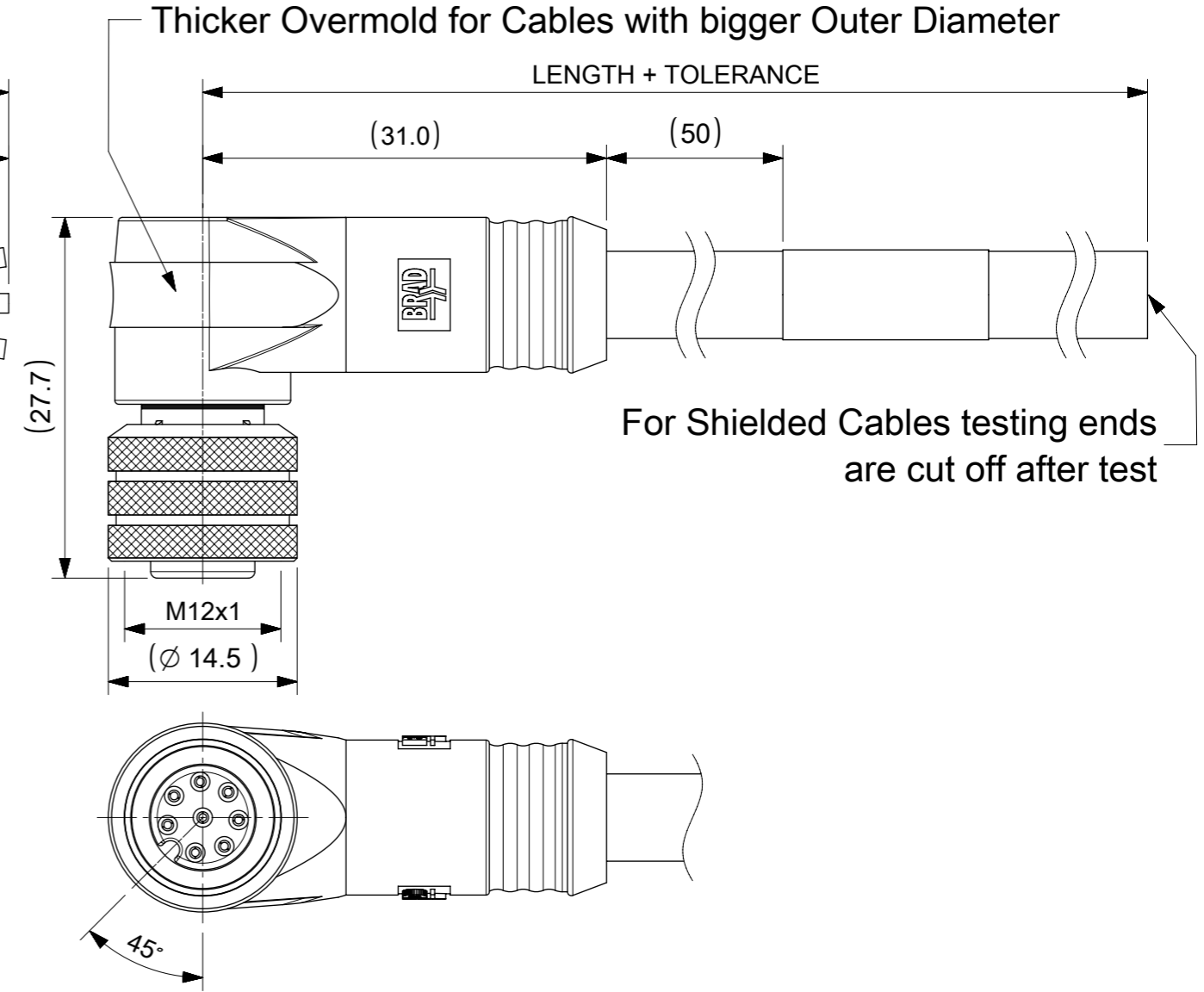
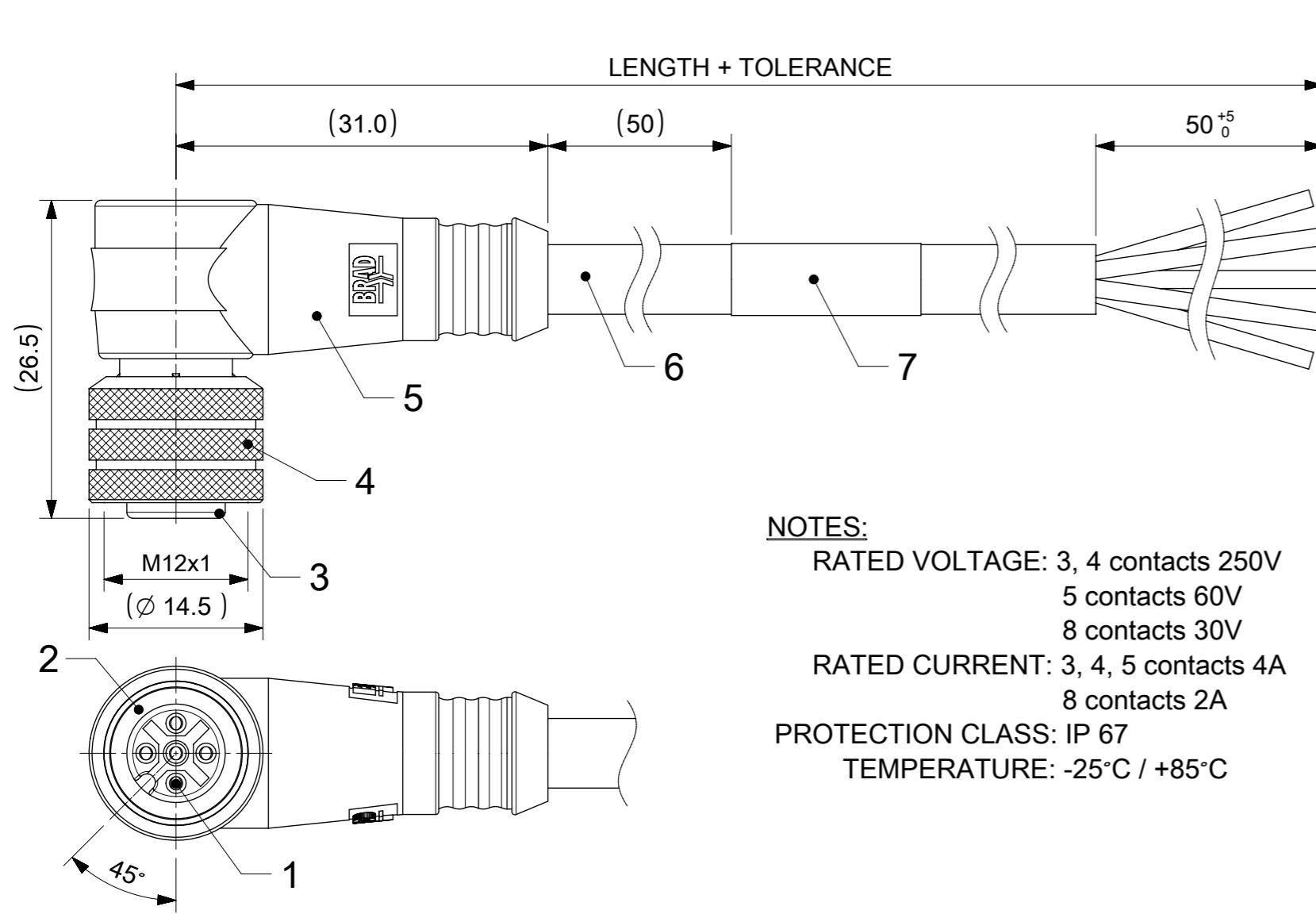


# FEMALE PLUG M12 90° ANGLED



**NOTES:**  
 RATED VOLTAGE: 3, 4 contacts 250V  
 5 contacts 60V  
 8 contacts 30V  
 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	
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 or YELLOW/GREEN	4	BLACK	4	BLACK	4	YELLOW
5	---	5	---	5	GREY or YELLOW/GREEN	5	GREY
						6	PINK
						7	BLUE
						8	RED

## FOR OPTIONS SEE - NUMERICAL CODE - ON SHEET 2

ITEM	QTY.	DESCRIPTION	MATERIAL	FINISH
7	1	LABEL YELLOW	VINYL	---
	-	PRINTING FOR CABLES lxx	---	---
6	-	CABLE	SEE SHEET 2	---
5	-	OVERMOLDING BLACK	TPU	---
4	1	COUPLING NUT FEMALE	BRASS	NICKEL
3	1	INSERT FEMALE BLACK	PUR	---
2	1	ORING RED	FPM	---
1	3 / 4 / 5 / 8	CONTACT M12 FEMALE	BRASS	SELECTIVE Au OVER Ni

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

SYMBOLS	DIMENSION UNITS	SCALE	CURRENT REV DESC:
▽ = 0	mm	2:1	EC NO: 615582
▽ = 0	GENERAL TOLERANCES (UNLESS SPECIFIED)		DRWN: SSM 2019/03/28
▽ = 0	ANGULAR TOL ± 1.0°		CHK'D: RSILLER 2019/04/16
▽ = 0	4 PLACES ±		APPR: RSILLER 2019/04/16
▽ = 0	3 PLACES ±		INITIAL REVISION:
▽ = 0	2 PLACES ± 0.05		DRWN: JMARSZALEK 2016/01/11
▽ = 0	1 PLACE ± 0.1		APPR: RSILLER 2016/04/08
▽ = 0	0 PLACES ± 0.2		
■ = 0	DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		THIRD ANGLE PROJECTION
▽ = 0			DRAWING
		SERIES	MATERIAL NUMBER
		A3-SIZE	120065
		CUSTOMER	GENERAL MARKET

**molex**

CSE M12 XP AC FE RA XM SE UNSH

PRODUCT CUSTOMER DRAWING

DOCUMENT NUMBER: 1200658471 | DOC TYPE: PSD | DOC PART: 000 | REVISION: A4

SHEET NUMBER: 1 OF 3

CODING REQUIRED TO IEC 61076-2-101

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

8 0 X 0 0 1 X X X X X X X X

80=M12x1  
Single ended

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

Heads style:  
001=Plug Female  
90° Angled

Cable type: See Table

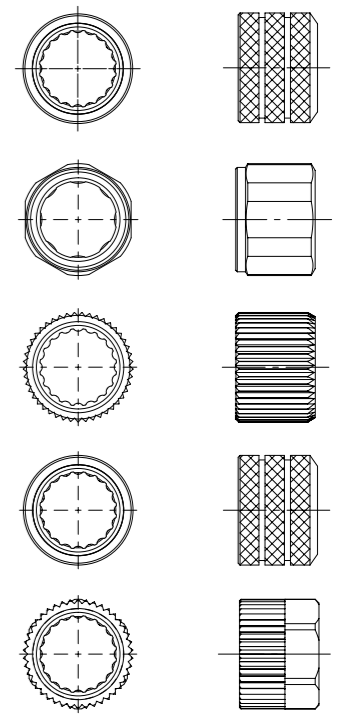
Units:  
M=Meter  
C=Centimeter

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

Overmold color:  
Blank (Standard)=Black TPU  
Blank=Yellow TPU for cables A09,S19,S20,S26  
Blank=Yellow TPE-E for cables K03,K05  
A=Grey / G=Black / Y=Yellow  
Blank=Yellow PVC for cable E13  
Coupling Nut:  
Blank (Standard) & 3=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

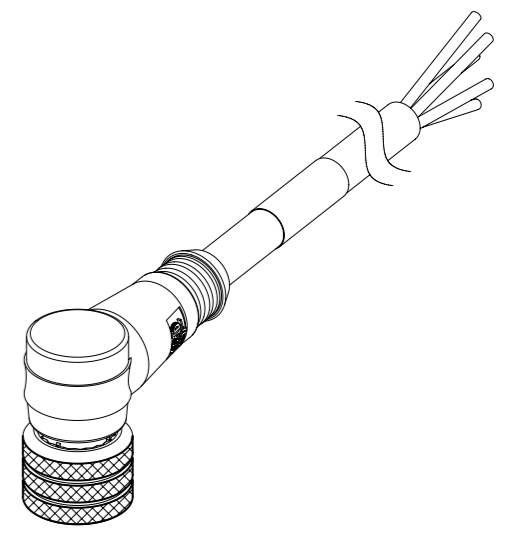
H= 2 pcs. of I/D Carrier  
PVC Transparent  
(Cables Ixx & P82 always  
with 2 pcs. of I/D Carrier  
even if no H in  
Engineering No.)

COUPLING NUTS



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
E13	3	18AWG	PVC YELLOW	UL 2661/1731	I/II A/B 80°C/300V	-	-	-	-
E52	3 / 4 / 8	0.34mm <sup>2</sup>	PVC GREY	-	-	-30°C to +70°C	-5°C to +70°C	-	-
H12	4	0.50mm <sup>2</sup>	PUR BLACK LS0H	UL 21198/10493	C22.2 I/II A/B 80°C/300V	-50°C to +80°C, 5xO.D.	-25°C to +80°C, 10xO.D.	2 000 000, Temp max 60°C	-
H69	4	0.20mm <sup>2</sup>	PUR GREY LS0H	-	-	-	-	-	-
I02	3 / 4 / 8	0.25mm <sup>2</sup>	PVC CEI GREY	-	-	-30°C to +70°C	-5°C to +70°C	-	-
I03	3 / 4 / 5	0.34mm <sup>2</sup>	PVC CEI GREY	-	-	-30°C to +70°C	-5°C to +70°C	-	-
I04	4	0.50mm <sup>2</sup>	PVC CEI GREY	-	-	-25°C to +70°C	-5°C to +70°C	-	-
I20	3 / 4	0.34mm <sup>2</sup>	PVC CEI GREY	-	-	-30°C to +70°C	-5°C to +70°C	-	YES
I26	5	0.34mm <sup>2</sup>	PVC CEI GREY	-	-	-30°C to +70°C	-5°C to +70°C	-	-
K05	3 / 4 / 5	0.34mm <sup>2</sup>	TPE YELLOW	UL ITC E195601 or PLC	I/II A/B 90°C/300V	-	-	-	-
P12	3 / 5	0.50mm <sup>2</sup>	PUR BLACK	-	-	-30°C to +90°C	-5°C to +90°C	-	-
P19	8	0.25mm <sup>2</sup>	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 <sup>2</sup>	PUR BLACK LS0H	-	-	-30°C to +80°C	-	-	YES
P82	3 / 4 / 5	0.34mm <sup>2</sup>	PUR IRR ORANGE	-	-	-50°C to +105°C, 5xO.D.	-40°C to +105°C, 7.5xO.D.	-	-
S19	8	0.25mm <sup>2</sup>	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 <sup>2</sup>	PVC YELLOW	UL 2661/1731	C22.2 II A 105°C/300V	-30°C to +105°C	-	-	YES
S26	5	0.34mm <sup>2</sup>	PVC YELLOW	UL 2661/1731	C22.2 II A 105°C/300V	-30°C to +105°C	-	-	YES



SCALE 1:1

CABLE LENGTH TOLERANCES

OVER	UP TO AND INCLUDING	TOLERANCES
0	305mm	+19mm
305mm	915mm	+45mm
915mm	1830mm	+56mm
1830mm	3660mm	+89mm
3660mm	7320mm	+165mm
7320mm	14640mm	+317mm
14640mm	30500mm	+610mm
30500mm	>	+2% of finished length

SYMBOLS	THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX ELECTRONIC TECHNOLOGIES, LLC AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION		CURRENT REV DESC:		
	▽ = 0	mm	SCALE 1:1	EC NO: 615582	
▽ = 0	GENERAL TOLERANCES (UNLESS SPECIFIED)		4 PLACES ±	DRWN: SSM 2019/03/28	CSE M12 XP AC FE RA XM SE UNSH
▽ = 0	ANGULAR TOL ± 1.0°		3 PLACES ±	CHK'D: RSILLER 2019/04/16	
▽ = 0			2 PLACES ± 0.05	APPR: RSILLER 2019/04/16	PRODUCT CUSTOMER DRAWING
▽ = 0			1 PLACE ± 0.1	INITIAL REVISION:	DOCUMENT NUMBER
▽ = 0			0 PLACES ± 0.2	DRWN: JMARSZALEK 2016/01/11	1200658471
▽ = 0	DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		THIRD ANGLE PROJECTION	APPR: RSILLER 2016/04/08	DOC TYPE DOC PART REVISION
▽ = 0			A3-SIZE	SERIES 120065	PSD 000 A4
DOCUMENT STATUS P1		RELEASE DATE 2019/04/16 06:18:09	MATERIAL NUMBER	CUSTOMER	SHEET NUMBER
			SEE PART LIST	GENERAL MARKET	2 OF 3

# PART LIST

No.	Part No.	Engineering No.	Cable Length
1	1200060010	803001I03M050	5m
2	1200060042	804001I03M050	5m
3	1200060043	804001P82M0507	5m
4	1200060202	803001I03M020	2m
5	1200060204	803001I03M030	3m
6	1200060205	803001I03M100	10m
7	1200060221	803001S20M020	2m
8	1200060222	803001S20M030	3m
9	1200060224	803001S20M050	5m
10	1200060225	803001S20M100	10m
11	1200060492	804001E52M100A	10m
12	1200060503	804001I03M020	2m
13	1200060505	804001I03M030	3m
14	1200060507	804001I03M100	10m
15	1200060508	804001I03M150	15m
16	1200060527	804001S20M010	1m
17	1200060528	804001S20M020	2m
18	1200060529	804001S20M030	3m
19	1200060531	804001S20M050	5m
20	1200061563	805001I03M050	5m
21	1200061612	804001S20M030H	3m
22	1200061850	805001I26M050	5m
23	1200062093	804001H69M100	10m
24	1200062121	804001S20M060	6m
25	1200062148	804001I20M160	16m
26	1200062155	804001P82M0307	3m
27	1200062160	804001S20M100H	10m
28	1200062161	804001P82M1007	10m
29	1200062334	805001I03M100	10m
30	1200062374	804001S20M020H	2m
31	1200062502	804001S20M050H	5m
32	1200062520	804001P82M050	5m
33	1200062575	804001I03M0501	5m
34	1200062589	804001S20M010H	1m
35	1200062615	804001P82M100	10m

No.	Part No.	Engineering No.	Cable Length
36	1200062764	805001P82M1007	10m
37	1200062838	808001E52M100	10m
38	1200062851	803001I03M025	2.5m
39	1200062919	804001P20M100	10m
40	1200062922	804001P20M050	5m
41	1200063109	804001S20M1001 *	10m
42	1200063165	805001P20M050	5m
43	1200063286	803001E13M030	3m
44	1200063320	803001E13M060	6m
45	1200063386	805001P82M0507	5m
46	1200063532	804001I03M0505	5m
47	1200063563	804001I04M030G	3m
48	1200063564	805001I26M100	10m
49	1200063645	803001E13M100	10m
50	1200063682	803001P82M0207	2m
51	1200063825	805001I03M050G	5m
52	1200064095	805001P20M100	10m
53	1200064134	804001E52M050	5m
54	1200064184	804001P20M250	25m
55	1200064210	803001I03M051	5.1m
56	1200064244	804001I03M040	4m
57	1200064268	808001S19M100	10m
58	1200064380	804001S20M0201 *	2m
59	1200064381	804001S20M0501 *	5m
60	1200064452	804001S20M3001 *	30m
61	1200064457	803001S20M0501 *	5m
62	1200071330	804001P82M0207	2m
63	1200650814	804001E52M050A	5m
64	1200650910	804001S20M100	10m
65	1200651642	804001K05M050	5m
66	1200651644	804001K05M100	10m
67	1200651771	803001E52M050A	5m
68	1200651797	808001E52M020	2m
69	1200655008	808001P19M050	5m
70	1200655050	803001E52M050	5m

No.	Part No.	Engineering No.	Cable Length
71	1200655071	805001P82M0207	2m
72	1200658006	804001P82M1507	15m
73	1200658007	804001P82M2007	20m
74	1200658052	803001I03M036	3.6m
75	1200658054	803001S20M010	1m
76	1200658089	805001P12M020	2m
77	1200658090	805001S26M100	10m
78	1200658106	808001P19M030	3m
79	1200658187	804001S20M200	20m
80	1200658203	805001S26M1001 *	10m
81	1200658276	804001I20M100	10m
82	1200658287	803001I20M100	10m
83	1200658324	804001P20M030	3m
84	1200658326	805001I03M015	1.5m
85	1200658328	808001P19M100	10m
86	1200658471	805001I03M010	1m
87	1200658485	804001H69M010	1m
88	1200658504	808001S19M050	5m
89	1200658510	804001S20M2001	20m
90	1200658544	808001P19M250	25m
91	1200658547	803001P20M150	15m
92	1200658548	805001I26M250	25m
93	1200658594	803001I03M040	4m
94	1200658607	805001I03M030	3m
95	1200658608	805001I03M040	4m
96	1200658683	808001I02M010	1m
97	1200658684	808001I02M020	2m
98	1200658685	808001I02M030	3m
99	1200658686	808001I02M040	4m
100	1200658687	808001I02M050	5m
101	1200658688	808001I02M100	10m
102	1200658707	804001I03M010G	1m
103	1200658708	804001I03M020G	2m
104	1200658709	804001I03M030G	3m
105	1200658710	804001I03M040G	4m

No.	Part No.	Engineering No.	Cable Length
106	1200658711	804001I03M050G	5m
107	1200658712	804001I03M100G	10m
108	1200658875	803001S20M0201G	2m
109	1200658933	805001P12M050	5m
110	1200658934	805001P12M100	10m
111	1200659029	804001S20M150	15m
112	1200659068	804001I03M050Y	5m
113	1200659069	804001P82M0507Y	5m
114	1200659078	804001I03M100Y	10m
115	1200659079	804001S20M050Y	5m
116	1200659084	805001I26M050Y	5m
117	1200659086	804001P82M1007Y	10m
118	1200659091	804001S20M100Y	10m
119	1200659098	804001S20M200Y	20m
120	1200659112	804001H12M050	5m
121	1200659114	805001S26M050	5m
122	1200659117	805001I26M100Y	10m
123	1200659118	803001I03M050Y	5m
124	1200659120	803001I03M030Y	3m
125	1200659121	803001I03M100Y	10m
126	1200659156	805001S26M2001 *	20m
127	1200659160	804001I03M020Y	2m
128	1200659168	803001I03M025Y	2.5m
129	1200659201	805001S26M150H	15m
130	1200659240	803001P20M100HY	10m
131	1200659251	804001H12M010	1m
132	1200659252	804001H12M030	3m
133	1200659270	804001H12M100	10m
134	1200659361	804001I03M030Y	3m
135	1200659374	804001S20M350	35m
136	1200659774	808001S19M150	15m
137	1200659810	805001S26M200	20m
138	1200668648	804001P82M0207Y	2m
139	1200656064	805001E03M0271	2.7m
140	1200656216	808001E02M200	20m

## NOTES:

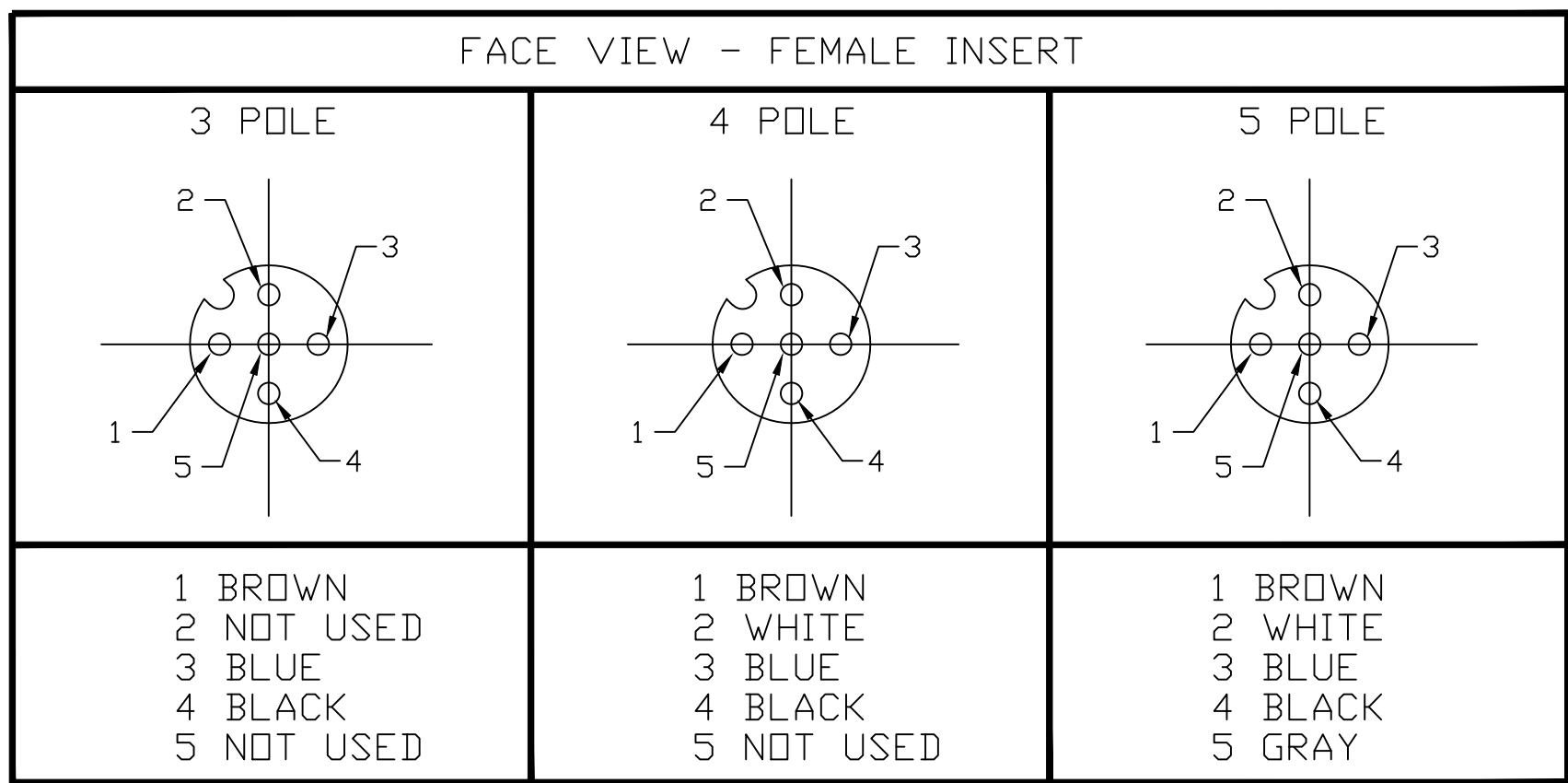
\* - Part No. with Yellow PVC overmolding

SYMBOLS	THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX ELECTRONIC TECHNOLOGIES, LLC AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION	
	DIMENSION UNITS	SCALE
▽ = 0	mm	1:1
▽ = 0	GENERAL TOLERANCES (UNLESS SPECIFIED)	
▽ = 0	ANGULAR TOL	± 1.0°
▽ = 0	4 PLACES	±
▽ = 0	3 PLACES	±
▽ = 0	2 PLACES	± 0.05
▽ = 0	1 PLACE	± 0.1
▽ = 0	0 PLACES	± 0.2
■ = 0	DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS	
▽ = 0	THIRD ANGLE PROJECTION	DRAWING
		A3-SIZE
	SERIES	120065
	MATERIAL NUMBER	SEE PART LIST
	CUSTOMER	GENERAL MARKET
	SHEET NUMBER	3 OF 3
	DOCUMENT NUMBER	1200658471
	DOC TYPE	PSD
	DOC PART	000
	REVISION	A4
	EC NO:	615582
	DRWN:	SSM 2019/03/28
	CHK'D:	RSILLER 2019/04/16
	APPR:	RSILLER 2019/04/16
	INITIAL REVISION:	
	DRWN:	JMARSZALEK 2016/01/11
	APPR:	RSILLER 2016/04/08

# molex

CSE M12 XP AC FE RA XM SE UNSH

PRODUCT CUSTOMER DRAWING



PART NO.	ENGINEERING NO.	FINISHED LENGTH	POLES	CABLE DIA.
1200651489	803001K05M020	2.0M [6'7"]	3	.20/5.1
1200651640	804001K05M030	3.0M [9'10"]	4	.21/5.3
1200652457	805001K05M100	10.0M [32'10"]	5	.23/5.8

*CABLE FLEX CHARACTERISTICS*

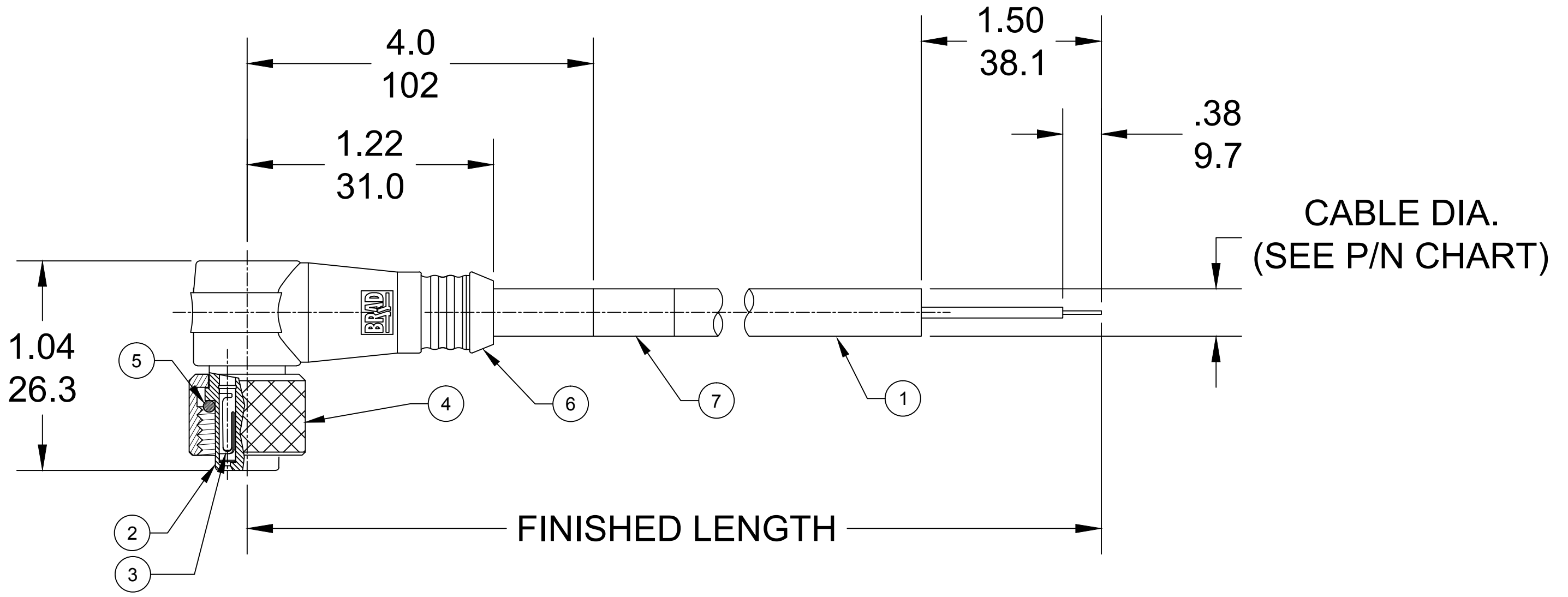
TORSIONAL FLEX TEST	10 MILLION CYCLES PER MIL-C-13777G
BEND FLEX TEST	10 MILLION CYCLES PER MIL-C-13777G
WELD SLAG RESISTANCE	WOODHEAD STANDARD S-300

**PART NO. LEGEND**  
**803001K05M020**

POLES: 3,4 & 5

CABLE TYPE  
 22AWG  
 TPE YELLOW

FINISHED LENGTH  
 M005----0.5 Meters  
 M010----1.0 Meter  
 M100----10 Meters



- NOTES:**
- MATERIAL: AS NOTED
  - FINISH: AS NOTED
  - ELECTRICAL:  
 VOLTAGE: 250V  
 CURRENT: 4A
  - TEMP RATING: -25°TO +105°C
  - PROTECTION: IP67 (WHEN MATED)
  - COUPLING THREAD: M12 X 1
  - UL RECOGNIZED FILE: E152210  
 CSA CERTIFIED FILE: LR6837
  - ALL DIMS ARE FOR REFERENCE UNLESS NOTED OTHERWISE

**CABLE LENGTH TOLERANCES**

>.3M [1FT]: +19mm-0 [+1.75in-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

ITEM	DESCRIPTION	MATERIAL	FINISH
7	WRAP LABEL	VINYL	BLACK/YELLOW
6	OVERMOLD	TPE	YELLOW
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, 300V, 105°	TPE JACKET	YELLOW

EC NO: IPG2019-0189  
 DRWN: RSTONE 2018/10/25  
 CHKD: C CHRAST 2018/11/07  
 APPR: BWOODMAN2018/11/30

RELEASED  
 DESCRIPTION

	GENERAL TOLERANCES (UNLESS SPECIFIED)	
	mm	INCH
4 PLACES	±---	±---
3 PLACES	±---	±---
2 PLACES	±---	±---
1 PLACE	±---	±---
ANGULAR ±---°		
DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		

DIMENSION STYLE	
IN/MM	
DRAWN BY	DATE
RSTONE	2018/10/25
CHECKED BY	DATE
C CHRAST	2018/11/07
APPROVED BY	DATE
BWOODMAN	2018/11/30
MATERIAL NO.	
SEE P/N CHART	
SIZE	
C	

SCALE	DESIGN UNITS	THIRD ANGLE PROJECTION	
---	INCH		
<b>MIC CABLE ASSY</b>			
<b>M12, FEMALE 90 DEG</b>			
<b>22AWG TPE YELLOW</b>			
MOLEX INCORPORATED			
DOCUMENT NO.		SHEET NO.	
SD-120065-113		1 OF 1	
THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION			