

I/O MTUs - SDe Series I/O

ABB Ability™ Symphony® Plus Hardware Selector

Module Termination Units (MTUs) provide mounting and connectivity for SDe series control and I/O modules. The Evolution Mounting Chassis is a form, space-fit, functional replacement for a Harmony rack MMU. Mounting bases provide the host for SDe control and I/O modules when mounted in an evolution chassis or on a rail.

The MTUs combine with the SDe Series I/O product family including DIN Rail horizontally or vertically mounting. The flexible and modular I/O offering works across the entire control landscape regardless of application type, size, or physical location. It includes traditional analog, HART, and digital modules as also turbine specific modules for integrated turbine control solutions.

Below is an outline of the range of different MTUs for SDe I/O modules available.



Specific feature ¹	EMB01S-BLK	EMB01S-CIO	EMB01S-EMR	EMB01S-PIO
General info				
Article number	7PAA015403R11	7PAA005092R11	7PAA008522R11	7PAA008524R11
Life cycle status	Active			
Line redundancy	Yes			
Hot swap	No			
Supported IO modules	NONE	AD11e	DO05e	PI01e
Singular or redundant	Singular			
Form factor	EMC-_B0_ Evolution Mounting Chassis			
Mounting	EMC-DB01, EMC-DB02, EMC-SB01, EMC-SB02			
HN800 bus length	190 mm		19 mm	190 mm
MTBF (per MIL-HDBK-217-FN2)	PR A: 45,248,869 Hours @ 30, 40 & 70 deg C	PR C: 1,384,953 Hours @ 30 °C, 1,350,557Hours @ 40 °C, 1,231,591 Hours @ 70 °C		PR C: 1,404,403 Hours @ 30 °C, 1,369,046 Hours @ 40 °C, 1,246,948 Hours @ 70 °C
MTTR (Hours)	16 Hours	8 Hrs		
Channels		13	8	
Dimensions				
Width	35.5 mm	35.5 mm		
Depth	173.46 mm			
Height	177 mm			
Weight	126 g	204 g		
Environment and certification				
RoHS compliance	RoHS Directive 2015/863			
WEEE compliance	DIRECTIVE/2012/19/EU			

¹ For detailed information on each module, please visit: symphonyplushardwareselector.automation.abb.com



Specific feature ¹	EMB01S-RBX	EMB01S-SOE	EMB01S-UAI	EMB01S-XIO
General info				
Article number	7PAA008654R11	7PAA008647R11	7PAA005094R11	7PAA005096R11
Life cycle status	Active			
Line redundancy	Redundant HN800 I/O Bus	Yes		
Hot swap	No			
Supported IO modules	RBX01e	DI06e	AI16e	AI12e, AO02e, DI06e, DO01e
Singular or redundant	Singular			
Form factor	EMC-_B0_ Evolution Mounting Chassis			
Mounting	EMC-DB01, EMC-DB02, EMC-SB01, EMC-SB02			
HN800 bus length	190 mm			
MTBF (per MIL-HDBK-217-FN2)	EMB01S-RBX PR A: 401,469 hours @ 30°C 396,607 hours @ 45°C 372,349 hours @ 70°C	PR B: 1,404,403 Hours @ 30 °C, 1,369,046 Hours @ 40 °C, 1,246,948 Hours @ 70 °C	PR C: 73,572 Hours @ 30 °C, 73,473 Hours @ 40 °C, 73,089 Hours @ 70 °C	PR E: 245,577 Hours @ 30 °C, 244,473 Hours @ 40 °C, 240,272 Hours @ 70 °C
MTTR (Hours)	24 Hrs	8 Hrs	8Hrs	8 Hrs
Channels		16		14, 15 or 16
Dimensions				
Width	35.5 mm	35.5 mm		
Depth	173.5 mm	173.46 mm		
Height	177 mm			
Weight	170 g	204 g	218 g	210 g
Environment and certification				
RoHS compliance	RoHS Directive 2015/863			
WEEE compliance	DIRECTIVE/2012/19/EU			

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Specific feature ¹	EMB910e	EMC-DB01	EMC-DB02	EMC-SB01
General info				
Article number	7PAA005098R11	7PAA005101R11	7PAA005102R11	7PAA005099R11
Life cycle status	Active			
Line redundancy	Yes			
Hot swap	No			
Supported IO modules	SPC810e	EMB01S-CIO, EMB01S-EMR, EMB01S-PIO, EMB01S-SOE, EMB01S-UAI, EMB01S-XIO		
Singular or redundant	Redundant	Singular		
Form factor	EMC-_B0_ Evolution Mounting Chassis	19-Inch Rack		
Mounting	EMC-DB01, EMC-DB02, EMC-SB01, EMC-SB02	REAR Mounting Rail	FRONT Mounting Rail	REAR Mounting Rail
HN800 bus length	190 mm	610 mm		520 mm
MTBF (per MIL-HDBK-217-FN2)	PR C: 8,568,246 Hours @ 30 °C, 7,392,563 Hours @ 40 °C, 4,825,271 Hours @ 70 °C	PR C: 569,872 Hours @ 30 °C, 483,065 Hours @ 40 °C, 310,534 Hours @ 70 °C		PR C: 685,379 Hours @ 30 °C, 598,469 Hours @ 40 °C, 409,247 Hours @ 70 °C
MTTR (Hours)	8 Hrs	16 Hrs		
Dimensions				
Width	35.5 mm	483.1 mm		
Depth	173.46 mm	99.04 mm		
Height	177 mm	177.80 mm		
Weight	181 g	1.792 kg	3.175 kg	1.701 kg
Environment and certification				
RoHS compliance	RoHS Directive 2015/863			
WEEE compliance	DIRECTIVE/2012/19/EU			

¹ For detailed information on each module, please visit: symphonyplushardwareselector.automation.abb.com



Specific feature ¹	EMC-SB02	HBR11e-EPD	HBR11e-FPH	HBR11e-FPN
General info				
Article number	7PAA005100R11	7PAA015523R11	7PAA015524R11	7PAA015525R11
Life cycle status	Active			
Line redundancy	Yes	Redundant HN800 I/O Bus		
Hot swap	No			
Supported IO modules	EMB01S-CIO, EMB01S-EMR, EMB01S-PIO, EMB01S-SOE, EMB01S-UAI, EMB01S-XIO	AI12e, FI12e, AD11e, AO02e, DI06e, DO01e, DO05e, PI01e	AI12e, FI12e, DI06e, DO01e, PI01e	DI06e, DO01e, PI01e
Singular or redundant	Singular	Redundant		
Form factor	19-Inch Rack	Full-size (180 mm Tall x 90 mm Wide)		
Mounting	Front Mounting Rack	Horizontal Row		
HN800 bus length	520 mm	200 mm		
MTBF (per MIL-HDBK-217-FN2)	PR C: 685,379 Hours @ 30 °C, 598,469 Hours @ 40 °C, 409,247 Hours @ 70 °C	PR A: 3,465,714 hours @ 30 °C; 2,983,485 hours @ 45 °C; 1,936,720 hours @ 70 °C		
MTTR (Hours)	16 Hrs	24 Hrs		
Channels		16		
Dimensions				
Width	483.1 mm	90 mm	90 mm	
Depth	99.04 mm	86.5 mm		
Height	177.80 mm	202.5 mm		
Weight	3.084 kg	470 g		
Environment and certification				
RoHS compliance	RoHS Directive 2015/863			
WEEE compliance	DIRECTIVE/2012/19/EU			

¹ For detailed information on each module, please visit: symphonyplushardwareselector.automation.abb.com



Specific feature ¹	HBR11e-UAI	HBS11e-EPD	HBS11e-FPH	HBS11e-FPN
General info				
Article number	7PAA015526R11	7PAA015527R11	7PAA015528R11	7PAA015529R11
Line redundancy	Redundant HN800 I/O Bus			
Hot swap	No			
Supported IO modules	AI16e	AI12e, FI12e, AD11e, AO02e, DI06e, DO01e, DO05e, PI01e	AI12e, FI12e, DI06e, DO01e, PI01e	DI06e, DO01e, PI01e
Singular or redundant	Redundant	Singular		
Form factor	Full-size (180 mm Tall x 90 mm Wide)	Full-size (180 mm Tall x 45 mm Wide)		
Mounting	Horizontal Row			
HN800 bus length	200 mm	150 mm		
MTBF (per MIL-HDBK-217-FN2)	PR A: 2,871,363 hours @ 30 °C; 2,529,849 hours @ 45 °C; 1,731,201 hours @ 70 °C	PR A: 5,099,474 hours @ 30 °C; 4,456,363 hours @ 45 °C; 2,991,384 hours @ 70 °C		
MTTR (Hours)	24 Hrs			
Channels	16			
Dimensions				
Width	90 mm	45 mm		
Depth	86.5 mm			
Height	202.5 mm			
Weight	470 g	300 g		
Environment and certification				
RoHS compliance	RoHS Directive 2015/863			
WEEE compliance	DIRECTIVE/2012/19/EU			

¹ For detailed information on each module, please visit: symphonyplushardwareselector.automation.abb.com



Specific feature ¹	HBS11e-UAI	HDT-BRK-01	HDT-UAI-01	HDT-XIO-01
General info				
Article number	7PAA015530R11	7PAA008805R1	7PAA008674R11	7PAA008675R11
Life cycle status		Active		
Line redundancy	Redundant HN800 I/O Bus	Yes		No
Hot swap	No			
Supported IO modules	AI16e	AD11e, AI12e, AI16e, AO02e, DI06e, DO01e, DO05e, FI12e and PI01e	AI16e	AD11e, AI12e, AO02e, DI06e, DO01e, DO05e, FI12e and PI01e
Singular or redundant	Singular			
Form factor	Full-size (218 mm Tall x 66 mm Wide)	EMC-_BO_ Evolution Mounting Chassis		
Mounting	Horizontal Row	EMC-DB01, EMC-DB02, EMC-SB01, EMC-SB02		
HN800 bus length	150 mm	n/a		
MTBF (per MIL-HDBK-217-FN2)	PR A: 3,908,931 hours @ 30 °C; 3,514,936 hours @ 45 °C; 2,527,868 hours @ 70 °C	PR x: N/A Hours @ 30 °C N/A Hours @ 40 °C N/A Hours @ 70 °C	PR A: 186,677 Hours @ 30 °C 186,657 Hours @ 40 °C 186,589 Hours @ 70 °C	PR A: 167,809 Hours @ 30 °C 167,562 Hours @ 40 °C 166,666 Hours @ 70 °C
MTRR (Hours)	24 Hrs	8 Hrs		
Channels	16			
Dimensions				
Width	45 mm	30.7 mm		
Depth	86.5 mm	134.5 mm		
Height	202.5 mm	130.5 mm		
Weight	300 g	250 g		
Environment and certification				
RoHS compliance	RoHS Directive 2015/863			
WEEE compliance	DIRECTIVE/2012/19/EU			

¹ For detailed information on each module, please visit: symphonyplushardwarselector.automation.abb.com



Specific feature ¹	MBA-CJC01R	MBA-CJC01S	MBA-RM01	MBA-SM01
General info				
Article number	7PAA008662R11	7PAA008663R11	7PAA008656R11	7PAA008655R11
Line redundancy	Redundant HN800 I/O Bus			
Hot swap	No			
Supported IO modules	AI16e		AI12e, FI12e, AO02e, DI06e, DO01e	AD11e, AI12e, AO02e, DI06e, DO01e, DO05e, FI12e, PI01e
Singular or redundant	Redundant	Singular	Redundant	Singular
Form factor	SD Series 'Full-size'			
Mounting	SD Series DIN-Rail Bases			
HN800 bus length	50 mm			
MTBF (per MIL-HDBK-217-FN2)	PR A: 9,121,503 hours @ 30 °C 7,937,322 hours @ 45 °C 5,385,604 hours @ 70 °C	PR A: 9,121,503 hours @ 30 °C 7,937,322 hours @ 45 °C 5,385,604 hours @ 70 °C	PR A: 9,121,503 hours @ 30 °C 7,937,322 hours @ 45 °C 5,385,604 hours @ 70 °C	
MTTR (Hours)	24 Hrs			
Channels	16			
Dimensions				
Width	26.76 mm			
Depth	54.9 mm			
Height	189.8 mm			
Weight	120 g			
Environment and certification				
RoHS compliance	RoHS Directive 2015/863			
WEEE compliance	DIRECTIVE/2012/19/EU			

¹ For detailed information on each module, please visit: symphonyplushardwareselector.automation.abb.com



Specific feature ¹	MBA-UA101	VBR11e-EPD	VBR11e-FPH	VBR11e-FPN
General info				
Article number	7PAA008657R11	7PAA015515R11	7PAA015516R11	7PAA015517R11
Line redundancy	Redundant HN800 I/O Bus			
Hot swap	No			
Supported IO modules	AI16e	AI12e, FI12e, AD11e, AO02e, DI06e, DO01e, DO05e, PI01e	AI12e, FI12e, DI06e, DO01e, PI01e	DI06e, DO01e, PI01e
Singular or redundant	Singular	Redundant		
Form factor	SD Series 'Full-size'	Full-size (218 mm Tall x 103 mm Wide)		
Mounting	SD Series DIN-Rail Bases	Vertical Column		
HN800 bus length	50 mm	355 mm		
MTBF (per MIL-HDBK-217-FN2)	PR A: 9,121,503 hours @ 30 °C 7,937,322 hours @ 45 °C 5,385,604 hours @ 70 °C	PR A: 1,398,319 hours @ 30 °C 1,356,396 hours @ 45 °C 1,206,467 hours @ 70 °C	PR A: 1,398,319 hours @ 30 °C 1,356,396 hours @ 45 °C 1,206,467 hours @ 70 °C	PR A: 1,398,319 hours @ 30 °C 1,356,396 hours @ 45 °C 1,206,467 hours @ 70 °C
MTTR (Hours)	24 Hrs			
Channels	16			
Dimensions				
Width	26.76 mm	103 mm		
Depth	54.9 mm	113.92 mm		
Height	189.8 mm	224 mm		
Weight	120 g	470 g		
Environment and certification				
RoHS compliance	RoHS Directive 2015/863			
WEEE compliance	DIRECTIVE/2012/19/EU			

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Specific feature ¹	VBR11e-UAI	VBS11e-EPD	VBS11e-FPH	VBS11e-FPN
General info				
Article number	7PAA015518R11	7PAA015519R11	7PAA015520R11	7PAA015521R11
Line redundancy	Redundant HN800 I/O Bus			
Hot swap	No			
Supported IO modules	AI16e	AI12e, FI12e, AD11e, AO02e, DI06e, DO01e, DO05e, PI01e	AI12e, FI12e, DI06e, DO01e, PI01e	DI06e, DO01e, PI01e
Singular or redundant	Redundant	Singular		
Form factor	Full-size (218 mm Tall x 66 mm Wide)			
Mounting	Vertical Column			
HN800 bus length	305 mm			
MTBF (per MIL-HDBK-217-FN2)	PR A: 8,000,942 hours @ 30 °C; 6,864,006 hours @ 45 °C 4,392,183 hours @ 70 °C	PR A: 1,079,369 hours @ 30 °C; 1,065,631 hours @ 45 °C 1,011,518 hours @ 70 °C	PR A: 1,079,369 hours @ 30 °C; 1,065,631 hours @ 45 °C; 1,011,518 hours @ 70 °C	
MTTR (Hours)	24 Hrs			
Channels	16			
Dimensions				
Width	103 mm	66 mm		
Depth	110.7 mm			
Height	218 mm			
Weight	470 g	330 g		
Environment and certification				
RoHS compliance	RoHS Directive 2015/863			
WEEE compliance	DIRECTIVE/2012/19/EU			

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Specific feature ¹	VBS11e-UAI
General info	
Article number	7PAA015522R11
Line redundancy	Redundant HN800 I/O Bus
Hot swap	No
Supported IO modules	AI16e
Singular or redundant	Singular
Form factor	Full-size (218 mm Tall x 66 mm Wide)
Mounting	Vertical Column
HN800 bus length	305 mm
MTBF (per MIL-HDBK-217-FN2)	PR A: 8,000,942 hours @ 30 °C; 6,864,006 hours @ 45 °C; 4,392,183 hours @ 70 °C
MTTR (Hours)	24 Hrs
Channels	16
Dimensions	
Width	66 mm
Depth	110.7 mm
Height	218 mm
Weight	330 g
Environment and certification	
RoHS compliance	RoHS Directive 2015/863
WEEE compliance	DIRECTIVE/2012/19/EU

¹ For detailed information on each module, please visit: symphonyplushardwareselector.automation.abb.com

Accessories



Specific feature ¹	DBJ01
General info	
Article number	7PAA005103R1
Life cycle status	Active
Redundancy	No
Dimensions	
Width	24 mm
Depth	20.98 mm
Height	28.3 mm
Weight	0.014 kg
Environment and certification	
RoHS compliance	EU Directive 2011/65/EU
WEEE compliance	Small Equipment (No External Dimension More Than 50 cm)

¹ For detailed information on each module, please visit: symphonyplushardwarselector.automation.abb.com

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