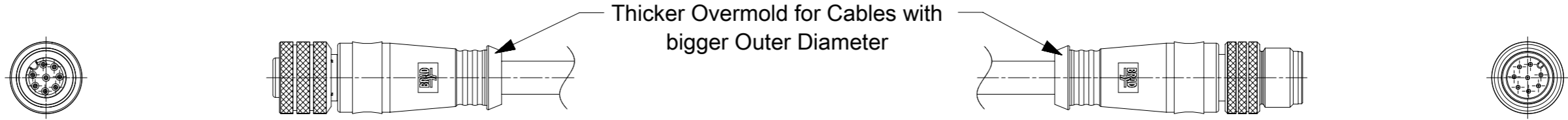
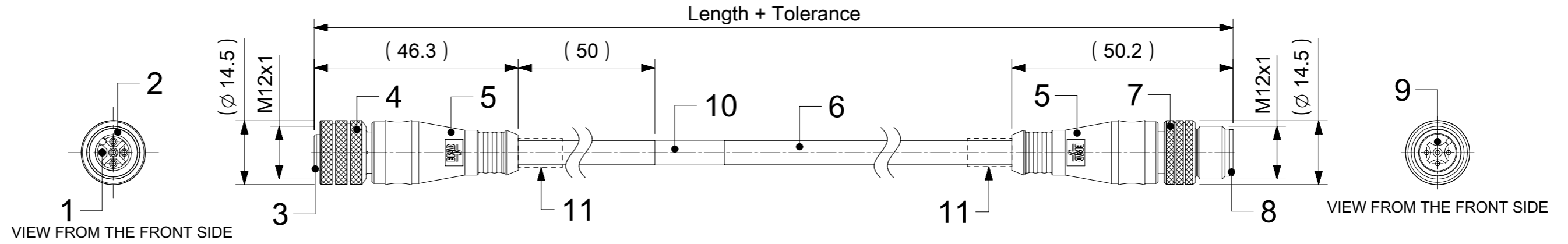


FEMALE PLUG M12 STRAIGHT TO MALE PLUG M12 STRAIGHT



NOTES:

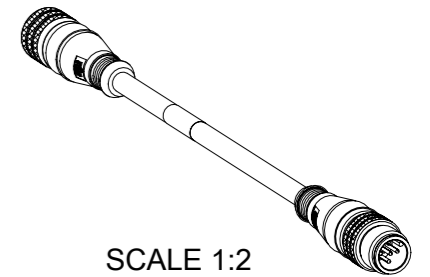
- RATED VOLTAGE: 3, 4 contacts 250V per IEC 60664
- 5 contacts 60V per IEC 60664
- 5 contacts 250V per UL 2238
- 8 contacts 30V per IEC 60664
- RATED CURRENT: 3, 4, 5 contacts 4A
- 8 contacts 2A

PROTECTION CLASS: IP 67
TEMPERATURE: -25°C / +85°C

CONTACTS POSITION FRONT VIEW:

	3 CONTACTS		4 CONTACTS		5 CONTACTS		8 CONTACTS	
FEMALE								
MALE								
CONNECTIONS	PIN	WIRE	PIN	WIRE	PIN	WIRE	PIN	WIRE
	1	BROWN	1	BROWN	1	BROWN	1	WHITE
	2	-	2	WHITE	2	WHITE	2	BROWN
	3	BLUE	3	BLUE	3	BLUE	3	GREEN
	4	BLACK	4	BLACK	4	BLACK	4	YELLOW
					5	GREY	5	GREY
							6	PINK
							7	BLUE
						8	RED	

CODING REQUIRED TO IEC 61076-2-101



SCALE 1:2

FOR OPTIONS SEE - NUMERICAL CODE - ON SHEET 2

ITEM	QTY.	DESCRIPTION	MATERIAL	FINISH
11	SEE SHEET 2	ID CARRIER	PVC	TRANSPARENT
10	1	LABEL YELLOW	VINYL	-
9	3 / 4 / 5 / 8	CONTACT MALE	SEE PART LIST	SELECTIVE GOLD OVER NICKEL
8	1	INSERT MALE BLACK	TPU	-
7	1	COUPLING NUT MALE	-	-
6	-	CABLE	SEE SHEET 2	-
5	-	OVERMOULDING BLACK	TPU	-
4	1	COUPLING NUT FEMALE	-	-
3	1	INSERT FEMALE BLACK	PUR	-
2	1	O-RING RED	FPM	-
1	3 / 4 / 5 / 8	CONTACT FEMALE	SEE PART LIST	SELECTIVE GOLD OVER NICKEL

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

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: A3-SIZE

SERIES: 120066

MATERIAL NUMBER: SEE SHEET 3-4

CUSTOMER: GENERAL MARKET

SHEET NUMBER: 1 OF 4

EC NO: 732259
DRWN: SANTHN 2022/12/20
CHK'D: GGA 2022/12/21
APPR: GGA 2022/12/21

INITIAL REVISION:
DRWN: JMARSZALEK 2016/09/16
APPR: RSILLER 2016/12/08

DOCUMENT NUMBER: 1200668084

DOC TYPE: PSD

DOC PART: 000

REVISION: A15

molex

CSE M12 XP AC FE STR MA STR XM DE

PRODUCT CUSTOMER DRAWING

ENGINEERING NO. - NUMERICAL CODE (Available parts see PART LIST table. Other parts available upon request).

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

88=Micro-Change
M12x1
Double ended

Contacts:
3=3 Contacts
4=4 Contacts
5=5 Contacts
8=8 Contacts

Heads style:
030=Plug Female Straight
to Plug Male Straight

Cable type: See Table

Units:
M=Meter
C=Centimeter

Length
Examples:
005=0.5 unit
010=1 unit
100=10 units

Overmold color:
Blank (Standard)=Black
A=Grey / G=Black / Y=Yellow

Coupling Nut:
Blank (Standard) & 3=Knurled Brass Ni Plated
1=Hexagonal Stainless steel
5=Knurled Derlin
7=Knurled Brass Ni Plated, Teflon Coated
8=Type 316 stainless steel
9=Knurled / Hexagonal Brass Ni Plated SW13

H= 2 pcs. of I/D Carrier PVC Transparent

COUPLING NUTS
FEMALE MALE



CABLE INFORMATION (for more information see Cable Data Sheet).

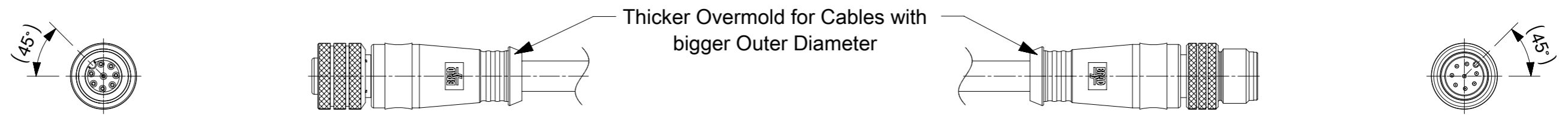
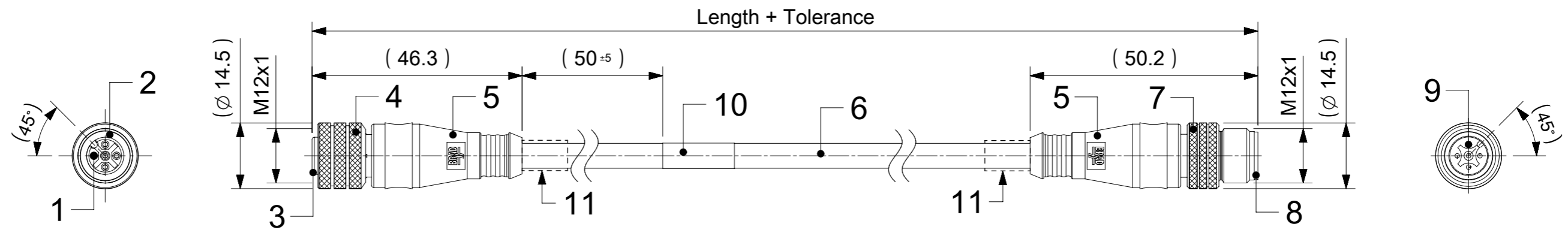
CABLE TYPE	NO. OF WIRES	CROSS SECTION	CABLE JACKET	UL	CSA	STATIC: TEMP. / BENDING RADIUS	DYNAMIC: TEMP. / BENDING RADIUS	DRAG CHAIN	SHIELD
E02	3 / 4 / 5 / 8	0.25mm ²	PVC BLACK	UL 2464/1729	C22.2 I/II A/B 80°C/300V	-30°C to +80°C, 10xO.D.	-10°C to +80°C, 15xO.D.	-	-
E03	3 / 4 / 5	0.34mm ²	PVC BLACK	UL 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.	-	-
H08	3 / 4 / 5 / 8	0.25mm ²	PUR BLACK LS0H	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	-
H09	3 / 4 / 5	0.34mm ²	PUR BLACK LS0H	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	-
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.	-	-

OVER [mm]	UP TO AND INCLUDING [mm]	TOLERANCES [mm]
0	305	+19
305	915	+45
915	1830	+56
1830	3660	+89
3660	7320	+165
7320	14640	+317
14640	30500	+610
30500	>	+2% OF FINISHED 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 OBSOLETE PART NUMBER AS PER PCN#512871.	molex		
GENERAL TOLERANCES (UNLESS SPECIFIED)					
ANGULAR TOL ± 1.0 °	4 PLACES ±	EC NO: 732259	PRODUCT CUSTOMER DRAWING		
3 PLACES ±	3 PLACES ±	DRWN: SANTHN 2022/12/20	DOCUMENT NUMBER		
2 PLACES ± 0.05	2 PLACES ±	CHK'D: GGA 2022/12/21	1200668084		
1 PLACE ± 0.3	1 PLACE ±	APPR: GGA 2022/12/21	DOC TYPE DOC PART REVISION		
0 PLACES ± 0.5	0 PLACES ±	INITIAL REVISION: DRWN: JMARSZALEK 2016/09/16 APPR: RSILLER 2016/12/08	PSD 000 A15		
DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS	THIRD ANGLE PROJECTION	DRAWING	SERIES	MATERIAL NUMBER	CUSTOMER
		A3-SIZE	120066	SEE SHEET 3-4	GENERAL MARKET
					SHEET NUMBER
					2 OF 4

FEMALE PLUG M12 STRAIGHT TO MALE PLUG M12 STRAIGHT



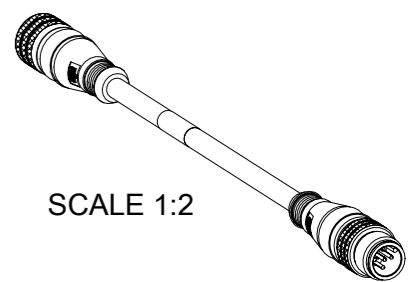
NOTES:

- RATED VOLTAGE: 3, 4 contacts 250V per IEC 60664
- 5 contacts 60V per IEC 60664
- 5 contacts 250V per UL 2238
- 8 contacts 30V per IEC 60664
- RATED CURRENT: 3, 4, 5 contacts 4A
- 8 contacts 2A

PROTECTION CLASS: IP 67
 TEMPERATURE: -25°C / +85°C
 CONTACTS POSITION FRONT VIEW:

	3 CONTACTS		4 CONTACTS		5 CONTACTS		8 CONTACTS	
FEMALE								
MALE								
CONNECTIONS	PIN	WIRE	PIN	WIRE	PIN	WIRE	PIN	WIRE
	1	BROWN	1	BROWN	1	BROWN	1	WHITE
	2	---	2	WHITE	2	WHITE	2	BROWN
	3	BLUE	3	BLUE	3	BLUE	3	GREEN
	4	BLACK	4	BLACK	4	BLACK	4	YELLOW
	5	---	5	---	5	GREY OR GREEN/YELLOW	5	GREY
							6	PINK
							7	BLUE
						8	RED	

CODING REQUIRED TO IEC 61076-2-101



FOR OPTIONS SEE - NUMERICAL CODE - ON SHEET 2

ITEM	QTY.	DESCRIPTION	MATERIAL	FINISH
11	SEE SHEET 2	ID CARRIER	PVC	TRANSPARENT
10	1	LABEL YELLOW	VINYL	---
	-	PRINTING FOR CABLES Ixx	---	---
9	3 / 4 / 5 / 8	CONTACT MALE	SEE PART LIST	SELECTIVE Au OVER Ni
8	1	INSERT MALE BLACK	TPU	---
7	1	COUPLING NUT MALE	---	---
6	-	CABLE	SEE SHEET 2	---
5	-	OVERMOLDING BLACK	TPU	---
4	1	COUPLING NUT FEMALE	---	---
3	1	INSERT FEMALE BLACK	PUR	---
2	1	ORING RED	FPM	---
1	3 / 4 / 5 / 8	CONTACT FEMALE	SEE PART LIST	SELECTIVE Au OVER Ni

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DIMENSION UNITS	SCALE	CURRENT REV DESC: NEW P/N ADDED				
mm	1:1					
GENERAL TOLERANCES (UNLESS SPECIFIED)		<p>molex</p> <p>CSE M12 XP AC FE STR MA STR XM DE</p> <p>PRODUCT CUSTOMER DRAWING</p>				
ANGULAR TOL	± 1.0°					
4 PLACES	±				EC NO: 734641	2022/12/01
3 PLACES	±				DRWN: RSCHIEBER	2023/01/12
2 PLACES	± 0.05				CHK'D: RSILLER	2023/01/12
1 PLACE	± 0.3	APPR: RSILLER	2023/01/12			
0 PLACES	± 0.5	INITIAL REVISION:				
DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		DRWN: JMARSZALEK	2016/09/19	2016/12/08		
THIRD ANGLE PROJECTION		APPR: RSILLER				
DRAWING		SERIES	MATERIAL NUMBER	CUSTOMER		
A3-SIZE		120066	SEE PART LIST	GENERAL MARKET		
DOCUMENT NUMBER		DOC TYPE	DOC PART	REVISION		
1200668165		PSD	000	A6		
SHEET NUMBER		1 OF 4				

ENGINEERING NO. - NUMERICAL CODE (Available parts see PART LIST table. Other parts available upon request).

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

OPTIONS

88=Micro-Change
M12x1
Double ended

Contacts:
3=3 Contacts
4=4 Contacts
5=5 Contacts
8=8 Contacts

Heads style:
030=Plug Female Straight
to Plug Male Straight

Cable type: See Table

Units:
M=Meter

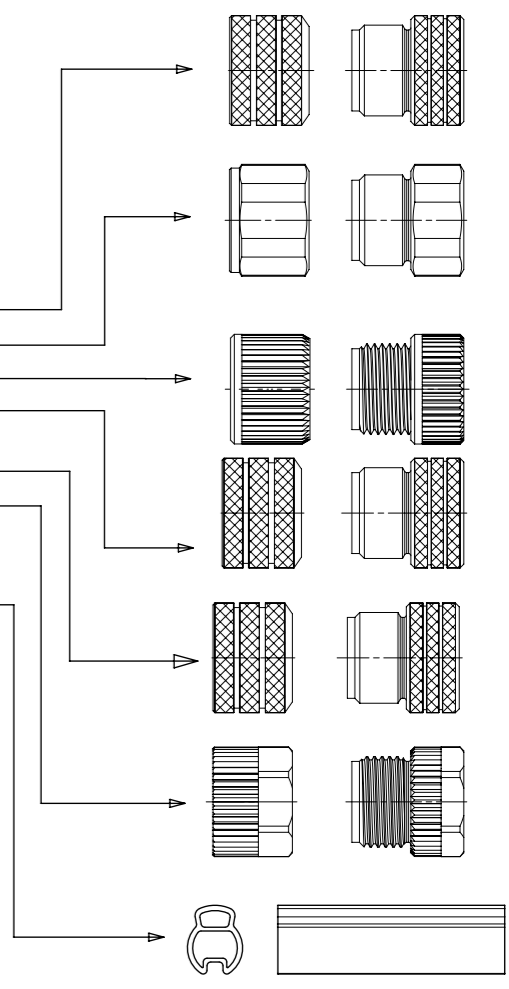
Length
Examples:
005=0.5 unit
010=1 unit
100=10 units

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
8=Type 316 stainless steel
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.)

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 FEMALE MALE



CABLE LENGTH TOLERANCES		
OVER [mm]	UP TO AND INCLUDING [mm]	TOLERANCES [mm]
0	305	+19
305	915	+45
915	1830	+56
1830	3660	+89
3660	7320	+165
7320	14640	+317
14640	30500	+610
30500	>	+2% OF FINISHED LENGTH


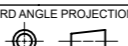
THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX ELECTRONIC TECHNOLOGIES, LLC AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION

DIMENSION UNITS	SCALE	CURRENT REV DESC: NEW P/N ADDED		molex		
mm	1:1					
GENERAL TOLERANCES (UNLESS SPECIFIED)				CSE M12 XP AC FE STR MA STR XM DE		
ANGULAR TOL	± 1.0 °	EC NO: 734641		PRODUCT CUSTOMER DRAWING		
4 PLACES	±	DRWN: RSCHIEBER	2022/12/01	DOCUMENT NUMBER		
3 PLACES	±	CHK'D: RSILLER	2023/01/12	1200668165		
2 PLACES	± 0.05	APPR: RSILLER	2023/01/12	DOC TYPE	DOC PART	REVISION
1 PLACE	± 0.3	INITIAL REVISION:		PSD	000	A6
0 PLACES	± 0.5	DRWN: JMARSZALEK	2016/09/19	SHEET NUMBER		
DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		THIRD ANGLE PROJECTION	DRAWING	SERIES	MATERIAL NUMBER	CUSTOMER
			A3-SIZE	120066	SEE PART LIST	GENERAL MARKET
						2 OF 4

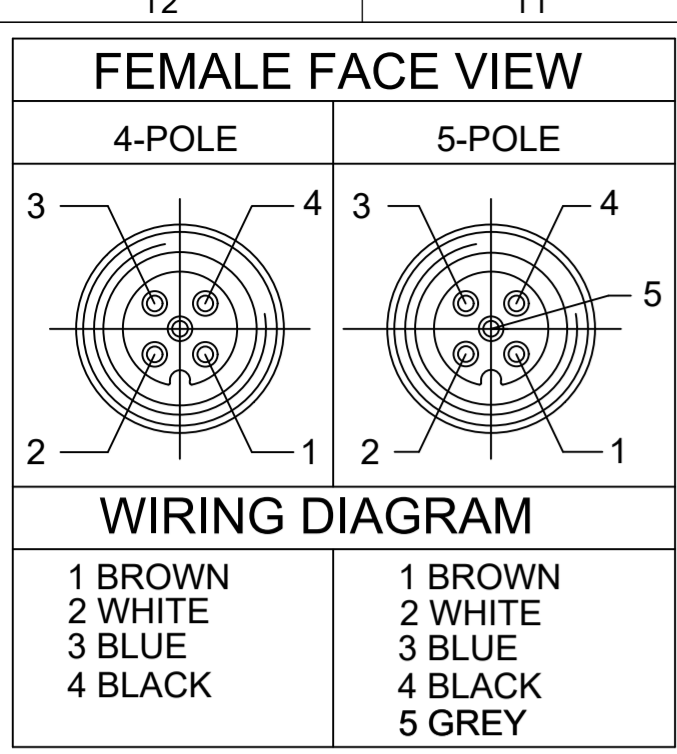
CABLE INFORMATION

(for more information see Cable Data Sheet).

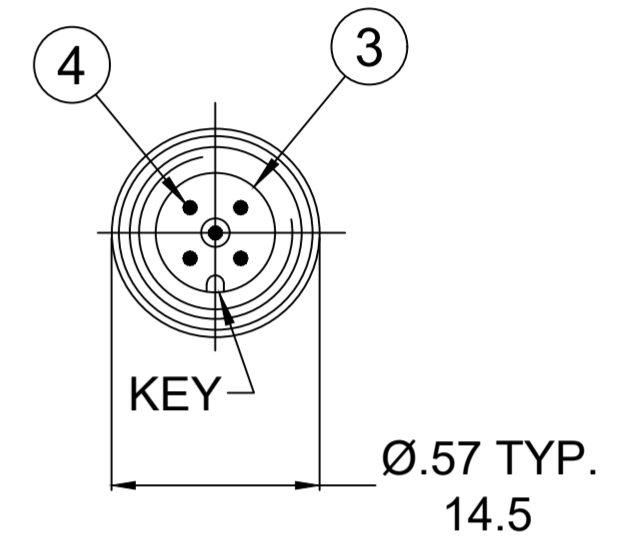
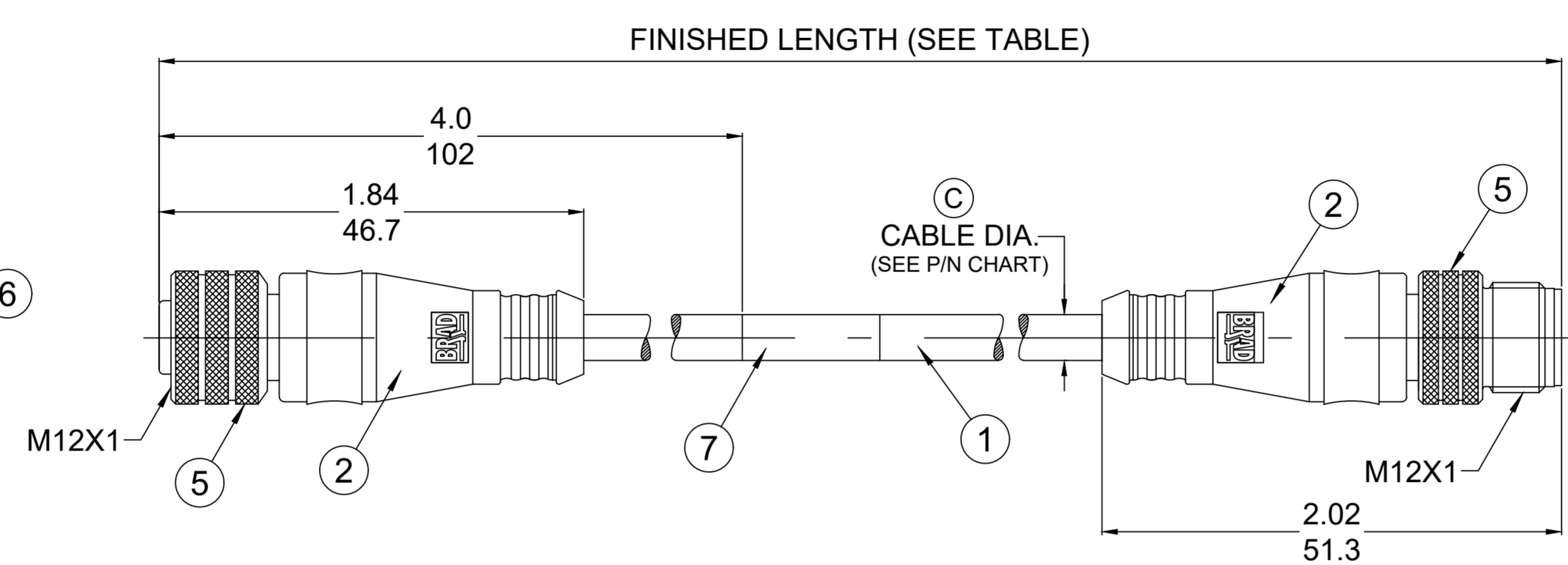
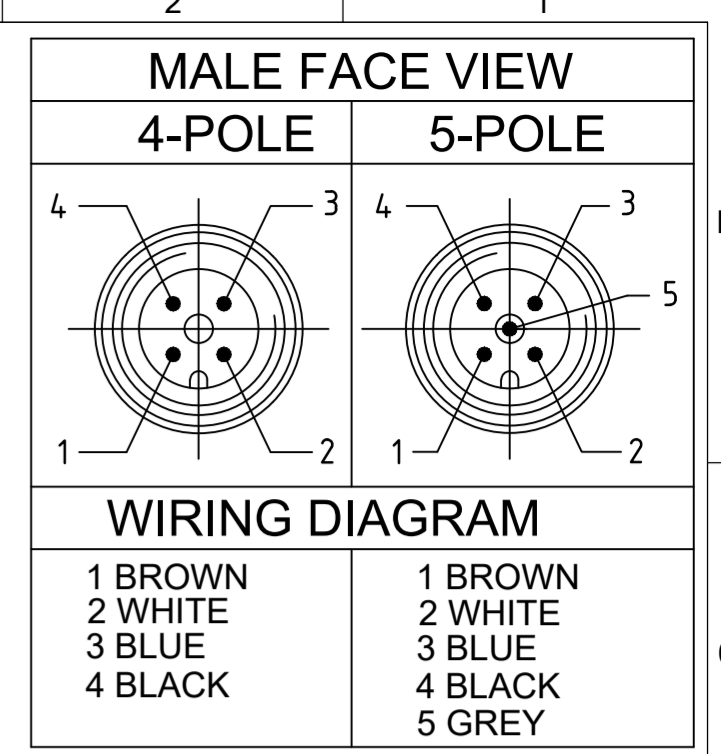
CABLE TYPE	NO. OF WIRES	CROSS SECTION	CABLE JACKET	UL	CSA	STATIC: TEMP. / BENDING RADIUS	DYNAMIC: TEMP. / BENDING RADIUS	DRAG CHAIN	SHIELD
A09	4	22AWG	PVC YELLOW	UL 2661	I/II A/B 80°C/300V	-	-	-	-
B02	4	18AWG	PUR YELLOW	UL 20549	I/II A/B 80°C/300V	-	-	-	-
E52	3 / 4	0.34mm ²	PVC GREY	-	-	-30°C to +70°C	-5°C to +70°C	-	-
E57	5	0.34mm ²	PVC GREY	-	-	-	-5°C to +70°C	-	-
I02	3 / 4 / 8	0.25mm ²	PVC CEI GREY	-	-	-30°C to +70°C	-5°C to +70°C	-	-
I03	3 / 4 / 5	0.34mm ²	PVC CEI GREY	-	-	-30°C to +70°C	-5°C to +70°C	-	-
I20	3 / 4	0.34mm ²	PVC CEI GREY	-	-	-30°C to +70°C	-5°C to +70°C	-	YES
I26	5	0.34mm ²	PVC CEI GREY	-	-	-30°C to +70°C	-5°C to +70°C	-	YES
K03	4 / 5	18AWG	TPE YELLOW	UL ITC or PLC	I/II A/B 90°C/300V	max 105°C	-	-	-
K05	3 / 4 / 5	22AWG	TPE YELLOW	UL ITC or PLTC	I/II A/B 90°C/300V	max 105°C	-	-	-
P04	4	0.50mm ²	PUR BLACK	-	-	-40°C to +90°C, >7.5xO.D.	-15°C to +90°C, >12.5xO.D.	-	-
P19	8	0.25mm ²	PUR BLACK	-	-	-40°C to +90°C, >7.5xO.D.	-15°C to +90°C, >12.5xO.D.	2 000 000 cycles, >15xO.D.	YES
P20	3 / 4 / 5	0.34mm ²	PUR BLACK LS0H	-	-	-30°C to +80°C	-	-	YES
P82	3 / 4 / 5	0.34mm ²	PUR IRR ORANGE	-	-	-50°C to +105°C, >5xO.D.	-40°C to +105°C, >7.5xO.D.	-	-
S19	8	0.25mm ²	PVC YELLOW	UL 2661/1569	C22.2 II A 105°C/300V	-30°C to +105°C, >10xO.D.	-15°C to +105°C, >15xO.D.	-	YES
S20	3 / 4 / 5	0.34mm ²	PVC YELLOW	UL 2661/1731	C22.2 II A 105°C/300V	-30°C to +105°C	-	-	YES
S26	5	0.34mm ²	PVC YELLOW	UL 2661/1731	C22.2 II A 105°C/300V	-30°C to +105°C	-	-	YES

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: NEW P/N ADDED							
mm	1:1	 CSE M12 XP AC FE STR MA STR XM DE							
GENERAL TOLERANCES (UNLESS SPECIFIED)									
ANGULAR TOL	± 1.0 °	EC NO: 734641 DRWN: RSCHIEBER 2022/12/01 CHK'D: RSILLER 2023/01/12 APPR: RSILLER 2023/01/12							
4 PLACES	±								
3 PLACES	±	INITIAL REVISION: DRWN: JMARSZALEK 2016/09/19 APPR: RSILLER 2016/12/08							
2 PLACES	± 0.05								
1 PLACE	± 0.3	DOCUMENT NUMBER		DOC TYPE		DOC PART		REVISION	
0 PLACES	± 0.5	1200668165		PSD		000		A6	
DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		THIRD ANGLE PROJECTION	DRAWING	SERIES	MATERIAL NUMBER	CUSTOMER		SHEET NUMBER	
			A3-SIZE	120066	SEE PART LIST	GENERAL MARKET		3 OF 4	

DOCUMENT STATUS	P1	RELEASE DATE	2023/01/12	11:47:32
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PART NO	ENGINEERING NO.	FINISHED LENGTH	POLES	CABLE DIA.
1200660878	884030K03M003	0.3M [12 IN]	4	.26 [6.6]
1200662229	885030K03M700	70M [229FT 8 IN]	5	.28 [7.1]



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

PART NO. MATRIX 88X030K03XXXX

POLES
(4, 5)

LENGTH
M010 = 1 METER
M050 = 5 METER
M100 = 10 METER

MECHANICAL CHARACTERISTICS: (C)

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

ITEM	COMPONENT	MATERIAL	FINISH
1	CABLE-#18/4-5	TPE JACKET	YELLOW
2	OVERMOLD	TPC	YELLOW
3	INSERT	PUR	BLACK
4	SOCKET/PIN CONTACT	COPPER ALLOY	GOLD OVER NICKEL
5	COUPLER	BRASS	TEFLON/NICKEL
6	O-RING	VITON	RED
7	LABEL	MYLAR	BLACK/YELLOW

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

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

FUNCTIONAL SYMBOLS: FA=0, EC=0, EP=0

DIMENSION UNITS: INCH/MM, SCALE: NTS

GENERAL TOLERANCES (UNLESS SPECIFIED):

	mm	INCH
4 PLACES	±----	±----
3 PLACES	±----	±----
2 PLACES	±----	±----
1 PLACE	±----	±----
0 PLACES	±----	±----
ANGULAR TOL	± ---- °	

DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS

THIRD ANGLE PROJECTION

DRAWING: C-SIZE

SERIES: 120066

EC NO: 645633
DRWN: ABENJAMINLW 2020/09/18
CHK'D: RSTONE 2020/09/29
APPR: BWOODMAN 2020/10/23

INITIAL REVISION:
DRWN: LSTEMMLE 2010/02/01
APPR: FPACHER 2010/02/03

DOCUMENT NUMBER: SD-120066-020
DOC TYPE/DOC PART: PSD 001
REVISION: C

MATERIAL NUMBER: SEE CHART
CUSTOMER: GENERAL MARKET
SHEET NUMBER: 1 OF 1

molex

MICRO-CHANGE CORDSET, M12
4/5 POLE, FEMALE-MALE, STRAIGHT SINGLE KEY,
18/4-5 AWG HI-FLEX

PRODUCT CUSTOMER DRAWING