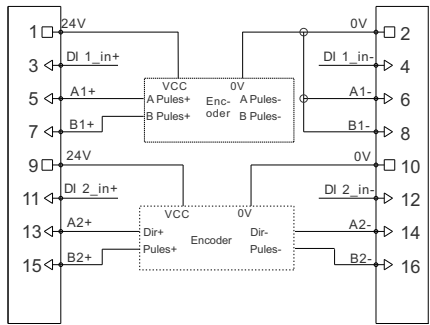
DN1/DN2

On: encoder rotates in the forward direction
Off: the encoder is stationary or rotating in the opposite direction

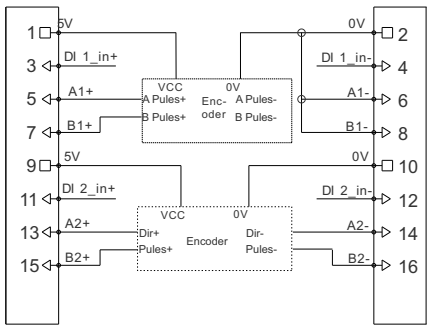
FP

On: Module power is normal Off: Module power is abnormal

Wiring Diagram



DF20-M-2CNT-EL-4



DF20-M-2CNT-EL-5

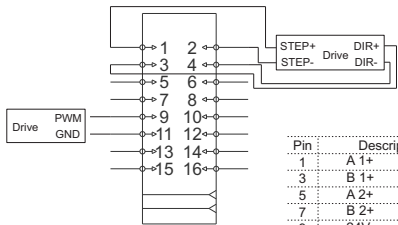
Pulse output module

DF20-M-2PWM

Wiring Diagram



Pulse output module,2 port,24V



Pin	Description	Pin	Description
1	A 1+	2	A 1-
3	B 1+	4	B 1-
5	A 2+	6	A 2-
7	B 2+	8	B 2-
9	24V	10	24V
11	P1	12	D1
13	P2	14	D2
15	GND	16	GND

DF20-M-2PWM

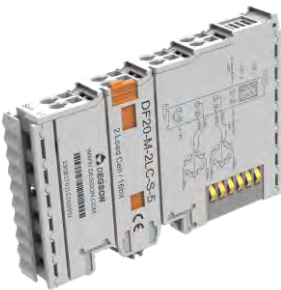
Specification		Power Supply Parameters	
Product	DF20-M-2PWM	Product	DF20-M-2PWM
Maximum frequency count	4Mhz	Connection type	Spring terminal blocks
Number of channels	2	Working voltage	24V DC +20 %/ -15 %
Data size	28 Byte	System feed current	<150mA
Output signal type	Pulse signal / PWM	Maximum area of wire	2.5mm²
Output signal type	24V DC	Maximum area of wire (AWG)	AWG14
Output connection type	2-line / 4-line	The minimum area of a wire	0.2mm²
Isolation method	Magnetic isolation	The minimum area of a wire (AWG)	AWG28
Fault diagnosis	Yes	Strip length	8...9mm
Resolution	32 Bit	Mechanical Structure	
Precision	±1 pulse	Protection grade	IP20
		Size(H X W X D)	100mm X 12mm X 67mm
		Installation type	35mm DIN
		Work Environment	
		Working temperature	-25...75°C
		Storage temperature	-40...85°C
		Relative humidity	5...95%RH(non-condensing)

Bridge Module

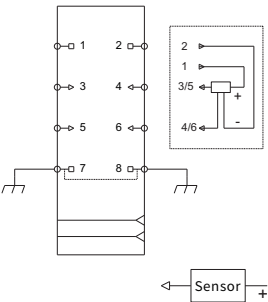
CE RoHS

DF20-M-2LC-S-5

Wiring Diagram



Bridge measurement module, 16-bit resolution, 2-channel



Pin	描述 Description
1	Ref power 5V
2	Ref power 0V
3	Signal1 +
4	Signal1 -
5	Signal2 +
6	Signal2 -
7	PE
8	PE

DF20-M-2LC-S-5

Specification		Power Supply Parameters	
Product	DF20-M-2LC-S-5	Product	DF20-M-2LC-S-5
Measuring range	0-10mV	Connection type	Spring terminal blocks
Number of channels	2	Working voltage	24V DC +20 %/ -15 %
Signal type	Load CellBridge, pressure sensor, Load Cell	System feed current	<210mA
Connection type	4-line	Maximum area of wire	2.5mm²
Reverse protection	Yes	Maximum area of wire (AWG)	AWG14
Isolation method	Magnetic isolation	The minimum area of a wire	0.2mm²
Data size	8 Byte	The minimum area of a wire (AWG)	AWG28
Fault diagnosis	Yes	Strip length	8...9mm
Internal resistance	>500KΩ	Mechanical Structure	
Resolution16bit	16bit	Protection grade	IP20
Frequency interference suppression	10Hz 50Hz 60Hz 400Hz	Size(H X W X D)	100mm X 12mm X 69mm
Diagnosis	Parameter assignment error	Installation type	35mm DIN
Precision	0.20%	Work Environment	
Measuring range	-32768~32767	Working temperature	-25...60°C
Conversion time	3.3ms	Storage temperature	-40...85°C
		Relative humidity	5...95%RH(non-condensing)
		LED Status Indicator	
		LED1	Green: Power is working
		LED2	Green blinks: I/O system and modules working properly

Voltage distribution module



DF20-M-DC-U-24

DF20-M-DC-U-0

DF20-M-T-8L

DF20-M-DC-UD-5



Voltage distribution module,
16 channel 24VDC

Voltage distribution module,
16 channel 0VDC

Extended module,
8channel, 2 line

Voltage distribution module,
24VDC to 5VDC

Specification

Product	DF20-M-DC-U-24	DF20-M-DC-U-0	DF20-M-T-8L	DF20-M-DC-UD-5
Number of channels	16	16	8	1
Isolation method	/	/	/	/

Power Supply Parameters

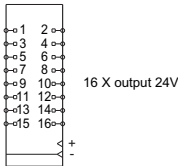
Connection type	Spring terminal blocks	Spring terminal blocks	Spring terminal blocks	Spring terminal blocks
Working voltage	24V DC +20 %/ -15 %	0V DC	0V...36VDC	24V DC +20 %/ -15 %
Reverse power protection	/			YES
Supply system voltage	/			5VDC
Supply system current	/			Max.2A
Supply load voltage	24V DC +20 %/ -15 %	0VDC	Voltage distribution	24V DC +20 %/ -15 %
Supply load current (MAX)	5A			8A
Maximum area of wire	1.5mm²			2.5mm²
Maximum area of wire (AWG)	AWG16			AWG14
The minimum area of a wire	0.2mm²			0.2mm²
The minimum area of a wire (AWG)	AWG28			AWG28
Strip length	8...9mm			8...9mm

Voltage distribution module

Product	DF20-M-DC-U-24	DF20-M-DC-U-0	DF20-M-T-8L	DF20-M-DC-UD-5
Mechanical Structure				
Protection grade	IP20			
Size(H X W X D)	100mm X 12mm X 69mm			
Installation type	35mm DIN			
Work Environment				
Working temperature	-25...60℃			
Storage temperature	-40...85℃			
Relative humidity	5... 95%RH(non-condensing)			
LED Status Indicator				
POWER-1、POWER-2	/			Green: The system power is working.
POWER-7、POWER-8	/			Green: The load power is working.

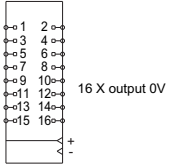
Wiring Diagram

Pin	Description	Pin	Description
1	Load_24V	9	Load_24V
2	Load_24V	10	Load_24V
3	Load_24V	11	Load_24V
4	Load_24V	12	Load_24V
5	Load_24V	13	Load_24V
6	Load_24V	14	Load_24V
7	Load_24V	15	Load_24V
8	Load_24V	16	Load_24V



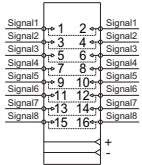
DF20-M-DC-U-24

Pin	Description	Pin	Description
1	Load_0V	9	Load_0V
2	Load_0V	10	Load_0V
3	Load_0V	11	Load_0V
4	Load_0V	12	Load_0V
5	Load_0V	13	Load_0V
6	Load_0V	14	Load_0V
7	Load_0V	15	Load_0V
8	Load_0V	16	Load_0V



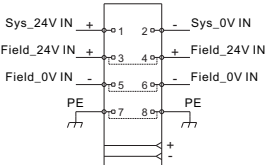
DF20-M-DC-U-0

Pin	Description	Pin	Description
1	Signal1	9	Signal5
2	Signal1	10	Signal5
3	Signal2	11	Signal6
4	Signal2	12	Signal6
5	Signal3	13	Signal7
6	Signal3	14	Signal7
7	Signal4	15	Signal8
8	Signal4	16	Signal8



DF20-M-T-8L

Pin	Description
1	System_24V
2	System_0V
3	Load_24V
4	Load_24V
5	Load_0V
6	Load_0V
7	PE
8	PE



DF20-M-DC-UD-5

Serial communication module



DF20-M-1COM-232/485/422



Serial communication module, 1 channel

Specification

Product	DF20-M-1COM-232/485/422
Interface	RS232/RS485/RS422
Number of channels	1
Agreement	Modbus RTU/ASCII master and slave modes; Free protocol transparent mode
BAUD	2400bps - 500000bps
Data bits	7bit/8bit
Check bit	None/Even/Odd/Space/Mark
Stop bit	1bit/2bit
Maximum data frame length	128 byte

Power Supply Parameters

Connection type	Spring terminal blocks
System feed current	<100mA
Maximum area of wire	1.5mm²
Maximum area of wire (AWG)	AWG16
The minimum area of a wire	0.14mm²
The minimum area of a wire (AWG)	AWG26
Strip length	8...10mm

Mechanical Structure

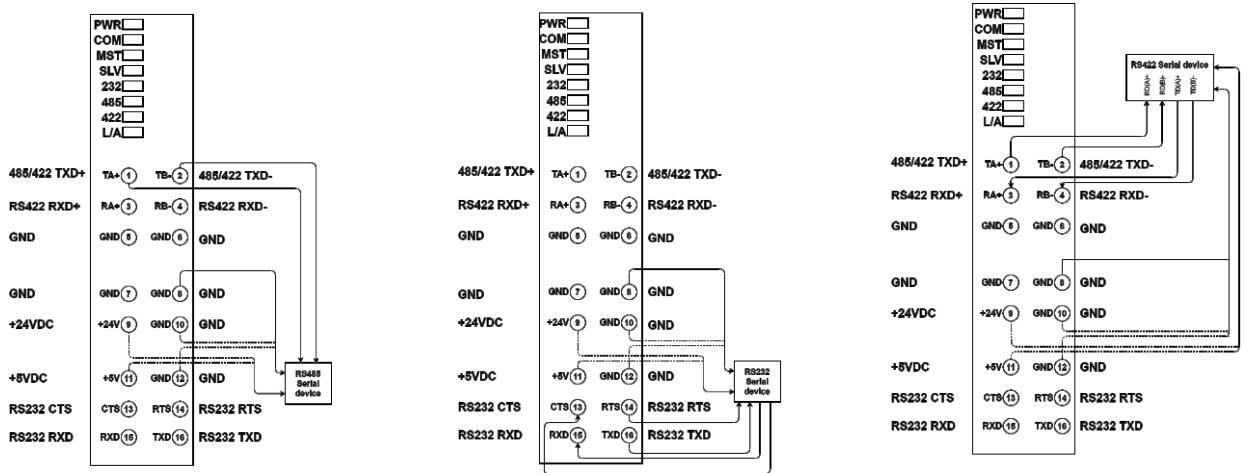
Protection grade	IP20
Size(H X W X D)	111mm X 12mm X 75mm
Installation type	35mm DIN

Serial communication module



Product	DF20-M-1COM-232/485/422
Work Environment	
Working temperature	-25...60°C
Storage temperature	-40...85°C
Relative humidity	5... 95%RH(non-condensing)
LED Status Indicator	
PW	Green: Internal bus power supply is normal
ST	Power on stage: green on: module initialization abnormal, green off: module initialization normal
	Operation phase: Green flashing: The internal bus of the module is working normally, green off: The internal bus of the module is working abnormally
COM	On: Input signal valid Off: Input signal invalid
MST	On: Input signal valid Off: Input signal invalid
SLV	On: Input signal valid Off: Input signal invalid
232	In 232 mode, on: connection normal off: connection abnormal
485	In 485 mode, on: connection normal off: connection abnormal
422	In 422 mode, on: connection normal off: connection abnormal
TS	On: Normal communication transmission Off: Abnormal communication transmission
RX	On: normal communication reception Off: abnormal communication reception
EP	On: External power supply normal Off: External power supply normal

Wiring Diagram



Pin	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
RS485	A	B														
RS422	TX+	TX-	RX+	RX-		GND			24V+	GND	5V+	GND				
RS232													CTS	RTS	RXD	TXD

IO-Link communication modules



DF20-M-4IOL



IO-Link communication modules, 4 channel

Specification		Power Supply Parameters	
Product	DF50-M-4IOL	Product	DF50-M-4IOL
Number of channels	4	Connection type	Spring terminal blocks
IO-Link Input Mode		System feed current	<100mA
Connection type	3-line/5-line	Maximum area of wire	1.5mm²
Port type	A type	Maximum area of wire (AWG)	AWG16
Digital Input Mode		The minimum area of a wire	0.14mm²
Input description	When the IO-Link port is set to DI	The minimum area of a wire (AWG)	AWG28
Input type	PNP	Strip length	8...9mm
Connect system	3-line	Mechanical Structure	
Input Voltage	24 V DC	Protection grade	IP20
"0" signal	-0.3 V DC ... 8 V DC	Size(H X W X D)	100mm X 12mm X 67mm
"1" signal	12.9 V DC ... 24.3 V DC	Installation type	35mm DIN
Digital Output Mode		Work Environment	
Output description	When the IO-Link port is set to DO	Working temperature	-25...75°C
Output type	PNP	Storage temperature	-40...85°C
Connection method	Push-in	Relative humidity	5... 95%RH(non-condensing)
Connect system	2,3-line		
Rated output voltage	24 V DC		
Rated current per channel	500 mA		

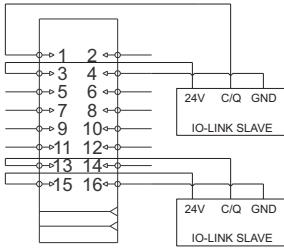
IO-Link communication modules



Product	DF20-M-4IOL	
LED Status Indicator		
PWR	Green: Internal bus power supply is normal	
STA	Power on stage: green on: module initialization abnormal, green off: module initialization normal	
	Operation phase: Green flashing: The internal bus of the module is working normally, Green off: The internal bus of the module is working abnormally	
L0~L3	Green on: Corresponding channel IO-LINK communicates normally	
	Green blinks: No IO-LINK slave access on the corresponding channel	
	Green off: the corresponding channel is not configured for IO-LINK mode	
F0~F3	Red on: corresponding channel reports error Red off: no error on the corresponding channel	
I0~I3	Green on: DI input valid signal	Green off: DI does not input valid signal

Wiring Diagram

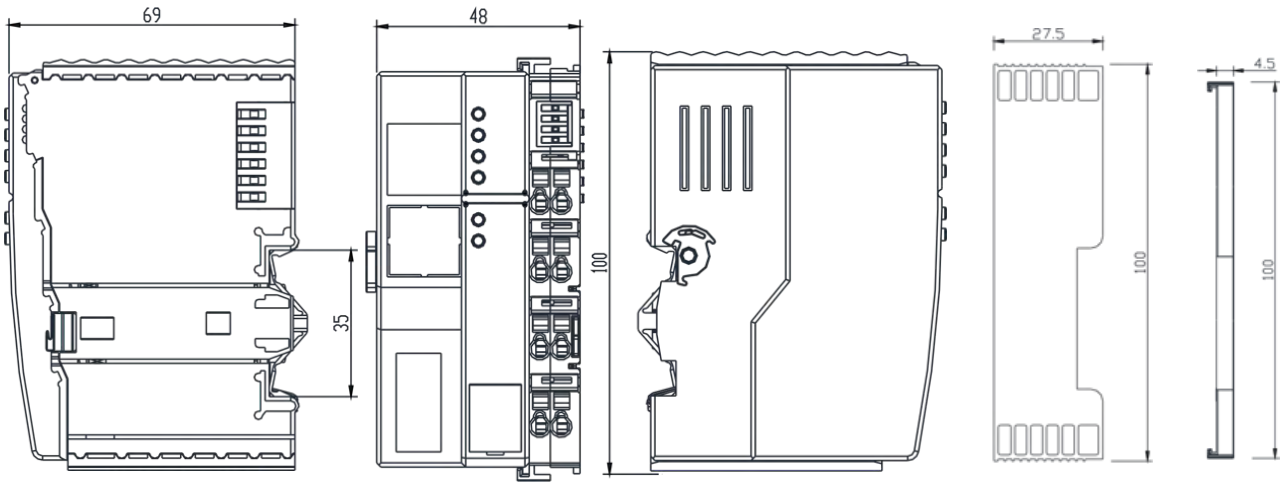
Pin	Description	Pin	Description
1	C/Q 0	2	DI 0
3	L+ 0	4	L- 0
5	C/Q 1	6	DI 1
7	L+ 1	8	L- 1
9	C/Q 2	10	DI 2
11	L+ 2	12	L- 2
13	C/Q 3	14	DI 3
15	L+ 3	16	L- 3



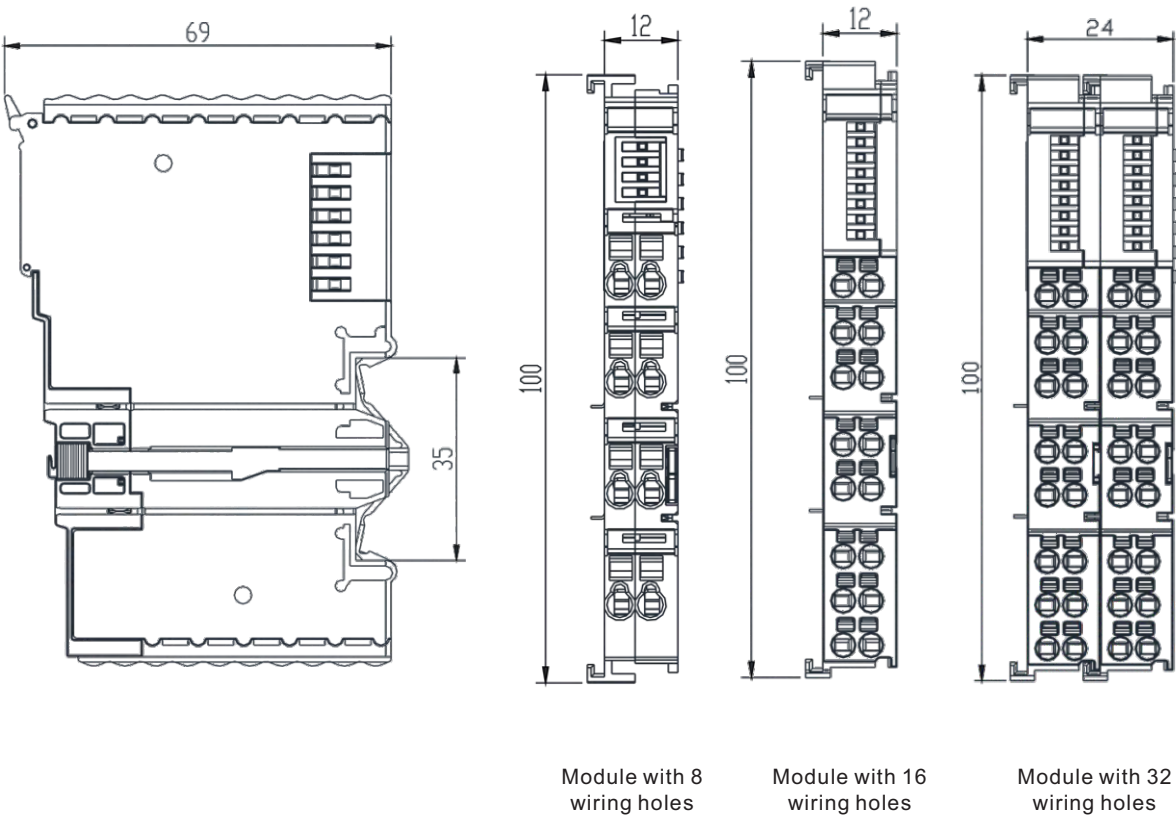
DF20-M-4IOL

DF20 series dimension

DF20 series bus coupler & Terminal cover dimension



DF20 series I/O module dimension



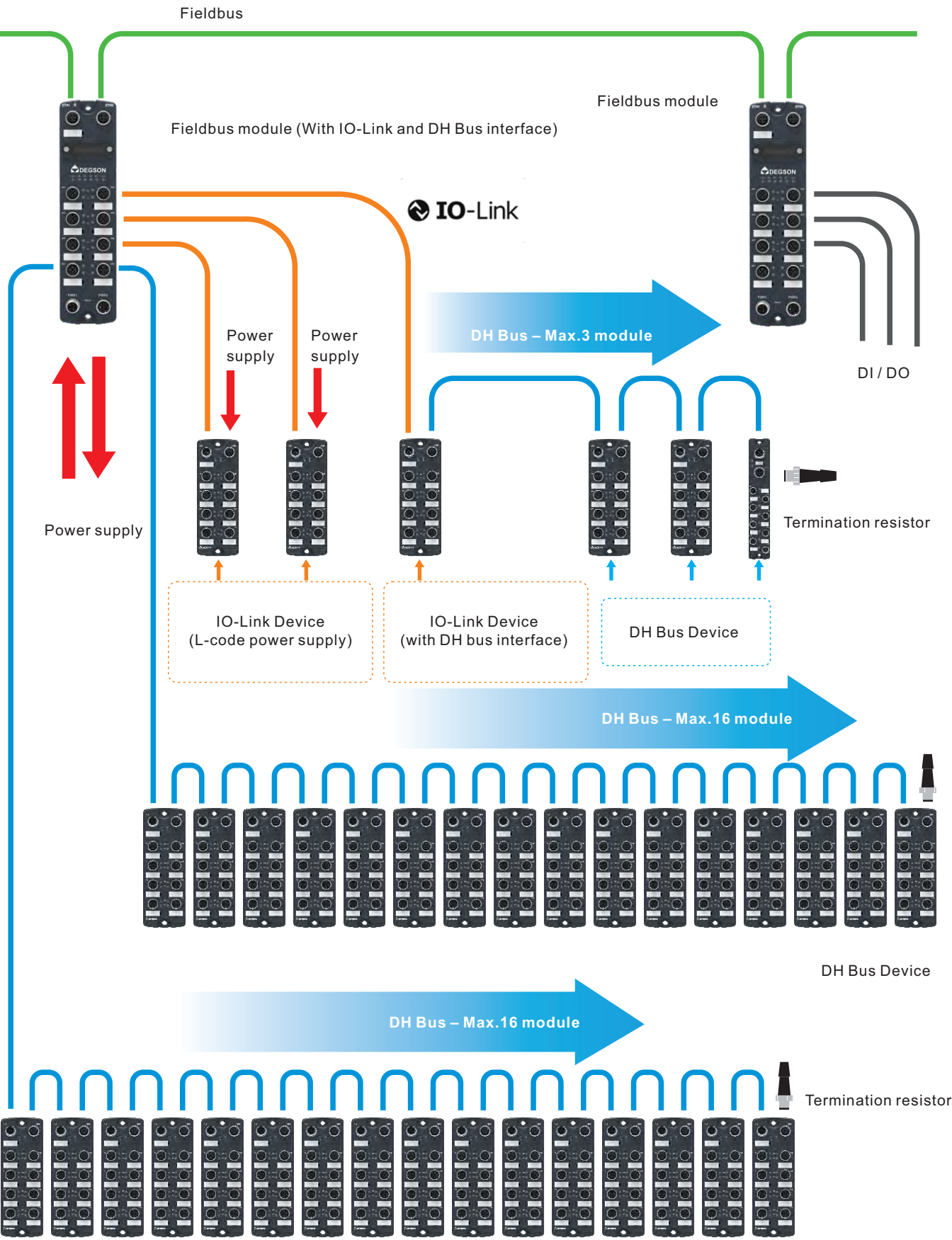
DEGSON Fieldbus High performance IP67 I/O



- Reliable
- Robust
- Durable

- Supports multiple mainstream fieldbus protocols
- Flexible and suitable for multiple applications and work environments
- IP67/IP65 high protection structure
- Rich models and I/O types
- Extended Bus Technology (DH Bus) fully isolated, high-speed
- A single fieldbus node can scale up to 512DI/512DO/128AI/128AO

Application Extension Graph



IO-Link

Universal

Smart

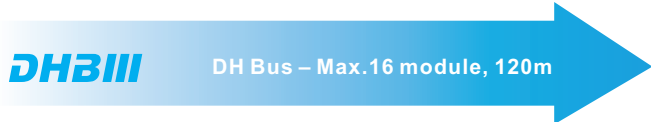
Easy

Pin	Signal	Definition	Standard
1	L+	24 V	IEC 61131-2
2	I/Q	Not connected, DI, or DO	IEC 61131-2
3	L-	0 V	IEC 61131-2
4	Q	"Switching signal" (SIO)	IEC 61131-2
	C	"Coded switching" (COM1, COM2, COM3)	IEC 61131-9

- IO-Link is the world's first standardized I/O technology for communication with sensors and actuators (IEC 61131-9)
- No additional requirements for cable materials are required, and the conventional 3-wire connection method can achieve powerful point-to-point communication
- IO-Link is not a fieldbus, but a further development of classic sensor and actuator connection technology

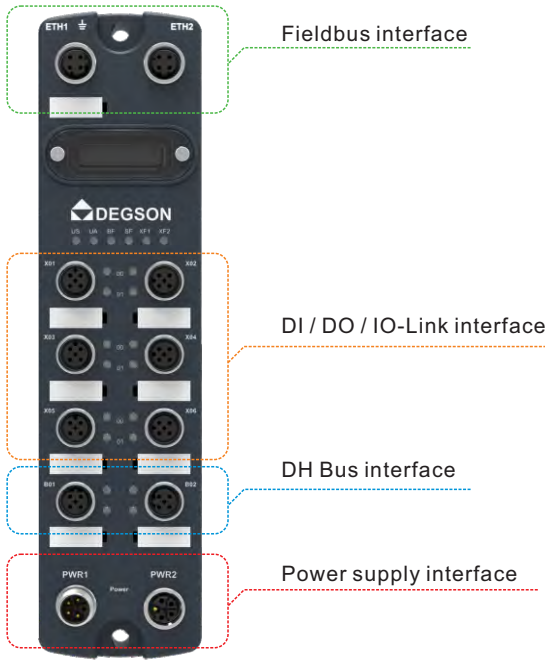
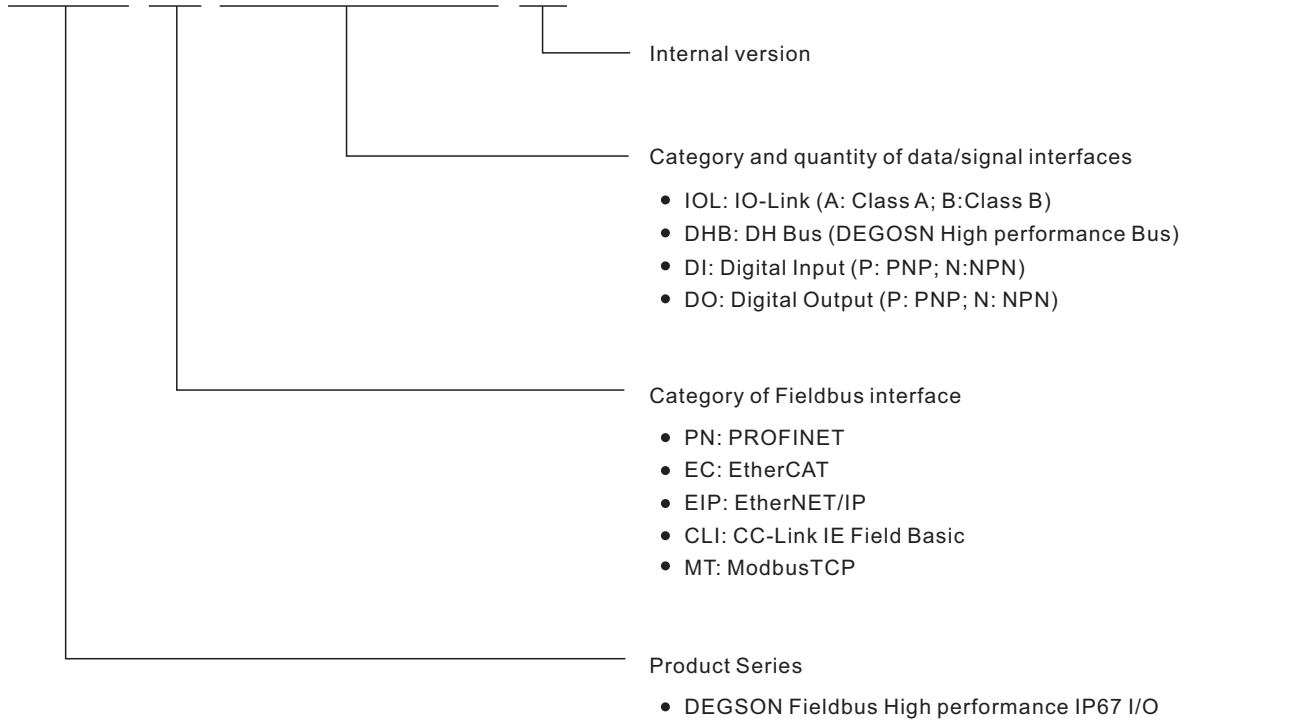
DH Bus

- DEGSON High performance Bus
- DEGSON internal communication protocol for efficient remote extension modules
- DH Bus single link can extend up to 16 modules, with a maximum length of 120m, and adjacent stations with a maximum length of 15m
- The last DH Bus station needs to increase terminal resistance to ensure stable and reliable communication



Fieldbus Module

DFH67-PN-IOL2A4B-DHB2



Fieldbus module with DH Bus interface



Fieldbus module without DH Bus interface

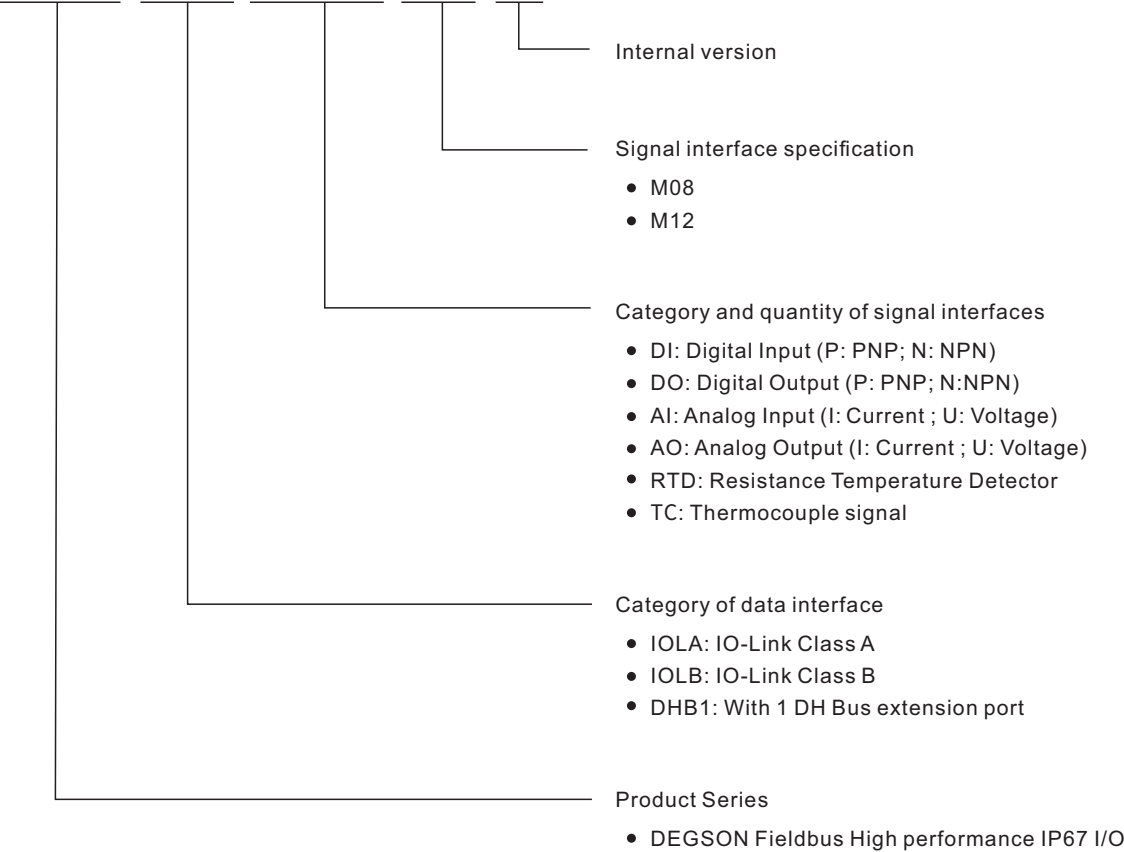
Fieldbus Module

NO.	Order NO.	Fieldbus interface					Data/Signal interfaces				
		PROFINET	EtherCAT	EtherNET/IP	CC-Link IE	Modbus TCP	IO-Link Class A	IO-Link Class B	DH Bus	DI	DO
1	DFH67-PN-IOL2A4B-DHB2	•					2	4	2	2 PNP	
2	DFH67-PN-IOL6A-DHB2	•					6		2	6 PNP	
3	DFH67-PN-IOL8A	•					8			8 PNP	
4	DFH67-EC-IOL2A4B-DHB2		•				2	4	2	2 PNP	
5	DFH67-EC-IOL6A-DHB2		•				6		2	6 PNP	
6	DFH67-EC-IOL8A		•				8			8 PNP	
7	DFH67-EIP-IOL2A4B-DHB2			•			2	4	2	2 PNP	
8	DFH67-EIP-IOL6A-DHB2			•			6		2	6 PNP	
9	DFH67-EIP-IOL8A			•			8			8 PNP	
10	DFH67-CLI-IOL2A4B-DHB2				•		2	4	2	2 PNP	
11	DFH67-CLI-IOL6A-DHB2				•		6		2	6 PNP	
12	DFH67-CLI-IOL8A				•		8			8 PNP	
13	DFH67-PN-DI12P-DHB2	•							2	12 PNP	
14	DFH67-PN-DI12N-DHB2	•							2	12 NPN	
15	DFH67-EC-DI12P-DHB2		•						2	12 PNP	
16	DFH67-EC-DI12N-DHB2		•						2	12 NPN	
17	DFH67-EIP-DIO12P-DHB2	1*		•					2	12 PNP (Configurable)	
18	DFH67-EIP-DIO12N-DHB2	1*		•					2	12 NPN (Configurable)	
19	DFH67-CLI-DIO12P-DHB2	1*			•				2	12 PNP (Configurable)	
20	DFH67-CLI-DIO12N-DHB2	1*			•				2	12 NPN (Configurable)	
21	DFH67-MT-DIO12P-DHB2	1*				•			2	12 PNP (Configurable)	
22	DFH67-MT-DIO12N-DHB2	1*				•			2	12 NPN (Configurable)	

1*: This model requires less usage and has a longer lead time.

IO-Link module

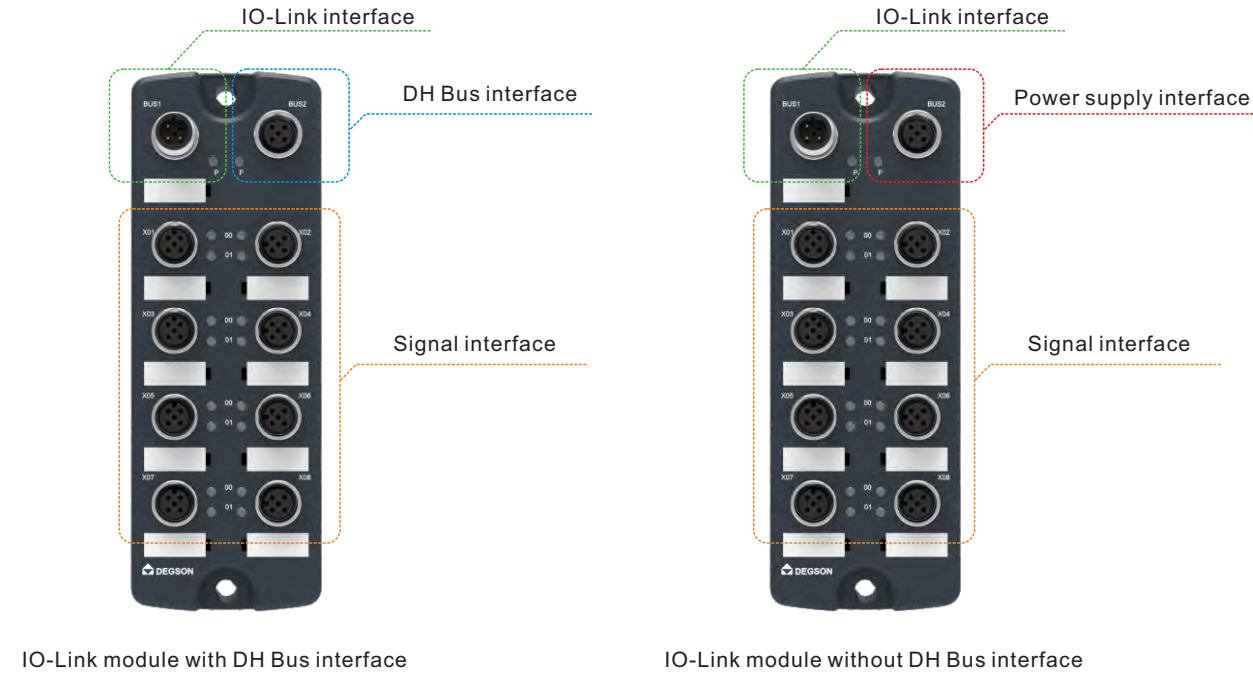
DFH67-IOLA-DIO16P-M12



IO-Link module

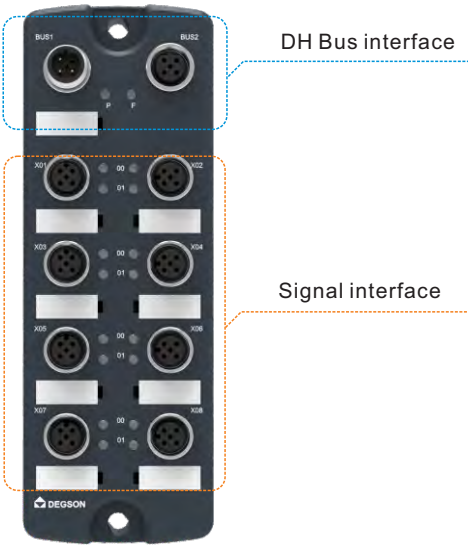
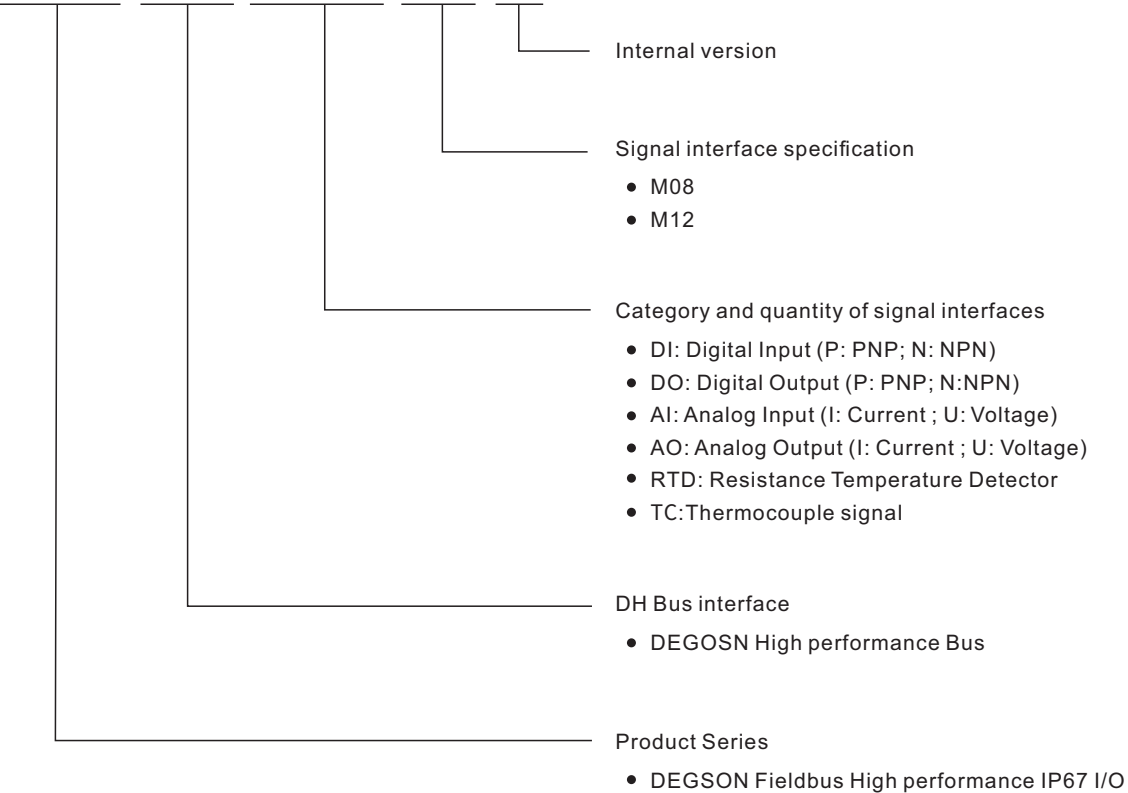
NO.	Order NO.	Data interfaces			Signal interfaces									
		IO-Link Class A	IO-Link Class B	DH Bus	DI-P	DO-P	DI-N	DO-N	AI-I	AO-I	AI-U	AO-U	RTD	TC
1	DFH67-IOLA-DIO16P-M12	•			16 (Configurable)									
2	DFH67-IOLA-DIO16N-M12	•					16 (Configurable)							
3	DFH67-IOLA-DHB1-DIO16P-M12	•		1	16 (Configurable)									
4	DFH67-IOLA-DHB1-DIO16N-M12	•		1			16 (Configurable)							
5	DFH67-IOLA-DHB1-AI4I-AO4I-M12	1*	•	1					4	4				
6	DFH67-IOLA-DHB1-AI4U-AO4U-M12	1*	•	1							4	4		
7	DFH67-IOLA-DHB1-AI8I-M12	1*	•	1					8					
8	DFH67-IOLA-DHB1-AI8U-M12	1*	•	1							8			
9	DFH67-IOLA-DHB1-AI4I-M12	1*	•	1					4					
10	DFH67-IOLA-DHB1-AI4U-M12	1*	•	1							4			

1*: This model requires less usage and has a longer lead time.

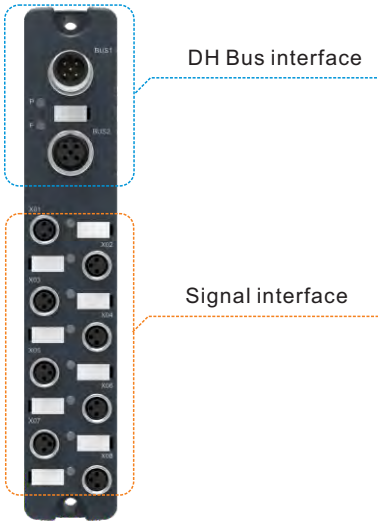


DH Bus module

DFH67-DHB-DIO16P-M12



DH Bus module for M12 signal interface



DH Bus module for M8 signal interface

DH Bus module

NO.	Order NO.		Data interfaces			Signal interfaces									
			IO-Link Class A	IO-Link Class B	DH Bus	DI-P	DO-P	DI-N	DO-N	AI-I	AO-I	AI-U	AO-U	RTD	TC
1	DFH67-DHB-DIO16P-M12				●	16 (Configurable)									
2	DFH67-DHB-DIO16N-M12				●		16 (Configurable)								
3	DFH67-DHB-DI16P-M12				●	16									
4	DFH67-DHB-DI16N-M12				●			16							
5	DFH67-DHB-DI8P-M08				●	8									
6	DFH67-DHB-DI8N-M08				●			8							
7	DFH67-DHB-DO16P-M12				●		16								
8	DFH67-DHB-DO16N-M12				●				16						
9	DFH67-DHB-DO8P-M08				●		8								
10	DFH67-DHB-DO8N-M08				●				8						
11	DFH67-DHB-DI8P-DO8P-M12				●	8	8								
12	DFH67-DHB-DI8N-DO8N-M12				●			8	8						
13	DFH67-DHB-DI4P-DO4P-M08	1*			●	4	4								
14	DFH67-DHB-DI4N-DO4N-M08	1*			●			4	4						
15	DFH67-DHB-AI8I-M12				●					8					
16	DFH67-DHB-AI8U-M12				●							8			
17	DFH67-DHB-AI4I-M12				●					4					
18	DFH67-DHB-AI4U-M12				●							4			
19	DFH67-DHB-AO4I-AO4U-M12				●						4		4		
20	DFH67-DHB-AO8I-M12	1*			●						8				
21	DFH67-DHB-AO8U-M12	1*			●								8		
22	DFH67-DHB-AO4I-M12	1*			●						4				
23	DFH67-DHB-AO4U-M12	1*			●								4		
24	DFH67-DHB-AI4I-AO4I-M12	1*			●					4	4				
25	DFH67-DHB-AI4U-AO4U-M12	1*			●							4	4		
26	DFH67-DHB-RTD8-M12				●									8	
27	DFH67-DHB-RTD4-M12				●									4	
28	DFH67-DHB-TC8-M12	1*			●										8
29	DFH67-DHB-TC4-M12	1*			●										4

1*: This model requires less usage and has a longer lead time.

IO-Link Master

CE RoHS



Features

- Designed according to IO-Link v1.1 specifications
- IO-Link master supports COM1/COM2/COM3
- IO-Link Interface supports Class-A or Class-B type
- Support DH BUS extension

PROFINET-RT PROTOCOL

Ordering Data

Order No.	DFH67-PN-IOL2A4B-DHB2	DFH67-PN-IOL6A-DHB2	DFH67-PN-IOL8A
Description	PROFINET-RT slave & IO-Link master 2* Class A + 4*Class B 2*DH BUS interface	PROFINET-RT slave & IO-Link master 6* Class A 2*DH BUS interface	PROFINET-RT slave & IO-Link master 8* Class A

Fieldbus

Protocol	PROFINET-RT
Operation mode	Automatic negotiation ; Auto MDI/MDIX
Transmission speed	10/100 Mbps
IP allocation	Programming software configuration, or allocation by master
Topology	Yes
MRP	Yes

Power Supply

Working voltage	24 VDC (18...30 VDC)
Current consumption	Max. 200mA
System and Input	Us , Max. 8A
Actuators	Ua , Max. 8A
Electrical isolation	Us/Ua : 24V isolated , 0V isolation

Interface Type

Power supply	2 * L-code 5pin , Plug(input) + Socket(output)	
Fieldbus	2 * M12 D-code 4pin , Socket	
Signal	6 * M12 A-code 5pin , Socket	8 * M12 A-code 5pin , Socket
DH Bus interface	2 * M12 B-code 5pin , Socket	/
Number of DH Bus modules	Max. 32 (16 × 2)	/
Extension distance of DH Bus	Single chain passth: Max. 120m; Between adjacent modules: Max. 15m	/

Electrical Parameters

IO-Link channels	6	6	8
Interface Type	2*Class-A + 4*Class-B	6*Class-A	8*Class-A
IO-Link version	IO-Link V1.1		
Transmission speed	COM1 (4.8kbps) 、 COM2 (38.4kbps) 、 COM3 (230.4kbps)		

IO-Link Master

CE RoHS

Ordering Data

Order No.	DFH67-PN-IOL2A4B-DHB2	DFH67-PN-IOL6A-DHB2	DFH67-PN-IOL8A
-----------	-----------------------	---------------------	----------------

Electrical Parameters

Signal type	DI/DO/IO-Link Configurable by software		
Number of inputs	Max. 8	Max. 12	Max. 16
Us current (Pin1&Pin3)	IO-Link interface : Max. 1.6A ; Signal interface: Max. 200mA		
Ua current (Pin2&Pin5)	Per channel : Max. 2A	/	
Input signal type	PNP type		
Input filter time	Max. 1.6ms		
Number of outputs	Max. 6	Max. 6	Max. 8
Output current	Per channel : Max. 2A		
Output signal type	PNP/NPN type(configurable)		
Output switch frequency	Resistive load : 100Hz ; Inductive load : 5Hz		

Diagnostic

Communication status	LED indication, Communication message
Power supply	Yes, Low voltage alarm
Short circuit/Overload	Yes, LED indication

General Data

Degree of protection	IP67
Temperature range	Operation temperature : -20~60 °C ; Storage temperature : -40~85 °C
Installation	2-hole fixing

IO-Link Master

CE RoHS



EtherCAT PROTOCOL

Features

- Designed according to IO-Link v1.1 specifications
- IO-Link master supports COM1/COM2/COM3
- IO-Link Interface supports Class-A or Class-B type
- Support DH BUS extension

Ordering Data

Order No.	DFH67-EC-IOL2A4B-DHB2	DFH67-EC-IOL6A-DHB2	DFH67-EC-IOL8A
Description	EtherCAT slave & IO-Link master 2* Class A + 4*Class B 2*DH BUS interface	EtherCAT slave & IO-Link master 6* Class A 2*DH BUS interface	EtherCAT slave & IO-Link master 8* Class A

Fieldbus

Protocol	EtherCAT
Operation mode	Automatic negotiation ; Auto MDI/MDIX
Transmission speed	10/100 Mbps
IP allocation	System automatic allocation or DIP switch setting
Topology	Yes

Power Supply

Working voltage	24 VDC (18...30 VDC)
Current consumption	Max. 200mA
System and Input	Us , Max. 8A
Actuators	Ua , Max. 8A
Electrical isolation	Us/Ua : 24V isolated , 0V isolation

Interface Type

Power supply	2 * L-code 5pin , Plug(input) + Socket(output)	
Fieldbus	2 * M12 D-code 4pin , Socket	
Signal	6 * M12 A-code 5pin , Socket	8 * M12 A-code 5pin , Socket
DH Bus interface	2 * M12 B-code 5pin , Socket	/
Number of DH Bus modules	Max. 32 (16 × 2)	/
Extension distance of DH Bus	Single chain pasth: Max. 120m; Between adjacent modules: Max. 15m	/

Electrical Parameters

IO-Link channels	6	6	8
Interface Type	2*Class-A + 4*Class-B	6*Class-A	8*Class-A
IO-Link version	IO-Link V1.1		
Transmission speed	COM1 (4.8kbps) 、COM2 (38.4kbps) 、COM3 (230.4kbps)		

IO-Link Master

CE RoHS

Ordering Data

Order No.	DFH67-EC-IOL2A4B-DHB2	DFH67-EC-IOL6A-DHB2	DFH67-EC-IOL8A
-----------	-----------------------	---------------------	----------------

Electrical Parameters

Signal type	DI/DO/IO-Link Configurable by software		
Number of inputs	Max. 8	Max. 12	Max. 16
Us current (Pin1&Pin3)	IO-Link interface : Max. 1.6A ; Signal interface: Max. 200mA		
Ua current (Pin2&Pin5)	Per channel : Max. 2A	/	
Input signal type	PNP type		
Input filter time	Max. 1.6ms		
Number of outputs	Max. 6	Max. 6	Max. 8
Output current	Per channel : Max. 2A		
Output signal type	PNP/NPN type(configurable)		
Output switch frequency	Resistive load : 100Hz ; Inductive load : 5Hz		

Diagnostic

Communication status	LED indication , Communication message
Power supply	Yes, Low voltage alarm
Short circuit/Overload	Yes, LED indication

General Data

Degree of protection	IP67
Temperature range	Operation temperature : -20~60 °C ; Storage temperature : -40~85 °C
Installation	2-hole fixing

IO-Link Master

CE RoHS



CC-Link IE Field Basic PROTOCOL

Features

- Designed according to IO-Link v1.1 specifications
- IO-Link master supports COM1/COM2/COM3
- IO-Link Interface supports Class-A or Class-B type
- Support DH BUS extension

Ordering Data

Order No.	DFH67-CLI-IOL2A4B-DHB2	DFH67-CLI-IOL6A-DHB2	DFH67-CLI-IOL8A
Description	CC-Link IEFB slave & IO-Link master 2* Class A + 4*Class B 2*DH BUS interface	CC-Link IEFB slave & IO-Link master 6* Class A 2*DH BUS interface	CC-Link IEFB slave & IO-Link master 8* Class A

Fieldbus

Protocol	CC-Link IE Field Basic
Operation mode	Remote device station
Transmission speed	10/100 Mbps
IP allocation	Web server configuration or DIP switch setting
Topology	Yes

Power Supply

Working voltage	24 VDC (18...30 VDC)
Current consumption	Max. 200mA
System and Input	Us , Max. 8A
Actuators	Ua , Max. 8A
Electrical isolation	Us/Ua : 24V isolated , 0V isolation

Interface Type

Power supply	2 * L-code 5pin , Plug(input) + Socket(output)	
Fieldbus	2 * M12 D-code 4pin , Socket	
Signal	6 * M12 A-code 5pin , Socket	8 * M12 A-code 5pin , Socket
DH Bus interface	2 * M12 B-code 5pin , Socket	/
Number of DH Bus modules	Max. 32 (16 × 2)	/
Extension distance of DH Bus	Single chain pasth: Max. 120m; Between adjacent modules: Max. 15m	/

Electrical Parameters

IO-Link channels	6	6	8
Interface Type	2*Class-A + 4*Class-B	6*Class-A	8*Class-A
IO-Link version	IO-Link V1.1		
Transmission speed	COM1 (4.8kbps) 、COM2 (38.4kbps) 、COM3 (230.4kbps)		

IO-Link Master

CE RoHS

Ordering Data

Order No.	DFH67-CLI-IOL2A4B-DHB2	DFH67-CLI-IOL6A-DHB2	DFH67-CLI-IOL8A
-----------	------------------------	----------------------	-----------------

Electrical Parameters

Signal type	DI/DO/IO-Link Configurable by software		
Number of inputs	Max. 8	Max. 12	Max. 16
Us current (Pin1&Pin3)	IO-Link interface : Max. 1.6A ; Signal interface: Max. 200mA		
Ua current (Pin2&Pin5)	Per channel : Max. 2A	/	
Input signal type	PNP type		
Input filter time	Max. 1.6ms		
Number of outputs	Max. 6	Max. 6	Max. 8
Output current	Per channel : Max. 2A		
Output signal type	PNP/NPN type(configurable)		
Output switch frequency	Resistive load : 100Hz ; Inductive load : 5Hz		

Diagnostic

Communication status	LED indication , Communication message
Power supply	Yes, Low voltage alarm
Short circuit/Overload	Yes, LED indication

General Data

Degree of protection	IP67
Temperature range	Operation temperature : -20~60 °C ; Storage temperature : -40~85 °C
Installation	2-hole fixing

IO-Link Master

CE RoHS



Features

- Designed according to IO-Link v1.1 specifications
- IO-Link master supports COM1/COM2/COM3
- IO-Link Interface supports Class-A or Class-B type
- Support DH BUS extension

EtherNet/IP PROTOCOL

Ordering Data

Order No.	DFH67-EIP-IOL2A4B-DHB2	DFH67-EIP-IOL6A-DHB2	DFH67-EIP-IOL8A
Description	EtherNet/IP slave & IO-Link master 2* Class A + 4*Class B 2*DH BUS interface	EtherNet/IP slave & IO-Link master 6* Class A 2*DH BUS interface	EtherNet/IP slave & IO-Link master 8* Class A

Fieldbus

Protocol	EtherNet/IP
Operation mode	Automatic negotiation ; Auto MDI/MDIX
Transmission speed	10/100 Mbps
IP allocation	Web server configuration or DIP switch setting
Topology	Yes

Power Supply

Working voltage	24 VDC (18...30 VDC)
Current consumption	Max. 200mA
System and Input	Us , Max. 8A
Actuators	Ua , Max. 8A
Electrical isolation	Us/Ua : 24V isolated , 0V isolation

Interface Type

Power supply	2 * L-code 5pin , Plug(input) + Socket(output)	
Fieldbus	2 * M12 D-code 4pin , Socket	
Signal	6 * M12 A-code 5pin , Socket	8 * M12 A-code 5pin , Socket
DH Bus interface	2 * M12 B-code 5pin , Socket	/
Number of DH Bus modules	Max. 32 (16 × 2)	/
Extension distance of DH Bus	Single chain pasth: Max. 120m; Between adjacent modules: Max. 15m	/

Electrical Parameters

IO-Link channels	6	6	8
Interface Type	2*Class-A + 4*Class-B	6*Class-A	8*Class-A
IO-Link version	IO-Link V1.1		
Transmission speed	COM1 (4.8kbps) 、COM2 (38.4kbps) 、COM3 (230.4kbps)		

IO-Link Master

CE RoHS

Ordering Data

Order No.	DFH67-EIP-IOL2A4B-DHB2	DFH67-EIP-IOL6A-DHB2	DFH67-EIP-IOL8A
-----------	------------------------	----------------------	-----------------

Electrical Parameters

Signal type	DI/DO/IO-Link Configurable by software		
Number of inputs	Max. 8	Max. 12	Max. 16
Us current (Pin1&Pin3)	IO-Link interface : Max. 1.6A ; Signal interface: Max. 200mA		
Ua current (Pin2&Pin5)	Per channel : Max. 2A	/	
Input signal type	PNP type		
Input filter time	Max. 1.6ms		
Number of outputs	Max. 6	Max. 6	Max. 8
Output current	Per channel : Max. 2A		
Output signal type	PNP/NPN type(configurable)		
Output switch frequency	Resistive load : 100Hz ; Inductive load : 5Hz		

Diagnostic

Communication status	LED indication , Communication message
Power supply	Yes, Low voltage alarm
Short circuit/Overload	Yes, LED indication

General Data

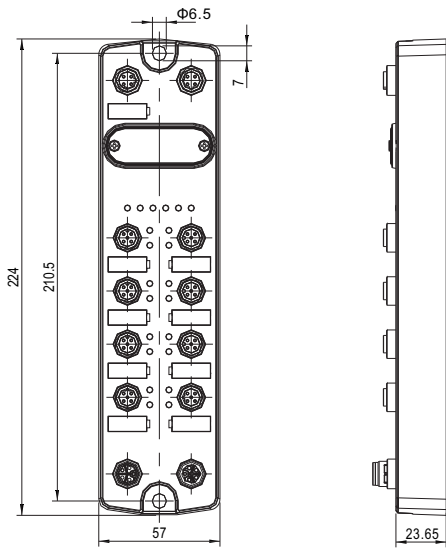
Degree of protection	IP67
Temperature range	Operation temperature : -20~60 °C ; Storage temperature : -40~85 °C
Installation	2-hole fixing

IO-Link Master

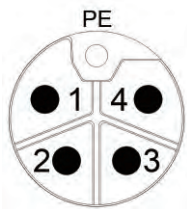
CE RoHS

Dimension

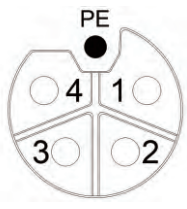
M12-MASTER



Power supply interface

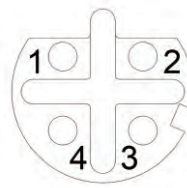


Power supply L-code plug (Metal) - PWR1
1-System and signal power supply Us+
2-Actuator Power supply Ua-
3-System and signal power supply Us-
4-Actuator Power supply Ua+
5-PE-Protective grounding PE

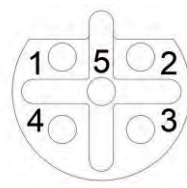


Power supply L-code socket (Metal) - PWR2

Fieldbus & DH BUS interface



Fieldbus interface D-code socket(Metal) - ETH1/ETH2
1-Transmitter Tx+
2-Receiver Rx+
3-Transmitter Tx-
4-Receiver Rx-



DH Bus B-code socket (Black) - D01/D02
1-Power supply 24V+
2-Data signal A
3-Data signal B
4-Power supply GND
5-ADR 1

IO-Link interface

M12 A-code socket (Green)



IO-Link Class-A interface (Green)
1-Power supply 24V+
2-Digital Input/Output
3-Power supply GND
4-IO-Link C/Q
5-Protective grounding PE

IO-Link Class-B interface (Green)
1-Power supply 24V+
2-Actuator power supply P24
3-Power supply GND
4-IO-Link C/Q
5-Actuator power supply N24

IO-Link digital device

CE RoHS



Features

- Input/Output photoelectric isolation
- Input or Output configurable
- Overvoltage and short circuit protection function
- Designed according to IO-Link v1.1 specifications, Communication rate : COM2

Ordering Data		
Order No.	DFH67-IOLA-DHB1-DIO16P-M12	DFH67-IOLA-DHB1-DIO16N-M12
Description	16 DI/DO , PNP , 8*M12	16 DI/DO , NPN , 8*M12
Interface Type		
IO-Link interface	1 * M12 A-code 4pin Plug	
DH Bus interface	1 * M12 B-code 5pin Socket	
Power	IO Link interface power supply : 24V, 1.6A	
Signal	8 * M12 A-code 5pin , Socket	
Electrical Parameters		
Supply voltage	24 VDC (18...30V)	
Current consumption	Max. 50mA	
Number of inputs	Max. 16 , PNP type	Max. 16 , NPN type
Input signal type	Sensor, Limit switch, Contact, etc	
Input filter time	Max. 2ms	
Number of outputs	Max. 16 , PNP type	Max. 16 , NPN type
Output signal type	Actuators, Indicator lights, Mini electromagnetic valves, etc	
Output current	Per channel : Max. 0.3A , Total : Max. 1.5A	
Output switch frequency	Resistive load : 100Hz ; Inductive load : 5Hz	
Extending capability	Up to 3 DH BUS extension modules (up to 1 analog or temperature module) , Total length not exceeding 60m	
IO-Link Parameters		
Interface Type	CLASS A	
IO-Link version	IO-Link V1.1	
Transmission speed	COM2 (38.4kbps)	
Process data	2 input bytes, 2 output bytes	
Diagnostic		
Communication status	LED indication, Communication message	
Power supply	Yes, Low voltage alarm	
Short circuit/Overload	Yes, LED indication	
General Data		
Degree of protection	IP67	
Temperature range	Operation temperature : -20~60 °C ; Storage temperature : -40~85 °C	
Installation	2-hole fixing	

IO-Link digital device

CE

RoHS



Features

- Input/Output photoelectric isolation
- Input or Output configurable
- Overvoltage and short circuit protection function
- Designed according to IO-Link v1.1 specifications, Communication rate : COM2

Ordering Data		
Order No.	DFH67-IOLA-DIO16P-M12	DFH67-IOLA-DIO16N-M12
Description	16 DI/DO , PNP , 8*M12	16 DI/DO , NPN , 8*M12
Interface Type		
IO-Link interface	1 * M12 A-code 4pin Plug	
Power	1 * M12 L-code 5pin Plug : 24V , 8A	
Signal	8 * M12 A-code 5pin , Socket	
Electrical Parameters		
Supply voltage	24 VDC (18...30V)	
Current consumption	Max. 50mA	
Number of inputs	Max. 16 , PNP type	Max. 16 , NPN type
Input signal type	Sensor, Limit switch, Contact, etc	
Input filter time	Max. 2ms	
Number of outputs	Max. 16 , PNP type	Max. 16 , NPN type
Output signal type	Actuators, Indicator lights, Mini electromagnetic valves, etc	
Output current	Per channel : Max. 0.5A , Total : Max. 8A	
Output switch frequency	Resistive load : 100Hz ; Inductive load : 5Hz	
Extending capability	No	
IO-Link Parameters		
Interface Type	CLASS A	
IO-Link version	IO-Link V1.1	
Transmission speed	COM2 (38.4kbps)	
Process data	2 input bytes, 2 output bytes	
Diagnostic		
Communication status	LED indication, Communication message	
Power supply	Yes, Low voltage alarm	
Short circuit/Overload	Yes, LED indication	
General Data		
Degree of protection	IP67	
Temperature range	Operation temperature : -20~60 °C ; Storage temperature : -40~85 °C	
Installation	2-hole fixing	

IO-Link analog device

CE

RoHS



Features

- Resolution : 16 bit
- Interface Type : Class-A
- Designed according to IO-Link v1.1 specifications, Communication rate : COM2

Ordering Data		
Order No.	DFH67-IOLA-DHB1-AI4I-AO4U-M12	DFH67-IOLA-DHB1-AI4U-AO4U-M12
Description	4 AI+4AO , Current type , 8*M12	4 AI+4AO , Voltage type , 8*M12
Interface Type		
IO-Link interface	1 * M12 A-code 4pin Plug	
DH Bus interface	1 * M12 B-code 5pin Socket	
Power	IO Link interface power supply : 24V, 1.6A	
Signal	8 * M12 A-code 5pin , Socket	
Electrical Parameters		
Supply voltage	24 VDC (18...30V)	
Current consumption	Max. 50mA	
Number of inputs	4	
Input signal type	4AI (0~20mA , First 4 channels)	4AI (±10V , First 4 channels)
Input impedance	< 450Ω	> 1kΩ
Number of outputs	4	
Output signal type	4AO (0~20mA , Last 4 channels)	4AO (±10V , Last 4 channels)
Resolution	16Bit	
Conversion time	Max. 300us	
Precision	± 0.3%	
Extending capability	Up to 3 DH BUS extension modules (up to 1 analog or temperature module) , Total length not exceeding 60m	
IO-Link Parameters		
Interface Type	CLASS A	
IO-Link version	IO-Link V1.1	
Transmission speed	COM2 (38.4kbps)	
Process data	8 input bytes, 8 output bytes	
Diagnostic		
Communication status	LED indication, Communication message	
Power supply	Yes, Low voltage alarm	
Short circuit/Overload	Yes, LED indication	
General Data		
Degree of protection	IP67	
Temperature range	Operation temperature : -20~60 °C ; Storage temperature : -40~85 °C	
Installation	2-hole fixing	

IO-Link analog device

CE

RoHS



- Features
- Designed according to IO-Link v1.1 specifications , Communication rate : COM2
 - Interface Type : Class-A

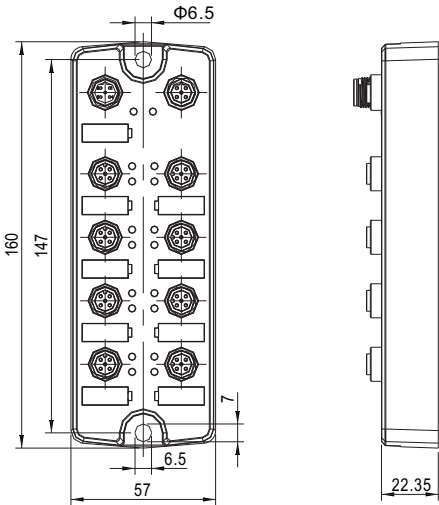
Ordering Data				
Order No.	DFH67-IOLA-DHB1-AI4I-M12	DFH67-IOLA-DHB1-AI4U-M12	DFH67-IOLA-DHB1-AI8I-M12	DFH67-IOLA-DHB1-AI8U-M12
Description	4 AI , Current type , 8*M12	4 AI , Voltage type , 8*M12	8 AI , Current type , 8*M12	8 AI , Voltage type , 8*M12
Interface Type				
IO-Link interface	1 * M12 A-code 4pin Plug			
DH Bus interface	1 * M12 B-code 5pin Socket			
Power	IO Link interface power supply : 24V, 1.6A			
Signal	8 * M12 A-code 5pin , Socket			
Electrical Parameters				
Supply voltage	24 VDC (18...30V)			
Current consumption	Max. 50mA			
Number of inputs	4 (First 4 channels)		8	
Input signal type	0~20mA	±10V	0~20mA	±10V
Input impedance	Current input : 250Ω ; Voltage input : 1MΩ			
Resolution	16Bit			
Conversion time	Max. 300us			
Precision	± 0.3%			
Extending capability	Up to 3 DH BUS extension modules (up to 1 analog or temperature module) , Total length not exceeding 60m			
IO-Link Parameters				
Interface Type	CLASS A			
IO-Link version	IO-Link V1.1			
Transmission speed	COM2 (38.4kbps)			
Process data	8 input bytes		16 input bytes	
Diagnostic				
Communication status	LED indication, Communication message			
Power supply	Yes, Low voltage alarm			
Short circuit/Overload	Yes, LED indication			
General Data				
Degree of protection	IP67			
Temperature range	Operation temperature : -20~60 °C ; Storage temperature : -40~85 °C			
Installation	2-hole fixing			

IO-Link module

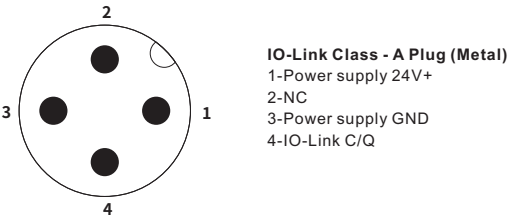
CE

RoHS

Dimension

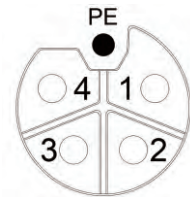


IO-Link interface

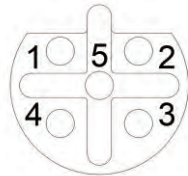


- IO-Link Class - A Plug (Metal)**
- 1-Power supply 24V+
 - 2-NC
 - 3-Power supply GND
 - 4-IO-Link C/Q

Power supply interface / DH Bus interface



- Power supply L-code plug (Metal) - PWR1**
- 1-System and signal power supply Us+
 - 2-Actuator Power supply Ua-
 - 3-System and signal power supply Us-
 - 4-Actuator Power supply Ua+
 - 5-PE-Protective grounding PE



- DH Bus B-code socket (Metal) - BUS1**
- 1-Power supply 24V+
 - 2-Data signal A
 - 3-Data signal B
 - 4-Power supply GND
 - 5-ADR 1

M12 Input/Output



- Digital signal interface M12 A-code socket (Green)**
- 1-Power supply 24V+
 - 2-Digital Input/Output B
 - 3-Power supply GND
 - 4-Digital Input/Output A
 - 5-Protective grounding PE

- Analog/Temperature signal interface M12 A-code socket (Green)**
- 1- a-
 - 2- A-
 - 3- NC
 - 4- A+
 - 5- NC

Fieldbus interface module

CE

RoHS



PROFINET-RT PROTOCOL

Features

- Advanced diagnostic function
- Fieldbus and Power adopt isolation technology and are reliable
- Supports 2 chain path; Max. 32 modules(16×2)
- Standalone configuration file
- Support DH BUS extension

Ordering Data		
Order No.	DFH67-PN-DI12P-DHB2	DFH67-PN-DI12N-DHB2
Description	PROFINET-RT protocol 6*A-Code 12DI , PNP type 2*B-Code DH BUS interface	PROFINET-RT protocol 6*A-Code 12DI , NPN type 2*B-Code DH BUS interface
Fieldbus		
Protocol	PROFINET-RT	
Operation mode	Automatic negotiation ; Auto MDI/MDIX	
Transmission speed	10/100 Mbps	
IP allocation	Programming software configuration, or allocation by master	
Power Supply		
Working voltage	24 VDC (18...30 VDC)	
Current consumption	Max. 200 mA	
System and Input	Us , Max. 8A	
Actuators	Ua , Max. 8A	
DH Bus interface power supply	Current of each DH Bus interface : Max. 4A	
Electrical isolation	Module/Input power supply Ui and Output power supply Uo : 24V isolated , 0V connected	
Interface Type		
Power supply	2 * M12 L-code 5pinPlug(input) + Socket(output)	
Fieldbus	2 * M12 D-code 4pin , Socket	
Signal	6 * M12 A-code 5pin , Socket	
DH Bus interface	2 * M12 B-code 5pin , Socket	
Number of DH Bus modules	Max. 32 (16 × 2)	
Extension distance of DH Bus	Single chain pasth: Max. 120m; Between adjacent modules: Max. 15m	

Fieldbus interface module

CE

RoHS

Ordering Data		
Order No.	DFH67-PN-DI12P-DHB2	DFH67-PN-DI12N-DHB2
Electrical Parameters		
Number and type of I/O	12DI PNP	12DI NPN
Input power supply current	Per channel : Max. 200mA	
Input filter time	Max. 10ms	
Diagnostic		
Communication status	LED indication, Communication message	
Power supply	Yes, Low voltage alarm	
Short circuit/Overload	Yes, LED indication	
Extension	LED indication	
General Data		
Degree of protection	IP67	
Temperature range	Operation temperature : -20~60 °C ; Storage temperature : -40~85 °C	
Installation	2-hole fixing	

Fieldbus interface module

CE

RoHS



EtherCAT PROTOCOL

Features

- Advanced diagnostic function
- Fieldbus and Power adopt isolation technology and are reliable
- Supports 2 chain path; Max. 32 modules(16×2)
- Standalone configuration file
- Support DH BUS extension

Ordering Data		
Order No.	DFH67-EC-DI12P-DHB2	DFH67-EC-DI12N-DHB2
Description	EtherCAT protocol 6"A-Code 12DI , PNP type 2"B-Code DH BUS interface	EtherCAT protocol 6"A-Code 12DI , NPN type 2"B-Code DH BUS interface
Fieldbus		
Protocol	EtherCAT	
Operation mode	Automatic negotiation ; Auto MDI/MDIX	
Transmission speed	10/100 Mbps	
IP allocation	System automatic allocation or DIP switch setting	
Power Supply		
Working voltage	24 VDC (18...30 VDC)	
Current consumption	Max. 200 mA	
System and Input	Us , Max. 8A	
Actuators	Ua , Max. 8A	
DH Bus interface power supply	Current of each DH Bus interface : Max. 4A	
Electrical isolation	Module/Input power supply Ui and Output power supply Uo : 24V isolated , 0V connected	
Interface Type		
Power supply	2 " M12 L-code 5pinPlug(input) + Socket(output)	
Fieldbus	2 " M12 D-code 4pin , Socket	
Signal	6 " M12 A-code 5pin , Socket	
DH Bus interface	2 " M12 B-code 5pin , Socket	
Number of DH Bus modules	Max. 32 (16 × 2)	
Extension distance of DH Bus	Single chain pasth: Max. 120m; Between adjacent modules: Max. 15m	

Fieldbus interface module

CE

RoHS

Ordering Data		
Order No.	DFH67-EC-DI12P-DHB2	DFH67-EC-DI12N-DHB2
Electrical Parameters		
Number and type of I/O	12DI PNP	12DI NPN
Input power supply current	Per channel : Max. 200mA	
Input filter time	Max. 1.6ms	
Diagnostic		
Communication status	LED indication, Communication message	
Power supply	Yes, Low voltage alarm	
Short circuit/Overload	Yes, LED indication	
Extension	LED indication	
General Data		
Degree of protection	IP67	
Temperature range	Operation temperature : -20~60 °C ; Storage temperature : -40~85 °C	
Installation	2-hole fixing	

Fieldbus interface module

CERoHS



CC-Link IE Field Basic PROTOCOL

Features

- Advanced diagnostic function
- Fieldbus and Power adopt isolation technology and are reliable
- Supports 2 chain path; Max. 32 modules(16×2)
- Support DH BUS extension
- Input or Output configurable

Ordering Data		
Order No.	DFH67-CLI-DIO12P-DHB2	DFH67-CLI-DIO12N-DHB2
Description	CC-Link IE Field Basic protocol 6*A-Code 12DI/DO(configurable) , PNP type 2*B-Code DH BUS interface	CC-Link IE Field Basic protocol 6*A-Code 12DI/DO(configurable) , NPN type 2*B-Code DH BUS interface
Fieldbus		
Protocol	CC-Link IE Field Basic	
Operation mode	Automatic negotiation ; Auto MDI/MDIX	
Transmission speed	10/100 Mbps	
IP allocation	Web server configuration or DIP switch setting	
Power Supply		
Working voltage	24 VDC (18...30 VDC)	
Current consumption	Max. 200 mA	
System and Input	Us , Max. 8A	
Actuators	Ua , Max. 8A	
DH Bus interface power supply	Current of each DH Bus interface : Max. 4A	
Electrical isolation	Module/Input power supply Ui and Output power supply Uo : 24V isolated , 0V connected	
Interface Type		
Power supply	2 * M12 L-code 5pinPlug(input) + Socket(output)	
Fieldbus	2 * M12 D-code 4pin , Socket	
Signal	6 * M12 A-code 5pin , Socket	
DH Bus interface	2 * M12 B-code 5pin , Socket	
Number of DH Bus modules	Max. 32 (16 × 2)	
Extension distance of DH Bus	Single chain pasth: Max. 120m; Between adjacent modules: Max. 15m	

Fieldbus interface module

CERoHS

Ordering Data		
Order No.	DFH67-CLI-DIO12P-DHB2	DFH67-CLI-DIO12N-DHB2
Electrical Parameters		
Number and type of I/O	12DI/DO(configurable) , PNP type	12DI/DO(configurable) , NPN type
Input power supply current	Per channel : Max. 200mA	
Input filter time	Max. 10ms	
Diagnostic		
Communication status	LED indication, Communication message	
Power supply	Yes, Low voltage alarm	
Short circuit/Overload	Yes, LED indication	
Extension	LED indication	
General Data		
Degree of protection	IP67	
Temperature range	Operation temperature : -20~60 °C ; Storage temperature : -40~85 °C	
Installation	2-hole fixing	

Fieldbus interface module

CE RoHS



EtherNet/IP PROTOCOL

Features

- Advanced diagnostic function
- Fieldbus and Power adopt isolation technology and are reliable
- Supports 2 chain path; Max. 32 modules(16×2)
- Standalone configuration file
- Support DH BUS extension
- Input or Output configurable

Ordering Data

Order No.	DFH67-EIP-DIO12P-DHB2	DFH67-EIP-DIO12N-DHB2
Description	EtherNet/IP protocol 6*A-Code 12DI/DO(configurable) , PNP type 2*B-Code DH BUS interface	EtherNet/IP protocol 6*A-Code 12DI/DO(configurable) , NPN type 2*B-Code DH BUS interface

Fieldbus

Protocol	EtherNet/IP
Operation mode	Automatic negotiation ; Auto MDI/MDIX
Transmission speed	10/100 Mbps
IP allocation	Web server configuration or DIP switch setting

Power Supply

Working voltage	24 VDC (18...30 VDC)
Current consumption	Max. 200 mA
System and Input	Us , Max. 8A
Actuators	Ua , Max. 8A
DH Bus interface power supply	Current of single chain path : Max. 4A
Electrical isolation	Module/Input power supply Ui and Output power supply Uo : 24V isolated , 0V connected

Interface Type

Power supply	2 * M12 L-code 5pinPlug(input) + Socket(output)
Fieldbus	2 * M12 D-code 4pin , Socket
Signal	6 * M12 A-code 5pin , Socket
DH Bus interface	2 * M12 B-code 5pin , Socket
Number of DH Bus modules	Max. 32 (16 × 2)
Extension distance of DH Bus	Single chain path: Max. 120m; Between adjacent modules: Max. 15m

Fieldbus interface module

CE RoHS

Ordering Data

Order No.	DFH67-EIP-DIO12P-DHB2	DFH67-EIP-DIO12N-DHB2
-----------	-----------------------	-----------------------

Electrical Parameters

Number and type of I/O	12DI/DO(configurable) , PNP type	12DI/DO(configurable) , NPN type
Input power supply current	Per channel : Max. 200mA	
Input filter time	Max. 20ms	

Diagnostic

Communication status	LED indication, Communication message
Power supply	Yes, Low voltage alarm
Short circuit/Overload	Yes, LED indication
Extension	LED indication

General Data

Degree of protection	IP67
Temperature range	Operation temperature : -20~60 °C ; Storage temperature : -40~85 °C
Installation	2-hole fixing

Fieldbus interface module

CE RoHS



Modbus-TCP PROTOCOL

Features

- Advanced diagnostic function
- Fieldbus and Power adopt isolation technology and are reliable
- Supports 2 chain path; Max. 32 modules(16×2)
- Standalone configuration file
- Support DH BUS extension
- Input or Output configurable

Ordering Data

Order No.	DFH67-MT-DIO12P-DHB2	DFH67-MT-DIO12N-DHB2
Description	Modbus-TCP protocol 6*A-Code 12DI/DO(configurable) , PNP type 2*B-Code DH BUS interface	Modbus-TCP protocol 6*A-Code 12DI/DO(configurable) , NPN type 2*B-Code DH BUS interface

Fieldbus

Protocol	Modbus-TCP
Operation mode	Automatic negotiation ; Auto MDI/MDIX
Transmission speed	10/100 Mbps
IP allocation	Web server configuration or DIP switch setting

Power Supply

Working voltage	24 VDC (18...30 VDC)
Current consumption	Max. 200 mA
System and Input	Us , Max. 8A
Actuators	Ua , Max. 8A
DH Bus interface power supply	Current of single chain path : Max. 4A
Electrical isolation	Module/Input power supply Ui and Output power supply Uo : 24V isolated , 0V connected

Interface Type

Power supply	2 * M12 L-code 5pinPlug(input) + Socket(output)
Fieldbus	2 * M12 D-code 4pin , Socket
Signal	6 * M12 A-code 5pin , Socket
DH Bus interface	2 * M12 B-code 5pin , Socket
Number of DH Bus modules	Max. 32 (16 × 2)
Extension distance of DH Bus	Single chain path: Max. 120m; Between adjacent modules: Max. 15m

Fieldbus interface module

CE RoHS

Ordering Data

Order No.	DFH67-MT-DIO12P-DHB2	DFH67-MT-DIO12N-DHB2
-----------	----------------------	----------------------

Electrical Parameters

Number and type of I/O	12DI/DO(configurable) , PNP type	12DI/DO(configurable) , NPN type
Input power supply current	Per channel : Max. 200mA	
Input filter time	Max. 20ms	

Diagnostic

Communication status	LED indication, Communication message
Power supply	Yes, Low voltage alarm
Short circuit/Overload	Yes, LED indication
Extension	LED indication

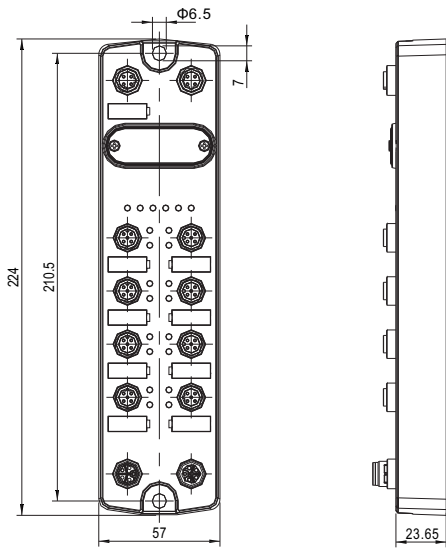
General Data

Degree of protection	IP67
Temperature range	Operation temperature : -20~60 °C ; Storage temperature : -40~85 °C
Installation	2-hole fixing

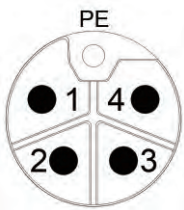
Fieldbus interface module

CE RoHS

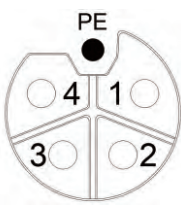
Dimension



Power supply interface



Power supply L-code plug (Metal) - PWR1
1-System and signal power supply Us+
2-Actuator Power supply Ua-
3-System and signal power supply Us-
4-Actuator Power supply Ua+
5-PE-Protective grounding PE

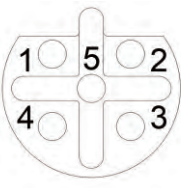


Power supply L-code socket (Metal) - PWR2

Fieldbus & DH BUS interface



Fieldbus interface D-code socket(Metal) - ETH1/ETH2
1-Transmitter Tx+
2-Receiver Rx+
3-Transmitter Tx-
4-Receiver Rx-



DH Bus B-code socket (Black) - D01/D02
1-Power supply 24V+
2-Data signal A
3-Data signal B
4-Power supply GND
5-ADR 1

I/O signal interface



I/O signal interface M12 A-code socket (Green)
1-Power supply 24V+
2-Digital Input/Output B
3-Power supply GND
4-Digital Input/Output A
5-Protective grounding PE

DH BUS extension module

CE RoHS



Features

- Input/Output photoelectric isolation
- Hardware filtering time 500us
- Output photoelectric isolation
- Overvoltage and short circuit protection function
- DH BUS and Channel adopt isolation technology and are reliable

16 digital inputs module

Ordering Data

Order No.	DFH67-DHB-DI16P-M12	DFH67-DHB-DI16N-M12
Description	16DI , PNP , 8*M12	16DI , NPN , 8*M12

Interface Type

DH Bus	2 * M12 B-code 5pin Plug(input) + Socket(output)
Power	DH Bus interface includes power supply
Signal	8 * M12 A-code 5pin , Socket

Electrical Parameters

Supply voltage	24 VDC (18...30V)	
Current consumption	Max. 50mA	
Number of inputs	16	
Input power supply current	Per channel : Max. 200mA	
Input signal type	PNP type Sensors, Limit switch, Contact, etc	NPN type Sensors, Limit switch, Contact, etc
Input filter time	Max. 2ms	
Number of outputs	/	
Output current	/	
Output signal type	/	
Output switch frequency	/	

Diagnostic

Communication status	LED indication, Communication message
Power supply	Yes, Low voltage alarm
Short circuit/Overload	Yes, LED indication

General Data

Degree of protection	IP67
Temperature range	Operation temperature : -20~60 °C ; Storage temperature : -40~85 °C
Installation	2-hole fixing



Features

- Input/Output photoelectric isolation
- Hardware filtering time 500us
- Output photoelectric isolation
- Overvoltage and short circuit protection function
- DH BUS and Channel adopt isolation technology and are reliable

16 digital outputs module

Ordering Data		
Order No.	DFH67-DHB-DO16P-M12	DFH67-DHB-DO16N-M12
Description	16DO , PNP , 8*M12	16DO , NPN , 8*M12
Interface Type		
DH Bus	2 * M12 B-code 5pin Plug(input) + Socket(output)	
Power	DH Bus interface includes power supply	
Signal	8 * M12 A-code 5pin , Socket	
Electrical Parameters		
Supply voltage	24 VDC (18...30V)	
Current consumption	Max. 50mA	
Number of inputs	/	
Input power supply current	/	
Input signal type	/	
Input filter time	/	
Number of outputs	16	
Output current	Per channel : Max. 0.5A	
Output signal type	PNP type, actuator, Indicator, etc	NPN type, actuator, Indicator, etc
Output switch frequency	Resistive load : 100Hz, Inductive load : 5Hz	
Diagnostic		
Communication status	LED indication, Communication message	
Power supply	Yes, Low voltage alarm	
Short circuit/Overload	Yes, LED indication	
General Data		
Degree of protection	IP67	
Temperature range	Operation temperature : -20~60 °C ; Storage temperature : -40~85 °C	
Installation	2-hole fixing	



Features

- Input/Output photoelectric isolation
- Hardware filtering time 500us
- Output photoelectric isolation
- Overvoltage and short circuit protection function
- DH BUS and Channel adopt isolation technology and are reliable

8 digital inputs + 8 digital outputs module

Ordering Data		
Order No.	DFH67-DHB-DI8P-DO8P-M12	DFH67-DHB-DI8N-DO8N-M12
Description	8DI+8DO,PNP,8*M12	8DI+8DO,NPN,8*M12
Interface Type		
DH Bus	2 * M12 B-code 5pin Plug(input) + Socket(output)	
Power	DH Bus interface includes power supply	
Signal	8 * M12 A-code 5pin , Socket	
Electrical Parameters		
Supply voltage	24 VDC (18...30V)	
Current consumption	Max. 50mA	
Number of inputs	8	
Input power supply current	Per channel : Max. 200mA	
Input signal type	PNP type Sensors, Limit switch, Contact, etc	NPN type Sensors, Limit switch, Contact, etc
Input filter time	Max. 2ms	
Number of outputs	8	
Output current	Per channel : Max. 0.5A	
Output signal type	PNP type, actuator, Indicator, etc	NPN type, actuator, Indicator, etc
Output switch frequency	Resistive load : 100Hz, Inductive load : 5Hz	
Diagnostic		
Communication status	LED indication, Communication message	
Power supply	Yes, Low voltage alarm	
Short circuit/Overload	Yes, LED indication	
General Data		
Degree of protection	IP67	
Temperature range	Operation temperature : -20~60 °C ; Storage temperature : -40~85 °C	
Installation	2-hole fixing	



Features

- Input photoelectric isolation
- Hardware filtering time 500us
- Overvoltage and short circuit protection function
- DH BUS and Channel adopt isolation technology and are reliable

8 digital inputs module

Ordering Data		
Order No.	DFH67-DHB-DI8P-M08	DFH67-DHB-DI8N-M08
Description	8DI , PNP , 8*M8	8DI , NPN , 8*M8
Interface Type		
DH Bus	2 * M12 B-code 5pin Plug(input) + Socket(output)	
Power	DH Bus interface includes power supply	
Signal	8 * M8 A-code 3pin , Socket	
Electrical Parameters		
Supply voltage	24 VDC (18...30V)	
Current consumption	Max. 50mA	
Number of inputs	8	
Input power supply current	Per channel : Max. 200mA	
Input signal type	PNP type Sensors, Limit switch, Contact, etc	NPN type Sensors, Limit switch, Contact, etc
Input filter time	Max. 2ms	
Number of outputs	/	
Output current	/	
Output signal type	/	
Output switch frequency	/	
Diagnostic		
Communication status	LED indication, Communication message	
Power supply	Yes, Low voltage alarm	
Short circuit/Overload	Yes, LED indication	
General Data		
Degree of protection	IP67	
Temperature range	Operation temperature : -20~60 °C ; Storage temperature : -40~85 °C	
Installation	2-hole fixing	



Features

- Input photoelectric isolation
- Hardware filtering time 500us
- Overvoltage and short circuit protection function
- DH BUS and Channel adopt isolation technology and are reliable

8 digital outputs module

Ordering Data		
Order No.	DFH67-DHB-DO8P-M08	DFH67-DHB-DO8N-M08
Description	8DO , PNP , 8*M8	8DO , NPN , 8*M8
Interface Type		
DH Bus	2 * M12 B-code 5pin Plug(input) + Socket(output)	
Power	DH Bus interface includes power supply	
Signal	8 * M8 A-code 3pin , Socket	
Electrical Parameters		
Supply voltage	24 VDC (18...30V)	
Current consumption	Max. 50mA	
Number of inputs	/	
Input power supply current	/	
Input signal type	/	
Input filter time	/	
Number of outputs	8	
Output current	Per channel : Max. 0.5A , Total : Max. 4A	
Output signal type	NPN type, actuator, Indicator, etc	
Output switch frequency	Resistive load : 100Hz, Inductive load : 5Hz	
Diagnostic		
Communication status	LED indication, Communication message	
Power supply	Yes, Low voltage alarm	
Short circuit/Overload	Yes, LED indication	
General Data		
Degree of protection	IP67	
Temperature range	Operation temperature : -20~60 °C ; Storage temperature : -40~85 °C	
Installation	2-hole fixing	

DH BUS extension module



RoHS



Features

- Input photoelectric isolation
- Hardware filtering time 500us
- Overvoltage and short circuit protection function
- DH BUS and Channel adopt isolation technology and are reliable

4 digital inputs + 4 digital outputs module

Ordering Data		
Order No.	DFH67-DHB-DI4P-DO4P-M08	DFH67-DHB-DI4N-DO4N-M08
Description	4DI+4DO,PNP,8*M8	4DI+4DO,NPN,8*M8
Interface Type		
DH Bus	2 * M12 B-code 5pin Plug(input) + Socket(output)	
Power	DH Bus interface includes power supply	
Signal	8 * M8 A-code 3pin , Socket	
Electrical Parameters		
Supply voltage	24 VDC (18...30V)	
Current consumption	Max. 50mA	
Number of inputs	4	
Input power supply current	Per channel : Max. 200mA	
Input signal type	PNP type Sensors, Limit switch, Contact, etc	NPN type Sensors, Limit switch, Contact, etc
Input filter time	Max. 2ms	
Number of outputs	4	
Output current	Per channel : Max. 0.5A , Total : Max. 4A	
Output signal type	PNP type, actuator, Indicator, etc	NPN type, actuator, Indicator, etc
Output switch frequency	Resistive load : 100Hz, Inductive load : 5Hz	
Diagnostic		
Communication status	LED indication, Communication message	
Power supply	Yes, Low voltage alarm	
Short circuit/Overload	Yes, LED indication	
General Data		
Degree of protection	IP67	
Temperature range	Operation temperature : -20~60 °C ; Storage temperature : -40~85 °C	
Installation	2-hole fixing	

DH BUS extension module



RoHS



Features

- Input/Output photoelectric isolation
- Hardware filtering time 500us
- Input or Output configurable
- Overvoltage and short circuit protection function
- DH BUS and Channel adopt isolation technology and are reliable

16 configurable digital I/O module

Ordering Data		
Order No.	DFH67-DHB-DIO16P-M12	DFH67-DHB-DIO16N-M12
Description	16 DI/DO , PNP , 8*M12	16 DI/DO , NPN , 8*M12
Interface Type		
DH Bus	2 * M12 B-code 5pin Plug(input) + Socket(output)	
Power	DH Bus interface includes power supply	
Signal	8 * M12 A-code 5pin , Socket	
Electrical Parameters		
Supply voltage	24 VDC (18...30V)	
Current consumption	Max. 50mA	
Number of inputs	Max. 16	
Input power supply current	Per channel : Max. 200mA	
Input signal type	PNP type Sensors, Limit switch, Contact, etc	NPN type Sensors, Limit switch, Contact, etc
Input filter time	Max. 2ms	
Number of outputs	Max. 16	
Output current	Per channel : Max. 0.5A , Total : Max. 4A	
Output signal type	PNP type, actuator, Indicator, etc	NPN type, actuator, Indicator, etc
Output switch frequency	Resistive load : 100Hz, Inductive load : 5Hz	
Diagnostic		
Communication status	LED indication, Communication message	
Power supply	Yes, Low voltage alarm	
Short circuit/Overload	Yes, LED indication	
General Data		
Degree of protection	IP67	
Temperature range	Operation temperature : -20~60 °C ; Storage temperature : -40~85 °C	
Installation	2-hole fixing	

DH BUS extension module

CE

RoHS



Features

- Rich variety and wide application range
- The measure range configured through XML file, more flexible
- DH BUS and Channel adopt isolation technology and are reliable

Analog input module

Ordering Data					
Order No.	DFH67-DHB-AI4I-M12		DFH67-DHB-AI8I-M12	DFH67-DHB-AI4U-M12	DFH67-DHB-AI8U-M12
Description	4AI (Current type) , 16 bit , 4*M12		8AI (Current type) , 16 bit , 8*M12	4AI (Voltage type) , 16 bit , 4*M12	8AI (Voltage type) , 16 bit , 8*M12
Interface Type					
DH Bus	2 * M12 B-code 5pin Plug(input) + Socket(output)				
Power	DH Bus interface includes power supply				
Signal	4 * M12 A-code 5pin , Socket	8 * M12 A-code 5pin , Socket	4 * M12 A-code 5pin , Socket	8 * M12 A-code 5pin , Socket	
Electrical Parameters					
Supply voltage	24 VDC (18...30V)				
Current consumption	Max. 50mA				
Number of inputs	4	8	4	8	
Input power supply current	Per channel : Max. 200mA				
Input signal type	0...20mA , 4...20mA , ±20mA			0...10V , ±10V	
Input impedance	250Ω			1MΩ	
Resolution	16 Bit				
Conversion time	Max. 300us				
Precision	± 0.3%				
Diagnostic					
Communication status	LED indication, Communication message				
Power supply	Yes, Low voltage alarm				
Short circuit/Overload	Yes, LED indication				
General Data					
Degree of protection	IP67				
Temperature range	Operation temperature : -20~60 °C ; Storage temperature : -40~85 °C				
Installation	2-hole fixing				

DH BUS extension module

CE

RoHS



Features

- Resolution : 16 bit
- The measure range configured through XML file, more flexible
- DH BUS and Channel adopt isolation technology and are reliable

8 channel analog output module

Ordering Data			
Order No.	DFH67-DHB-AO4I-AO4U-M12	DFH67-DHB- AO8I-M12	DFH67-DHB-AO8U-M12
Description	4AO(Current type)+4AO(Voltage type),16 bit,8*M12	8AO(Current type),16 bit,8*M12	8AO(Voltage type),16 bit,8*M12
Interface Type			
DH Bus	2 * M12 B-code 5pin Plug(input) + Socket(output)		
Power	DH Bus interface includes power supply		
Signal	8 * M12 A-code 5pin , Socket		
Electrical Parameters			
Supply voltage	24 VDC (18...30V)		
Current consumption	Max. 50mA		
Number of outputs	8		
Output signal type	First 4 channels (0...20mA,4...20mA) Last 4 channels (0...10V,±10V)	0...20mA , 4...20mA	0...10V , ±10V
Output impedance	Current type :<500Ω; Voltage type :>1kΩ	< 450Ω	> 1kΩ
Resolution	16 Bit		
Conversion time	Max. 300us		
Precision	± 0.3%		
Diagnostic			
Communication status	LED indication, Communication message		
Power supply	Yes, Low voltage alarm		
Short circuit/Overload	Yes, LED indication		
General Data			
Degree of protection	IP67		
Temperature range	Operation temperature : -20~60 °C ; Storage temperature : -40~85 °C		
Installation	2-hole fixing		

DH BUS extension module



RoHS



Features

- Resolution : 16 bit
- The measure range configured through XML file, more flexible
- DH BUS and Channel adopt isolation technology and are reliable

4 channel analog output module

Ordering Data		
Order No.	DFH67-DHB-AO4I-M12	DFH67-DHB-AO4U-M12
Description	4AO(Current type),16 bit,4*M12	4AO(Voltage type),16 bit,4*M12
Interface Type		
DH Bus	2 * M12 B-code 5pin Plug(input) + Socket(output)	
Power	DH Bus interface includes power supply	
Signal	8 * M12 A-code 5pin , Socket	
Electrical Parameters		
Supply voltage	24 VDC (18...30V)	
Current consumption	Max. 50mA	
Number of outputs	4	
Output signal type	0...20mA , 4...20mA	0...10V , ±10V
Output impedance	< 450Ω	> 1kΩ
Resolution	16 Bit	
Conversion time	Max. 300us	
Precision	± 0.3%	
Diagnostic		
Communication status	LED indication, Communication message	
Power supply	Yes, Low voltage alarm	
Short circuit/Overload	Yes, LED indication	
General Data		
Degree of protection	IP67	
Temperature range	Operation temperature : -20~60 °C ; Storage temperature : -40~85 °C	
Installation	2-hole fixing	

DH BUS extension module



RoHS



Features

- Resolution : 16 bit
- The measure range configured through XML file, more flexible
- DH BUS and Channel adopt isolation technology and are reliable

4 analog inputs + 4 analog outputs module

Ordering Data		
Order No.	DFH67-DHB-AI4I-AO4I-M12	DFH67-DHB-AI4U-AO4U-M12
Description	4AI+4AO(Current type),16 bit,8*M12	4AI+4AO(Voltage type),16 bit,8*M12
Interface Type		
DH Bus	2 * M12 B-code 5pin Plug(input) + Socket(output)	
Power	DH Bus interface includes power supply	
Signal	8 * M12 A-code 5pin , Socket	
Electrical Parameters		
Supply voltage	24 VDC (18...30V)	
Current consumption	Max. 50mA	
Number of inputs	4	4
Input signal type	0...20mA , 4...20mA , ±20mA	0...10V , ±10V
Input impedance	250Ω	1MΩ
Number of outputs	4	4
Output signal type	0...20mA , 4...20mA	0...10V , ±10V
Output impedance	< 450Ω	> 1kΩ
Resolution	16 bit	
Conversion time	Max. 300us	
Precision	± 0.3%	
Diagnostic		
Communication status	LED indication, Communication message	
Power supply	Yes, Low voltage alarm	
Short circuit/Overload	Yes, LED indication	
General Data		
Degree of protection	IP67	
Temperature range	Operation temperature : -20~60 °C ; Storage temperature : -40~85 °C	
Installation	2-hole fixing	

DH BUS extension module

CE RoHS



Features

- Resolution : 16 bit
- The measure range configured through XML file, more flexible
- Advanced filtering algorithm for more stable sampling
- DH BUS and Channel adopt isolation technology and are reliable

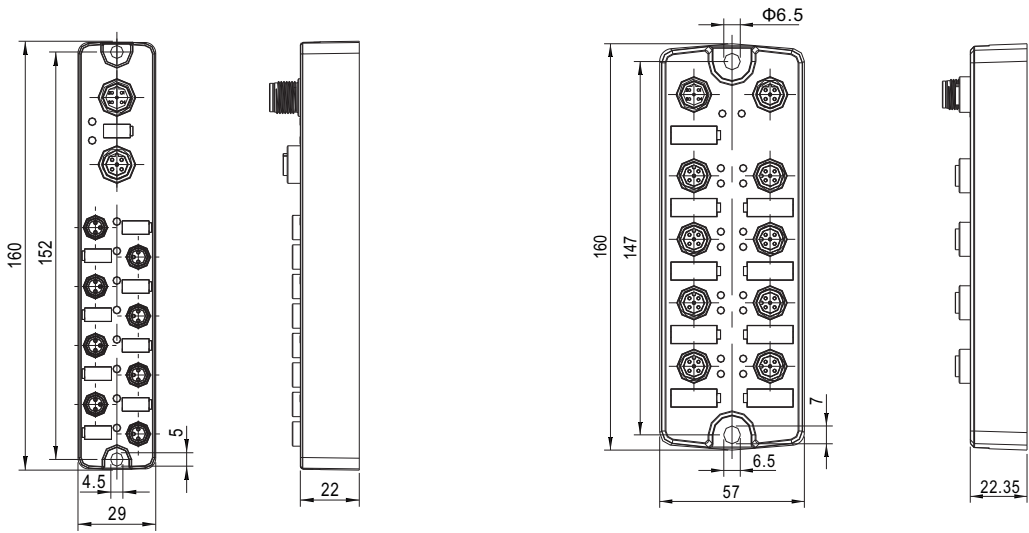
Temperature measuring module

Ordering Data				
Order No.	DFH67-DHB-RTD4-M12	DFH67-DHB-RTD8-M12	DFH67-DHB-TC4-M12 Planned model	DFH67-DHB-TC8-M12 Planned model
Description	4RTD , Thermal resistance , 16 bit , 4*M12	8RTD , Thermal resistance , 16 bit , 8*M12	4TC , Thermocouple, 16 bit , 4*M12	8TC , Thermocouple, 16 bit , 8*M12
Interface Type				
DH Bus	2 * M12 B-code 5pin Plug(input) + Socket(output)			
Power	DH Bus interface includes power supply			
Signal	4 * M12 A-code 5pin , Socket	8 * M12 A-code 5pin , Socket	4 * M12 A-code 5pin , Socket	8 * M12 A-code 5pin , Socket
Electrical Parameters				
Supply voltage	24 VDC (18...30V)			
Current consumption	Max. 50mA			
Number of inputs	4	8	4	8
Input power supply current	Per channel : Max. 200mA			
Input signal type	Pt 100 , Pt1000 , Ni100 , Ni1000 , 0-150/300/600/3000 Ω		B,E,J,K,N,R,S,T Type	
Resolution	16 Bit			
Conversion time	Max. 300us			
Precision	± 0.3%			
Diagnostic				
Communication status	LED indication, Communication message			
Power supply	Yes, Low voltage alarm			
Short circuit/Overload	Yes, LED indication			
General Data				
Degree of protection	IP67			
Temperature range	Operation temperature : -20~60 °C ; Storage temperature : -40~85 °C			
Installation	2-hole fixing			

DH BUS extension module

CE RoHS

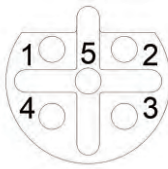
Dimension



DH Bus interface



DH Bus B-code plug (Metal) - BUS1
1-Power supply 24V+
2-Data signal A
3-Data signal B
4-Power supply GND
5-ADR 1



DH Bus B-code socket (Metal) - BUS2
1-Power supply 24V+
2-Data signal A
3-Data signal B
4-Power supply GND
5-ADR 1

M12 Input/Output



Digital signal interface M12 A-code socket (Green)
1-Power supply 24V+
2-Digital Input/Output B
3-Power supply GND
4-Digital Input/Output A
5-Protective grounding PE



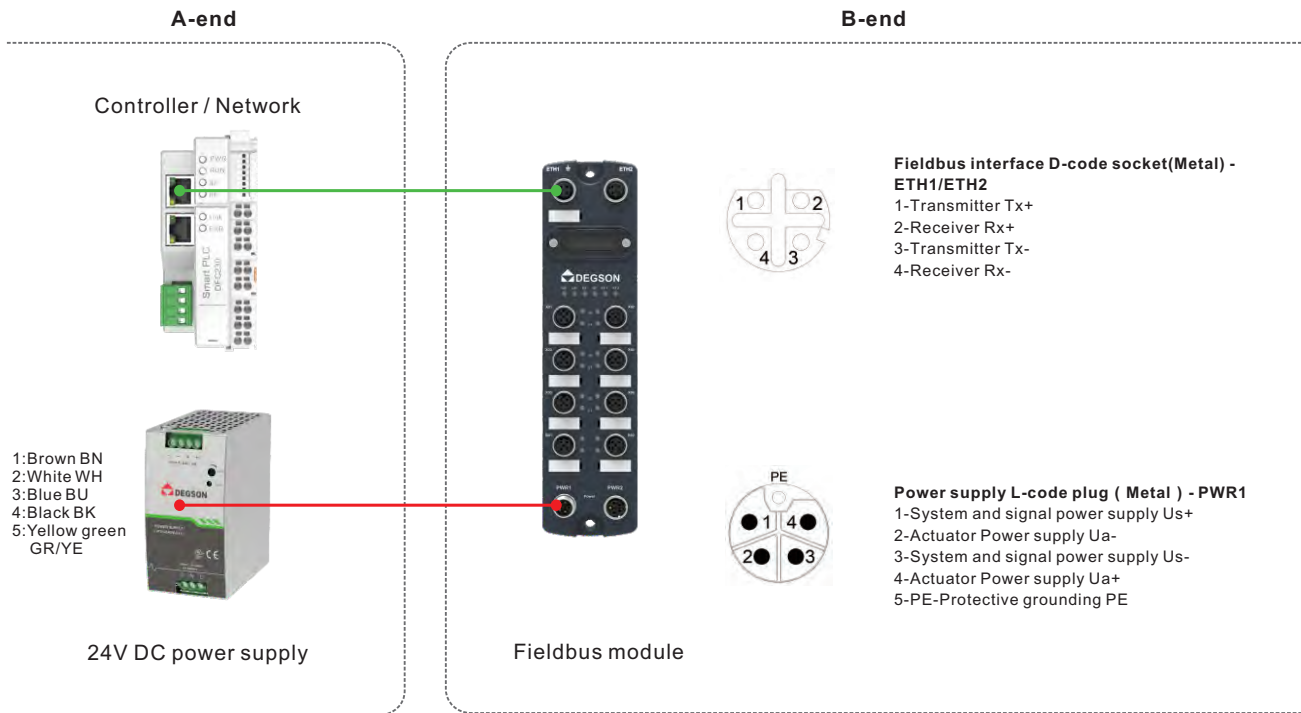
Analog/Temperature signal interface M12 A-code socket (Green)
1- a-
2- A-
3- NC
4- A+
5- NC

M8 Input/Output



DI/DO signal interface M8 A-code socket (Green)
1-Power supply 24V+
3-Power supply GND
4-Digital Input/Output

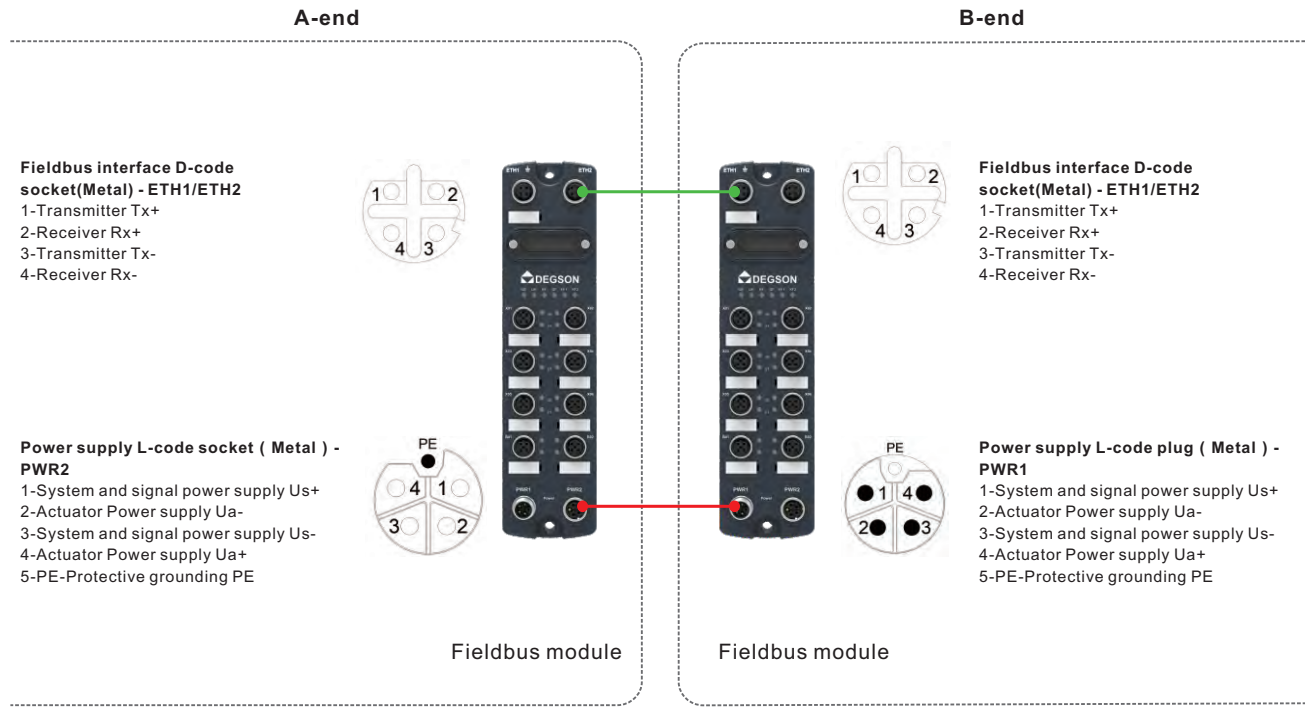
Upper control - Fieldbus module Cable



A-end			B-end			Cable		Order NO.
Connect Target	Style	Shape	Connect Target	Style	Shape	Material	Length	
Power connection at the power supply end	Wire	/	Fieldbus module Power input interface M12 L-code 5pin plug	M12 L-code 5pin socket	Straight	PVC	3m	PM-M12L-05P-FF-SL7C03-00Z(H)
							5m	PM-M12L-05P-FF-SL7C05-00Z(H)
							10m	PM-M12L-05P-FF-SL7C10-00Z(H)
							15m	PM-M12L-05P-FF-SL7C15-00Z(H)
					Angled	PVC	20m	PM-M12L-05P-FF-SL7C20-00Z(H)
							3m	PM-M12L-05P-FF-SR7C03-00Z(H)
							5m	PM-M12L-05P-FF-SR7C05-00Z(H)
							10m	PM-M12L-05P-FF-SR7C10-00Z(H)
					Straight	PUR	15m	PM-M12L-05P-FF-SR7C15-00Z(H)
							20m	PM-M12L-05P-FF-SR7C20-00Z(H)
					Angled	PUR	3m	PM-M12L-05P-FF-SL7D03-00Z(H)
							5m	PM-M12L-05P-FF-SL7D05-00Z(H)
							10m	PM-M12L-05P-FF-SL7D10-00Z(H)
							15m	PM-M12L-05P-FF-SL7D15-00Z(H)
					Angled	PUR	20m	PM-M12L-05P-FF-SL7D20-00Z(H)
							3m	PM-M12L-05P-FF-SR7D03-00Z(H)
Network interface	RJ45	Straight	Fieldbus module Fieldbus interface M12 D-code 4pin socket	M12 D-code 4pin plug	Straight	PVC Shielded	5m	PM-M12L-05P-FF-SR7D05-00Z(H)
							10m	PM-M12L-05P-FF-SR7D10-00Z(H)
							15m	PM-M12L-05P-FF-SR7D15-00Z(H)
							20m	PM-M12L-05P-FF-SR7D20-00Z(H)
					Angled	PVC Shielded	3m	PMSH-M12D-04P-MM-SL8E03-RJ45
							5m	PMSH-M12D-04P-MM-SL8E05-RJ45
							10m	PMSH-M12D-04P-MM-SL8E10-RJ45
							15m	PMSH-M12D-04P-MM-SL8E15-RJ45
							20m	PMSH-M12D-04P-MM-SL8E20-RJ45
					Straight	PUR Shielded	3m	PMSH-M12D-04P-MM-SR8E03-RJ45
							5m	PMSH-M12D-04P-MM-SR8E05-RJ45
							10m	PMSH-M12D-04P-MM-SR8E10-RJ45
							15m	PMSH-M12D-04P-MM-SR8E15-RJ45
					Angled	PUR Shielded	20m	PMSH-M12D-04P-MM-SR8E20-RJ45
							3m	PMSH-M12D-04P-MM-SL8F03-RJ45
							5m	PMSH-M12D-04P-MM-SL8F05-RJ45
							10m	PMSH-M12D-04P-MM-SL8F10-RJ45
							15m	PMSH-M12D-04P-MM-SL8F15-RJ45
							20m	PMSH-M12D-04P-MM-SL8F20-RJ45
					Straight	PVC	3m	PMSH-M12D-04P-MM-SR8F03-RJ45
							5m	PMSH-M12D-04P-MM-SR8F05-RJ45
							10m	PMSH-M12D-04P-MM-SR8F10-RJ45
							15m	PMSH-M12D-04P-MM-SR8F15-RJ45
					Angled	PVC	20m	PMSH-M12D-04P-MM-SR8F20-RJ45
							3m	PMSH-M12D-04P-MM-SR8E03-RJ45
							5m	PMSH-M12D-04P-MM-SR8E05-RJ45
							10m	PMSH-M12D-04P-MM-SR8E10-RJ45
							15m	PMSH-M12D-04P-MM-SR8E15-RJ45
							20m	PMSH-M12D-04P-MM-SR8E20-RJ45

Note 1: L-code angled cables have a long lead time and should be carefully purchased
Note 2: Other lengths of cables are not in regular stock. If necessary, please contact sales personnel

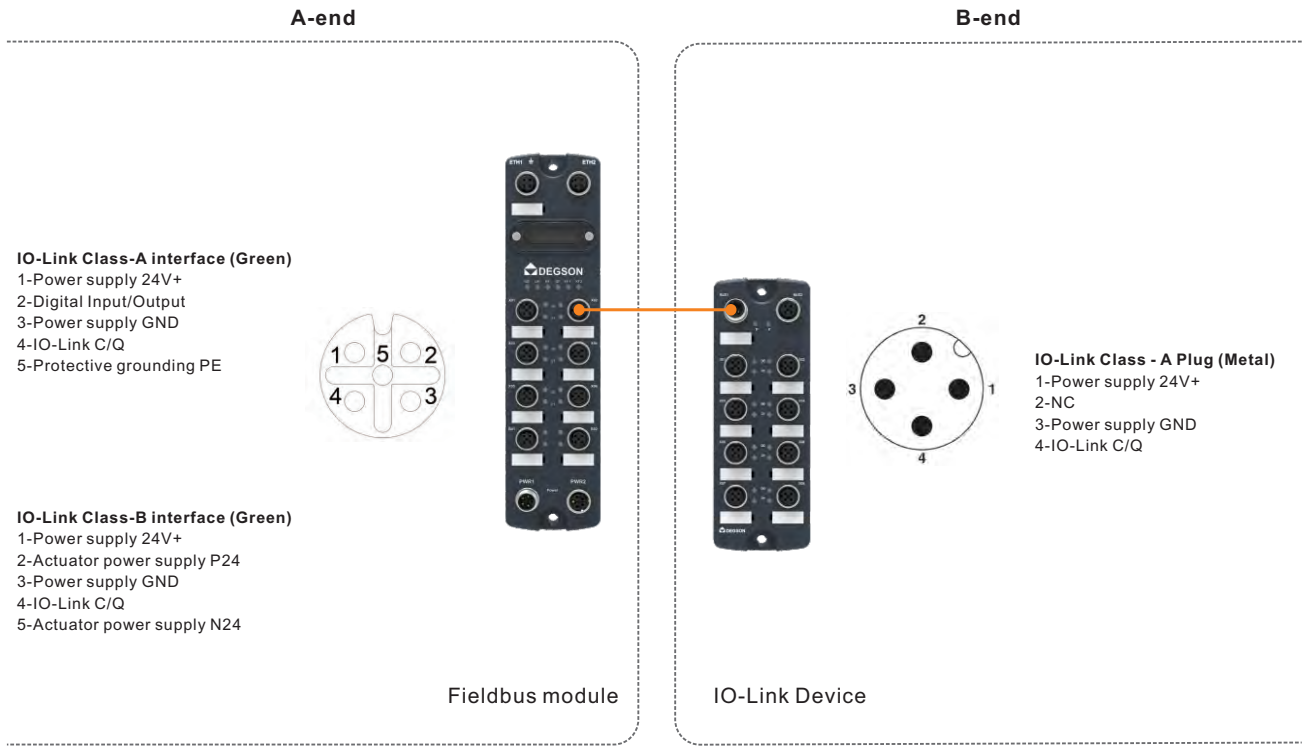
Fieldbus module - Fieldbus module Cable



A-end			B-end			Cable		Order NO.
Connect Target	Style	Shape	Connect Target	Style	Shape	Material	Length	
Fieldbus module Power input interface M12 L-code 5pin socket	M12 L-code 5pin plug	Straight	Fieldbus module Power input interface M12 L-code 5pin plug	M12 L-code 5pin socket	Straight	PVC	3m	PM-M12L-05P-FL-ML-7C01-00Z(H)
							5m	PM-M12L-05P-FL-ML-7C02-00Z(H)
		10m			PM-M12L-05P-FL-ML-7C03-00Z(H)			
		15m			PM-M12L-05P-FL-ML-7C05-00Z(H)			
		20m			PM-M12L-05P-FL-ML-7C10-00Z(H)			
		Angled			Angled	3m	PM-M12L-05P-FR-MR-7C01-00Z(H)	
						5m	PM-M12L-05P-FR-MR-7C02-00Z(H)	
		10m				PM-M12L-05P-FR-MR-7C03-00Z(H)		
15m	PM-M12L-05P-FR-MR-7C05-00Z(H)							
20m	PM-M12L-05P-FR-MR-7C10-00Z(H)							
Straight	Straight	PUR	3m	PM-M12L-05P-FL-ML-7D01-00Z(H)				
			5m	PM-M12L-05P-FL-ML-7D02-00Z(H)				
			10m	PM-M12L-05P-FL-ML-7D03-00Z(H)				
			15m	PM-M12L-05P-FL-ML-7D05-00Z(H)				
20m	PM-M12L-05P-FL-ML-7D10-00Z(H)							
Angled	Angled	PUR	3m	PM-M12L-05P-FR-MR-7D01-00Z(H)				
			5m	PM-M12L-05P-FR-MR-7D02-00Z(H)				
			10m	PM-M12L-05P-FR-MR-7D03-00Z(H)				
			15m	PM-M12L-05P-FR-MR-7D05-00Z(H)				
20m	PM-M12L-05P-FR-MR-7D10-00Z(H)							
Fieldbus module Fieldbus interface M12 D-code 4pin socket	M12 D-code 4pin plug	Straight	Fieldbus module Fieldbus interface M12 D-code 4pin socket	M12 D-code 4pin plug	Straight	PVC Shielded	3m	PMSH-M12D-04P-ML-ML-8E01-00Z(H)
							5m	PMSH-M12D-04P-ML-ML-8E02-00Z(H)
		10m			PMSH-M12D-04P-ML-ML-8E03-00Z(H)			
		15m			PMSH-M12D-04P-ML-ML-8E05-00Z(H)			
		20m			PMSH-M12D-04P-ML-ML-8E10-00Z(H)			
		Angled			Angled	PVC Shielded	3m	PMSH-M12D-04P-MR-MR-8E01-00Z(H)
							5m	PMSH-M12D-04P-MR-MR-8E02-00Z(H)
		10m					PMSH-M12D-04P-MR-MR-8E03-00Z(H)	
15m	PMSH-M12D-04P-MR-MR-8E05-00Z(H)							
20m	PMSH-M12D-04P-MR-MR-8E10-00Z(H)							
Straight	Straight	PUR	3m	PMSH-M12D-04P-ML-ML-8F01-00Z(H)				
			5m	PMSH-M12D-04P-ML-ML-8F02-00Z(H)				
			10m	PMSH-M12D-04P-ML-ML-8F03-00Z(H)				
			15m	PMSH-M12D-04P-ML-ML-8F05-00Z(H)				
20m	PMSH-M12D-04P-ML-ML-8F10-00Z(H)							
Angled	Angled	PUR Shielded	3m	PMSH-M12D-04P-MR-MR-8F01-00Z(H)				
			5m	PMSH-M12D-04P-MR-MR-8F02-00Z(H)				
			10m	PMSH-M12D-04P-MR-MR-8F03-00Z(H)				
			15m	PMSH-M12D-04P-MR-MR-8F05-00Z(H)				
20m	PMSH-M12D-04P-MR-MR-8F10-00Z(H)							

Note 1: L-code angled cables have a long lead time and should be carefully purchased
Note 2: Other lengths of cables are not in regular stock. If necessary, please contact sales personnel

Fieldbus module - IO-Link device Cable



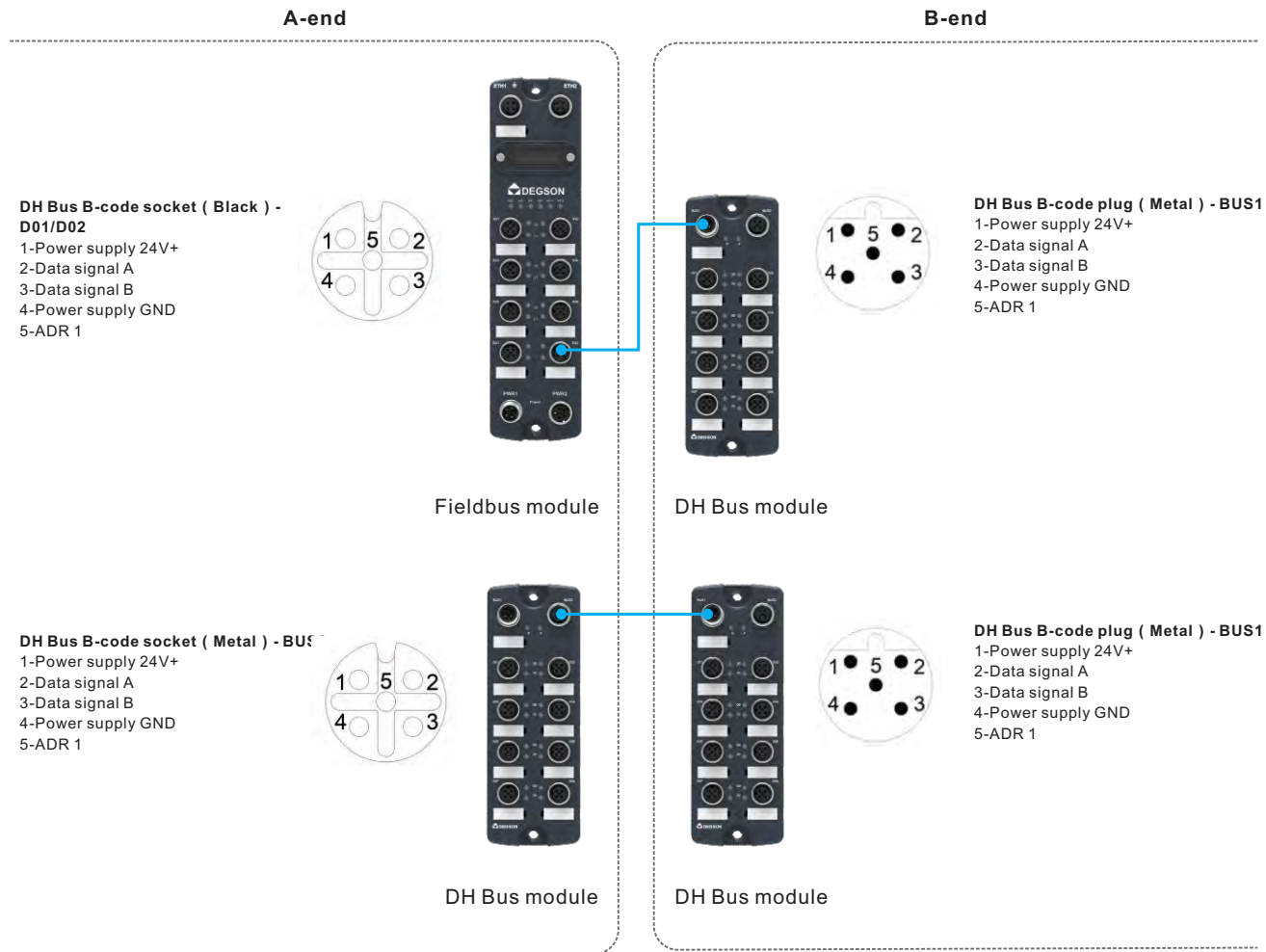
A-end			B-end			Cable		Order NO.
Connect Target	Style	Shape	Connect Target	Style	Shape	Material	Length	
Fieldbus module IO-Link interface M12 A-code 5pin socket	M12 A-code 5pin plug	Straight	IO-Link module IO-Link interface M12 A-code 4pin plug	M12 A-code 5pin socket (Pin5 None)	Straight	PVC	0.3m	PM-M12A-05P-FL-ML-8C-300-00Z(H)
							0.5m	PM-M12A-05P-FL-ML-8C-500-00Z(H)
							1m	PM-M12A-05P-FL-ML-8C01-00Z(H)
							2m	PM-M12A-05P-FL-ML-8C02-00Z(H)
		3m			PM-M12A-05P-FL-ML-8C03-00Z(H)			
		5m			PM-M12A-05P-FL-ML-8C05-00Z(H)			
		10m			PM-M12A-05P-FL-ML-8C10-00Z(H)			
		Angled			Angled		0.3m	PM-M12A-05P-FR-MR-8C-300-00Z(H)
	0.5m			PM-M12A-05P-FR-MR-8C-500-00Z(H)				
	1m			PM-M12A-05P-FR-MR-8C01-00Z(H)				
	2m			PM-M12A-05P-FR-MR-8C02-00Z(H)				
	3m	PM-M12A-05P-FR-MR-8C03-00Z(H)						
	5m	PM-M12A-05P-FR-MR-8C05-00Z(H)						
	10m	PM-M12A-05P-FR-MR-8C10-00Z(H)						
	Straight	Straight		PUR	0.3m	PM-M12A-05P-FL-ML-8D-300-00Z(H)		
					0.5m	PM-M12A-05P-FL-ML-8D-500-00Z(H)		
1m			PM-M12A-05P-FL-ML-8D01-00Z(H)					
2m			PM-M12A-05P-FL-ML-8D02-00Z(H)					
3m			PM-M12A-05P-FL-ML-8D03-00Z(H)					
5m			PM-M12A-05P-FL-ML-8D05-00Z(H)					
10m			PM-M12A-05P-FL-ML-8D10-00Z(H)					
Angled			Angled		0.3m	PM-M12A-05P-FR-MR-8D-300-00Z(H)		
	0.5m	PM-M12A-05P-FR-MR-8D-500-00Z(H)						
	1m	PM-M12A-05P-FR-MR-8D01-00Z(H)						
	2m	PM-M12A-05P-FR-MR-8D02-00Z(H)						
3m	PM-M12A-05P-FR-MR-8D03-00Z(H)							
5m	PM-M12A-05P-FR-MR-8D05-00Z(H)							
10m	PM-M12A-05P-FR-MR-8D10-00Z(H)							

Note 1: If the IO-Link module requires L-code cables (Power supply), the selection is the same as that of Fieldbus module

Note 2: If the IO-Link module requires B-code cables (DH Bus), the selection is the same as that of DH Bus module

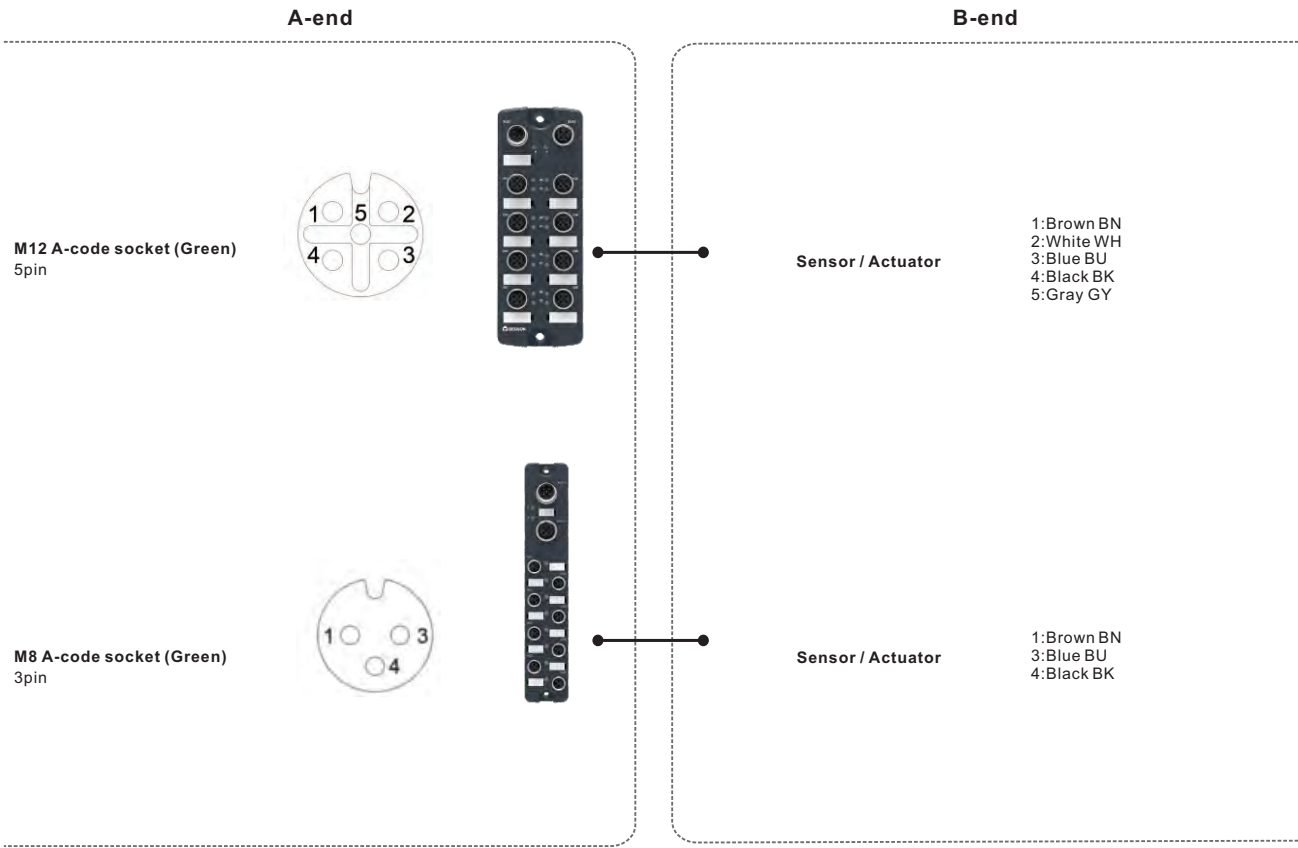
Note 3: Other lengths of cables are not in regular stock. If necessary, please contact sales personnel

DH Bus cable



A-end			B-end			Cable		Order NO.			
Connect Target	Style	Shape	Connect Target	Style	Shape	Material	Length				
Fieldbus module DH Bus interface M12 B-code 5pin socket	M12 B-code 5pin plug	Straight	DH Bus module DH Bus interface M12 B-code 5pin plug	M12 B-code 5pin socket	Straight	PVC Shielded	0.3m	PMSH-M12B-05P-FL-ML-7P-300-00Z(H) PMSH-M12B-05P-FL-ML-7P-500-00Z(H) PMSH-M12B-05P-FL-ML-7P01-00Z(H) PMSH-M12B-05P-FL-ML-7P02-00Z(H) PMSH-M12B-05P-FL-ML-7P03-00Z(H) PMSH-M12B-05P-FL-ML-7P05-00Z(H) PMSH-M12B-05P-FL-ML-7P10-00Z(H)			
							0.5m				
							1m				
							2m				
		Angled			Angled		3m				
							5m				
							10m				
							0.3m				
DH Bus module DH Bus interface M12 B-code 5pin socket	M12 B-code 5pin plug	Straight	DH Bus module DH Bus interface M12 B-code 5pin plug	M12 B-code 5pin socket	Straight	PVC Shielded	0.3m	PMSH-M12B-05P-FL-ML-7P-300-00Z(H) PMSH-M12B-05P-FL-ML-7P-500-00Z(H) PMSH-M12B-05P-FL-ML-7P01-00Z(H) PMSH-M12B-05P-FL-ML-7P02-00Z(H) PMSH-M12B-05P-FL-ML-7P03-00Z(H) PMSH-M12B-05P-FL-ML-7P05-00Z(H) PMSH-M12B-05P-FL-ML-7P10-00Z(H)			
							0.5m				
							1m				
							2m				
		Angled			Angled		3m				
							5m				
							10m				
							0.3m				

Sensor / Actuator Cable



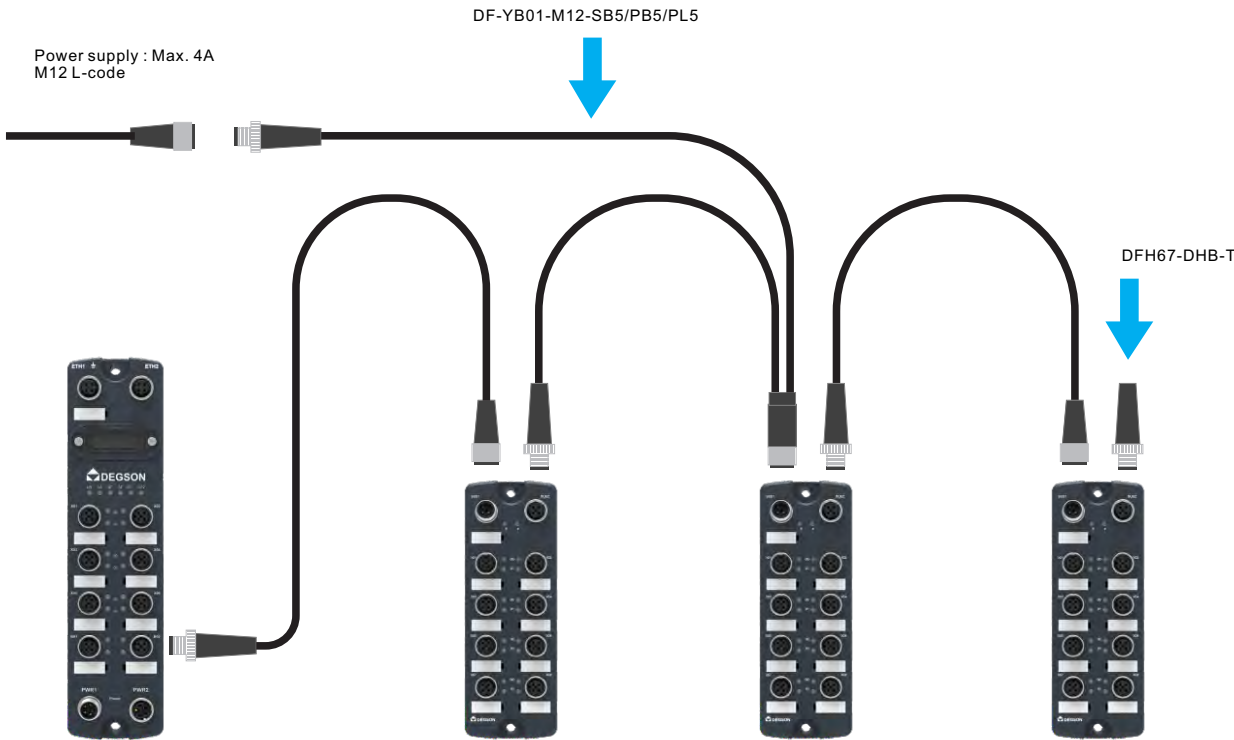
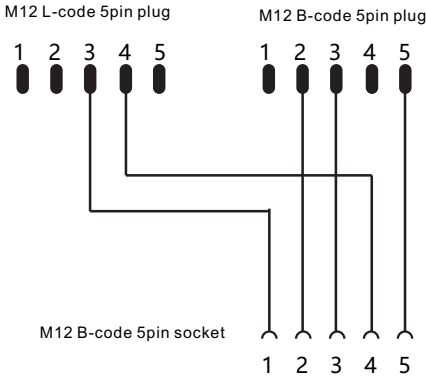
A-end			B-end			Cable		Order NO.
Connect Target	Style	Style	Connect Target	Style	Style	Material	Length	
M12 A-code interface 5pin socket	M12 A-code 5pin plug	Straight	Sensor / Actuator	Wire	Straight	PVC	1m 2m 3m 5m 10m	PM-M12A-05P-MM-SL8C01-00Z(H) PM-M12A-05P-MM-SL8C02-00Z(H) PM-M12A-05P-MM-SL8C03-00Z(H) PM-M12A-05P-MM-SL8C05-00Z(H) PM-M12A-05P-MM-SL8C10-00Z(H)
		Angled			Angled		1m 2m 3m 5m 10m	PM-M12A-05P-MM-SR8C01-00Z(H) PM-M12A-05P-MM-SR8C02-00Z(H) PM-M12A-05P-MM-SR8C03-00Z(H) PM-M12A-05P-MM-SR8C05-00Z(H) PM-M12A-05P-MM-SR8C10-00Z(H)
M8 A-code interface 3pin socket	M8 A-code 3pin plug	Straight	Sensor / Actuator	Wire	Straight	PVC	1m 2m 3m 5m 10m	PM-M8A-03P-MM-SL7C01-00Z(H) PM-M8A-03P-MM-SL7C02-00Z(H) PM-M8A-03P-MM-SL7C03-00Z(H) PM-M8A-03P-MM-SL7C05-00Z(H) PM-M8A-03P-MM-SL7C10-00Z(H)
		Angled			Angled		1m 2m 3m 5m 10m	PM-M8A-03P-MM-SR7C01-00Z(H) PM-M8A-03P-MM-SR7C02-00Z(H) PM-M8A-03P-MM-SR7C03-00Z(H) PM-M8A-03P-MM-SR7C05-00Z(H) PM-M8A-03P-MM-SR7C10-00Z(H)

Note : Other lengths of cables are not in regular stock. If necessary, please contact sales personnel

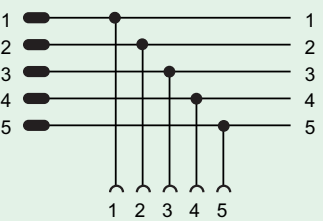
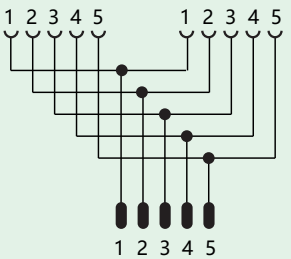
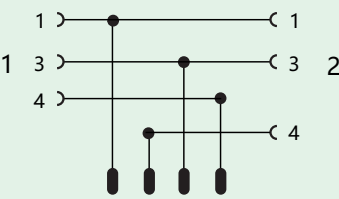
DH Bus accessories

Picture	
Description	DH Bus auxiliary power supply unit
Order NO.	DF-YB01-M12-SB5/PB5/PL5
Style	M12 B-code 5pin socket M12 B-code 5pin plug M12 L-code 5pin plug
Voltage/Current	24V / 4A
Rated voltage	60V
Pulse voltage	2500V
Protection degrees	IP67 / IP68
Notes	When the power supply is insufficient, increase the maximum 4A power supply

Picture	
Description	Termination resistor
Order NO.	DFH67-DHB-T
Style	M12 B-code 5pin plug
Resistance value	Pin4 / Pin5 = 120Ω
Protection degrees	IP67 / IP68



Accessories

Picture			
Description	M12 L-code 5pin T-type distributor	M12 A-code 5pin Y-type distributor	M12 A-code - M8 A-code Y-type distributor
Order NO.	DF-TB-M12-PL5/SL5/SL5	FY-M12A-05F-M12A-05M-Q-0100	FY-M12A-04M-M8A-03F-T-0100
Voltage/Current	24V / 4A	24V / 4A	24V / 3A
Style	Plug / Socket / Socket	Plug / Socket / Socket	M12 4pin Plug / M8 3pin Socket / M8 3pin Socket
Shielding	Unshielded	Unshielded	Unshielded
Diagram			

Description	Order NO.	MOQ	Picture
M12 Plug Cover	DF-PLUGCOVER-M12	10	
M12 Socket Cover	DF-SOCKETCOVER-M12	10	
M8 Socket Cover	DF-SOCKETCOVER-M08	10	

DSW series unmanaged switch



- Wide range working temperature: -40℃ ~ 70℃
- Wide range working voltage: DC9.6~60V & AC18~30V
- High strength cast aluminum shell, greatly improving EMC electromagnetic compatibility and heat dissipation performance, vibration and impact resistance
- High data exchange performance, backplane bandwidth: 16Gbps; MAC address table size: 4K; Package cache area: 1.5Mb
- BSP Broadcast storm suppression function improves network stability
- QoS priority function ensures priority forwarding of high demand data packets



DSW-A3K

DSW-A5K

DSW-A8K

Features

- Industrial-grade Chip.
- 10/100/1000 BaseT(X)(RJ45 connector) .
- Compact size for easy installation.
- Broadcast storm protection (BSP),the Quality of Service (QoS) function.
- Die-casting aluminum alloy housing.
- IP30 protection class.
- -40 to 75°C wide operating temperature range.

Specifications

Type	DSW-A5K0005	DSW-A8K0008	DSW-A3K1020	DSW-A5K0050	DSW-A8K0080	DSW-A5K0104	DSW-A8K0206	DSW-A8K0107
Ports	5 BaseT ports	8 BaseT ports	1BaseX SFP port 2 BaseT ports	5 BaseT ports	8 BaseT ports	1 BaseX SFP port 4 BaseT ports	2 BaseX SFP port 6 BaseT ports	1 BaseX SFP port 7 BaseT ports
Bandwidth	100M	100M	1000M	1000M	1000M	100M	100M	100M

Switch Properties

Processing Type	Store-and-Forward
Backplane Bandwidth	16Gbps (Max)
MAC Table Size	4K (Max)
Packet Buffer Size	1.5Mb (Max)

DIP Switch Configuration

	Quality of Service (QoS), Broadcast Storm Protection (BSP)
	Ethernet Interface

Power Parameters

Connection	1 removable 2-contact terminal block
Input Voltage	12/24/48 VDC & 24 VAC
Operating Voltage	9.6~60 VDC & 18~30 VAC
Overload Current Protection	Supported
Reverse Polarity Protection	Supported

Physical Characteristics

Installation	DIN-rail mounting
Housing	Die-casting aluminum alloy housing
(W×H×D) Dimensions	MTX100-A3K/-A5K: 24mm x 100mm x 61.8mm MTX100-A8K: 40mm x 100mm x 61.8mm
Weight	0.23Kg (Max)
Power Consumption	5W(Max)

Environment Limits

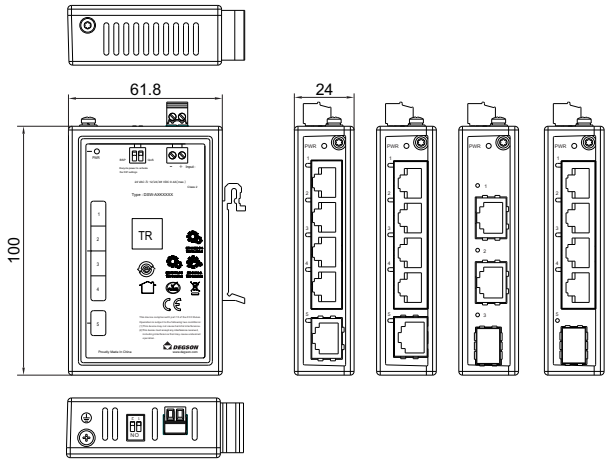
Ambient Relative Humidity	5 to 95% (non-condensing)
Operating Temperature	- 40°C~ 75°C
Storage Temperature	- 40°C~ 85°C

Standards and Certifications

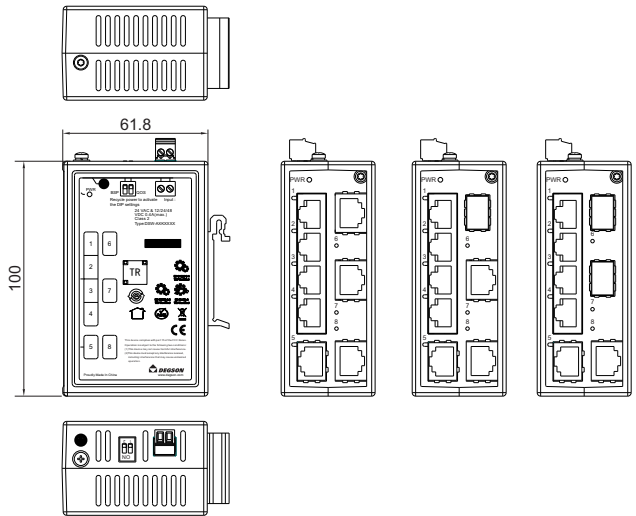
Safety	IEC/EN62368-1
UL	UL61010
EMC	EN55032 EN55035

Overall Dimensions

DSW-A3K/A5K



DSW-A8K



Accessories

Picture	Product	Transmission rate	Transfer mode	Matching model
	DSW-SFP-01-S-20	10/100Mbps	Single mode	DSW-A5K0104 DSW-A8K0107 DSW-A8K0206
	DSW-SFP-10-S-20	100/1000Mbps	Single mode	DSW-A3K1020



DSW-A16K000G

Features

- Industrial-grade Chips
- Small size, and easy to install
- Support QoS (IEEE 802.1P/1Q and TOS/DiffServ)
- Die-cast aluminum alloy shell
- IP30 protection grade
- Redundant dual input power supply design
- -40 to 75°C wide operating temperature range
- Support DIP sound and light alarm output and 1 relay alarm port (1A@24VDC)

Specifications

Type	DSW-A16K000G
Ports	16 16 BaseT ports
Bandwidth	100M

Switch Properties

Processing Type	Store-and-Forward
Backplane Bandwidth	8.8Gbps (Max)
MAC Table Size	8K (Max)
Packet Buffer Size	4Mb (Max)

DIP Switch Configuration

DIP Switch Function	QoS (Quality of Service), BSP (Broadcast Storm Protection), Power Alarm, Port Alarm, Alarm Buzzer
---------------------	---

Power Parameters

Connection	1 removable 6-contact terminal block
Input Voltage	12/24/48 VDC & 24 VAC, redundant dual input
Operating Voltage	9.6~60 VDC & 18~30 VAC
Overload Current Protection	Supported
Reverse Polarity Protection	Supported
Power Consumption	<10W

Physical Characteristics

Installation	DIN-rail mounting
Housing	Die-casting aluminum alloy housing
IP Grade	IP30
(W×H×D) Dimensions	52mmx140mmx110mm
Weight	<1.2 kg

Environment Limits

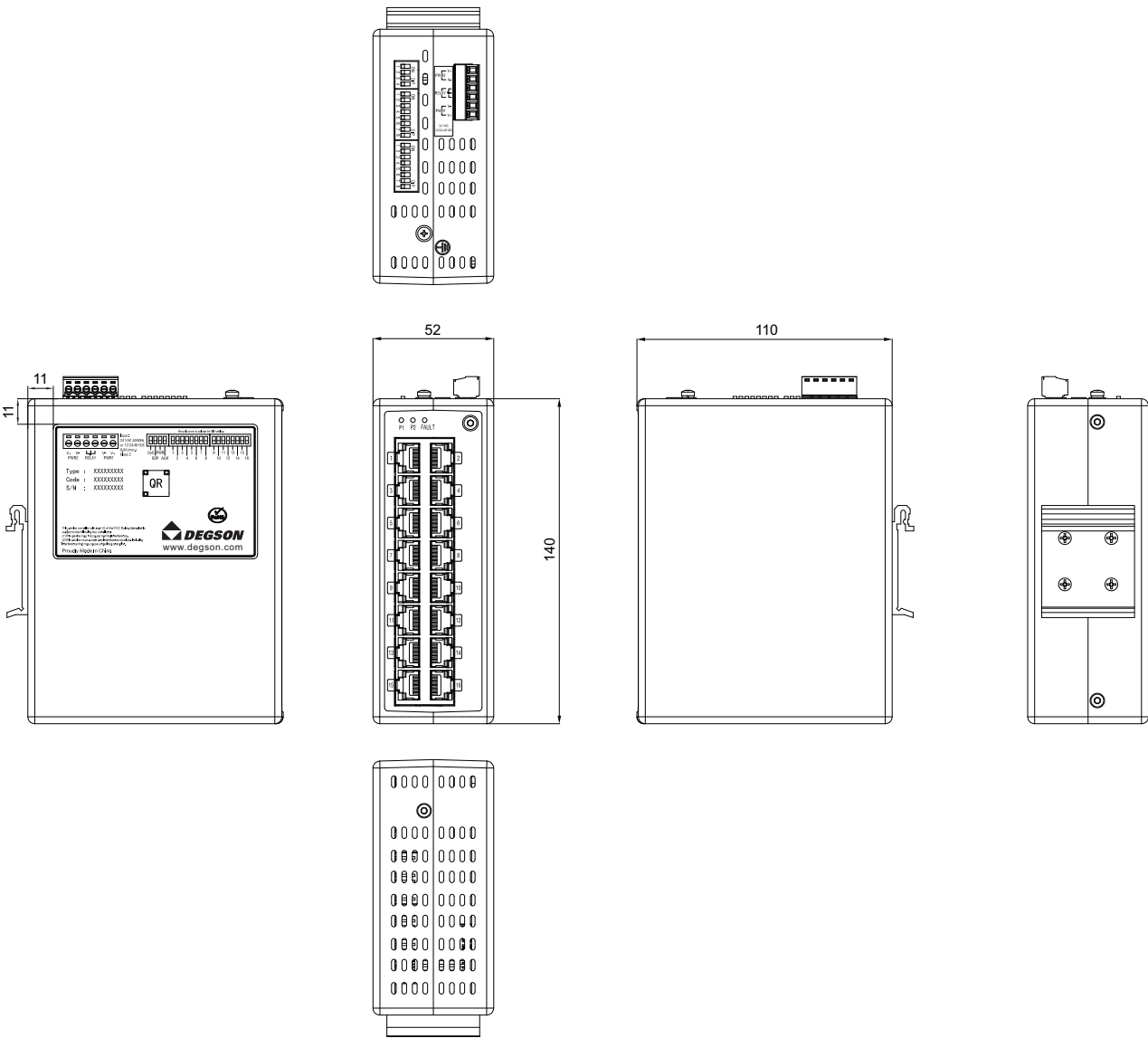
Ambient Relative Humidity	5 to 95% (non-condensing)
Operating Temperature	-40°C~ 75°C
Storage Temperature	-40°C~ 85°C

Standards and Certifications

Safety	IEC/EN62368-1
UL	UL61010
EMC	EN55032 EN55035

Overall Dimensions

DSW-A16K000G



Accessories

Picture	Product	Transmission rate	Transfer mode	Matching model
/	/	/	/	/
/	/	/	/	/



DSW series unmanaged switch

CE RoHS



DSW-A6K2040P



DSW-A10K2080P

Features

- Full Gigabit Ethernet ports.
- 20Gbps backplane bandwidth.
- Support IEEE 802.3af/at compliant PoE.
- Each PoE port provides up to 30W output power
- PoE management: PoE device detection, PoE power management.
- Dual redundant power inputs design for DC models.
- IP40 Die-casting aluminum alloy housing.
- Fanless, -40 to 75°C wide operating temperature range.
- MTBF≥400,000 hours.

Specifications

Type	DSW-A6K2040P	DSW-A10K2080P
Ports	2 BaseX SFP port, 4 BaseT ports	2 BaseX SFP port, 8 BaseT ports
Bandwidth	1000M	1000M

Switch Properties

Processing Type	Store-and-Forward
Backplane Bandwidth	20Gbps (Max)
MAC Table Size	4K (Max)
Exchange Rate	1,488,000 pps / 1000M ports

Power Parameters

Connection	1 removable 5-contact terminal block
Input Voltage	DSW-A6K/A10K: 48-57VDC, Redundant dual inputs
Overload Current Protection	Supported
Reverse Polarity Protection	Supported

Physical Characteristics

Installation	DIN-rail mounting, Wall mounting
Housing	Die-casting aluminum alloy housing
Protection level	IP30
(W×H×D) Dimensions	52mm×140mm×110mm
Weight	0.7 kg
MTBF	≥400,000H

Environment Limits

Ambient Relative Humidity	5 to 95% (non-condensing)
Operating Temperature	-40°C~75°C
Storage Temperature	-40°C~85°C

Electromagnetic Characteristics

EMI	FCC 47 CFR Part 15 Class A EN55022 Class A
-----	--

Standards and Certifications

Safety	FCC Part 15 Subpart B Class A	IEC/EN55022 Class A IEC60825-1
Industrial Control Industry	UL/cUL61010	
Power Industry	IEC61850-3 IEEE1613 (C37.90.x)	

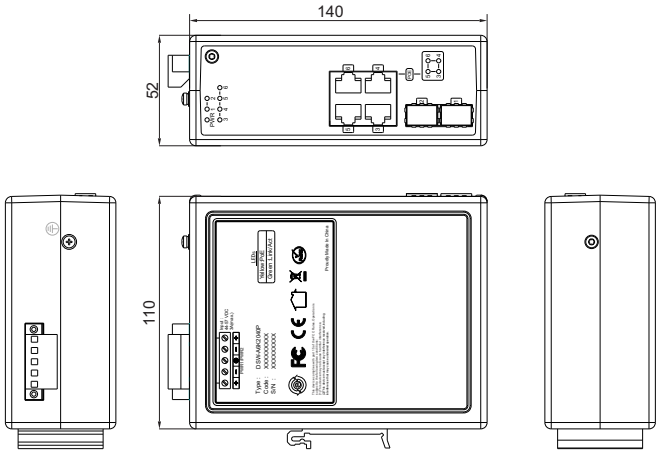


DSW series unmanaged switch

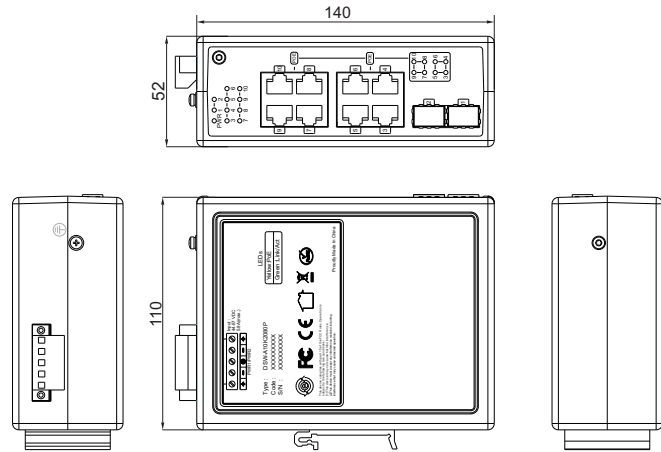
CE RoHS

Overall Dimensions

DSW-A6K2040P



DSW-A10K2080P

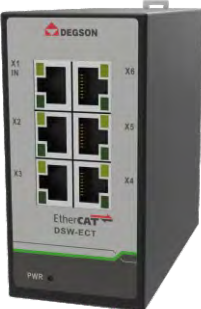


Accessories

Picture	Product	Transmission rate	Transfer mode	Matching model
	DSW-SFP-10-S-20	100/1000Mbps	Single mode	DSW-A6K2040P DSW-A10K2080P
/	/	/	/	/



DSW-ECT-A4K0004



DSW-ECT-A6K0006

Features

- 4-port / 6-port 100 Mbit RJ45 interface, 10M/100M adaptive
- Metal housing, more suitable for harsh industrial environments
- Anti-electromagnetic interference, more stable communication transmission.
- Supports DC-distributed clock synchronization.
- Supports the cascading function and hot swap of network cables
- Flexible composition of a variety of topologies

Specifications

Type	DSW-ECT-A4K0004	DSW-ECT-A6K0006
Functions In The System	Coupling of EtherCAT connections	
Transmission Medium	Ethernet/EtherCAT cables (at least Category 5) shielded	
Network Interface	4* RJ45	6* RJ45
Network Protocol	EtherCAT	
Support for distributed clocks	Yes	
Delayed	Approximately 1 microsecond per port	
Transmission Speed	100M	

Power Parameters

Connection	1 removable 3-contact terminal block
Input Voltage	Rated 24VDC (allowed for 18-28VDC)
Overload Current Protection	Supported
Reverse Polarity Protection	Supported

Physical Characteristics

Installation	DIN35 rail installation	
Housing	Aluminum alloy housing	
Protection level	IP40	
(W×H×D) Dimensions	29×95×102(mm)	47×94×102(mm)

Environment Limits

Ambient Relative Humidity	5 to 90% (non-condensing)
Operating Temperature	- 10°C~ 55°C

Electromagnetic Characteristics

EMI	FCC 47 CFR Part 15 Class A	EN55032 Class A	EN55035 Class A
-----	----------------------------	-----------------	-----------------

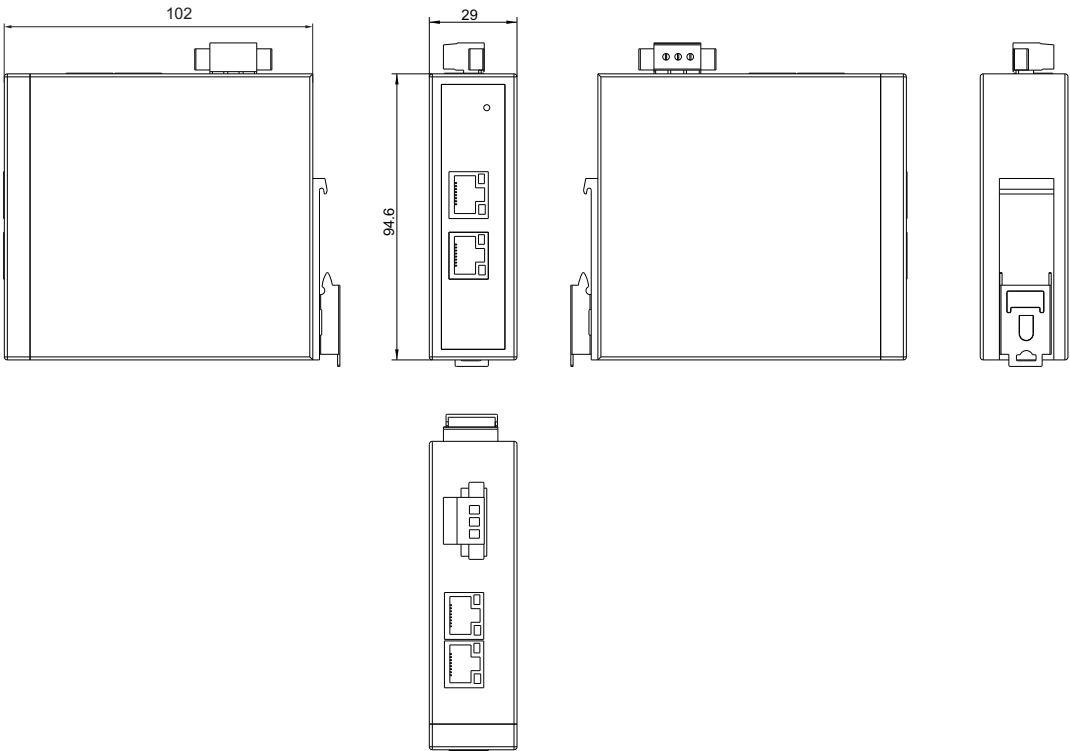
Standards and Certifications

Safety	EN 62368-1
--------	------------

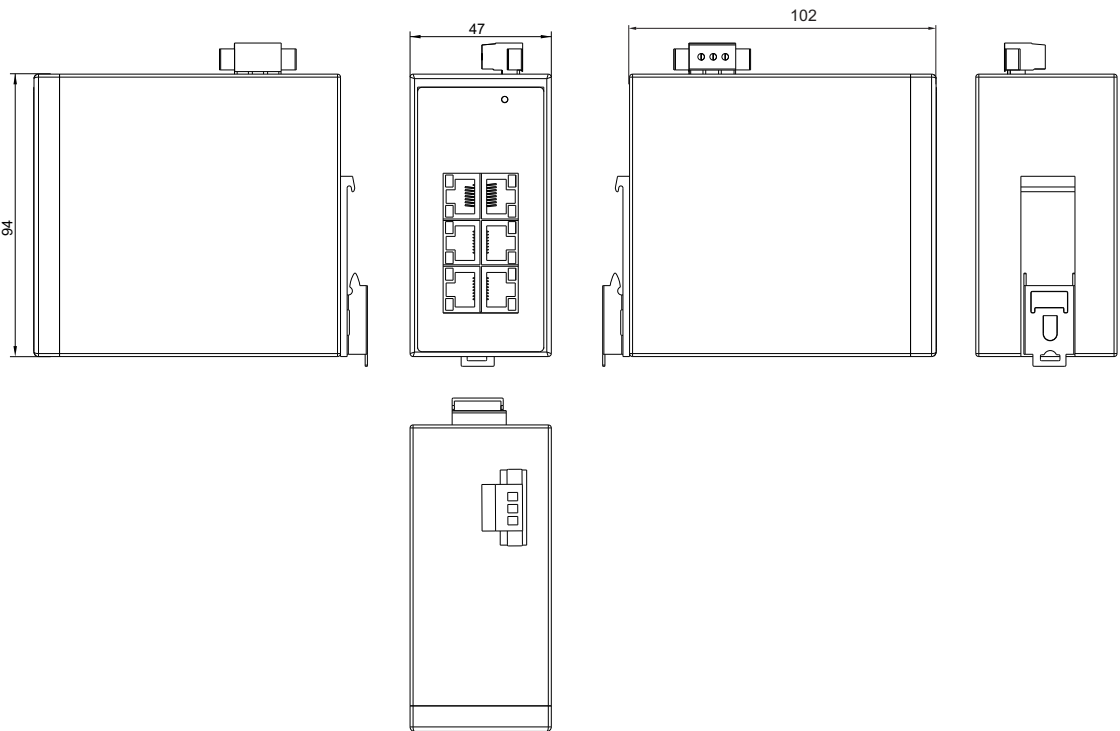


Overall Dimensions

DSW-ECT-A4K0004



DSW-ECT-A6K0006





DSW series ST Optical fiber EtherCAT protocol switches

CE RoHS



DSW-ECT-A4K0202-S-STA DSW-ECT-A4K0202-S-STB

Features

- 4-port (2 optical and 2 electrical) branch with ST port and built-in optical module
- Metal housing, more suitable for harsh industrial environments
- Anti-electromagnetic interference, more stable communication transmission.
- Supports DC-distributed clock synchronization.
- Supports the cascading function and hot swap of network cables
- Flexible composition of a variety of topologies

Specifications

Type	DSW-ECT-A4K0202-S-STA	DSW-ECT-A4K0202-S-STB
Functions In The System	Coupling of EtherCAT connections	
Transmission Medium	Ethernet/EtherCAT cables (at least Category 5) shielded	
Network Interface	2*RJ45, 2*ST	
Network Protocol	EtherCAT	
Support for distributed clocks	Yes	
Delayed	Approximately 1 microsecond per port	
Transmission Speed	100M	

Power Parameters

Connection	1 removable 3-contact terminal block
Input Voltage	Rated 24VDC (allowed for 18-28VDC)
Overload Current Protection	Supported
Reverse Polarity Protection	Supported

Physical Characteristics

Installation	DIN35 rail installation
Housing	Aluminum alloy housing
Protection level	IP40
Dimensions	29×95×102(mm)

Environment Limits

Ambient Relative Humidity	5 to 90% (non-condensing)
Operating Temperature	- 10°C~ 55°C

Electromagnetic Characteristics

EMI	FCC 47 CFR Part 15 Class A EN55032 Class A EN55035 Class A
-----	--

Standards and Certifications

Safety	EN 62368-1
--------	------------

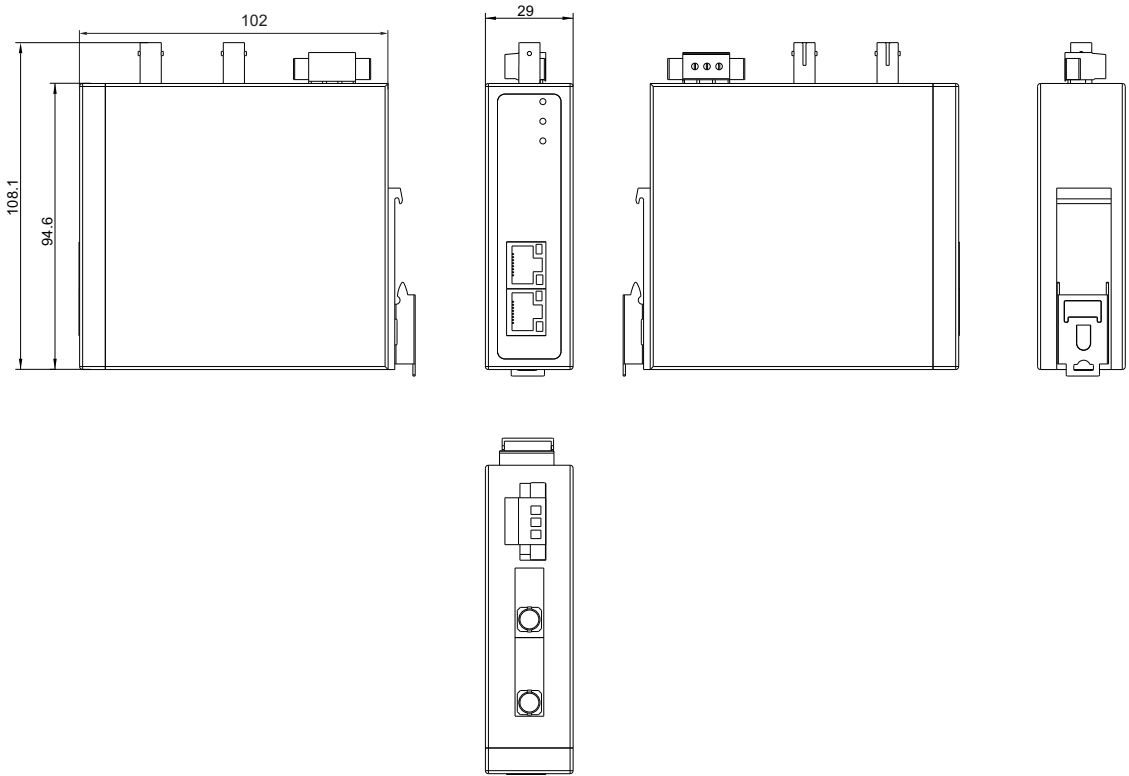


DSW series ST Optical fiber EtherCAT protocol switches

CE RoHS

Overall Dimensions

DSW-ECT-A4K0202-S-STA DSW-ECT-A4K0202-S-STB





Features

- Small size, easy to install.
- You can select PNP, NPN according to the function mode of the controller.
- There is LED indicator light, you can see the working status of the product.
- IP67 level of protection.
- You can can customize the material and length of the cable.

Product

Product	JB-M8-04-P-00	JB-M8-04-N-00	Product	JB-M8-04-P-00	JB-M8-04-N-00
Functional description	Split Plastic box, 4 channels, single signal, PNP	Split Plastic box, 4 channels, single signal, NPN	Functional description	Split Plastic box, 4 channels, single signal, PNP	Split Plastic box, 4 channels, single signal, NPN

Performance Parameter

Signal type	PNP	NPN
Number of I/O channels	4	
Number of signal output points	1	
Shell material	PBT	
Contact material	Copper alloy	
Contact surface material	Au	
Contact material	PA	
Contact resistance	<10mΩ	

Power Supply Parameters

Supply voltage	10...30VDC
Supply current MAX	Max 4A
Interface type	M12 Male Acode 8P IEC 61076-2-101
Torque	0.4Nm(3.54Lb-In)
Interface material	Copper alloy
Thread material	Ni

I/O Parameters

Rated voltage	24VDC
Rated current	1.5A
Interface type	M8 Female Acode 3P IEC 61076-2-104
Torque	0.2Nm(1.77Lb-In)
Interface material	Copper alloy
Thread material	Ni

Mechanical Structure

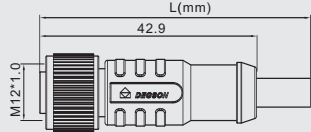
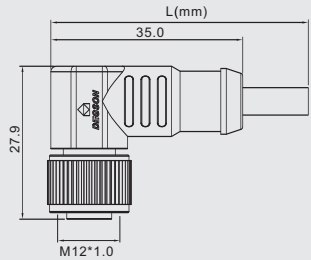
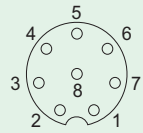
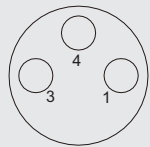
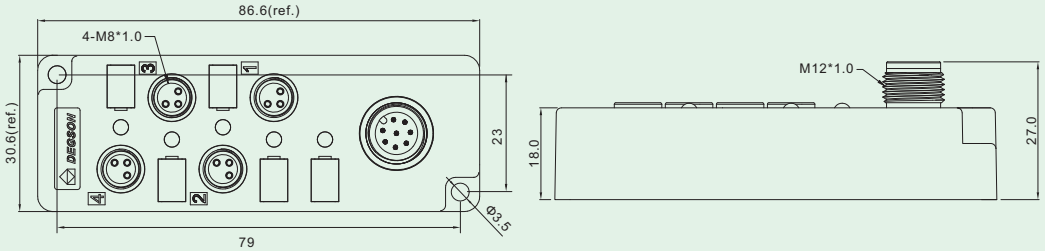
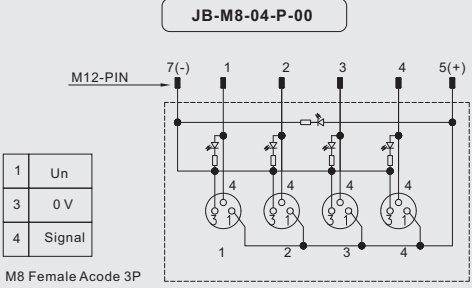
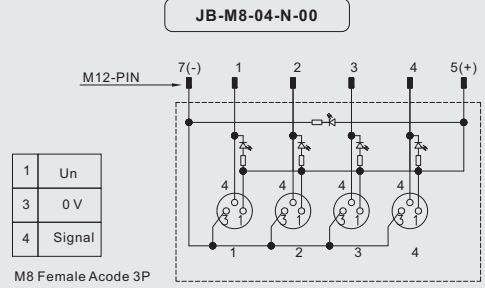
Protection grade	IP67
size(L X W X H)	86.6mm X 30.6mm X 27mm

Work Environment

Working temperature	-25...80°C
Storage temperature	-25...80°C

LED Status Indicator

Power lamp	Green LED
I/O lamp	Yellow LED

Cable				
Product	PM-M12A-08P-FF-SL8A02-00A(H)	PM-M12A-08P-FF-SL8B02-00A(H)	PM-M12A-08P-FF-SR8A02-00A(H)	PM-M12A-08P-FF-SR8B02-00A(H)
Shell material	M12 * 1 Female Overmolded with Cable Plug, 8P, single end, Unshielded, Straight, PVC, 2m	M12 * 1 Female Overmolded with Cable Plug, 8P, single end, Unshielded, Straight, PUR, 2m	M12 * 1 Female Overmolded with Cable Plug, 8P, single end, Unshielded, Angled, PVC, 2m	M12 * 1 Female Overmolded with Cable Plug, 8P, single end, Unshielded, Angled, PUR, 2m
Cable				
M12 Connector Pin drawing			NO.	Color
			1	White(WH)
			2	Brown(BN)
			3	Green(GN)
			4	Yellow(YE)
M8 Pin drawing			NO.	Color
			5	Grey(GY)
			6	Pink(PK)
			7	Blue(BU)
			8	Red(RD)
Junction Box drawing				
Wiring diagram				



Features

- Small size, easy to install.
- You can select PNP, NPN according to the function mode of the controller.
- There is LED indicator light, you can see the working status of the product.
- IP67 level of protection.
- You can customize the material and length of the cable.

Product

Product	JB-M8-06-P-00	JB-M8-06-N-00	Product	JB-M8-06-P-00	JB-M8-06-N-00
Functional description	Split Plastic box, 6 channels, single signal, PNP	Split Plastic box, 6 channels, single signal, PNP	Functional description	Split Plastic box, 6 channels, single signal, PNP	Split Plastic box, 6 channels, single signal, PNP

Performance Parameter

Signal type	PNP	NPN
Number of I/O channels	6	
Number of signal output points	1	
Shell material	PBT	
Contact material	Copper alloy	
Contact surface material	Au	
Contact material	PA	
Contact resistance	<10mΩ	

Power Supply Parameters

Supply voltage	10...30VDC
Supply current MAX	Max 4A
Interface type	M12 Male Acode 8P IEC 61076-2-101
Torque	0.4Nm(3.54Lb-In)
Interface material	Copper alloy
Thread material	Ni

I/O Parameters

Rated voltage	24VDC
Rated current	1.5A
Interface type	M8 Female Acode 3P IEC 61076-2-104
Torque	0.2Nm(1.77Lb-In)
Interface material	Copper alloy
Thread material	Ni

Mechanical Structure

Protection grade	IP67
size(L X W X H)	106.6mm X 30.6mm X 27mm

Work Environment

Working temperature	-25...80℃
Storage temperature	-25...80℃

LED Status Indicator

Power lamp	Green LED
I/O lamp	Yellow LED

Cable																								
Product	PM-M12A-08P-FF-SL8A02-00A(H)	PM-M12A-08P-FF-SL8B02-00A(H)	PM-M12A-08P-FF-SR8A02-00A(H)	PM-M12A-08P-FF-SR8B02-00A(H)																				
Shell material	M12 * 1 Female Overmolded with Cable Plug, 8P, single end, Unshielded, Straight, PVC, 2m	M12 * 1 Female Overmolded with Cable Plug, 8P, single end, Unshielded, Straight, PUR, 2m	M12 * 1 Female Overmolded with Cable Plug, 8P, single end, Unshielded, Angled, PVC, 2m	M12 * 1 Female Overmolded with Cable Plug, 8P, single end, Unshielded, Angled, PUR, 2m																				
Cable																								
M12 Connector Pin drawing			<table><tr><td>NO.</td><td>Color</td><td>NO.</td><td>Color</td></tr><tr><td>1</td><td>White(WH)</td><td>5</td><td>Grey(GY)</td></tr><tr><td>2</td><td>Brown(BN)</td><td>6</td><td>Pink(PK)</td></tr><tr><td>3</td><td>Green(GN)</td><td>7</td><td>Blue(BU)</td></tr><tr><td>4</td><td>Yellow(YE)</td><td>8</td><td>Red(RD)</td></tr></table>		NO.	Color	NO.	Color	1	White(WH)	5	Grey(GY)	2	Brown(BN)	6	Pink(PK)	3	Green(GN)	7	Blue(BU)	4	Yellow(YE)	8	Red(RD)
NO.	Color	NO.	Color																					
1	White(WH)	5	Grey(GY)																					
2	Brown(BN)	6	Pink(PK)																					
3	Green(GN)	7	Blue(BU)																					
4	Yellow(YE)	8	Red(RD)																					
M8 Pin drawing																								
Junction Box drawing																								
Wiring diagram	JB-M8-06-P-00		JB-M8-06-N-00																					



Features

- Small size, easy to install.
- You can select PNP, NPN according to the function mode of the controller.
- There is LED indicator light, you can see the working status of the product.
- IP67 level of protection.
- You can can customize the material and length of the cable.

Product

Product	JB-M8-08-P-00	JB-M8-08-N-00	Product	JB-M8-08-P-00	JB-M8-08-N-00
Functional description	Split Plastic box, 8 channels, single signal, PNP	Split Plastic box, 8 channels, single signal, NPN	Functional description	Split Plastic box, 8 channels, single signal, PNP	Split Plastic box, 8 channels, single signal, NPN
Performance Parameter			I/O Parameters		
Signal type	PNP	NPN	Rated voltage	24VDC	
Number of I/O channels	8		Rated current	1.5A	
Number of signal output points	1		Interface type	M8 Female Acode 3P IEC 61076-2-104	
Shell material	PBT		Torque	0.2Nm(1.77Lb-In)	
Contact material	Copper alloy		Interface material	Copper alloy	
Contact surface material	Au		Thread material	Ni	
Contact material	PA		Mechanical Structure		
Contact resistance	<10mΩ		Protection grade	IP67	
Power Supply Parameters			size(L X W X H)	126.6mm X 30.6mm X 27mm	
Supply voltage	10...30VDC		Work Environment		
Supply current MAX	Max 4A		Working temperature	-25...80℃	
Interface type	M12 Male Acode 12P IEC 61076-2-101		Storage temperature	-25...80℃	
Torque	0.4Nm(3.54Lb-In)		LED Status Indicator		
Interface material	Copper alloy		Power lamp	Green LED	
Thread material	Ni		I/O lamp	Yellow LED	

Cable																																
Product	PM-M12A-12P-FF-SL8A03-00A(H)	PM-M12A-12P-FF-SL8B03-00A(H)	PM-M12A-12P-FF-SR8A03-00A(H)	PM-M12A-12P-FF-SR8B03-00A(H)																												
Shell material	M12 * 1 Female Overmolded with Cable Plug, 12P, single end, Unshielded, Straight, PVC, 3m	M12 * 1 Female Overmolded with Cable Plug, 12P, single end, Unshielded, Straight, PUR, 3m	M12 * 1 Female Overmolded with Cable Plug, 12P, single end, Unshielded, Angled, PVC, 3m	M12 * 1 Female Overmolded with Cable Plug, 12P, single end, Unshielded, Angled, PUR, 3m																												
Cable																																
M12 Connector Pin drawing			<table><tr><td>NO.</td><td>Color</td><td>NO.</td><td>Color</td></tr><tr><td>1</td><td>Brown(BN)</td><td>7</td><td>Black (BK)</td></tr><tr><td>2</td><td>Blue(BU)</td><td>8</td><td>Grey(GY)</td></tr><tr><td>3</td><td>White(WH)</td><td>9</td><td>Red(RD)</td></tr><tr><td>4</td><td>Green(GN)</td><td>10</td><td>Violet(VT)</td></tr><tr><td>5</td><td>Pink(PK)</td><td>11</td><td>Grey/Pink(GY/PK)</td></tr><tr><td>6</td><td>Yellow(YE)</td><td>12</td><td>Red/Blue(RD/BU)</td></tr></table>		NO.	Color	NO.	Color	1	Brown(BN)	7	Black (BK)	2	Blue(BU)	8	Grey(GY)	3	White(WH)	9	Red(RD)	4	Green(GN)	10	Violet(VT)	5	Pink(PK)	11	Grey/Pink(GY/PK)	6	Yellow(YE)	12	Red/Blue(RD/BU)
NO.	Color	NO.	Color																													
1	Brown(BN)	7	Black (BK)																													
2	Blue(BU)	8	Grey(GY)																													
3	White(WH)	9	Red(RD)																													
4	Green(GN)	10	Violet(VT)																													
5	Pink(PK)	11	Grey/Pink(GY/PK)																													
6	Yellow(YE)	12	Red/Blue(RD/BU)																													
M8 Pin drawing																																
Junction Box drawing																																
Wiring diagram	JB-M8-08-P-00 M12-PIN 2(-) 3 4 6 8 5 9 7 10 1(+) <table><tr><td>1</td><td>Un</td></tr><tr><td>3</td><td>0 V</td></tr><tr><td>4</td><td>Signal</td></tr></table> M8 Female Acode 3P		1	Un	3	0 V	4	Signal	JB-M8-08-N-00 M12-PIN 2(-) 3 4 6 8 5 9 7 10 1(+) <table><tr><td>1</td><td>Un</td></tr><tr><td>3</td><td>0 V</td></tr><tr><td>4</td><td>Signal</td></tr></table> M8 Female Acode 3P		1	Un	3	0 V	4	Signal																
1	Un																															
3	0 V																															
4	Signal																															
1	Un																															
3	0 V																															
4	Signal																															



Features

- Small size, easy to install.
- You can select PNP, NPN according to the function mode of the controller.
- There is LED indicator light, you can see the working status of the product.
- IP67 level of protection.
- You can can customize the material and length of the cable.

Product

Product	JB-M8-10-P-00	JB-M8-10-N-00	Product	JB-M8-10-P-00	JB-M8-10-N-00
Functional description	Split Plastic box, 10 channels, single signal, PNP	Split Plastic box, 10 channels, single signal, PNP	Functional description	Split Plastic box, 10 channels, single signal, PNP	Split Plastic box, 10 channels, single signal, PNP

Performance Parameter

Signal type	PNP	NPN
Number of I/O channels	10	
Number of signal output points	1	
Shell material	PBT	
Contact material	Copper alloy	
Contact surface material	Au	
Contact material	PA	
Contact resistance	<10mΩ	

Power Supply Parameters

Supply voltage	10...30VDC
Supply current MAX	Max 4A
Interface type	M12 Male Acode 12P IEC 61076-2-101
Torque	0.4Nm(3.54Lb-In)
Interface material	Copper alloy
Thread material	Ni

I/O Parameters

Rated voltage	24VDC
Rated current	1.5A
Interface type	M8 Female Acode 3P IEC 61076-2-104
Torque	0.2Nm(1.77Lb-In)
Interface material	Copper alloy
Thread material	Ni

Mechanical Structure

Protection grade	IP67
size(L X W X H)	146.6mm X 30.6mm X 27mm

Work Environment

Working temperature	-25...80°C
Storage temperature	-25...80°C

LED Status Indicator

Power lamp	Green LED
I/O lamp	Yellow LED

Cable																																
Product	PM-M12A-12P-FF-SL8A02-00A(H)	PM-M12A-12P-FF-SL8B02-00A(H)	PM-M12A-12P-FF-SR8A02-00A(H)	PM-M12A-12P-FF-SR8B02-00A(H)																												
Shell material	M12 * 1 Female Overmolded with Cable Plug, 12P, single end, Unshielded, Straight, PVC, 3m	M12 * 1 Female Overmolded with Cable Plug, 12P, single end, Unshielded, Straight, PUR, 3m	M12 * 1 Female Overmolded with Cable Plug, 12P, single end, Unshielded, Angled, PVC, 3m	M12 * 1 Female Overmolded with Cable Plug, 12P, single end, Unshielded, Angled, PUR, 3m																												
Cable																																
M12 Connector Pin drawing			<table><tr><td>NO.</td><td>Color</td><td>NO.</td><td>Color</td></tr><tr><td>1</td><td>Brown(BN)</td><td>7</td><td>Black (BK)</td></tr><tr><td>2</td><td>Blue(BU)</td><td>8</td><td>Grey(GY)</td></tr><tr><td>3</td><td>White(WH)</td><td>9</td><td>Red(RD)</td></tr><tr><td>4</td><td>Green(GN)</td><td>10</td><td>Violet(VT)</td></tr><tr><td>5</td><td>Pink(PK)</td><td>11</td><td>Grey/Pink(GY/PK)</td></tr><tr><td>6</td><td>Yellow(YE)</td><td>12</td><td>Red/Blue(RD/BU)</td></tr></table>		NO.	Color	NO.	Color	1	Brown(BN)	7	Black (BK)	2	Blue(BU)	8	Grey(GY)	3	White(WH)	9	Red(RD)	4	Green(GN)	10	Violet(VT)	5	Pink(PK)	11	Grey/Pink(GY/PK)	6	Yellow(YE)	12	Red/Blue(RD/BU)
NO.	Color	NO.	Color																													
1	Brown(BN)	7	Black (BK)																													
2	Blue(BU)	8	Grey(GY)																													
3	White(WH)	9	Red(RD)																													
4	Green(GN)	10	Violet(VT)																													
5	Pink(PK)	11	Grey/Pink(GY/PK)																													
6	Yellow(YE)	12	Red/Blue(RD/BU)																													
M8 Pin drawing																																
Junction Box drawing																																
Wiring diagram	JB-M8-10-P-00		JB-M8-10-N-00																													



Features

- Small size, easy to install.
- You can select PNP, NPN according to the function mode of the controller.
- There is LED indicator light, you can see the working status of the product.
- IP67 level of protection.
- You can can customize the material and length of the cable.

Product

Product	JB-M8-04-P-A03-00	JB-M8-04-N-A03-00
Functional description	Pre-injected cable, plastic box, 4 channels, single signal, PNP, PVC, 3m	Pre-injected cable, plastic box, 4 channels, single signal, NPN, PVC, 3m

Performance Parameter

Signal type	PNP	NPN
Number of I/O channels	4	
Number of signal output points	1	
Shell material	PBT	
Contact material	Copper alloy	
Contact surface material	Au	
Contact material	PA	
Contact resistance	<10mΩ	
Cable material	PUR/PP, 5 million times	
Cable length	3m	

Power Supply Parameters

Supply voltage	10...30VDC
Supply current MAX	Max 4A

I/O Parameters

Rated voltage	24VDC
Rated current	1.5A
Interface type	M8 Female Acode 3P IEC 61076-2-104
Torque	0.2Nm(1.77Lb-In)
Interface material	Copper alloy
Thread material	Ni

Mechanical Structure

Protection grade	IP67
size(L X W X H)	86.6mm X 30.6mm X 18mm

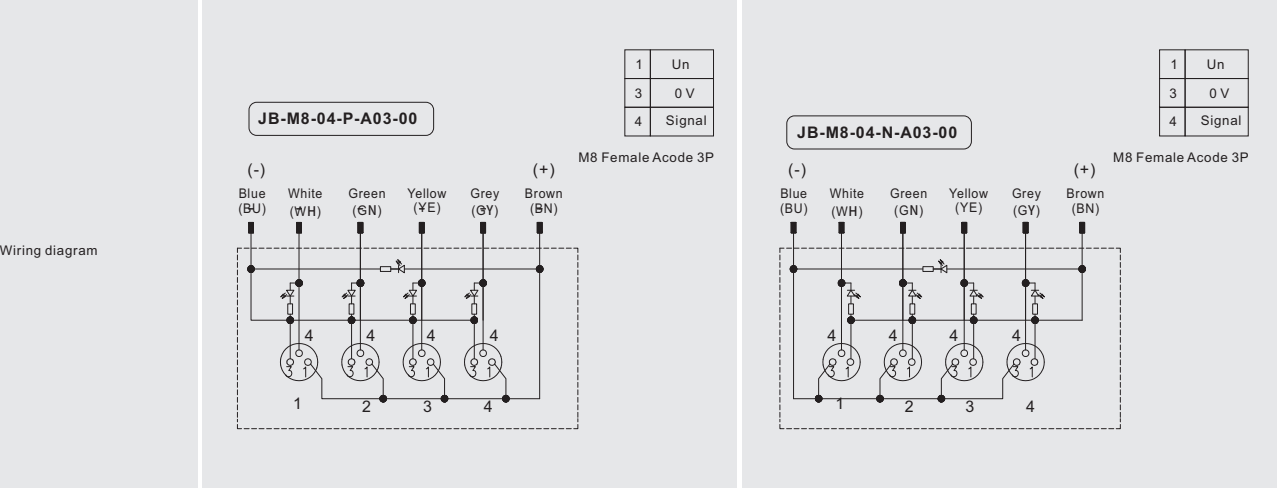
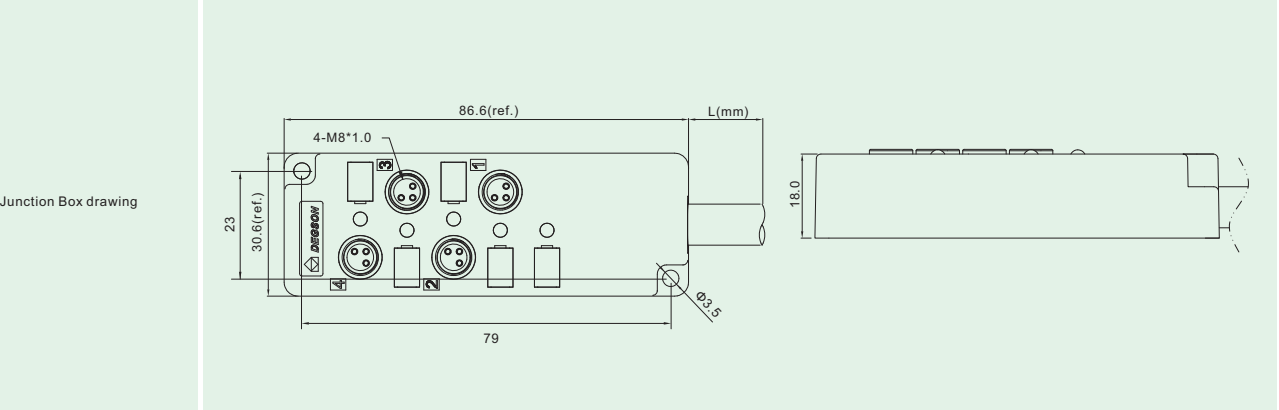
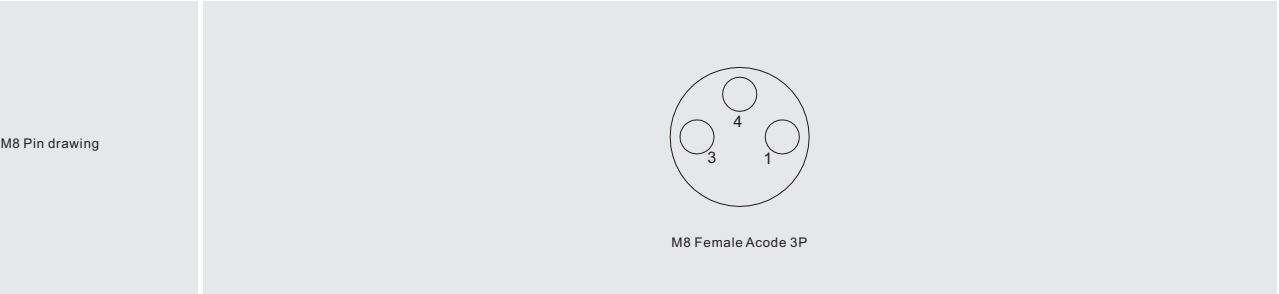
Work Environment

Working temperature	-25...80°C
Storage temperature	-25...80°C

LED Status Indicator

Power lamp	Green LED
I/O lamp	Yellow LED

Product Figure





Features

- Small size, easy to install.
- You can select PNP, NPN according to the function mode of the controller.
- There is LED indicator light, you can see the working status of the product.
- IP67 level of protection.
- You can can customize the material and length of the cable.

Product

Product	JB-M8-06-P-A03-00	JB-M8-06-N-A03-00
Functional description	Pre-injected cable, plastic box, 6 channels, single signal, PNP, PVC, 3m	Pre-injected cable, plastic box, 6 channels, single signal, NPN, PVC, 3m

Performance Parameter

Signal type	PNP	NPN
Number of I/O channels	6	
Number of signal output points	1	
Shell material	PBT	
Contact material	Copper alloy	
Contact surface material	Au	
Contact material	PA	
Contact resistance	<10mΩ	
Cable material	PUR/PP, 5 million times	
Cable length	3m	

Power Supply Parameters

Supply voltage	10...30VDC
Supply current MAX	Max 4A

I/O Parameters

Rated voltage	24VDC
Rated current	1.5A
Interface type	M8 Female Acode 3P IEC 61076-2-104
Torque	0.2Nm(1.77Lb-In)
Interface material	Copper alloy
Thread material	Ni

Mechanical Structure

Protection grade	IP67
size(L X W X H)	106.6mm X 30.6mm X 18mm

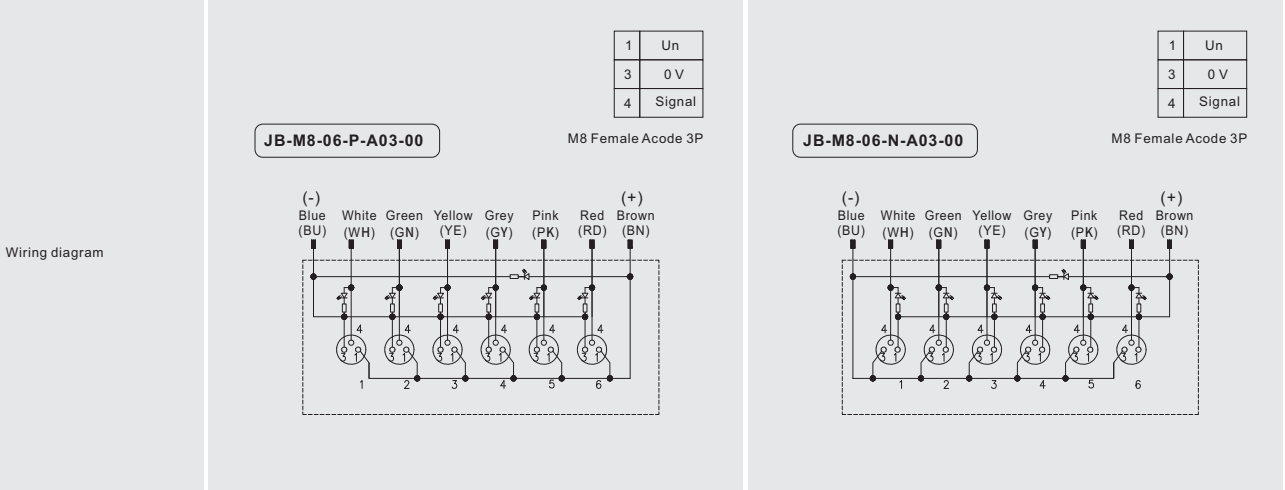
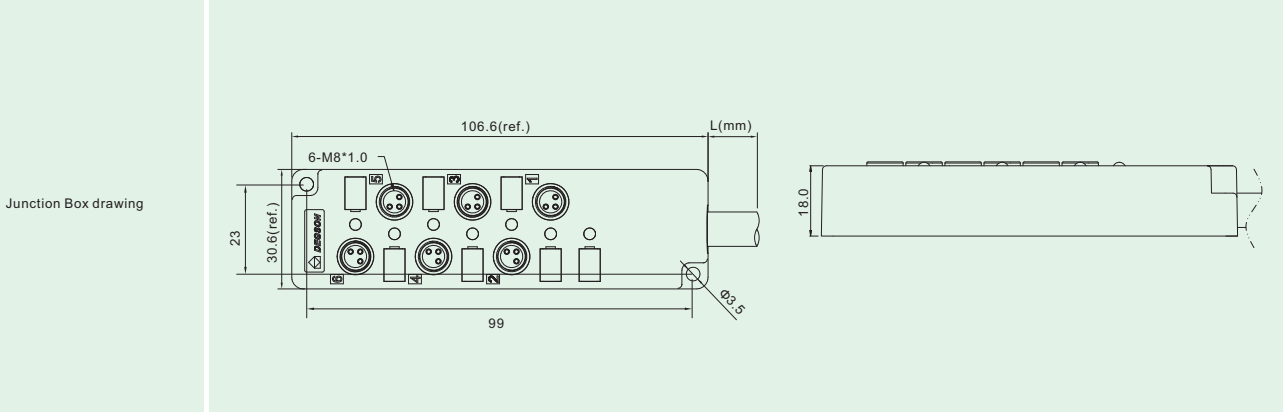
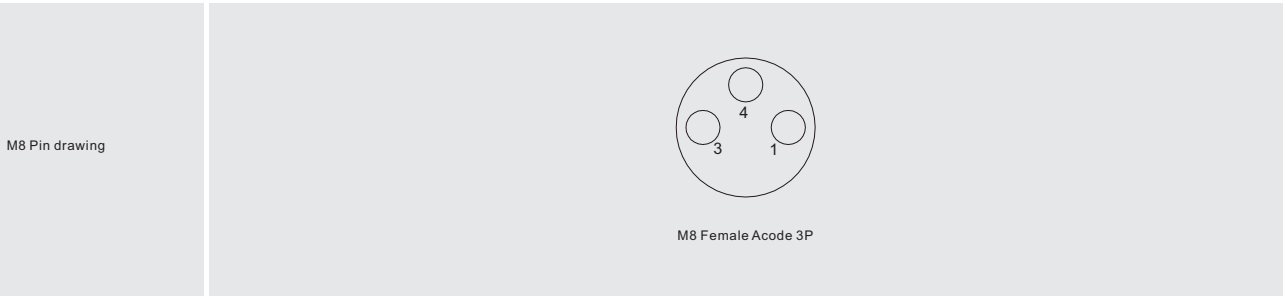
Work Environment

Working temperature	-25...80°C
Storage temperature	-25...80°C

LED Status Indicator

Power lamp	Green LED
I/O lamp	Yellow LED

Product Figure





Features

- Small size, easy to install.
- You can select PNP, NPN according to the function mode of the controller.
- There is LED indicator light, you can see the working status of the product.
- IP67 level of protection.
- You can can customize the material and length of the cable.

Product

Product	JB-M8-08-P-A03-00	JB-M8-08-N-A03-00
Functional description	Pre-injected cable, plastic box, 8 channels, single signal, PNP, PVC, 3m	Pre-injected cable, plastic box, 8 channels, single signal, NPN, PVC, 3m

Performance Parameter

Signal type	PNP	NPN
Number of I/O channels	8	
Number of signal output points	1	
Shell material	PBT	
Contact material	Copper alloy	
Contact surface material	Au	
Contact material	PA	
Contact resistance	<10mΩ	
Cable material	PUR/PP, 5 million times	
Cable length	3m	

Power Supply Parameters

Supply voltage	10...30VDC
Supply current MAX	Max 4A

I/O Parameters

Rated voltage	24VDC
Rated current	1.5A
Interface type	M8 Female Acode 3P IEC 61076-2-104
Torque	0.2Nm(1.77Lb-In)
Interface material	Copper alloy
Thread material	Ni

Mechanical Structure

Protection grade	IP67
size(L X W X H)	126.6mm X 30.6mm X 18mm

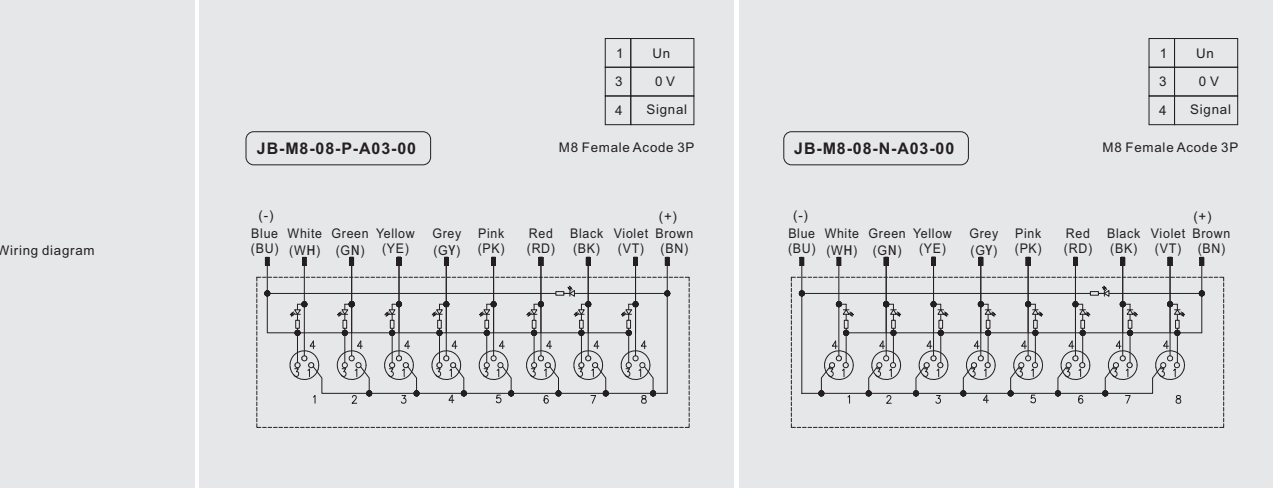
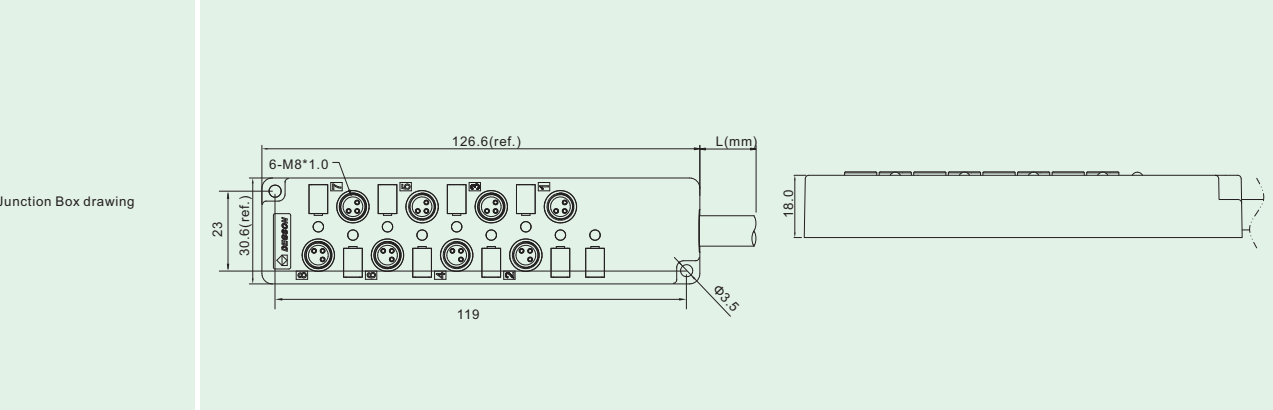
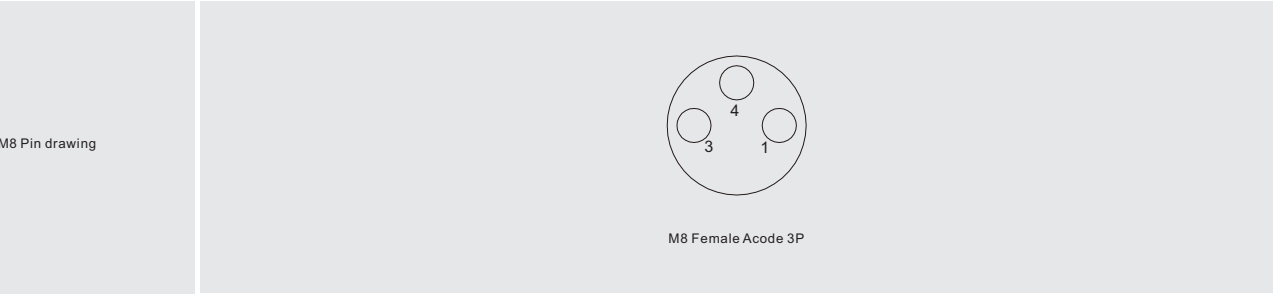
Work Environment

Working temperature	-25...80°C
Storage temperature	-25...80°C

LED Status Indicator

Power lamp	Green LED
I/O lamp	Yellow LED

Product Figure





Features

- Small size, easy to install.
- You can select PNP, NPN according to the function mode of the controller.
- There is LED indicator light, you can see the working status of the product.
- IP67 level of protection.
- You can can customize the material and length of the cable.

Product

Product	JB-M8-10-P-A03-00	JB-M8-10-N-A03-00
Functional description	Pre-injected cable, plastic box, 10 channels, single signal, PNP, PVC, 3m	Pre-injected cable, plastic box, 10 channels, single signal, NPN, PVC, 3m

Performance Parameter

Signal type	PNP	NPN
Number of I/O channels	10	
Number of signal output points	1	
Shell material	PBT	
Contact material	Copper alloy	
Contact surface material	Au	
Contact material	PA	
Contact resistance	<10mΩ	
Cable material	PUR/PP, 5 million times	
Cable length	3m	

Power Supply Parameters

Supply voltage	10...30VDC
Supply current MAX	Max 4A

I/O Parameters

Rated voltage	24VDC
Rated current	1.5A
Interface type	M8 Female Acode 3P IEC 61076-2-104
Torque	0.2Nm(1.77Lb-In)
Interface material	Copper alloy
Thread material	Ni

Mechanical Structure

Protection grade	IP67
size(L X W X H)	146.6mm X 30.6mm X 18mm

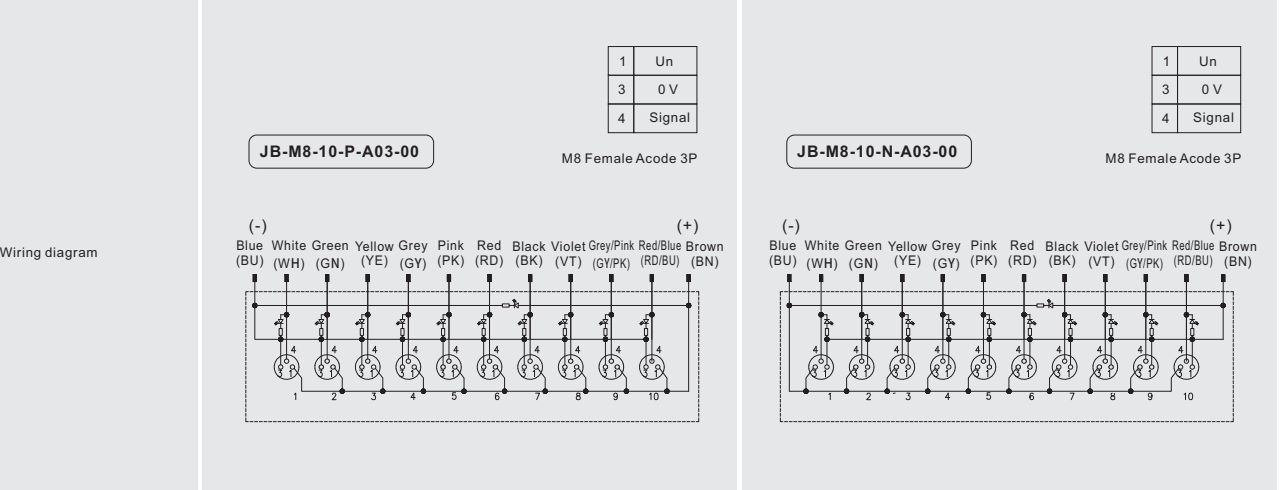
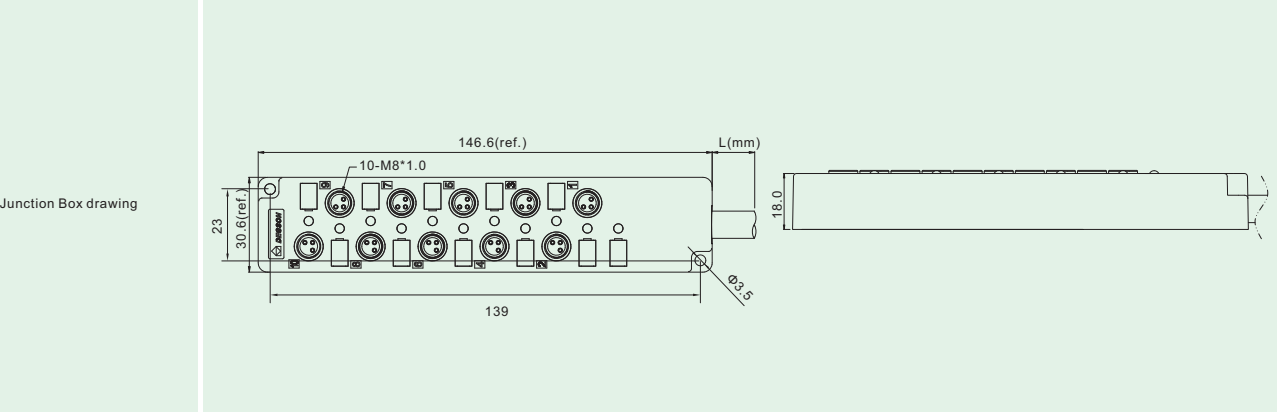
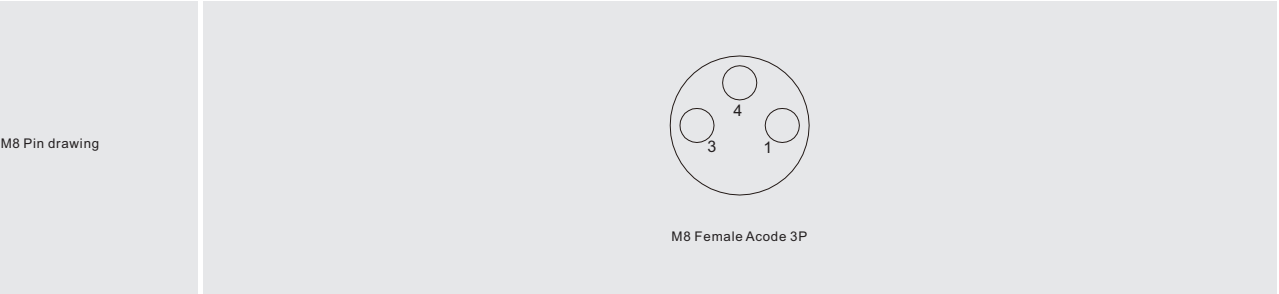
Work Environment

Working temperature	-25...80°C
Storage temperature	-25...80°C

LED Status Indicator

Power lamp	Green LED
I/O lamp	Yellow LED

Product Figure





Features

- Small size, easy to install.
- There is LED indicator light, you can see the working status of the product.
- Up to IP67 protection level.
- You can can customize the material and length of the cable.

Mechanical Structure

Protection grade	IP67
size(L X W X H)	103mm X 58mm X 22mm

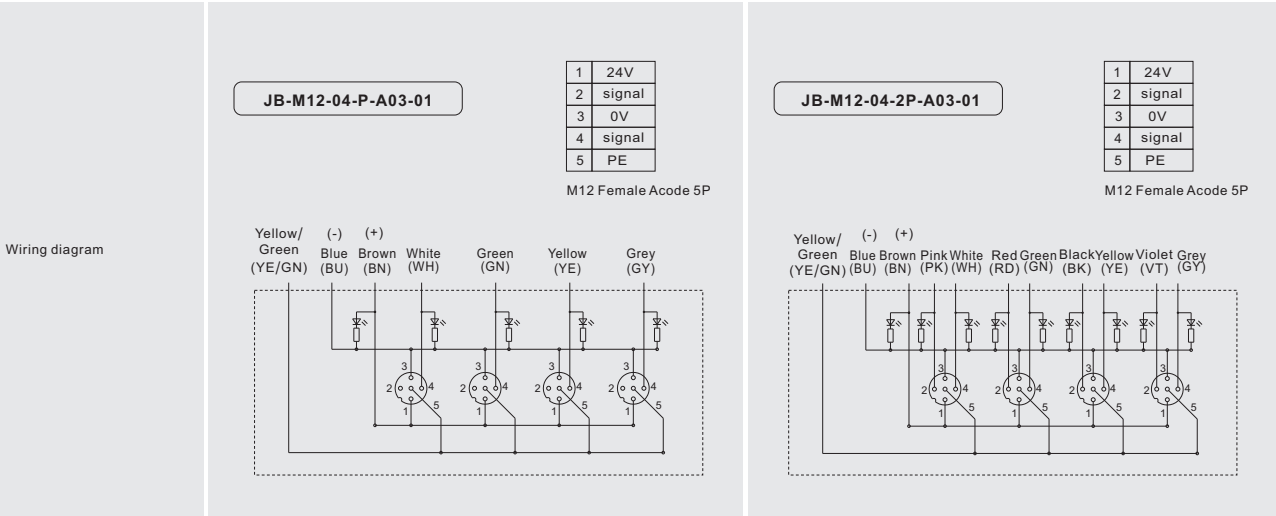
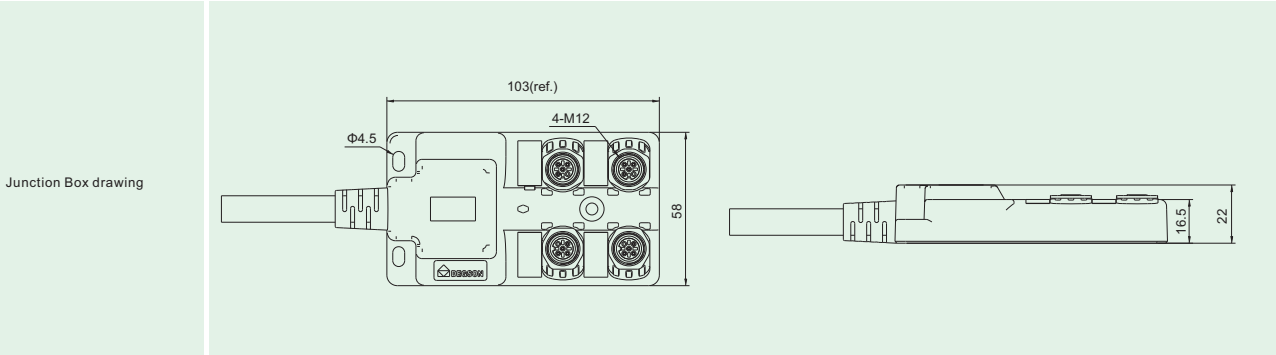
Work Environment

Working temperature	-25...80°C
Storage temperature	-25...80°C

LED Status Indicator

Power lamp	Green LED
I/O lamp	Yellow LED

Product Figure

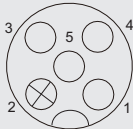
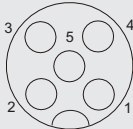
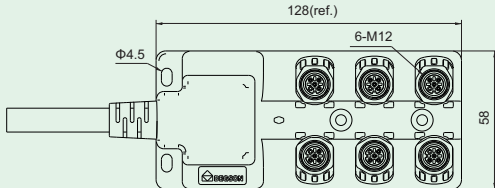
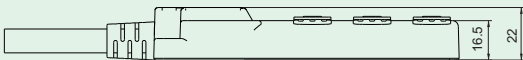
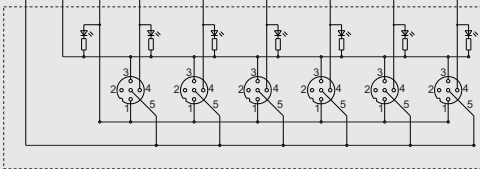
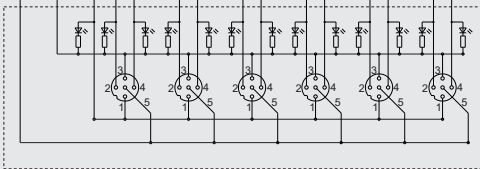




Features

- Small size, easy to install.
- There is LED indicator light, you can see the working status of the product.
- Up to IP67 protection level.
- You can customize the material and length of the cable.

Product		
Product	JB-M12-06-P-A03-01	JB-M12-06-2P-A03-01
Functional description	Split Plastic box, 6 channels, PNP, with cable, PVC, 3m	
Performance Parameter		
Signal type	PNP	
Number of I/O channels	6	
Number of signal output points	1	2
Shell material	PA flame retardant	
Contact material	Cu Alloy	
Contact surface material	Au	
Contact material	PA flame retardant	
Contact resistance	<10mΩ	
Power Supply Parameters		
Supply voltage	18...30VDC	
Supply current MAX	Max 6A	
Interface type	Cable connection	
I/O Parameters		
Rated voltage	24VDC/AC	
Rated current	4A	
Interface type	M12*1.0 Female	
Torque	0.8Nm	
Interface material	PA flame retardant	
Thread material	PC+ABS	

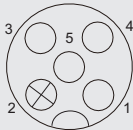
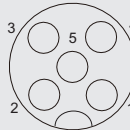
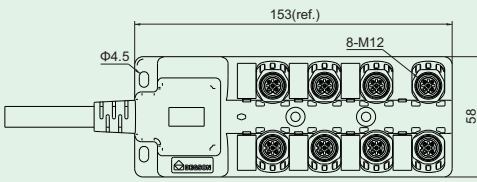
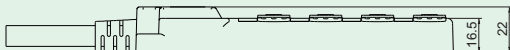
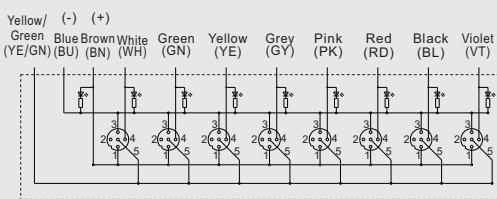
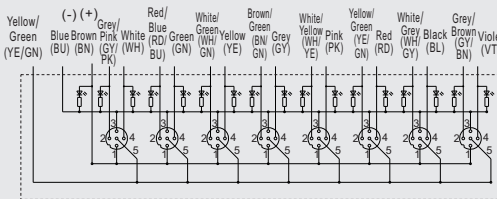
Mechanical Structure																					
Protection grade	IP67																				
size(L X W X H)	128mm X 58mm X 22mm																				
Work Environment																					
Working temperature	-25...80℃																				
Storage temperature	-25...80℃																				
LED Status Indicator																					
Power lamp	Green LED																				
I/O lamp	Yellow LED																				
Product Figure																					
M12 Pin drawing	 M12 Female Acode 5P  M12 Female Acode 5P																				
Junction Box drawing	 																				
Wiring diagram	JB-M12-06-P-A03-01 <table><tr><td>1</td><td>24V</td></tr><tr><td>2</td><td>signal</td></tr><tr><td>3</td><td>0V</td></tr><tr><td>4</td><td>signal</td></tr><tr><td>5</td><td>PE</td></tr></table> M12 Female Acode 5P Yellow/ (-) (+) Green Blue Brown White Green Yellow Grey Pink Red (YE/GN) (BU) (BN) (WH) (GN) (YE) (GY) (PK) (RD)  JB-M12-06-2P-A03-01 <table><tr><td>1</td><td>24V</td></tr><tr><td>2</td><td>signal</td></tr><tr><td>3</td><td>0V</td></tr><tr><td>4</td><td>signal</td></tr><tr><td>5</td><td>PE</td></tr></table> M12 Female Acode 5P Yellow/ (-) (+) Green Blue Brown Black White Violet Green Pink Yellow Red (YE/GN) (BU) (BN) (BL) (WH) (VT) (GN) (GY/PK) (YE) (RD/BU) (GY) (WH/GN/PK) (BN/GN) (RD) 	1	24V	2	signal	3	0V	4	signal	5	PE	1	24V	2	signal	3	0V	4	signal	5	PE
1	24V																				
2	signal																				
3	0V																				
4	signal																				
5	PE																				
1	24V																				
2	signal																				
3	0V																				
4	signal																				
5	PE																				



Features

- Small size, easy to install.
- There is LED indicator light, you can see the working status of the product.
- Up to IP67 protection level.
- You can customize the material and length of the cable.

Product		
Product	JB-M12-08-P-A03-01	JB-M12-08-2P-A03-01
Functional description	Split Plastic box, 8 channels, PNP, with cable, PVC, 3m	
Performance Parameter		
Signal type	PNP	
Number of I/O channels	8	
Number of signal output points	1	2
Shell material	PA flame retardant	
Contact material	Cu Alloy	
Contact surface material	Au	
Contact material	PA flame retardant	
Contact resistance	<10mΩ	
Power Supply Parameters		
Supply voltage	18...30VDC	
Supply current MAX	Max 6A	
Interface type	Cable connection	
I/O Parameters		
Rated voltage	24VDC/AC	
Rated current	4A	
Interface type	M12*1.0 Female	
Torque	0.8Nm	
Interface material	PA flame retardant	
Thread material	PC+ABS	

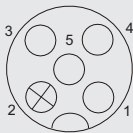
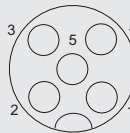
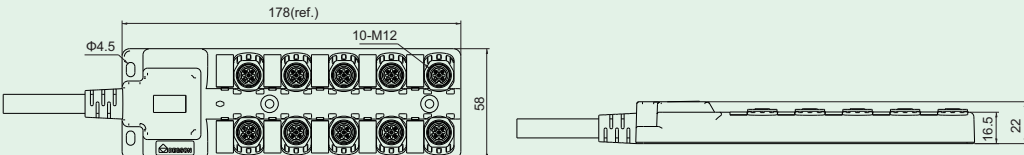
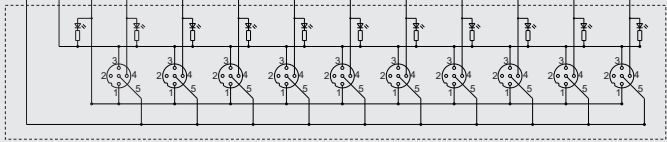
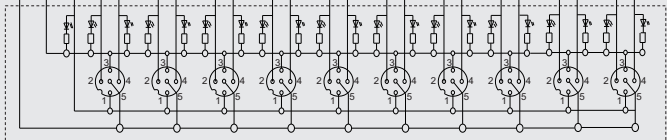
Mechanical Structure																					
Protection grade	IP67																				
size(L X W X H)	153mm X 58mm X 22mm																				
Work Environment																					
Working temperature	-25...80℃																				
Storage temperature	-25...80℃																				
LED Status Indicator																					
Power lamp	Green LED																				
I/O lamp	Yellow LED																				
Product Figure																					
M12 Pin drawing	 M12 Female Acode 5P  M12 Female Acode 5P																				
Junction Box drawing	 																				
Wiring diagram	JB-M12-08-P-A03-01 <table><tr><td>1</td><td>24V</td></tr><tr><td>2</td><td>signal</td></tr><tr><td>3</td><td>0V</td></tr><tr><td>4</td><td>signal</td></tr><tr><td>5</td><td>PE</td></tr></table> M12 Female Acode 5P  JB-M12-08-2P-A03-01 <table><tr><td>1</td><td>24V</td></tr><tr><td>2</td><td>signal</td></tr><tr><td>3</td><td>0V</td></tr><tr><td>4</td><td>signal</td></tr><tr><td>5</td><td>PE</td></tr></table> M12 Female Acode 5P 	1	24V	2	signal	3	0V	4	signal	5	PE	1	24V	2	signal	3	0V	4	signal	5	PE
1	24V																				
2	signal																				
3	0V																				
4	signal																				
5	PE																				
1	24V																				
2	signal																				
3	0V																				
4	signal																				
5	PE																				



Features

- Small size, easy to install.
- There is LED indicator light, you can see the working status of the product.
- Up to IP67 protection level.
- You can customize the material and length of the cable.

Product		
Product	JB-M12-10-P-A03-01	JB-M12-10-2P-A03-01
Functional description	Split Plastic box, 10 channels, PNP, with cable, PVC, 3m	
Performance Parameter		
Signal type	PNP	
Number of I/O channels	10	
Number of signal output points	1	2
Shell material	PA flame retardant	
Contact material	Cu Alloy	
Contact surface material	Au	
Contact material	PA flame retardant	
Contact resistance	<10mΩ	
Power Supply Parameters		
Supply voltage	18...30VDC	
Supply current MAX	Max 6A	
Interface type	Cable connection	
I/O Parameters		
Rated voltage	24VDC/AC	
Rated current	4A	
Interface type	M12*1.0 Female	
Torque	0.8Nm	
Interface material	PA flame retardant	
Thread material	PC+ABS	

Mechanical Structure																							
Protection grade	IP67																						
size(L X W X H)	178mm X 58mm X 22mm																						
Work Environment																							
Working temperature	-25...80℃																						
Storage temperature	-25...80℃																						
LED Status Indicator																							
Power lamp	Green LED																						
I/O lamp	Yellow LED																						
Product Figure																							
M12 Pin drawing	 M12 Female Acode 5P  M12 Female Acode 5P																						
Junction Box drawing																							
Wiring diagram	JB-M12-10-P-A03-01 <table><tr><td>1</td><td>24V</td></tr><tr><td>2</td><td>/</td></tr><tr><td>3</td><td>0V</td></tr><tr><td>4</td><td>signal</td></tr><tr><td>5</td><td>PE</td></tr></table> M12 Female Acode 5P Yellow/ Green (YE/GN) (-) Blue (BU) Brown (BN) White (WH) Green (GN) Yellow (YE) Grey (GY) Pink (PK) Red (RD) Black (BL) Violet (VT) Grey/Pink (GY/PK) Red/Blue (RD/BU) (+)  JB-M12-10-2P-A03-01 <table><tr><td>1</td><td>24V</td></tr><tr><td>2</td><td>/</td></tr><tr><td>3</td><td>0V</td></tr><tr><td>4</td><td>signal</td></tr><tr><td>5</td><td>PE</td></tr></table> M12 Female Acode 5P Yellow/ Green (YE/GN) (-) Blue (BU) Brown (BN) White (WH) Green (GN) Yellow (YE) Grey (GY) Pink (PK) Red (RD) Black (BL) Violet (VT) Grey/Pink (GY/PK) Red/Blue (RD/BU) (+)  <td data-kind="ghost"></td>		1	24V	2	/	3	0V	4	signal	5	PE	1	24V	2	/	3	0V	4	signal	5	PE	
1	24V																						
2	/																						
3	0V																						
4	signal																						
5	PE																						
1	24V																						
2	/																						
3	0V																						
4	signal																						
5	PE																						



Features

- Small size, easy to install.
- There is LED indicator light, you can see the working status of the product.
- Up to IP67 protection level.

Product					
Product	JB-M12-04-P-01		JB-M12-04-2P-01		
Functional description	Split Plastic box, 4 ports, single channels, PNP, with M23 prefabricated interface				
Performance Parameter			I/O Parameters		
Signal type	PNP		Rated voltage	24VDC	
Number of I/O channels	4		Rated current	4A	
Number of signal output points	1	2	Interface type	M12*1.0 Female	
Shell material	PA flame retardant				
Contact material	Cu Alloy				
Contact surface material	Au				
Contact material	PA flame retardant				
Contact resistance	<10mΩ				
Power Supply Parameters			Mechanical Structure		
Supply voltage	18...30VDC		Protection grade	IP67	
Supply current MAX	Max 6A		size(L X W X H)	103mm X 58mm X 32.5mm	
Interface type	M23 interface		Work Environment		
Torque	1.2Nm		Working temperature	-25...80℃	
Interface material	Cu Alloy		Storage temperature	-25...80℃	
Thread material	Ni		LED Status Indicator		
			Power lamp	Green LED	
			I/O lamp	Yellow LED	

Cable																																																										
Product	PCSH-M23P-07P-FF-1LM-SR7A03-01Z(H)	PCSH-M23P-11P-FF-2LM-SR7A03-01Z(H)																																																								
Shell material	M23 * 1 Female Overmolded with Cable Plug, 7P, single end, Unshielded, Angled, PVC, 3m	M23 * 1 Female Overmolded with Cable Plug, 11P, single end, Unshielded, Angled, PVC, 3m																																																								
Cable																																																										
M23 Connector Pin drawing	 M23 Female Acode 7P	 M23 Female Acode 11P																																																								
Pin Assignment	<table><tr><th>NO.</th><th>Color</th><th>NO.</th><th>Color</th></tr><tr><td>1</td><td>/</td><td>12</td><td>Green/Yellow(GN/YE)</td></tr><tr><td>2</td><td>/</td><td>15</td><td>White(WH)</td></tr><tr><td>3</td><td>Grey(GY)</td><td>16</td><td>Yellow(YE)</td></tr><tr><td>5</td><td>Green(GN)</td><td>17</td><td>/</td></tr><tr><td>6</td><td>Blue(BU)</td><td>19</td><td>Brown(BU)</td></tr><tr><td>11</td><td>/</td><td></td><td></td></tr></table>	NO.	Color	NO.	Color	1	/	12	Green/Yellow(GN/YE)	2	/	15	White(WH)	3	Grey(GY)	16	Yellow(YE)	5	Green(GN)	17	/	6	Blue(BU)	19	Brown(BU)	11	/			<table><tr><th>NO.</th><th>Color</th><th>NO.</th><th>Color</th></tr><tr><td>1</td><td>Violet(VT)</td><td>12</td><td>Green/Yellow(GN/YE)</td></tr><tr><td>2</td><td>Red(RD)</td><td>15</td><td>White(WH)</td></tr><tr><td>3</td><td>Grey(GY)</td><td>16</td><td>Yellow(YE)</td></tr><tr><td>5</td><td>Green(GN)</td><td>17</td><td>Pink(PK)</td></tr><tr><td>6</td><td>Blue(BU)</td><td>19</td><td>Brown(BU)</td></tr><tr><td>11</td><td>Black(BK)</td><td></td><td></td></tr></table>	NO.	Color	NO.	Color	1	Violet(VT)	12	Green/Yellow(GN/YE)	2	Red(RD)	15	White(WH)	3	Grey(GY)	16	Yellow(YE)	5	Green(GN)	17	Pink(PK)	6	Blue(BU)	19	Brown(BU)	11	Black(BK)		
NO.	Color	NO.	Color																																																							
1	/	12	Green/Yellow(GN/YE)																																																							
2	/	15	White(WH)																																																							
3	Grey(GY)	16	Yellow(YE)																																																							
5	Green(GN)	17	/																																																							
6	Blue(BU)	19	Brown(BU)																																																							
11	/																																																									
NO.	Color	NO.	Color																																																							
1	Violet(VT)	12	Green/Yellow(GN/YE)																																																							
2	Red(RD)	15	White(WH)																																																							
3	Grey(GY)	16	Yellow(YE)																																																							
5	Green(GN)	17	Pink(PK)																																																							
6	Blue(BU)	19	Brown(BU)																																																							
11	Black(BK)																																																									
M12 Pin drawing	 M12 Female Acode 5P	 M12 Female Acode 5P																																																								
Junction Box drawing																																																										
Wiring diagram	JB-M12-04-P-01 <table><tr><td>1</td><td>24V</td></tr><tr><td>2</td><td>signal</td></tr><tr><td>3</td><td>0V</td></tr><tr><td>4</td><td>signal</td></tr><tr><td>5</td><td>PE</td></tr></table> M12 Female Acode 5P Yellow/ Green (-) (+) (YE/GN) Blue Brown White PE (BU) (BN) (WH) 12 6 19 15 JB-M12-04-2P-01 <table><tr><td>1</td><td>24V</td></tr><tr><td>2</td><td>signal</td></tr><tr><td>3</td><td>0V</td></tr><tr><td>4</td><td>signal</td></tr><tr><td>5</td><td>PE</td></tr></table> M12 Female Acode 5P Yellow/ Green (-) (+) (YE/GN) Blue BrownPink White PE (BU) (BN) (PK) (WH) (RD) (GN) (BK) (YE) (VT) (GY) 12 6 19 17 15 2 5 11 16 1 3	1	24V	2	signal	3	0V	4	signal	5	PE	1	24V	2	signal	3	0V	4	signal	5	PE																																					
1	24V																																																									
2	signal																																																									
3	0V																																																									
4	signal																																																									
5	PE																																																									
1	24V																																																									
2	signal																																																									
3	0V																																																									
4	signal																																																									
5	PE																																																									



Features

- Small size, easy to install.
- There is LED indicator light, you can see the working status of the product.
- Up to IP67 protection level.

Product					
Product	JB-M12-06-P-01		JB-M12-06-2P-01		
Functional description	Split Plastic box, 6 ports, single channels, PNP, with M23 prefabricated interface				
Performance Parameter			I/O Parameters		
Signal type	PNP				
Number of I/O channels	6				
Number of signal output points	1	2			
Shell material	PA flame retardant				
Contact material	Cu Alloy				
Contact surface material	Au				
Contact material	PA flame retardant				
Contact resistance	<10mΩ				
Power Supply Parameters					
Supply voltage	18...30VDC				
Supply current MAX	Max 6A				
Interface type	M23 interface				
Torque	1.2Nm				
Interface material	Cu Alloy				
Thread material	Ni				
Product	JB-M12-06-P-01		JB-M12-06-2P-01		
Functional description	Split Plastic box, 6 ports, double channels, PNP, with M23 prefabricated interface				
Rated voltage		24VDC			
Rated current		4A			
Interface type		M12*1.0 Female			
Torque		0.8Nm			
Interface material		PA flame retardant			
Thread material		PC+ABS			
Mechanical Structure					
Protection grade		IP67			
size(L X W X H)		128mm X 58mm X 32.5mm			
Work Environment					
Working temperature		-25...80℃			
Storage temperature		-25...80℃			
LED Status Indicator					
Power lamp		Green LED			
I/O lamp		Yellow LED			

Cable																																						
Product	PCSH-M23P-09P-FF-1LM-SR7A03-01Z(H)																																					
Shell material	M23 * 1 Female Overmolded with Cable Plug, 9P, single end, Unshielded, Angled, PVC, 3m																																					
Cable																																						
M23 Connector Pin drawing																																						
Pin Assignment	<table><tr><th>NO.</th><th>Color</th><th>NO.</th><th>Color</th></tr><tr><td>1</td><td>/</td><td>11</td><td>/</td></tr><tr><td>2</td><td>Red(RD)</td><td>12</td><td>Yellow/Green(YE/GN)</td></tr><tr><td>3</td><td>Grey(GY)</td><td>14</td><td>/</td></tr><tr><td>4</td><td>/</td><td>15</td><td>White(WH)</td></tr><tr><td>5</td><td>Green(GN)</td><td>16</td><td>Yellow(YE)</td></tr><tr><td>6</td><td>Blue(BU)</td><td>17</td><td>Pink(PK)</td></tr><tr><td>7</td><td>/</td><td>19</td><td>Brown(BU)</td></tr><tr><td>8</td><td>/</td><td></td><td></td></tr></table>		NO.	Color	NO.	Color	1	/	11	/	2	Red(RD)	12	Yellow/Green(YE/GN)	3	Grey(GY)	14	/	4	/	15	White(WH)	5	Green(GN)	16	Yellow(YE)	6	Blue(BU)	17	Pink(PK)	7	/	19	Brown(BU)	8	/		
NO.	Color	NO.	Color																																			
1	/	11	/																																			
2	Red(RD)	12	Yellow/Green(YE/GN)																																			
3	Grey(GY)	14	/																																			
4	/	15	White(WH)																																			
5	Green(GN)	16	Yellow(YE)																																			
6	Blue(BU)	17	Pink(PK)																																			
7	/	19	Brown(BU)																																			
8	/																																					
M12 Pin drawing																																						
Junction Box drawing																																						
Wiring diagram	<table><tr><td colspan="2">JB-M12-06-P-01</td><td colspan="2">JB-M12-06-2P-01</td></tr><tr><td colspan="2"></td><td colspan="2"></td></tr></table>		JB-M12-06-P-01		JB-M12-06-2P-01																																	
JB-M12-06-P-01		JB-M12-06-2P-01																																				



Features

- Small size, easy to install.
- There is LED indicator light, you can see the working status of the product.
- Up to IP67 protection level.

Product					
Product	JB-M12-08-P-01		JB-M12-08-2P-01		
Functional description	Split Plastic box, 8 ports, single channels, PNP, with M23 prefabricated interface				
Performance Parameter			I/O Parameters		
Signal type	PNP				
Number of I/O channels	8				
Number of signal output points	1	2			
Shell material	PA flame retardant				
Contact material	Cu Alloy				
Contact surface material	Au				
Contact material	PA flame retardant				
Contact resistance	<10mΩ				
Power Supply Parameters			Mechanical Structure		
Supply voltage	18...30VDC				
Supply current MAX	Max 6A				
Interface type	M23 interface				
Torque	1.2Nm				
Interface material	Cu Alloy				
Thread material	Ni				
Product	JB-M12-08-P-01		JB-M12-08-2P-01		
Functional description	Split Plastic box, 8 ports, double channels, PNP, with M23 prefabricated interface				
Rated voltage	24VDC				
Rated current	4A				
Interface type	M12*1.0 Female				
Torque	0.8Nm				
Interface material	PA flame retardant				
Thread material	PC+ABS				
Protection grade	IP67				
size(L X W X H)	153mm X 58mm X 32.5mm				
Work Environment			LED Status Indicator		
Working temperature	-25...80℃				
Storage temperature	-25...80℃				
Power lamp	Green LED				
I/O lamp	Yellow LED				

Cable																																																																		
Product	PCSH-M23P-11P-FF-1LM-SR7A03-01Z(H)																																																																	
Shell material	M23 * 1 Female Overmolded with Cable Plug, 11P, single end, Unshielded, Angled, PVC, 3m																																																																	
Cable																																																																		
M23 Connector Pin drawing																																																																		
Pin Assignment	<table><tr><th>NO.</th><th>Color</th><th>NO.</th><th>Color</th></tr><tr><td>1</td><td>Violet(VT)</td><td>11</td><td>Black (BK)</td></tr><tr><td>2</td><td>Red(RD)</td><td>12</td><td>Yellow/Green(YE/GN)</td></tr><tr><td>3</td><td>Grey(GY)</td><td>13</td><td>/</td></tr><tr><td>4</td><td>/</td><td>14</td><td>/</td></tr><tr><td>5</td><td>Green(GN)</td><td>15</td><td>White(WH)</td></tr><tr><td>6</td><td>Blue(BU)</td><td>16</td><td>Yellow(YE)</td></tr><tr><td>7</td><td>/</td><td>17</td><td>Pink(PK)</td></tr><tr><td>8</td><td>/</td><td>18</td><td>/</td></tr><tr><td>9</td><td>/</td><td>19</td><td>Brown(BU)</td></tr><tr><td>10</td><td>/</td><td></td><td></td></tr></table>		NO.	Color	NO.	Color	1	Violet(VT)	11	Black (BK)	2	Red(RD)	12	Yellow/Green(YE/GN)	3	Grey(GY)	13	/	4	/	14	/	5	Green(GN)	15	White(WH)	6	Blue(BU)	16	Yellow(YE)	7	/	17	Pink(PK)	8	/	18	/	9	/	19	Brown(BU)	10	/																						
NO.	Color	NO.	Color																																																															
1	Violet(VT)	11	Black (BK)																																																															
2	Red(RD)	12	Yellow/Green(YE/GN)																																																															
3	Grey(GY)	13	/																																																															
4	/	14	/																																																															
5	Green(GN)	15	White(WH)																																																															
6	Blue(BU)	16	Yellow(YE)																																																															
7	/	17	Pink(PK)																																																															
8	/	18	/																																																															
9	/	19	Brown(BU)																																																															
10	/																																																																	
M12 Pin drawing																																																																		
Junction Box drawing																																																																		
Wiring diagram	JB-M12-08-P-01 <table><tr><td>1</td><td>24V</td></tr><tr><td>2</td><td>signal</td></tr><tr><td>3</td><td>0V</td></tr><tr><td>4</td><td>signal</td></tr><tr><td>5</td><td>PE</td></tr></table> M12 Female Acode 5P <table><tr><td>Yellow/ Green (YE/ GN)</td><td>(-) (BU)</td><td>(+) (BN)</td><td>White (WH)</td><td>Green (GN)</td><td>Yellow (YE)</td><td>Grey (GY)</td><td>Pink (PK)</td><td>Red (RD)</td><td>Black (BL)</td><td>Violet (VT)</td></tr><tr><td>12</td><td>6</td><td>19</td><td>15</td><td>5</td><td>16</td><td>3</td><td>17</td><td>2</td><td>11</td><td>1</td></tr></table> JB-M12-08-2P-01 <table><tr><td>1</td><td>24V</td></tr><tr><td>2</td><td>signal</td></tr><tr><td>3</td><td>0V</td></tr><tr><td>4</td><td>signal</td></tr><tr><td>5</td><td>PE</td></tr></table> M12 Female Acode 5P <table><tr><td>Yellow/ Green (YE/ GN)</td><td>(-) (BU)</td><td>(+) (BN)</td><td>White (WH)</td><td>Green (GN)</td><td>Yellow (YE)</td><td>Grey (GY)</td><td>Pink (PK)</td><td>Red (RD)</td><td>Black (BL)</td><td>Violet (VT)</td></tr><tr><td>12</td><td>6</td><td>19</td><td>7</td><td>15</td><td>4</td><td>5</td><td>8</td><td>16</td><td>14</td><td>3</td></tr></table>		1	24V	2	signal	3	0V	4	signal	5	PE	Yellow/ Green (YE/ GN)	(-) (BU)	(+) (BN)	White (WH)	Green (GN)	Yellow (YE)	Grey (GY)	Pink (PK)	Red (RD)	Black (BL)	Violet (VT)	12	6	19	15	5	16	3	17	2	11	1	1	24V	2	signal	3	0V	4	signal	5	PE	Yellow/ Green (YE/ GN)	(-) (BU)	(+) (BN)	White (WH)	Green (GN)	Yellow (YE)	Grey (GY)	Pink (PK)	Red (RD)	Black (BL)	Violet (VT)	12	6	19	7	15	4	5	8	16	14	3
1	24V																																																																	
2	signal																																																																	
3	0V																																																																	
4	signal																																																																	
5	PE																																																																	
Yellow/ Green (YE/ GN)	(-) (BU)	(+) (BN)	White (WH)	Green (GN)	Yellow (YE)	Grey (GY)	Pink (PK)	Red (RD)	Black (BL)	Violet (VT)																																																								
12	6	19	15	5	16	3	17	2	11	1																																																								
1	24V																																																																	
2	signal																																																																	
3	0V																																																																	
4	signal																																																																	
5	PE																																																																	
Yellow/ Green (YE/ GN)	(-) (BU)	(+) (BN)	White (WH)	Green (GN)	Yellow (YE)	Grey (GY)	Pink (PK)	Red (RD)	Black (BL)	Violet (VT)																																																								
12	6	19	7	15	4	5	8	16	14	3																																																								



Features

- Small size, easy to install.
- There is LED indicator light, you can see the working status of the product.
- Up to IP67 protection level.

Product				
Product	JB-M12-10-P-01			
Functional description	Split Plastic box, 10 ports, single channel, PNP, with M23 prefabricated interface			
Performance Parameter			I/O Parameters	
Signal type	PNP		Rated voltage	24VDC
Number of I/O channels	10		Rated current	4A
Number of signal output points	1	2	Interface type	M12*1.0 Female
Shell material	PA flame retardant		Torque	0.8Nm
Contact material	Cu Alloy		Interface material	PA flame retardant
Contact surface material	Au		Thread material	PC+ABS
Contact material	PA flame retardant		Mechanical Structure	
Contact resistance	<10mΩ		Protection grade	IP67
Power Supply Parameters			size(L X W X H)	178mm X 58mm X 32.5mm
Supply voltage	18...30VDC		Work Environment	
Supply current MAX	Max 6A		Working temperature	-25...80℃
Interface type	M23 interface		Storage temperature	-25...80℃
Torque	1.2Nm		LED Status Indicator	
Interface material	Cu Alloy		Power lamp	Green LED
Thread material	Ni		I/O lamp	Yellow LED

Cable													
Product	PCSH-M23P-13P-FF-1LM-SR7A03-01Z(H)												
Shell material	M23 * 1 Female Overmolded with Cable Plug, 13P, single end, Unshielded, Angled, PVC, 3m												
Cable													
M23 Connector Pin drawing	 M23 Female Acode 13P												
Pin Assignment	NO.	Color	NO.	Color									
	1	Violet(VT)	11	Black (BK)									
	2	Red(RD)	12	Yellow/Green(YE/GN)									
	3	Grey(GY)	15	White(WH)									
	4	Red/Blue(RD/BU)	16	Yellow(YE)									
	5	Green(GN)	17	Pink(PK)									
	6	Blue(BU)	19	Brown(BU)									
	7	Grey/Pink(GY/PK)											
M12 Pin drawing	 M12 Female Acode 5P												
Junction Box drawing													
Wiring diagram	JB-M12-10-P-01 <table><tr><td>1</td><td>24V</td></tr><tr><td>2</td><td>signal</td></tr><tr><td>3</td><td>0V</td></tr><tr><td>4</td><td>signal</td></tr><tr><td>5</td><td>PE</td></tr></table> M12 Female Acode 5P Yellow/ Green (YE/GN) (-) (+) PE Blue Brown White (BU) (BN) (WH) Green (GN) Yellow (YE) Grey (GY) Pink (PK) Red (RD) Black (BL) Violet (VT) Grey/Pink (GY/PK) Red/Blue (RD/BU) 12 6 19 15 5 16 3 17 2 11 1 7 4			1	24V	2	signal	3	0V	4	signal	5	PE
1	24V												
2	signal												
3	0V												
4	signal												
5	PE												



Features

- Small size, easy to install.
- There is LED indicator light, you can see the working status of the product.
- Up to IP67 protection level.

Product		
Product	JB-M12-04B-P-01	JB-M12-04B-2P-01
Functional description	Split Plastic box, 4 ports, PNP, with pluggable terminal block	
Performance Parameter		
Signal type	PNP	
Number of I/O channels	4	
Number of signal output points	1	2
Shell material	PA flame retardant	
Contact material	Cu Alloy	
Contact surface material	Au	
Contact material	PA flame retardant	
Contact resistance	<10mΩ	
Power Supply Parameters		
Supply voltage	18...30VDC	
Supply current MAX	Max 8A	
Interface type	PCB interface	
Torque	0.6Nm	
Interface material	PA flame retardant	
Thread material	PC+ABS	
I/O Parameters		
Rated voltage	24VDC/AC	
Rated current	4A	
Interface type	M12*1.0 Female	
Torque	0.8Nm	
Interface material	PA flame retardant	
Thread material	PC+ABS	

Mechanical Structure

Protection grade	IP67
size(L X W X H)	124.5mm X 58mm X 44.4mm

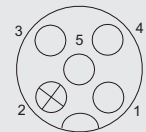
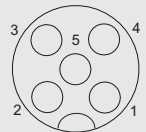
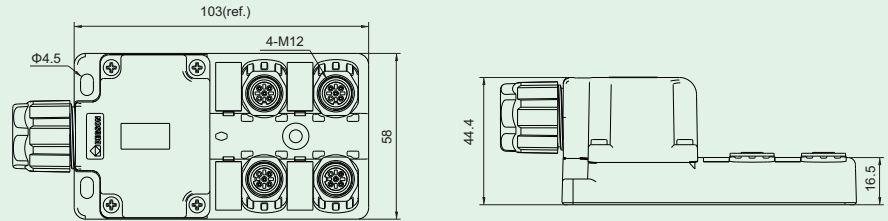
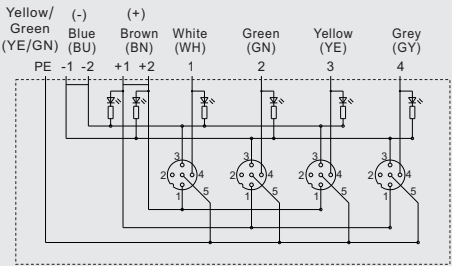
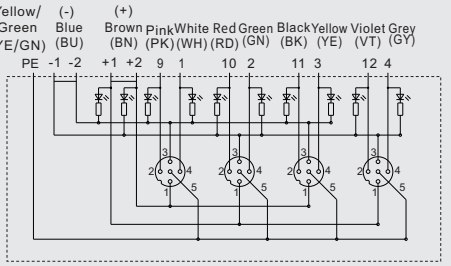
Work Environment

Working temperature	-25...80°C
Storage temperature	-25...80°C

LED Status Indicator

Power lamp	Green LED
I/O lamp	Yellow LED

Product Figure

M12 Pin drawing	 M12 Female Acode 5P	 M12 Female Acode 5P																				
Junction Box drawing																						
Wiring diagram	JB-M12-04B-P-01 <table><tr><td>1</td><td>24V</td></tr><tr><td>2</td><td>NO</td></tr><tr><td>3</td><td>0V</td></tr><tr><td>4</td><td>signal</td></tr><tr><td>5</td><td>PE</td></tr></table> M12 Female Acode 5P 	1	24V	2	NO	3	0V	4	signal	5	PE	JB-M12-04B-2P-01 <table><tr><td>1</td><td>24V</td></tr><tr><td>2</td><td>NO</td></tr><tr><td>3</td><td>0V</td></tr><tr><td>4</td><td>signal</td></tr><tr><td>5</td><td>PE</td></tr></table> M12 Female Acode 5P 	1	24V	2	NO	3	0V	4	signal	5	PE
1	24V																					
2	NO																					
3	0V																					
4	signal																					
5	PE																					
1	24V																					
2	NO																					
3	0V																					
4	signal																					
5	PE																					



Features

- Small size, easy to install.
- There is LED indicator light, you can see the working status of the product.
- Up to IP67 protection level.

Mechanical Structure

Protection grade	IP67
size(L X W X H)	149.5mm X 58mm X 44.4mm

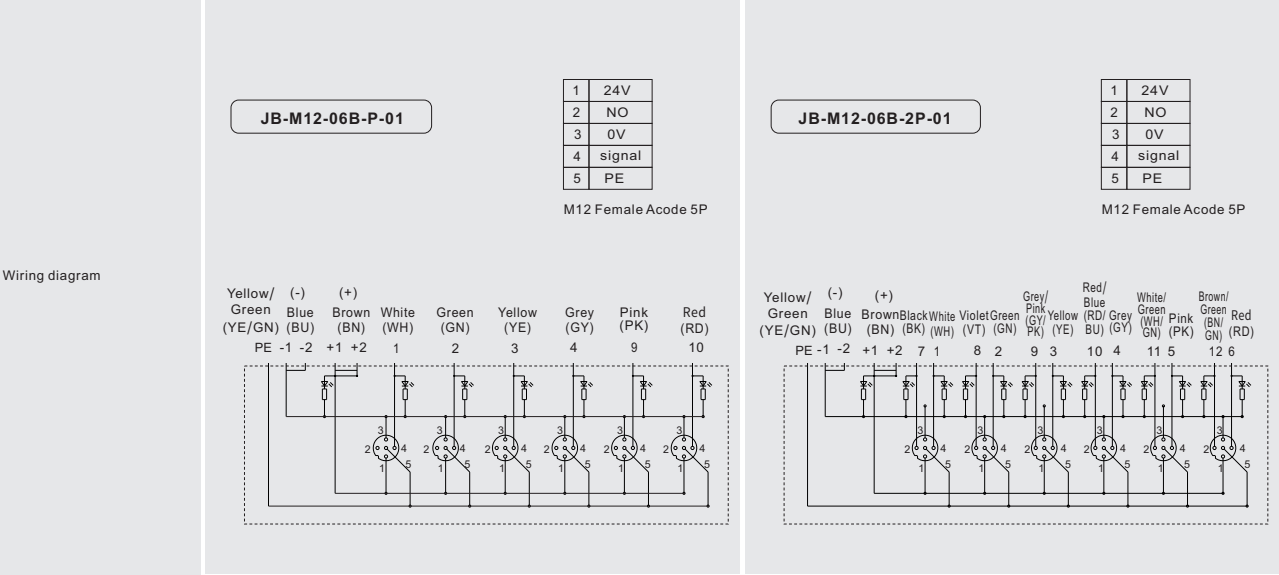
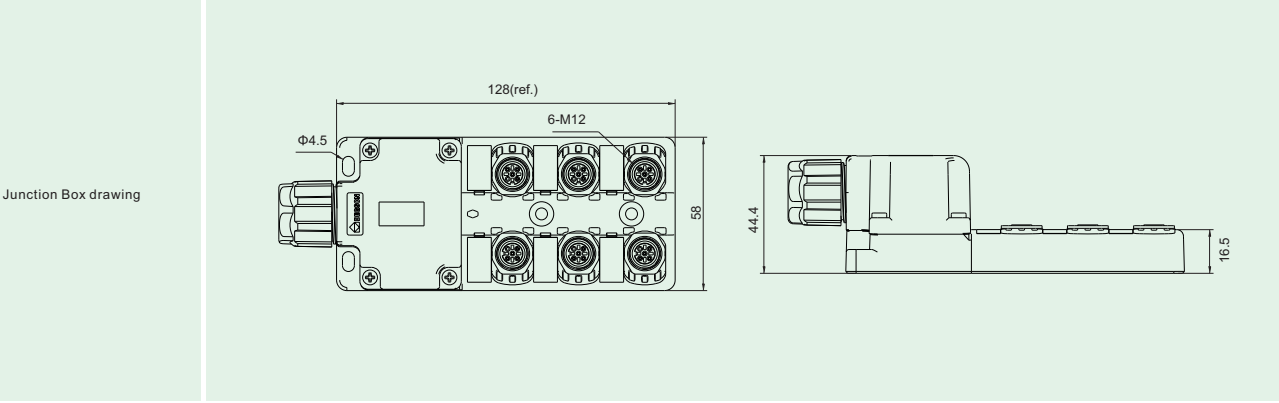
Work Environment

Working temperature	-25...80°C
Storage temperature	-25...80°C

LED Status Indicator

Power lamp	Green LED
I/O lamp	Yellow LED

Product Figure





Features

- Small size, easy to install.
- There is LED indicator light, you can see the working status of the product.
- Up to IP67 protection level.

Product		
Product	JB-M12-08B-P-01	JB-M12-08B-2P-01
Functional description	Split Plastic box, 8 ports, PNP, with pluggable terminal block	
Performance Parameter		
Signal type	PNP	
Number of I/O channels	8	
Number of signal output points	1	2
Shell material	PA flame retardant	
Contact material	Cu Alloy	
Contact surface material	Au	
Contact material	PA flame retardant	
Contact resistance	<10mΩ	
Power Supply Parameters		
Supply voltage	18...30VDC	
Supply current MAX	Max 8A	
Interface type	PCB interface	
Torque	0.6Nm	
Interface material	PA flame retardant	
Thread material	PC+ABS	
I/O Parameters		
Rated voltage	24VDC/AC	
Rated current	4A	
Interface type	M12*1.0 Female	
Torque	0.8Nm	
Interface material	PA flame retardant	
Thread material	PC+ABS	

Mechanical Structure

Protection grade	IP67
size(L X W X H)	174.5mm X 58mm X 44.4mm

Work Environment

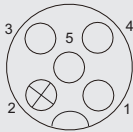
Working temperature	-25...80°C
Storage temperature	-25...80°C

LED Status Indicator

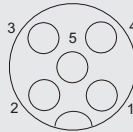
Power lamp	Green LED
I/O lamp	Yellow LED

Product Figure

M12 Pin drawing

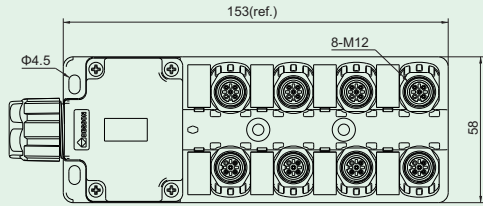


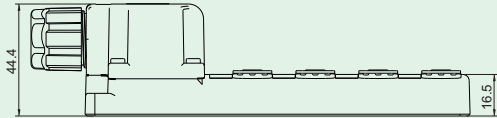
M12 Female Acode 5P



M12 Female Acode 5P

Junction Box drawing





JB-M12-08B-P-01

1	24V
2	NO
3	0V
4	signal
5	PE

M12 Female Acode 5P

JB-M12-08B-2P-01

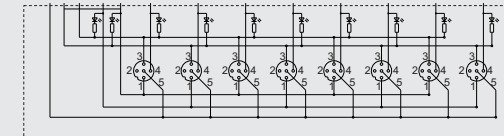
1	24V
2	NO
3	0V
4	signal
5	PE

M12 Female Acode 5P

Wiring diagram

Yellow/ (-) (+) Green Blue Brown White Green Yellow Grey Pink Red Black Violet
(YE/GN) (BU) (BN) (WH) (GN) (YE) (GY) (PK) (RD) (BK) (VT)

PE -1 -2 +1 +2 1 2 3 4 5 6 7 8



Yellow/ (-) (+) Grey/ Red/ White/ Brown/ White/ Brown/ White/ Brown/ Grey



Features

- Small size, easy to install.
- There is LED indicator light, you can see the working status of the product.
- Up to IP67 protection level.

Mechanical Structure

Protection grade	IP67
size(L X W X H)	199.5mm X 58mm X 44.4mm

Work Environment

Working temperature	-25...80°C
Storage temperature	-25...80°C

LED Status Indicator

Power lamp	Green LED
I/O lamp	Yellow LED

Product Figure

M12 Pin drawing

M12 Female Acode 5P

Junction Box drawing

Wiring diagram

JB-M12-10B-P-01

1	24V
2	NO
3	0V
4	signal
5	PE

M12 Female Acode 5P

Appendices						CE	RoHS
Product	Functional description	Picture	Dimensional drawing	Wiring diagram	Wiring list		
PM-M8A-03P-MM-SL7A02-00A(H)	M12 * 1 Male Overmolded with Cable Plug, 3P, single end, Unshielded, Straight, PVC, 2m				1.BN 3.BU 4.BK		
PM-M8A-03P-MM-SL7B02-00A(H)	M12 * 1 Male Overmolded with Cable Plug, 3P, single end, Unshielded, Straight, PUR, 2m						
PM-M8A-03P-MM-SR7A02-00A(H)	M12 * 1 Male Overmolded with Cable Plug, 3P, single end, Unshielded, Angled, PVC, 2m				1.BN 3.BU 4.BK		
PM-M8A-03P-MM-SR7B02-00A(H)	M12 * 1 Male Overmolded with Cable Plug, 3P, single end, Unshielded, Angled, PUR, 2m						
PB-M8A-03P-MM-SL7001-00A(H)	M8 * 1 Male Field Assembly Plug, 3P, Unshielded, Screw Connection, Straight				/		
PB-M8A-03P-MM-SL7001-00A(H)	M8 * 1 Female Field Assembly Plug, 3P, Unshielded, Screw Connection, Straight				/		

Appendices						CE	RoHS
Product	Functional description	Picture	Dimensional drawing	Wiring diagram	Wiring list		
PB-M12A-08P-MM-SL7001-00A(H)	M12 * 1 Male Field Assembly Plug, 8P, Unshielded, Screw Connection, Straight				/		
PB-M12A-08P-MM-SR7001-00A(H)	M12 * 1 Male Field Assembly Plug, 8P, Unshielded, Screw Connection, Angled				/		
PA-M12A-12P-MM-SL7001-00A(H)	M12 * 1 Male Field Assembly Plug, 12P, Unshielded, Soldering Connection, Straight				/		
PA-M12A-12P-MM-SR7001-00A(H)	M12 * 1 Male Field Assembly Plug, 12P, Unshielded, Soldering Connection, Angled				/		
SD-M12A-08P-MM-SF8AB0-00A(H)	M12 * 1 Female Panel Mount Receptacle, 8P, Rear Mounting, With 2m wires				1.WH 2.BN 3.GN 4.YE 5.GY 6.PK 7.BU 8.RD		
PA-M12A-12P-MM-SR7001-00A(H)	M12 * 1 Female Panel Mount Receptacle, 12P, Rear Mounting, With 2m wires				1.BN 2.BU 3.WH 4.GN 5.PK 6.YW 7.BK 8.GY 9.RD 10.VT 11.GY/PK 12.RD/BU		