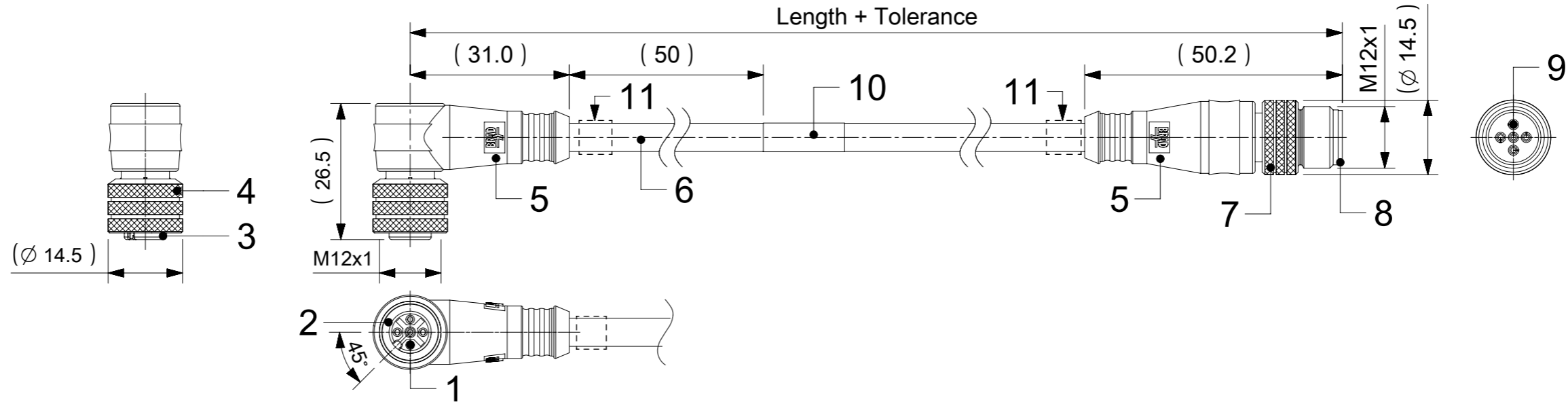


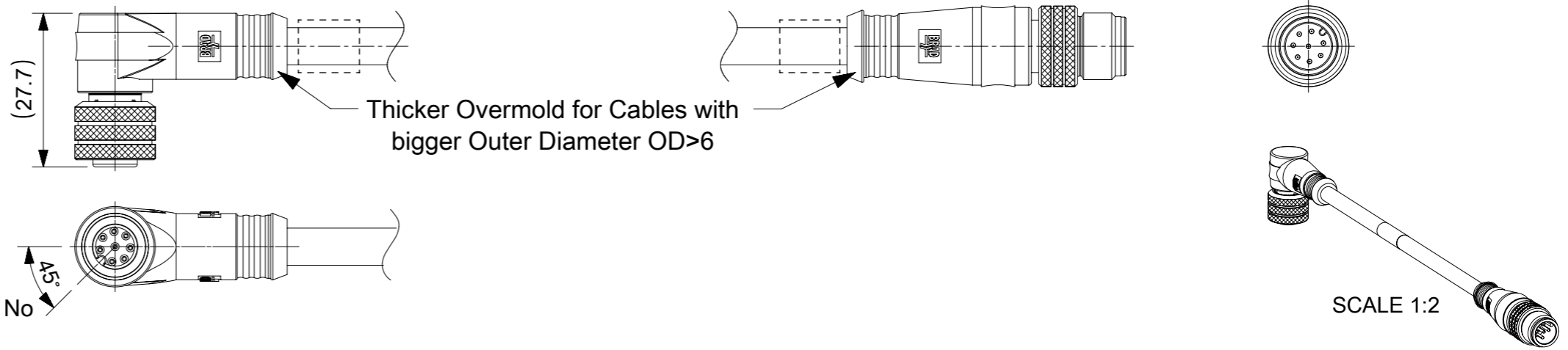
# FEMALE PLUG M12 90° ANGLED TO MALE PLUG M12 STRAIGHT



**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

\* FOR CABLES Ixx USE PRINTING ON THE CABLE IN THE SAME MEASUREMENT LIKE FOR LABEL - ENGINEERING No



**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	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 PART LIST	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	SEE PART LIST	---
7	1	COUPLING NUT MALE	SEE PART LIST	---
6	-	CABLE	SEE SHEET 2	---
5	-	OVERMOULDING BLACK	SEE PART LIST	---
4	1	COUPLING NUT FEMALE	SEE PART LIST	---
3	1	INSERT FEMALE BLACK	SEE PART LIST	---
2	1	O-RING RED	FPM	---
1	3 / 4 / 5 / 8	CONTACT FEMALE	SEE PART LIST	SELECTIVE Au OVER Ni

FUNCTIONAL 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	DIMENSION UNITS	SCALE	 CSE M12 XP AC FE RA MA STR XM DE PRODUCT CUSTOMER DRAWING	
▽/▽ = 0	mm	1:1		
▽/▽ = 0	GENERAL TOLERANCES (UNLESS SPECIFIED)			
	ANGULAR TOL ± 1.0°			
DIVISIONAL SYMBOLS	4 PLACES	±	EC NO: 684766	2021/11/03
	3 PLACES	±	DRWN: SSM	2021/11/10
	2 PLACES	± 0.05	CHK'D: RSILLER	2021/11/10
	1 PLACE	± 0.3	APPR: RSILLER	2021/11/10
	0 PLACES	± 0.5	INITIAL REVISION:	
	DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS	THIRD ANGLE PROJECTION	DRWING	SERIES
			A3-SIZE	120066
			MATERIAL NUMBER	CUSTOMER
			SEE SHEET 3, 4	GENERAL MARKET
			DOCUMENT NUMBER	DOC TYPE   DOC PART   REVISION
			1200660973	PSD   000   A9
				SHEET NUMBER
				1 OF 4

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

**8 8 X 0 X 1 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:  
031=Plug Female 90°  
to Plug Male Straight  
021=Plug Female 90°  
to Plug Male Straight  
with Female  
Coupling Nut

Cable type: See Table

Units:  
M=Meter  
C=Centimeter

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  
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 TPU 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 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
I03	3 / 4 / 5	0.34mm <sup>2</sup>	PVC CEI GREY	-	-	-30°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	-	YES
K03	4	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 PLC	I/II A/B 90°C/300V	max 105°C	-	-	-
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.	-	-
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
E02	3 / 4 / 5 / 8	0.25mm <sup>2</sup>	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 <sup>2</sup>	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.	-	-
H09	3 / 4 / 5	0.34mm <sup>2</sup>	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	-
P03	3 / 4 / 5	0.34mm <sup>2</sup>	PUR / PVC BLACK	-	-	-30°C to +80°C, >7xO.D.	-5°C to +80°C, >15xO.D.	-	-
H08	8	0.25mm <sup>2</sup>	PUR BLACK LSOH	UL 21198/10493	UL 21198/10493	-40°C to +80°C, >5xO.D.	-25°C to +80°C, >10xO.D.	2 000 000 cycles, Temp max 60°C	-
P02	8	0.25mm <sup>2</sup>	PUR / PVC BLACK	-	-	-30°C to +80°C, >7xO.D.	-5°C to +80°C, >15xO.D.	-	-

**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

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

FUNCTIONAL SYMBOLS:  $\sqrt{A} = 0$ ,  $\sqrt{E} = 0$ ,  $\sqrt{V} = 0$

DIVISIONAL SYMBOLS: 4 PLACES ±, 3 PLACES ±, 2 PLACES ± 0.05, 1 PLACE ± 0.3, 0 PLACES ± 0.5

SCALE: 1:1

GENERAL TOLERANCES (UNLESS SPECIFIED): ANGULAR TOL ± 1.0°

CURRENT REV DESC:

EC NO: 684766  
DRWN: SSM  
CHK'D: RSILLER  
APPR: RSILLER

INITIAL REVISION:  
DRWN: JMARSZALEK  
APPR: RSILLER

DATE: 2021/11/03, 2021/11/10, 2021/11/10, 2016/10/06, 2016/12/08

**molex**

CSE M12 XP AC FE RA MA STR XM DE

PRODUCT CUSTOMER DRAWING

DOCUMENT NUMBER: 1200660973

DOC TYPE: PSD, DOC PART: 000, REVISION: A9

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: 2 OF 4



Pos.	Part No.	Engineering No.	Cable Length
143	1200668753	883031P03M020H	2m
144	1200070144	883031P03M030	3m
145	1200668326	883031P03M030G	3m
146	1200070145	883031P03M050	5m
147	1200668520	883031P03M070	7m
148	1200070146	883031P03M100	10m
149	1200070507	884031E03M003	0.3m
150	1200070508	884031E03M006	0.6m
151	1200070509	884031E03M010	1m
152	1200668361	884031E03M015	1.5m
153	1200070511	884031E03M020	2m
154	1200070512	884031E03M030	3m
155	1200669260	884031E03M030H	3m
156	1200070904	884031E03M050	5m
157	1200071157	884031E03M060	6m
158	1200071278	884031E03M100	10m
159	1200072011	884031E03M200	20m
160	1200668669	884031H09M006	0.6m
161	1200668846	884031H09M008	0.8m
162	1200668210	884031H09M009	0.9m
163	1200668484	884031H09M010	1m
164	1200668848	884031H09M013	1.3m
165	1200668488	884031H09M015	1.5m
166	1200668845	884031H09M018	1.8m
167	1200668212	884031H09M020	2m
168	1200668847	884031H09M021	2.1m
169	1200668215	884031H09M030	3m
170	1200668670	884031H09M050	5m
171	1200668671	884031H09M100	10m
172	1200070526	884031P03M003	0.3m
173	1200070527	884031P03M006	0.6m
174	1200060056	884031P03M010	1m
175	1200060057	884031P03M020	2m
176	1200070529	884031P03M030	3m
177	1200071187	884031P03M050	5m
178	1200072012	884031P03M100	10m
179	1300288001	885031D12M020	2m
180	1200668658	885031E02M020	2m
181	1200668610	885031E02M050	5m
182	1200668660	885031E02M100	10m
183	1200668339	885031E03M006	0.6m
184	1200668189	885031E03M010	1m
185	1200668278	885031E03M020	2m
186	1200668340	885031E03M030	3m
187	1200668279	885031E03M050	5m
188	1200668653	885031E03M070	7m
189	1200668348	885031E03M100	10m
190	1200668761	885031E03M150	15m

Pos.	Part No.	Engineering No.	Cable Length
191	1200669229	885031H09C250	25m
192	1200668512	885031H09M006	0.6m
193	1200668496	885031H09M010	1m
194	1200668513	885031H09M020	2m
195	1200668514	885031H09M030	3m
196	1200668515	885031H09M050	5m
197	1200668516	885031H09M100	10m
198	1200073085	885031P03M006	0.6m
199	1200668188	885031P03M010	1m
200	1200072376	885031P03M0105	1m
201	1200070917	885031P03M020	2m
202	1200668091	885031P03M025	2.5m
203	1200070919	885031P03M030	3m
204	1200668273	885031P03M050	5m
205	1200073086	885031P03M100	10m
206	1200070434	884021E03M020	2m
207	1200072575	888031P02M030	3m
208	1200072708	888031P02M060	6m
209	1200658319	888031H08M050	5m
210	1200661620	888031P02M020	2m
211	1200661626	888031P02M010	1m
212	1200668673	888031E02M0041	0.4m
213	1200668849	888031P02M150	15m
214	1200656208	888031H08C250	2.5m
215	1200656209	888031H08M005	0.5m
216	1200656210	888031H08M008	0.8m
217	1200656211	888031H08M012	1.2m
218	1200656212	888031H08M015	1.5m
219	1200070057	883021E03M006	0.6m
220	1200070058	883021E03M020	2m
221	1200070439	884021P03M006	0.6m
222	1200070440	884021P03M010	1m
223	1200070441	884021P03M020	2m
224	1200070442	884021P03M030	3m
225	1200070870	883021P03M050	5m
226	1200072191	883021E03M030	3m
227	1200072198	883021E03M050	5m
228	1200665038	884021E03M050	5m
229	1200668061	884021E03M006	0.6m
230	1200668219	884021E03M030	3m
231	1200668673	888031E02M0041	0.4m
232	1200669541	884031P03M015	1.5m
233	1200669885	884031E03M004	0.4m
234	1200669886	884031E03M005	0.5m
235	1200669887	884031E03M013	1.3m
236	1200669888	884031E03M080	8m
237			
238			

FUNCTIONAL SYMBOLS	THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX ELECTRONIC TECHNOLOGIES, LLC AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION		
	$\nabla_A = 0$ $\nabla_E = 0$ $\nabla_V = 0$	DIMENSION UNITS: <b>mm</b> SCALE: <b>1:1</b>	CURRENT REV DESC: <div style="text-align: center;"><b>molex</b></div> CSE M12 XP AC FE RA MA STR XM DE
DIVISIONAL SYMBOLS	GENERAL TOLERANCES (UNLESS SPECIFIED) ANGULAR TOL $\pm 1.0^\circ$ 4 PLACES $\pm$ 3 PLACES $\pm$ 2 PLACES $\pm 0.05$ 1 PLACE $\pm 0.3$ 0 PLACES $\pm 0.5$		EC NO: 684766 DRWN: SSM CHK'D: RSILLER APPR: RSILLER INITIAL REVISION: DRWN: JMARSZALEK APPR: RSILLER
	DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS 		DOCUMENT NUMBER: <b>1200660973</b> DOC TYPE: PSD DOC PART: 000 REVISION: <b>A9</b>
THIRD ANGLE PROJECTION 		DRAWING: <b>A3-SIZE</b> SERIES: <b>120066</b>	MATERIAL NUMBER: SEE PART LIST CUSTOMER: GENERAL MARKET SHEET NUMBER: 4 OF 4