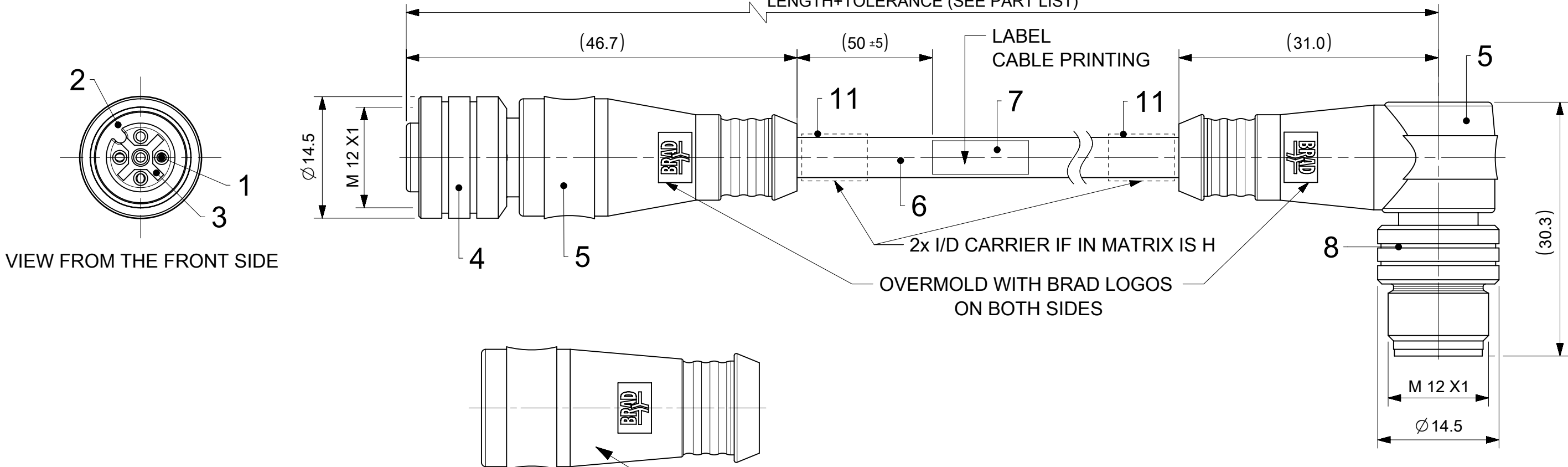


FEMALE PLUG M12 STRAIGHT TO MALE PLUG M12 90° ANGLED



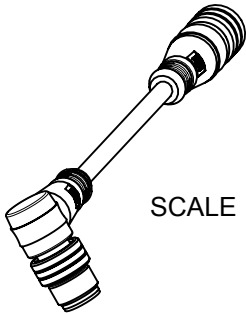
THICKER OVERMOLD FOR CABLES WITH O.D. BIGGER THAN 6

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	2022/03/07	15:09:32
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FUNCTIONAL SYMBOLS

$\nabla_A = 0$

$\nabla_E = 0$

$\nabla_F = 0$

DIVISIONAL SYMBOLS

DIMENSION UNITS

mm

SCALE

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

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

CURRENT REV DESC: ADDED PNS 1200669890 & 1200669891

EC NO: 698496

DRWN: MDHARMANTI

CHK'D: RSILLER

APPR: RSILLER

INITIAL REVISION:

DRWN: DSOPPIN

APPR: RSILLER

2022/03/07

2022/03/07

2018/09/27

2018/10/22

THIRD ANGLE PROJECTION

DRAWING

SERIES

MATERIAL NUMBER

CUSTOMER

SHEET NUMBER

A3-SIZE

120007

SEE PART LIST

GENERAL MARKET

1 OF 4

molex

CSE M12 XP AC FE STR MA RA XM

PRODUCT CUSTOMER DRAWING

DOCUMENT NUMBER

1200070026

DOC TYPE

PSD

DOC PART

000

REVISION

A6

10

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7

6

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4

3

2

1

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

88X032XXXXXX

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 = Kilometer
F = Feet

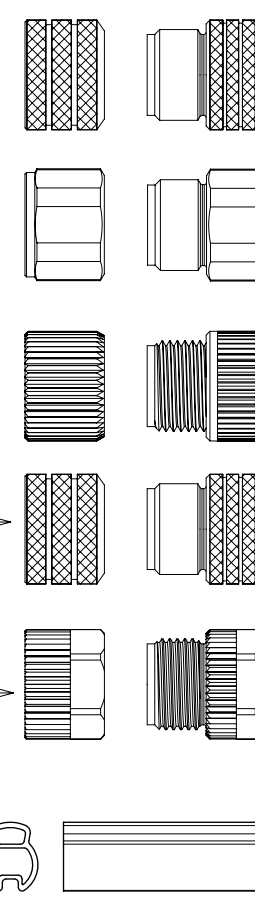
Length
Examples:
020 = 2 M
060 = 6 M
100 = 10 M

SPECIAL TYPES
XXXXXX

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 lxx & 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	0.25mm²	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

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mm

1:1

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

THIRD ANGLE PROJECTION

DRAWING

SERIES

MATERIAL NUMBER

CUSTOMER

SHEET NUMBER

CURRENT REV DESC: ADDED PNS 1200669890 & 1200669891

EC NO: 698496

DRWN: MDHARMANTI

CHK'D: RSILLER

APPR: RSILLER

INITIAL REVISION:

DRWN: DSOPPIN

APPR: RSILLER

2022/03/07

2022/03/07

2018/09/27

2018/10/22

DOCUMENT NUMBER

DOC TYPE

DOC PART

REVISION

1200070026

PSD

000

A6

SEE PART LIST

GENERAL MARKET

2 OF 4

DOCUMENT STATUS

P1

RELEASE DATE

2022/03/07

15:09:32

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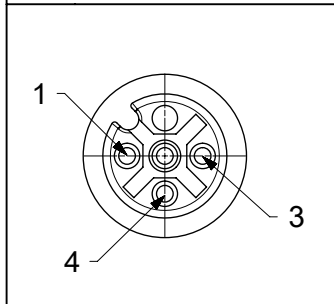
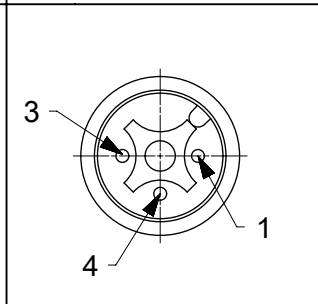
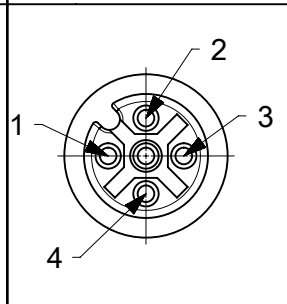
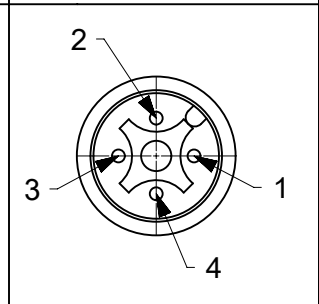
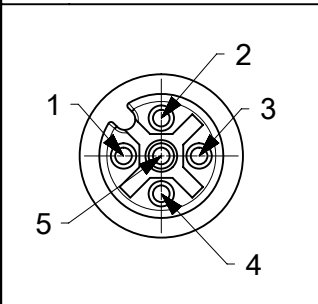
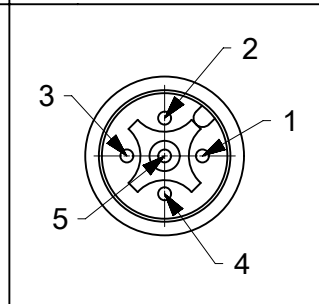
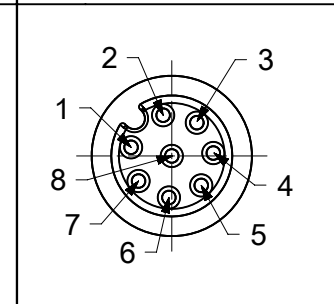
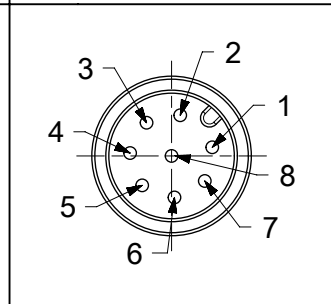
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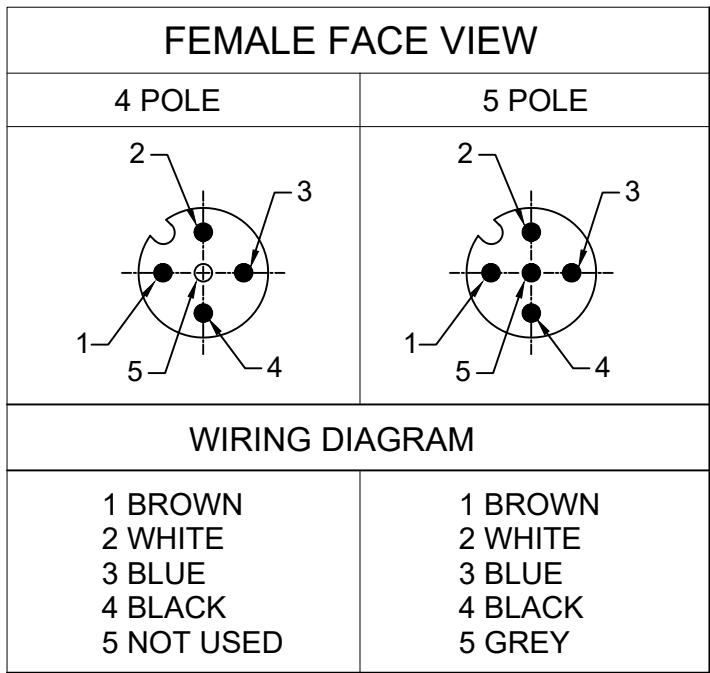
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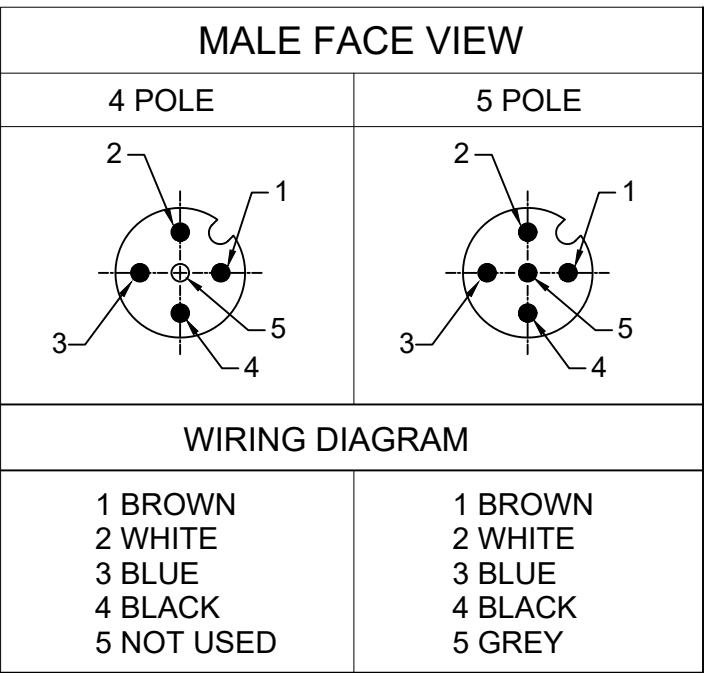
CONTACT POSITION FRONT VIEW:

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 FA=0 FE=0 FE=0	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: ADDED PNS 1200669890 & 1200669891					molex								
	mm		1:1															
	GENERAL TOLERANCES (UNLESS SPECIFIED)					EC NO: 698496 DRWN: MDHARMANTI 2022/03/07 CHK'D: RSILLER 2022/03/07 APPR: RSILLER 2022/03/07 INITIAL REVISION: DRWN: DSOPPIN 2018/09/27 APPR: RSILLER 2018/10/22					PRODUCT CUSTOMER DRAWING							
	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		DOCUMENT NUMBER		DOC TYPE		DOC PART		REVISION	
							A3-SIZE		120007		1200070026		PSD		000		A6	



PART NO	ENGINEERING NO.	FINISHED LENGTH	POLES	CABLE DIA.
1200661010	884032K03M004	0.4M [1FT 4 IN]	4	.26/6.6
1200661024	884032K03M150	15M [49FT 3 IN]		
1200661053	885032K03M005	0.5M [1FT 8 IN]	5	.28/7.1
1200661059	885032K03M050	5M [16FT 5 IN]		

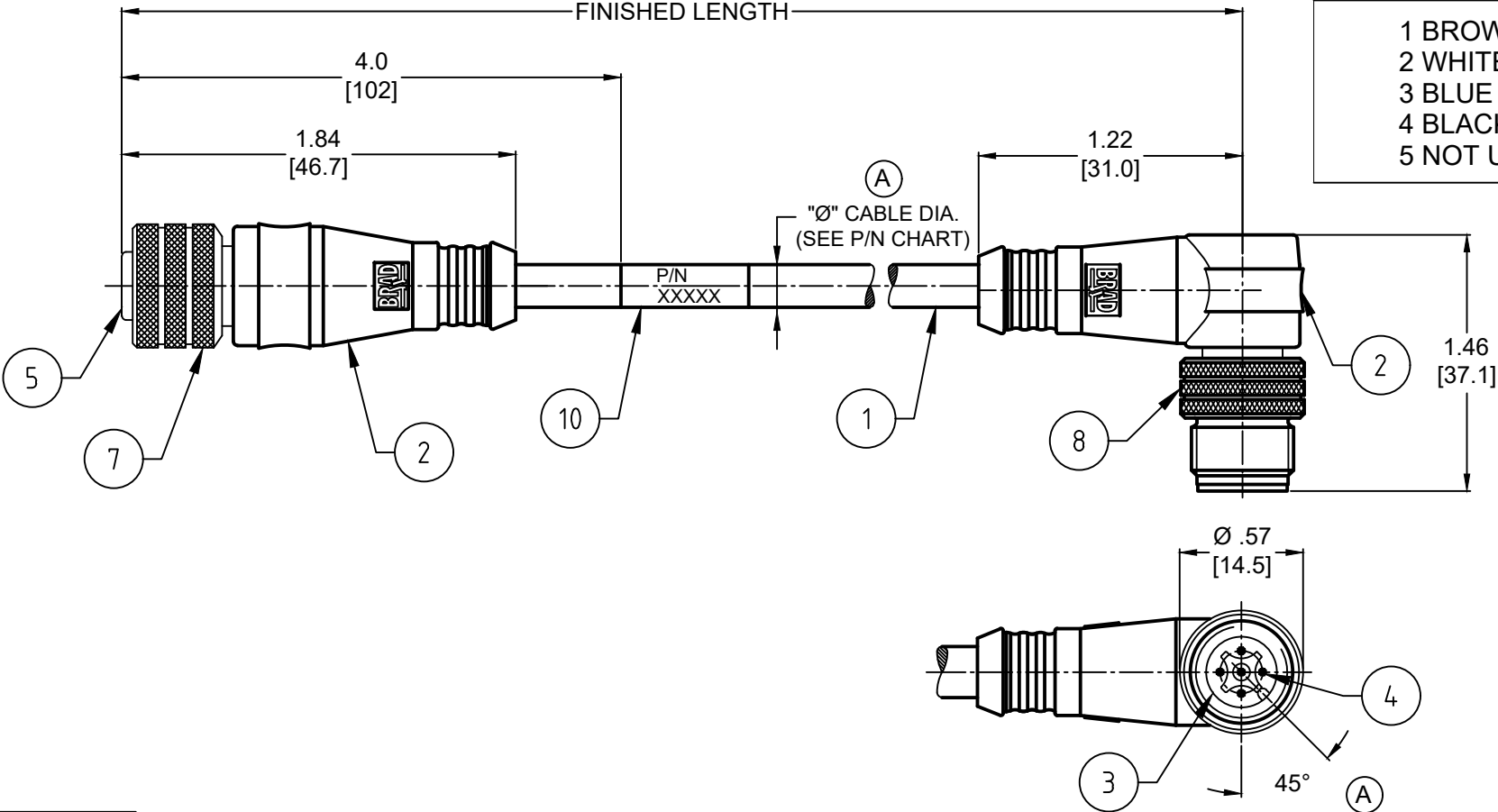


- NOTES:
- MATERIAL: AS NOTED
 - FINISH: AS NOTED
 - ELECTRICAL:
VOLTAGE: 250V
CURRENT: 4A
 - TEMP RATING: -20°TO +105°C
 - PROTECTION: IP67 (WHEN MATED)
 - COUPLING THREAD: M12X1
 - UL RECOGNIZED FILE: E152210
CSA CERTIFIED FILE: LR6837 (A)
 - ALL DIMENSIONS ARE FOR REFERENCE
UNLESS TOLERANCED OR NOTED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

CABLE FLEX CHARACTERISTICS (A)

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	LABEL	VINYL	BLACK/YELLOW
9	O-RING	VITON	RED
8	MALE COUPLING NUT	BRASS	NICKEL PLATED
7	FEMALE COUPLING NUT	BRASS	NICKEL PLATED
6	CONTACT SOCKET	COPPER ALLOY	GOLD OVER NICKEL
5	INSERT (FEMALE)	PUR	BLACK
4	CONTACT PIN	COPPER ALLOY	GOLD OVER NICKEL
3	INSERT (MALE)	PUR	BLACK
2	OVERMOLD	TPC	YELLOW
1	CABLE #18/4-5 AWG	TPE JACKET	YELLOW
ITEM	DESCRIPTION	MATERIAL	FINISH



PART NO. MATRIX (A)

884032K03M004

POLES (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 FA=0 FC=0 FE=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: ITEM #2 WAS TPE & #10 WAS MYLAR. REMOVED 3 POLE DETAILS. ADDED UL, CSA, TOL CHART & CABLE DIA. MODIFIED PN CHART			molex							
	INCH/MM		NTS												
	GENERAL TOLERANCES (UNLESS SPECIFIED)				MICRO-CHANGE CORDSET, M12 4-5 POLE, FEMALE STRAIGHT - MALE 90DEG, SINGLE KEY, #18 AWG TPE HI-FLEX										
		mm	INCH												
	4 PLACES		±----	±----		EC NO: 671333			2021/05/04						
	3 PLACES		±----	±----		DRWN: ABENJAMINLW									
	2 PLACES		±----	±----		CHK'D: RSTONE			2021/07/23						
	1 PLACE		±----	±----		APPR: BWOODMAN									
	0 PLACES		±----	±----		INITIAL REVISION:			2010/02/01						
ANGULAR TOL ± ---- °				DRWN: LSTEMMLE											
				APPR: FPACHER			2010/02/03								
DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS				THIRD ANGLE PROJECTION 		DRAWING A3-SIZE		SERIES 120066		MATERIAL NUMBER SEE CHART		CUSTOMER GENERAL MARKET		SHEET NUMBER 1 OF 1	