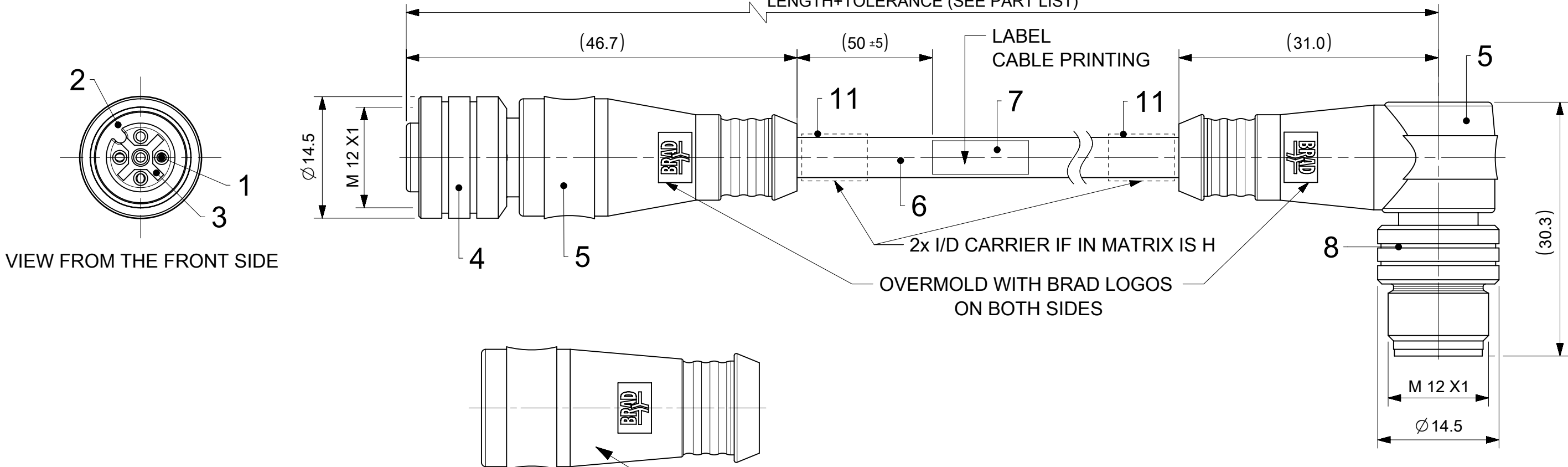


FEMALE PLUG M12 STRAIGHT TO MALE PLUG M12 90° ANGLED

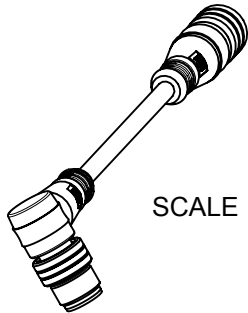


TECHNICAL SPECIFICATION:
CONTACT CURRENT RATING: 3-5 POLES 4A
8 POLES 2A
VOLTAGE RATING: 3-4 POLES 250V
5 POLES 60V DC
8 POLES 30V
PROTECTION CLASS: IP 67
TEMPERATURE: -25°C / +85°C

BILL OF MATERIAL

11	2 (SEE MATRIX)	ID CARRIER	PVC	TRANSPARENT
10	1	INSERT MALE	PUR	BLACK
9	3/4/5/8	CONTACT M12 MALE	BRASS	SELECTIVE GOLD OVER NICKEL
8	1	COUPLING NUT MALE	BRASS	NICKEL
7	1	LABEL	VINYL	YELLOW
6	-	CABLE	SEE MATRIX/ CABLE SPECIFICATION	---
5	-	OVERMOULD	TPU	SEE MATRIX
4	1	COUPLING NUT FEMALE	BRASS	NICKEL
3	1	INSERT FEMALE	PUR	BLACK
2	1	O-RING	FPM	RED
1	3/4/5/8	CONTACT M12 FEMALE	BRASS	SELECTIVE GOLD OVER NICKEL
ITEM	QTY.	DESCRIPTION	MATERIAL	FINISH/COLOR

DOCUMENT STATUS	P1	RELEASE DATE	2021/11/23	16:25:48
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FUNCTIONAL SYMBOLS A = 0 E = 0 E = 0 DIVISIONAL SYMBOLS	THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX ELECTRONIC TECHNOLOGIES, LLC AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION											
	DIMENSION UNITS		SCALE		CURRENT REV DESC: 8 POLE VERSION AND NEW P/N'S ADDED			molex				
	mm		2:1									
	GENERAL TOLERANCES (UNLESS SPECIFIED)				CSE M12 XP AC FE STR MA RA XM							
	ANGULAR TOL ± 1.0 °											
	4 PLACES		±		EC NO: 686239			2021/11/15				
	3 PLACES		±		DRWN: RSCHIEBER							
	2 PLACES		± 0.05		CHK'D: RSILLER						2021/11/23	
	1 PLACE		± 0.3		APPR: RSILLER			2021/11/23				
	0 PLACES		± 0.5		INITIAL REVISION:			DOCUMENT NUMBER				
DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS				DRWN: DSOPPIN 2018/09/27								
				APPR: RSILLER 2018/10/22			1200070026			DOC TYPE	DOC PART	REVISION
				THIRD ANGLE PROJECTION	DRAWING	SERIES	MATERIAL NUMBER		CUSTOMER		SHEET NUMBER	
					A3-SIZE	120007	SEE PART LIST		GENERAL MARKET		1 OF 4	

ENGINEERING NO. - NUMERICAL CODE (Available parts see PART LIST table. Others on request).

SPECIAL TYPES

COUPLING NUT
FEMALE MALE

8 8 X 0 3 2 X X X X X X X X X

88 = M12x1
Double ended

Poles:
3 = 3 Poles
4 = 4 Poles
5 = 5 Poles
8 = 8 Poles

Heads style:
032 = Plugs FE Straight & Male 90°

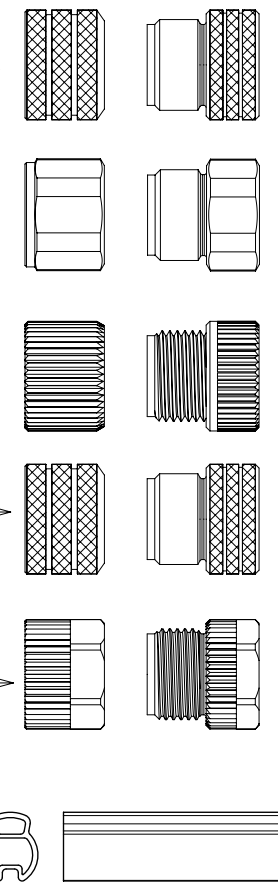
Cable types: E02=0.25mm² PVC Black E03=0.34mm² PVC Black E13=0.75mm² PVC Yellow E52=0.34mm² PVC Grey(RAL 7001) E57=0.34mm² PVC Grey(RAL 7001) H09=0.34mm² PUR Black H69=0.34mm² PUR Grey LSOH SCR I02=0.25mm² PVC Grey CEI I03=0.34mm² PVC Grey CEI I20=0.25mm² PVC Grey CEI SCR DC I26=0.34mm² PVC Grey CEI SCR AC P02=0.25mm² PUR/PVC Black P03=0.34mm² PUR/PVC Black P08=0.25mm² PUR Yellow HIFLEX P20=0.34mm² PUR Grey LSOH braid P82=0.34mm² PUR orange irradiated DC S20=0.34mm² PVC Yellow SJTO braid
--

Units:
C = Centimeter
M = Meter
K = Killometer
F = Feet

Length
Examples:
020 = 2 M
060 = 6 M
100 = 10 M

Overmold color:
Blank (Standard)=Black TPU
Blank=Yellow PVC for cables
A09, S19, S20, S26
Blank=Yellow TPE-E for cables
K03, K05
A=Grey / G=Black / Y=Yellow
Coupling Nut:
Blank (Standard)=Knurled Brass Ni Plated
1=Hexagonal Stainless steel
5=Knurled Derlin
7=Knurled Brass Ni Plated, Teflon Coated
Blank=7 for cables I20, I26, K03, K05, P82, S26
9=Knurled / Hexagonal Brass Ni Plated SW13

H= 2 pcs. of I/D Carrier PVC Transparent
(Cables Ixx & P82 always with 2 pcs. of
I/D Carrier even if no H in Engineering No.)



CABLE SPECIFICATION

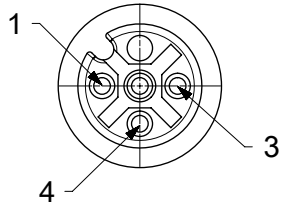
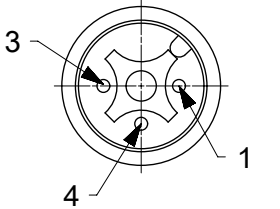
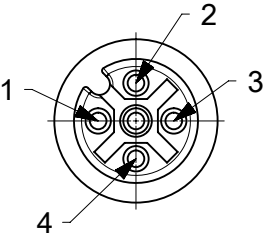
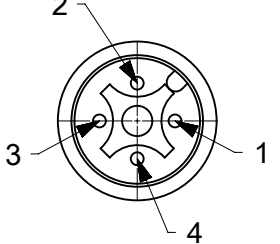
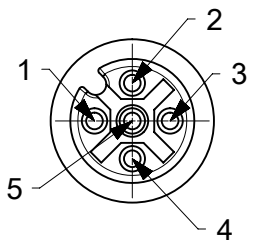
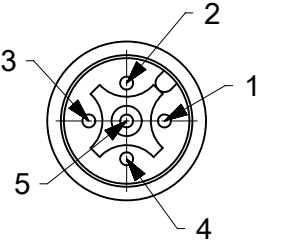
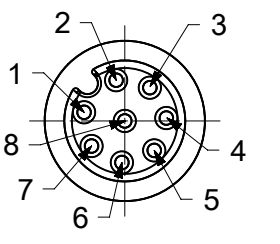
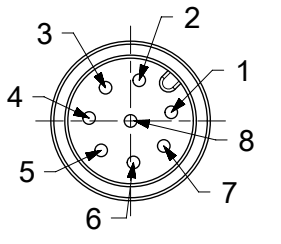
CABLE TYPE	NO. OF WIRES	CROSS SECTION	CABLE JACKET	UL	CSA	STATIC: TEMP. / BENDING RADIUS	DYNAMIC: TEMP. / BENDING RADIUS	DRAG CHAIN	SHIELD
E02	3 / 4 / 5 / 8	0.25mm²	PVC BLACK	UL 2464/1729	C22.2 I/II A/B 80°C/300V	-30°C to +80°C, 10xO.D.	-10°C to +80°C, 15xO.D.	-	-
E03	3 / 4 / 5	0.34mm²	PVC BLACK	UL 2464/1729	C22.2 I/II A/B 80°C/300V	-30°C to +80°C, 10xO.D.	-10°C to +80°C, 15xO.D.	-	-
E52	4	0.34mm²	PVC GRAY	-	-	- 30 to + 70°C	- 5 to + 70°C	-	-
H09	3 / 4 / 5	0.34mm²	PUR BLACK LSOH	UL 21198/10493	C22.2 I/II A/B 80°C/300V	-40°C to +80°C, 5xO.D.	-25°C to +80°C, 10xO.D.	2 000 000 cycles at 20°C, Temp. range +5°C to +60°C	-
H69	4	0.2mm²	PUR LSOH	-	-	-	-40°C to +80°C	-	-
P02	3 / 4 / 5 / 8	0.25mm²	PUR / PVC BLACK	-	-	-30°C to +80°C, 7xO.D.	-5°C to +80°C, 15xO.D.	-	-
P03	3 / 4 / 5	0.34mm²	PUR / PVC BLACK	-	-	-30°C to +80°C, >7xO.D.	-5°C to +80°C, >15xO.D.	-	-
P82	4	0.34mm²	PUR IRR ORANGE	-	-	-50°C to +105°C,	-50°C to +105°C,	-	-
I03	4	0.34mm²	PVC GRAY	-	-	-30°C to +70°C	-5°C to +70°C	-	-
K03	4	AWG18	TPE YELLOW	ITC E195601 OR PLTC	AWM I/II A/B FT4 LL54185	-	-40°C to +105°C	-	-
K05	4	0.34mm²	TPE YELLOW	ITC E195601 OR PLTC	AWM I/II A/B FT4 LL54185	-	-40°C to +105°C	-	-
S20	4	0.34mm²	PVC YELLOW	UL 2661/1731	C22.2 AWM II	-30°C to +105°C	-40°C to +105°C	-	-

CABLE LENGTH TOLERANCE

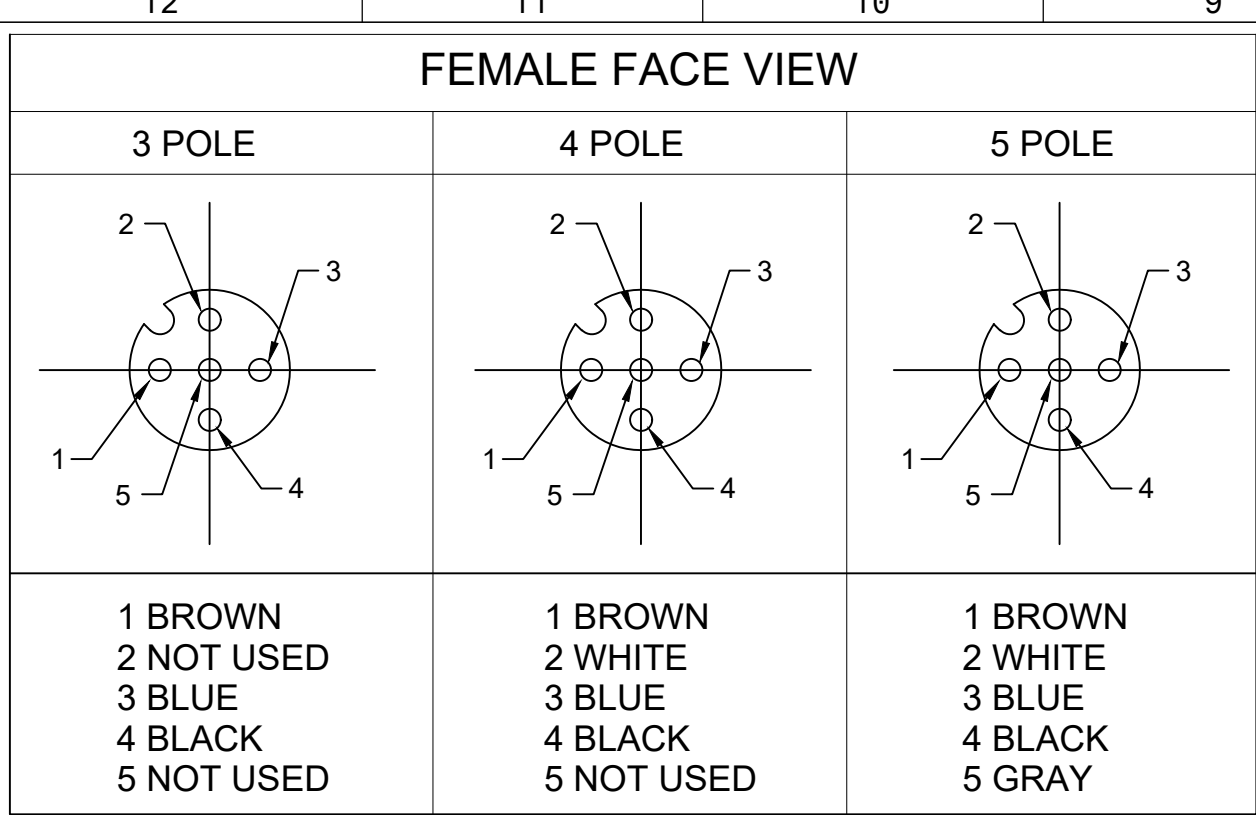
OVER	UPTO AND INCULDING	TOLERANCE
0	305	+19
305	915	+45
915	1830	+56
1830	3660	+89
3660	7320	+165
7320	14640	+317
14640	30500	+610
30500	>	+2% OF LENGTH

FUNCTIONAL SYMBOLS	THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX ELECTRONIC TECHNOLOGIES, LLC AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION														
	DIMENSION UNITS		SCALE		CURRENT REV DESC: 8 POLE VERSION AND NEW P/N'S ADDED EC NO: 686239 DRWN: RSCHIEBER2021/11/15 CHK'D: RSILLER2021/11/23 APPR: RSILLER2021/11/23 INITIAL REVISION: DRWN: DSOPPIN2018/09/27 APPR: RSILLER2018/10/22					molex CSE M12 XP AC FE STR MA RA XM					
	mm		1:1												
	GENERAL TOLERANCES (UNLESS SPECIFIED)									PRODUCT CUSTOMER DRAWING					
	ANGULAR TOL ± 1.0 °														
	4 PLACES		±												
	3 PLACES		±		DOCUMENT NUMBER 1200070026					DOC TYPE		DOC PART		REVISION	
	2 PLACES		± 0.05							PSD		000		A4	
	1 PLACE		± 0.3							SHEET NUMBER 2 OF 4					
	0 PLACES		± 0.5												
DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS				THIRD ANGLE PROJECTION		DRAWING		SERIES		MATERIAL NUMBER		CUSTOMER			
						A3-SIZE		120007		SEE PART LIST		GENERAL MARKET			

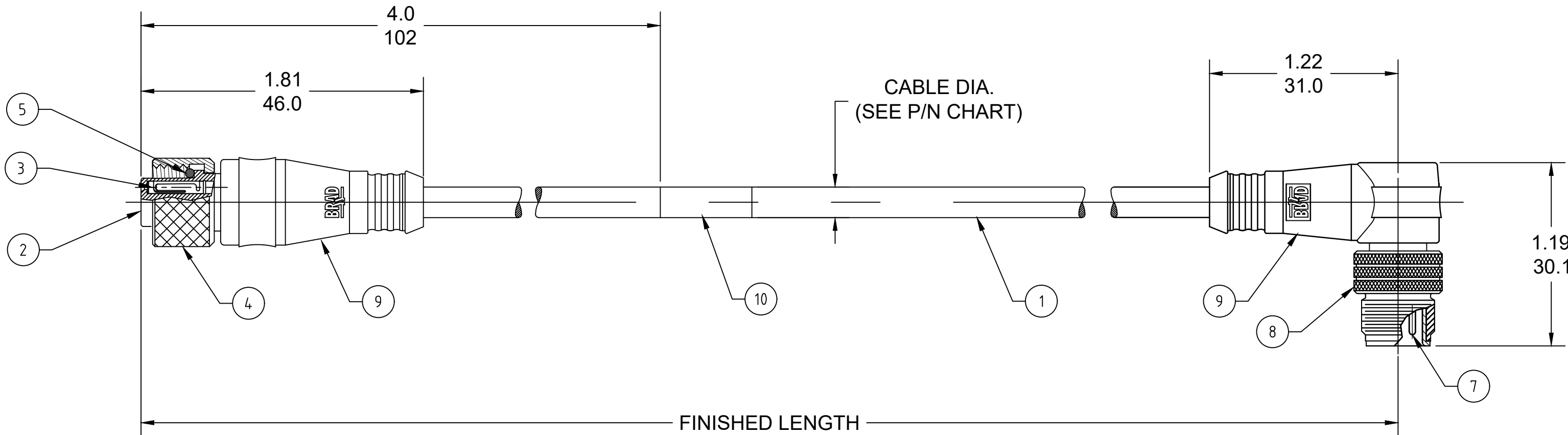
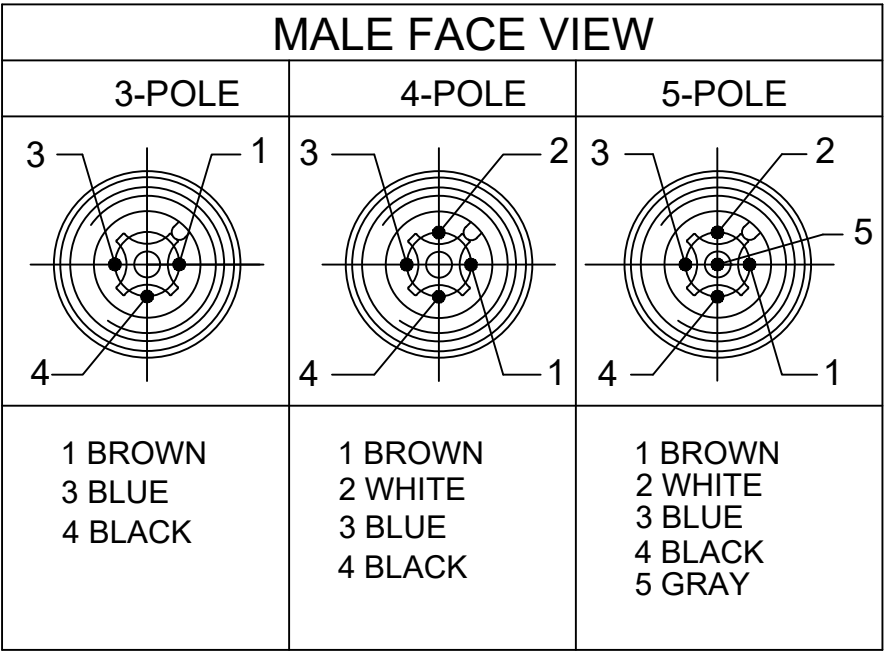
CONTACT POSITION FRONT VIEW:

3 POLES FEMALE		3 POLES MALE		4 POLES FEMALE		4 POLES MALE		5 POLES FEMALE		5 POLES MALE		8 POLES FEMALE		8 POLES MALE	
															
PIN	WIRE	PIN	WIRE	PIN	WIRE	PIN	WIRE	PIN	WIRE	PIN	WIRE	PIN	WIRE	PIN	WIRE
1	BROWN	1	BROWN	1	BROWN	1	BROWN	1	BROWN	1	BROWN	1	WHITE	1	WHITE
2	-	2	-	2	WHITE	2	WHITE	2	WHITE	2	WHITE	2	BROWN	2	BROWN
3	BLUE	3	BLUE	3	BLUE	3	BLUE	3	BLUE	3	BLUE	3	GREEN	3	GREEN
4	BLACK	4	BLACK	4	BLACK	4	BLACK	4	BLACK	4	BLACK	4	YELLOW	4	YELLOW
5	-	5	-	5	-	5	-	5	GREY OR GREEN/YELLOW	5	GREY OR GREEN/YELLOW	5	GREY	5	GREY
CODING REQUIRED TO IEC 61076-2-101				CODING REQUIRED TO IEC 61076-2-101				CODING REQUIRED TO IEC 61076-2-101				6	PINK	6	PINK
												7	BLUE	7	BLUE
												8	RED	8	RED
												CODING REQUIRED TO IEC 61076-2-101			

FUNCTIONAL SYMBOLS	THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX ELECTRONIC TECHNOLOGIES, LLC AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION	
	DIMENSION UNITS	SCALE
	$\frac{F}{A} = 0$	mm 1:1
	GENERAL TOLERANCES (UNLESS SPECIFIED)	
DIVISIONAL SYMBOLS	$\frac{F}{E} = 0$	ANGULAR TOL ± 1.0 °
	$\frac{F}{P} = 0$	
	4 PLACES ±	
	3 PLACES ±	
DIVISIONAL SYMBOLS	2 PLACES ± 0.05	
	1 PLACE ± 0.3	
	0 PLACES ± 0.5	
	DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS	
CURRENT REV DESC: 8 POLE VERSION AND NEW P/N'S ADDED		
EC NO: 686239		
DRWN: RSCHIEBER		2021/11/15
CHK'D: RSILLER		2021/11/23
APPR: RSILLER		2021/11/23
INITIAL REVISION:		
DRWN: DSOPPIN		2018/09/27
APPR: RSILLER		2018/10/22
THIRD ANGLE PROJECTION		
DRAWING		A3-SIZE
SERIES		120007
DOCUMENT NUMBER		1200070026
MATERIAL NUMBER		SEE PART LIST
CUSTOMER		GENERAL MARKET
DOC TYPE		PSD
DOC PART		000
REVISION		A4
SHEET NUMBER		3 OF 4



PART NO	ENGINEERING NO.	FINISHED LENGTH	POLES	CABLE DIA.
1200660228	883032K05M005	0.5M [1FT 7 IN]	3	.20/5.1
1200662157	885032K05M100	10M [32FT 9 IN]	5	.23/5.8
1200662223	884032K05M200	20M [65FT 7 IN]	4	.21/5.3



- NOTES:
1. MATERIAL: AS NOTED
 2. FINISH: AS NOTED
 3. ELECTRICAL:
VOLTAGE: 250V
CURRENT: 4A
 4. TEMP RATING: -20°TO +105°C
 5. PROTECTION: IP67 (WHEN MATED)
 6. COUPLING THREAD: M12X1
 7. UL RECOGNIZED FILE: E152210
CSA CERTIFIED FILE: LR6837
 8. ALL DIMENSIONS ARE FOR REFERENCE
UNLESS TOLERANCED OR NOTED OTHERWISE

CABLE FLEX CHARACTERISTICS:

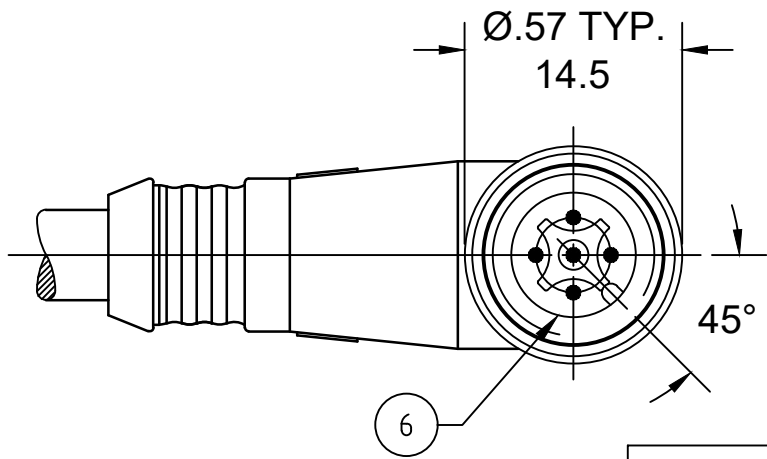
TORSIONAL FLEX TEST	10 MILLION CYCLES PER MIL-C-13777G
BEND FLEX TEST	10 MILLION CYCLES PER MIL-C-13777G
WELD SLAG RESISTANCE	WOODHEAD STANDARD S-300

10	WRAP LABEL	VINYL	BLACK/YELLOW
9	OVERMOLD	TPC	YELLOW
8	COUPLING NUT	BRASS	NICKEL PLATED
7	CONTACT PIN	COPPER ALLOY	GOLD PLATED
6	MALE INSERT	PUR	BLACK
5	O-RING	VITON	RED
4	COUPLING NUT	BRASS	NICKEL PLATED
3	CONTACT SOCKET	COPPER ALLOY	GOLD PLATED
2	FEMALE INSERT	PUR	BLACK
1	CABLE 22AWG	TPE JACKET	YELLOW
ITEM	DESCRIPTION	MATERIAL	FINISH

PART NO. MATRIX
883032K05M020

POLES
(3,4 & 5)

FINISHED LENGTH
M005 = 0.5 METER
M010 = 1 METER
M100 = 10 METER



CABLE LENGTH TOLERANCES
<.3M [1FT]: +19mm-0 [+.75in-0]
.3 - .9M [1 - 3FT]: +44.5mm-0 [+1.75in-0]
.9 - 1.8M [3 - 6FT]: +55.6mm-0 [+2.19in-0]
1.8 - 3.7M [6 - 12FT]: +88.9mm-0 [+3.50in-0]
3.7 - 7.3M [12 - 24FT]: +165.1mm-0 [+6.50in-0]
7.3-14.6M [24 - 48FT]: +317.5mm-0 [+12.50in-0]
14.6 - 30.5M [48-100FT]: +622.3mm-0 [+24.50in-0]
OVER 30M [100FT] +2% OF FINISHED LENGTH

FUNCTIONAL SYMBOLS	THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX ELECTRONIC TECHNOLOGIES, LLC AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION											
	DIMENSION UNITS		SCALE		CURRENT REV DESC: ITEM# 9 WAS TPE. UPDATED TEMP RATING. MODIFIED MATERIAL TABLE			molex				
	INCH/MM		NTS									
	GENERAL TOLERANCES (UNLESS SPECIFIED)				EC NO: 645633 DRWN: ABENJAMINLW 2020/09/18 CHK'D: RSTONE 2020/09/29 APPR: BWOODMAN 2020/10/23			MICRO-CHANGE CORDSET, M12 3/4/5 POLE, FE STR/MA 90, SINGLE KEY, 22 AWG HI-FLEX				
		mm	INCH									
4 PLACES	± ----	± ----										
3 PLACES	± ----	± ----										
2 PLACES	± ----	± ----										
DIVISIONAL SYMBOLS	1 PLACE				INITIAL REVISION:			PRODUCT CUSTOMER DRAWING				
	0 PLACES				DRWN: LSTEMMLE 2010/02/01 APPR: FPACHER 2010/02/03							
	ANGULAR TOL ± ---- °							DOCUMENT NUMBER		DOC TYPE	DOC PART	REVISION
								SD-120066-025		PSD	001	E
	DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS				THIRD ANGLE PROJECTION		DRAWING	SERIES	MATERIAL NUMBER	CUSTOMER		SHEET NUMBER
						C-SIZE	120066	SEE CHART	GENERAL MARKET		1 OF 1	