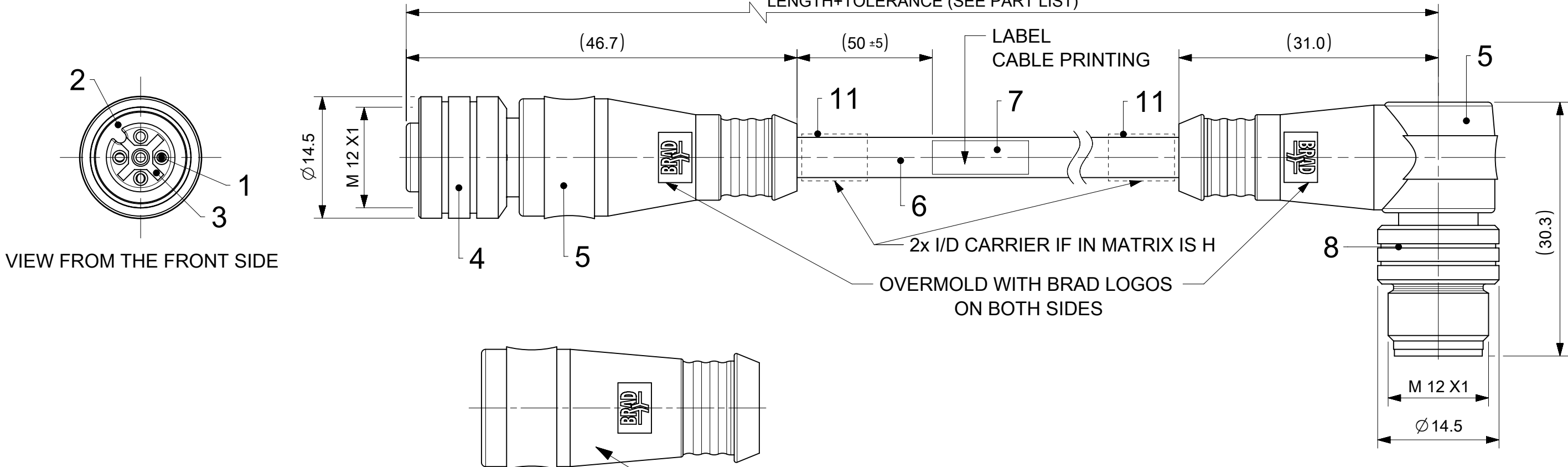


FEMALE PLUG M12 STRAIGHT TO MALE PLUG M12 90° ANGLED

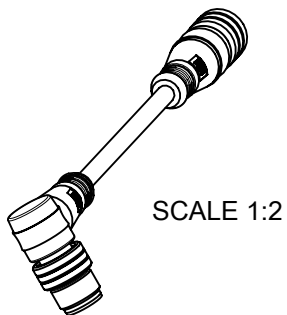


TECHNICAL SPECIFICATION:
CONTACT CURRENT RATING: 3-5 POLES 4A
8 POLES 2A
VOLTAGE RATING: 3-4 POLES 250V
5 POLES 60V DC
8 POLES 30V
PROTECTION CLASS: IP 67
TEMPERATURE: -25°C / +85°C

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	2023/12/25	13:30:36
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SCALE 1:2

THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX ELECTRONIC TECHNOLOGIES, LLC AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION

DIMENSION UNITS	SCALE
mm	2:1
GENERAL TOLERANCES (UNLESS SPECIFIED)	
ANGULAR TOL	± 1.0 °
4 PLACES	±
3 PLACES	±
2 PLACES	± 0.05
1 PLACE	± 0.3
0 PLACES	± 0.5
DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS	

CURRENT REV DESC: REMOVED OBSOLETE PART NUMBERS AS PER PCN#514494

EC NO: 770993
DRWN: MADHAM5
CHK'D: GGA
APPR: GGA

2023/11/09
2023/12/25
2023/12/25

INITIAL REVISION:
DRWN: DSOPPIN
APPR: RSILLER

2018/09/27
2018/10/22

THIRD ANGLE PROJECTION

DRAWING

SERIES

MATERIAL NUMBER

CUSTOMER

SHEET NUMBER

molex

CSE M12 XP AC FE STR MA RA XM

PRODUCT CUSTOMER DRAWING

DOCUMENT NUMBER

DOC TYPE

DOC PART

REVISION

1200070026

PSD

000

A8

SEE PART LIST

GENERAL MARKET

1 OF 4

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

SPECIAL TYPES

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°

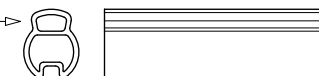
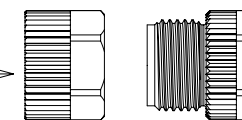
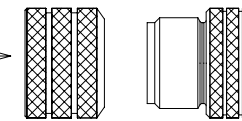
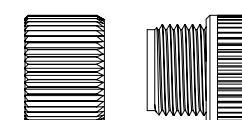
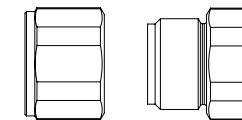
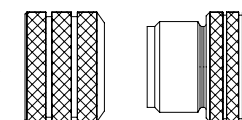
Cable types:
E02=0.25mm ² PVC Black
E03=0.34mm ² PVC Black
E13=0.75mm ² PVC Yellow
E52=0.34mm ² PVC Grey(RAL 7001)
E57=0.34mm ² PVC Grey(RAL 7001)
H09=0.34mm ² PUR Black
H69=0.34mm ² PUR Grey LSOH SCR
I02=0.25mm ² PVC Grey CEI
I03=0.34mm ² PVC Grey CEI
I20=0.25mm ² PVC Grey CEI SCR DC
I26=0.34mm ² PVC Grey CEI SCR AC
P02=0.25mm ² PUR/PVC Black
P03=0.34mm ² PUR/PVC Black
P08=0.25mm ² PUR Yellow HIFLEX
P20=0.34mm ² PUR Grey LSOH braid
P82=0.34mm ² PUR orange irradiated DC
S20=0.34mm ² PVC Yellow SJTO braid

Units:
C = Centimeter
M = Meter
K = Kilometer
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 Delrin
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.)

COUPLING NUT
FEMALE MALE

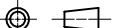


CABLE SPECIFICATION

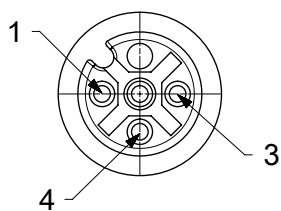
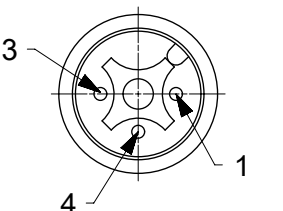
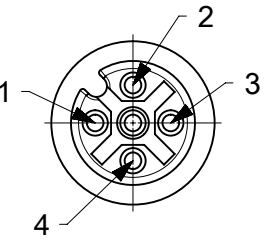
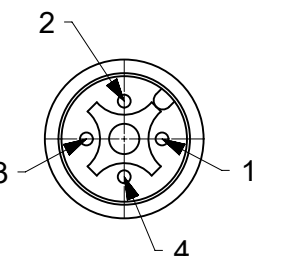
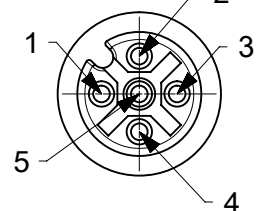
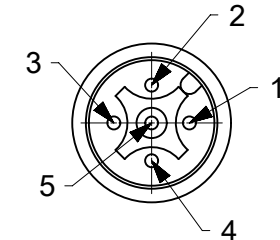
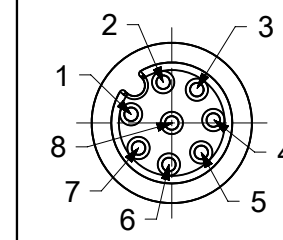
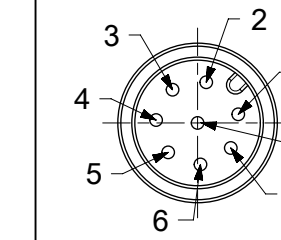
CABLE TYPE	NO. OF WIRES	CROSS SECTION	CABLE JACKET	UL	CSA	STATIC: TEMP. / BENDING RADIUS	DYNAMIC: TEMP. / BENDING RADIUS	DRAG CHAIN	SHIELD
E02	3 / 4 / 5 / 8	0.25mm ²	PVC BLACK	UL 2464/1729	C22.2 I/II A/B 80°C/300V	-30°C to +80°C, 10xO.D.	-10°C to +80°C, 15xO.D.	-	-
E03	3 / 4 / 5	0.34mm ²	PVC BLACK	UL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

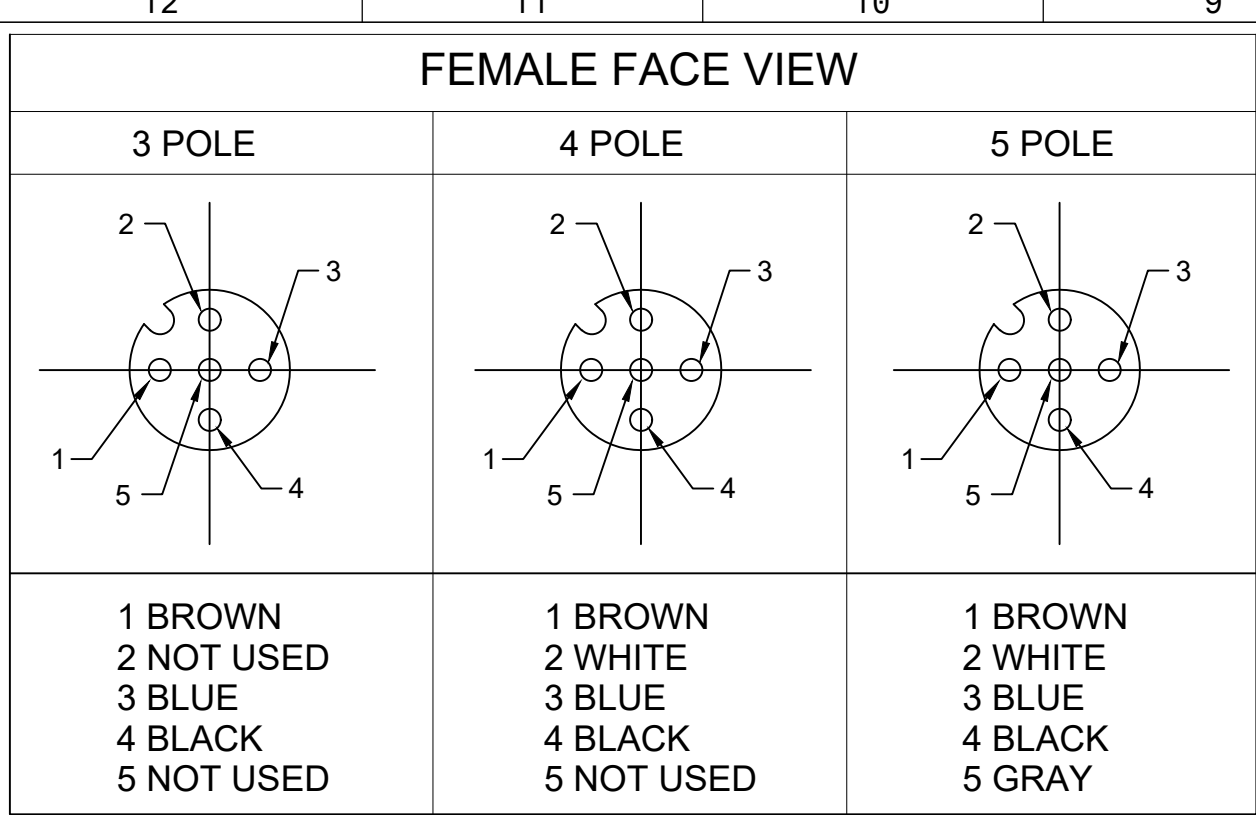
THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX ELECTRONIC TECHNOLOGIES, LLC AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION															
DIMENSION UNITS		SCALE		CURRENT REV DESC: REMOVED OBSOLETE PART NUMBERS AS PER PCN#514494			molex								
mm		1:1													
GENERAL TOLERANCES (UNLESS SPECIFIED)							CSE M12 XP AC FE STR MA RA XM								
ANGULAR TOL ± 1.0 °															
4 PLACES ±		EC NO: 770993		PRODUCT CUSTOMER DRAWING			DOCUMENT NUMBER 1200070026			DOC TYPE PSD		DOC PART 000		REVIS A	
3 PLACES ±		DRWN: MADHAM5 2023/11/09													
2 PLACES ± 0.05		CHK'D: GGA 2023/12/25													
1 PLACE ± 0.3		APPR: GGA 2023/12/25		INITIAL REVISION: DRWN: DSOPPIN 2018/09/27 APPR: RSILLER 2018/10/22											
0 PLACES ± 0.5															
DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		THIRD ANGLE PROJECTION 		DRAWING A3-SIZE		SERIES 120007		MATERIAL NUMBER SEE PART LIST		CUSTOMER GENERAL MARKET		SHEET NUMBER 2 OF 4			

CONTACT POSITION FRONT VIEW:

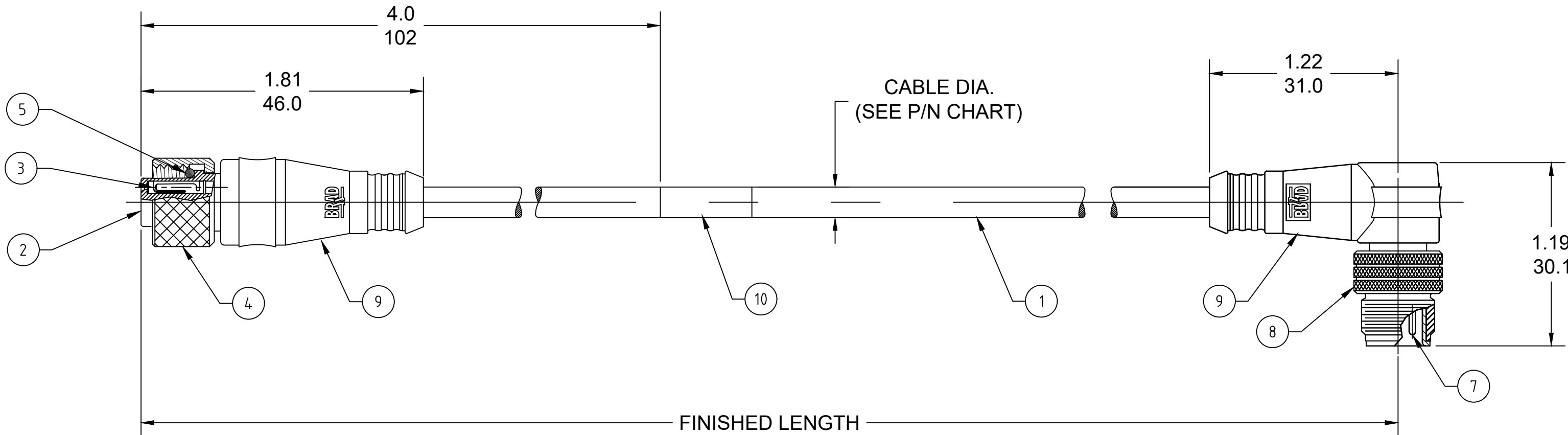
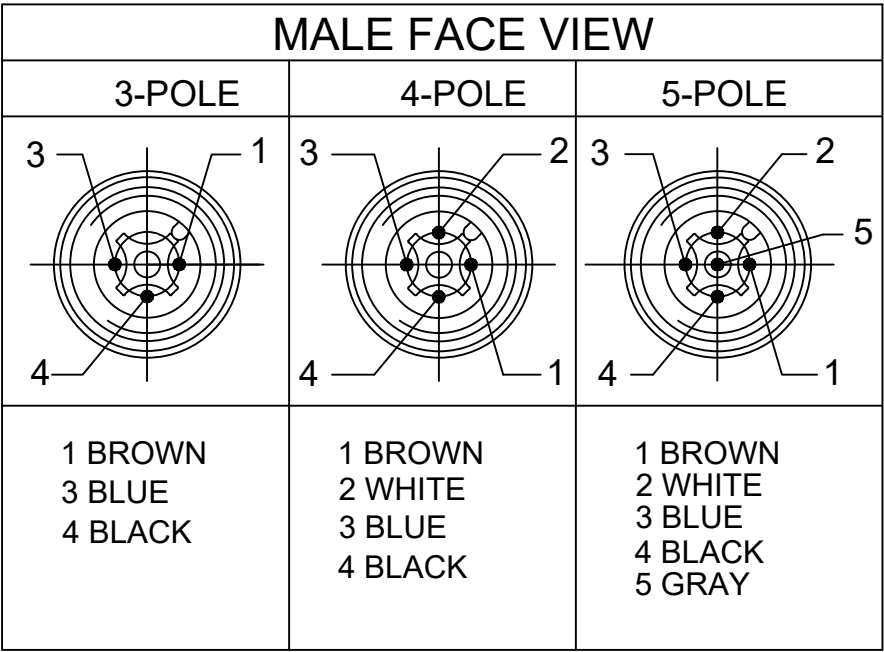
3 POLES FEMALE		3 POLES MALE		4 POLES FEMALE		4 POLES MALE		5 POLES FEMALE		5 POLES MALE		8 POLES FEMALE		8 POLES MALE	
															
PIN	WIRE	PIN	WIRE	PIN	WIRE	PIN	WIRE	PIN	WIRE	PIN	WIRE	PIN	WIRE	PIN	WIRE
1	BROWN	1	BROWN	1	BROWN	1	BROWN	1	BROWN	1	BROWN	1	WHITE	1	WHITE
2	-	2	-	2	WHITE	2	WHITE	2	WHITE	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			
								7	BLUE	7	BLUE				
CODING REQUIRED TO IEC 61076-2-101															

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: REMOVED OBSOLETE PART NUMBERS AS PER PCN#514494											
mm		1:1													
GENERAL TOLERANCES (UNLESS SPECIFIED)				EC NO: 770993 DRWN: MADHAM5 CHK'D: GGA APPR: GGA 2023/11/09 2023/12/25 2023/12/25											
ANGULAR TOL ± 1.0 °															
4 PLACES		±													
3 PLACES		±													
2 PLACES		± 0.05													
1 PLACE		± 0.3													
0 PLACES		± 0.5													
DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS				THIRD ANGLE PROJECTION		DRAWING		SERIES		MATERIAL NUMBER		CUSTOMER		SHEET NUMBER	
						A3-SIZE		120007		SEE PART LIST		GENERAL MARKET		3 OF 4	

DOCUMENT STATUS	P1	RELEASE DATE	2023/12/25	13:30:36
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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:

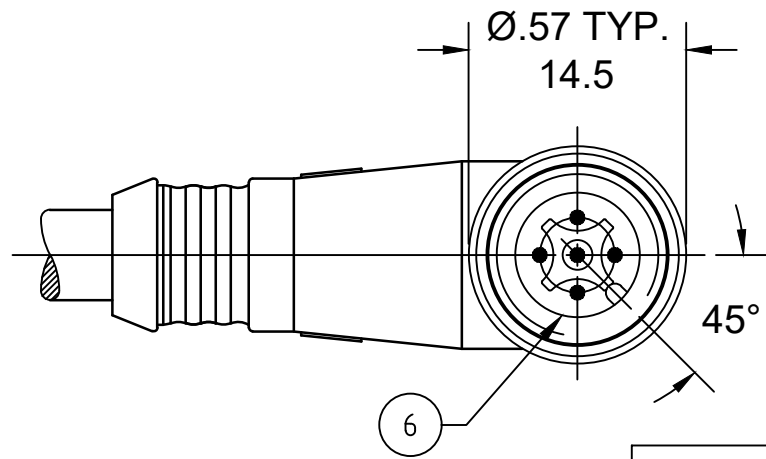
TORSIONAL FLEX TEST	10 MILLION CYCLES PER MIL-C-13777G
BEND FLEX TEST	10 MILLION CYCLES PER MIL-C-13777G
WELD SLAG RESISTANCE	WOODHEAD STANDARD S-300

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 MICRO-CHANGE CORDSET, M12 3/4/5 POLE, FE STR/MA 90, SINGLE KEY, 22 AWG HI-FLEX					
	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								
		mm	INCH										
4 PLACES	±----	±----											
3 PLACES	±----	±----											
2 PLACES	±----	±----											
DIVISIONAL SYMBOLS	1 PLACE	±----	±----		INITIAL REVISION:			PRODUCT CUSTOMER DRAWING					
	0 PLACES	±----	±----										
	ANGULAR TOL ± ---- °		DRWN: LSTEMMLE 2010/02/01		DOCUMENT NUMBER SD-120066-025						DOC TYPE PSD	DOC PART 001	REVISION E
	APPR: FPACHER 2010/02/03												
	DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		THIRD ANGLE PROJECTION		DRAWING C-SIZE		SERIES 120066				MATERIAL NUMBER SEE CHART		CUSTOMER GENERAL MARKET