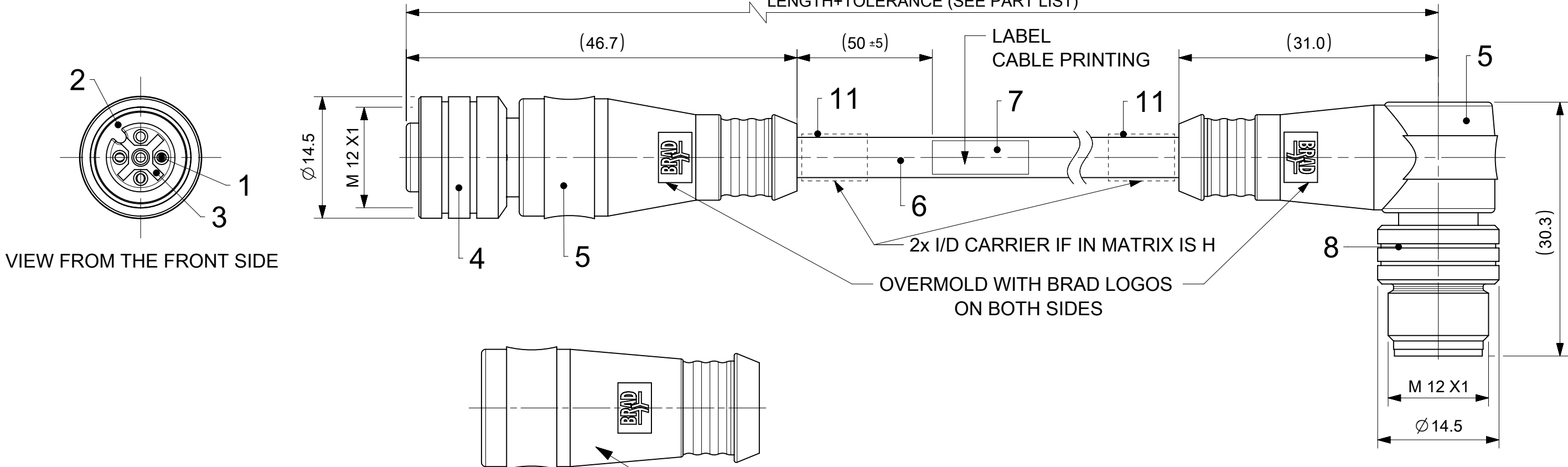


FEMALE PLUG M12 STRAIGHT TO MALE PLUG M12 90° ANGLED

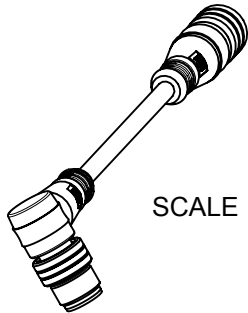


TECHNICAL SPECIFICATION:
CONTACT CURRENT RATING: 3-5 POLES 4A
8 POLES 2A
VOLTAGE RATING: 3-4 POLES 250V
5 POLES 60V DC
8 POLES 30V
PROTECTION CLASS: IP 67
TEMPERATURE: -25°C / +85°C

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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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

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 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.)

Technical drawings of various mechanical fasteners, including bolts, nuts, and washers, arranged in a grid. The drawings show different profiles and cross-sections of these components.

CABLE SPECIFICATION

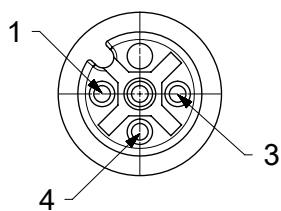
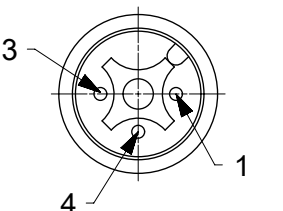
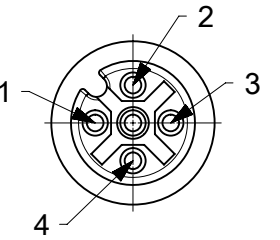
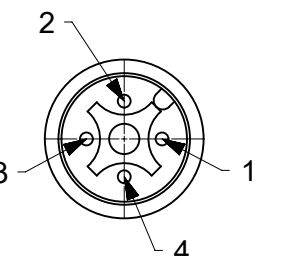
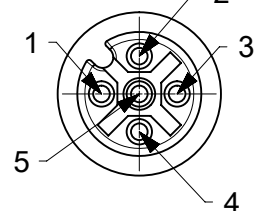
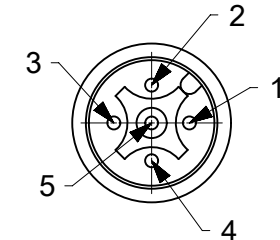
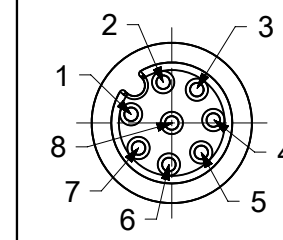
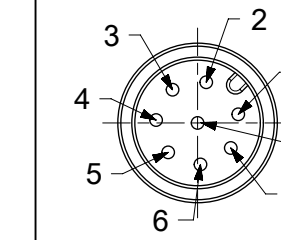
CABLE TYPE	NO. OF WIRES	CROSS SECTION	CABLE JACKET	UL	CSA	STATIC: TEMP. / BENDING RADIUS	DYNAMIC: TEMP. / BENDING RADIUS	DRAG CHAIN	SHIELD
E02	3 / 4 / 5 / 8	0.25mm²	PVC BLACK	UL 2464/1729	C22.2 I/II A/B 80°C/300V	-30°C to +80°C, 10xO.D.	-10°C to +80°C, 15xO.D.	-	-
E03	3 / 4 / 5	0.34mm²	PVC BLACK	UL 2464/1729	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 INCLUDING	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

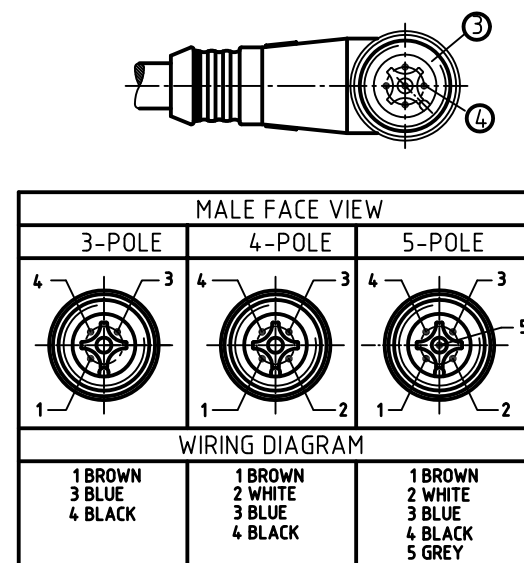
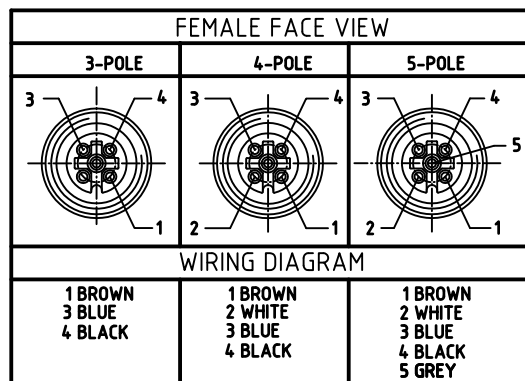
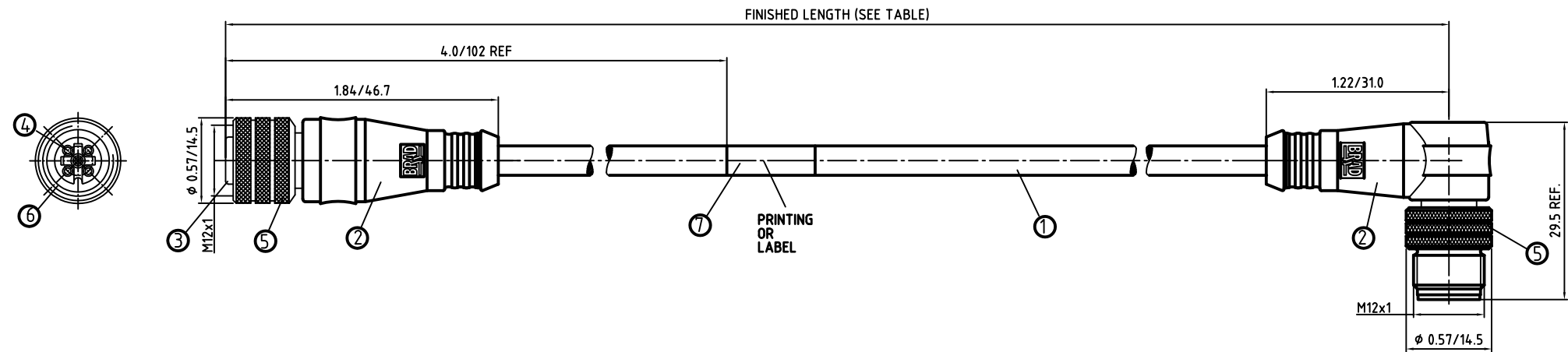
THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX ELECTRONIC TECHNOLOGIES, LLC AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION									
DIMENSION UNITS mm		SCALE 1:1		CURRENT REV DESC: REMOVED OBSOLETED PART NUMBERS AS PER PCN#514494			molex		
GENERAL TOLERANCES (UNLESS SPECIFIED)									
ANGULAR TOL ± 1.0 °									
4 PLACES ±		CSE M12 XP AC FE STR MA RA XM							
3 PLACES ±									
2 PLACES ± 0.05									
1 PLACE ± 0.3		PRODUCT CUSTOMER DRAWING							
0 PLACES ± 0.5									
DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		INITIAL REVISION:			DOCUMENT NUMBER		DOC TYPE	DOC PART	REVISION
		DRWN: DSOPPIN 2018/09/27			1200070026		PSD	000	A8
		APPR: RSILLER 2018/10/22							
THIRD ANGLE PROJECTION		DRAWING	SERIES	MATERIAL NUMBER		CUSTOMER		SHEET NUMBER	
		A3-SIZE	120007	SEE PART LIST		GENERAL MARKET		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				6	PINK	6	PINK
												7	BLUE	7	BLUE
												8	RED	8	RED
CODING REQUIRED TO IEC 61076-2-101															

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DIMENSION UNITS		SCALE		CURRENT REV DESC: REMOVED OBSOLETE PART NUMBERS AS PER PCN#514494											
mm		1:1													
GENERAL TOLERANCES (UNLESS SPECIFIED)				molex CSE M12 XP AC FE STR MA RA XM PRODUCT CUSTOMER DRAWING											
ANGULAR TOL ± 1.0 °															
4 PLACES		±													
3 PLACES		±													
2 PLACES		± 0.05													
1 PLACE		± 0.3		INITIAL REVISION: DRWN: DSOPPIN											

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

VOLTAGE RATING	250 VAC/VDC
AMPERAGE RATING	max. 4 AMPS
PROTECTION	IP67
OPERATING TEMPERATURE	-20°C TO 80°C

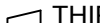
ITEM	COMPONENT	MATERIAL	FINISH
7	LABLE	MYLAR	BLACK/YELLOW
6	O-RING	VITON	RED
5	COUPLER	BRASS	NICKEL PLATED
4	SOCKET/PIN CONTACT	COPPER ALLOY	GOLD OVER NICKEL
3	INSERT	PUR	BLACK
2	OVERMOLD	POLYURETHANE (PUR)	YELLOW
1	CABLE- 22/3-5 (COPPER STRANDING) 3/4/5 CONDUCT. 300V	JACKET: TPE	JACKET: BLACK

DESCRIPTION EC NO: WEU2010-0389 DRWN: LSTEMMLE CHKD: NS APPR: FPACHER 24.02.10 2010/03/02	DESCRIPTION	QUALITY SYMBOLS	GENERAL TOLERANCES (UNLESS SPECIFIED)			DIMENSION STYLE IN/MM		SCALE 1:1	DESIGN UNITS METRIC	THIRD ANGLE PROJECTION		
		▽ = 0 ∇ = 0		mm	INCH	DRAWN BY LSTEMMLE	DATE 2010/01/25	MICRO-CHANGE CORDSET 3/4/5 P. FE STR/ MA 90 22/3-5 TPE BLACK CABLE				
			4 PLACES	±---	±---	CHECKED BY	DATE					
			3 PLACES	±---	±---	FP	2010/02/25					
			2 PLACES	±---	±.01	APPROVED BY	DATE	MOLEX INCORPORATED				
			1 PLACE	±0.3	±---	FPACHER	2010/03/01					
		ANGULAR ± --- °			MATERIAL NO.		DOCUMENT NO.		SHEET NO.			
		DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS			SEE TABLE SHEET 2		SD-120066-018		1 OF 2			
					SIZE A3	THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION						

POL	MATERIAL NUMBER	ENGINEERING NUMBER	FINISHED LENGTH
3	1200070172	883032P03M010	1.0M +55.6 -0 [3.27' +2.19" -0]

POL	MATERIAL NUMBER	ENGINEERING NUMBER	FINISHED LENGTH
4	1200071407	884032P03M010	1.0M +55.6 -0 [3.27' +2.19" -0]

POL	MATERIAL NUMBER	ENGINEERING NUMBER	FINISHED LENGTH
5	1200665401	885032P03M010	1.0M +55.6 -0 [3.27' +2.19" -0]

DESCRIPTION EC NO: WEU2010-0389 DRWN: LSTEMMLE CHKD: NS APPR: FPACHER 24.02.10 ----- 2010/03/02	DESCRIPTION	QUALITY SYMBOLS	GENERAL TOLERANCES (UNLESS SPECIFIED)			DIMENSION STYLE IN/MM		SCALE 1:1	DESIGN UNITS METRIC	 THIRD ANGLE PROJECTION	
		 = 0		mm	INCH	DRAWN BY LSTEMMLE	DATE 2010/01/25	MICRO-CHANGE CORDSET 3/4/5 P. FE STR/ MA 90 22/3-5 TPE BLACK CABLE			
		 = 0	4 PLACES	±---	±---	CHECKED BY FP	DATE 2010/02/25				
			3 PLACES	±---	±---	APPROVED BY FPACHER	DATE 2010/03/01				
			2 PLACES	±---	±.01	MATERIAL NO. SEE TABLE		DOCUMENT NO. SD-120066-018		SHEET NO. 2 OF 2	
	1 PLACE	±0.3	±---								
			ANGULAR ± --- °								
			DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS			THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION					
2	REV										