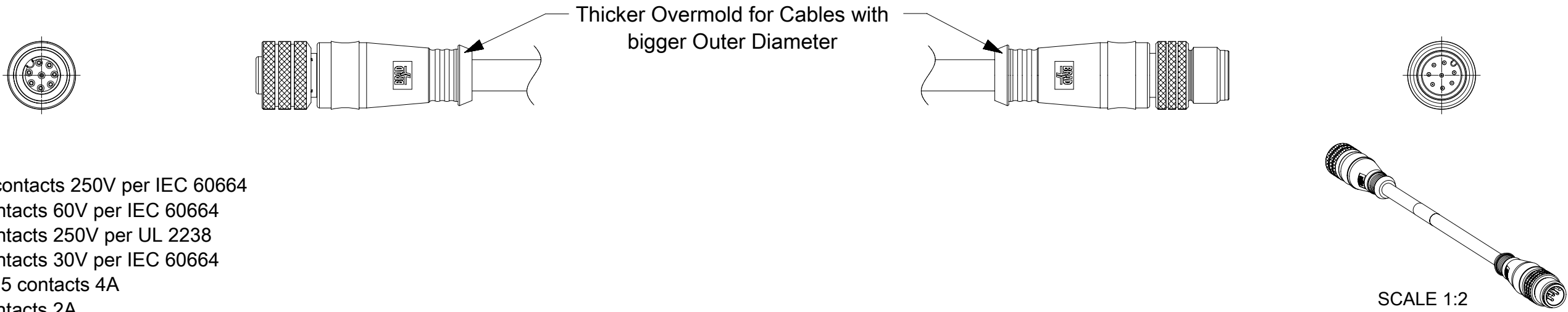
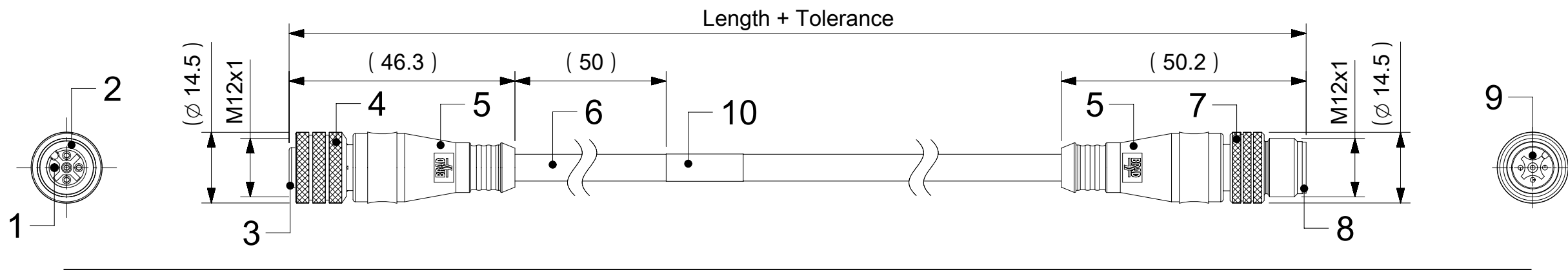


FEMALE PLUG M12 STRAIGHT TO MALE PLUG M12 STRAIGHT



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
CODING REQUIRED TO IEC 61076-2-101								

FOR OPTIONS SEE - NUMERICAL CODE - ON SHEET 2

10	1	LABEL YELLOW	VINYL	---
	-	PRINTING FOR CABLES lxx	---	---
9	3 / 4 / 5 / 8	CONTACT MALE	BRASS	SELECTIVE Au OVER Ni
8	1	INSERT MALE BLACK	TPU	---
7	1	COUPLING NUT MALE	BRASS	NICKEL
6	-	CABLE	SEE SHEET 2	---
5	-	OVERMOULDING 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 FEMALE	BRASS	SELECTIVE Au OVER Ni
ITEM	QTY.	DESCRIPTION	MATERIAL	FINISH

THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX ELECTRONIC TECHNOLOGIES, LLC AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION																				
QUALITY SYMBOLS		2017/05/25 2017/05/30		GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION UNITS		SCALE		molex® CSE M12 XP AC FE STR MA STR XM DE										
						MM		1:1												
						ANGULAR TOL ± 1.0 °				DRWN BY		DATE		JMARSZALEK2016/09/19						
										JMAR		2016/09/19								
						4 PLACES		±		CHK'D BY		DATE		PRODUCT CUSTOMER DRAWING						
						3 PLACES		±		APPR BY		DATE								
						2 PLACES		± 0.05		RSILLER		2016/12/08		SERIES		MATERIAL NUMBER			CUSTOMER	
						1 PLACE		± 0.3		DRAWING SIZE		THIRD ANGLE PROJECTION		120066		SEE SHEET 3-4			GENERAL MARKET	
						0 PLACES		± 0.5						DOCUMENT NUMBER		DOC TYPE		DOC PART		SHEET NUMBER
						DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		A1		REV		A3		1200668165		PSD		000		1 OF 4

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

88X030XXXXXX

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

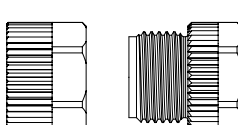
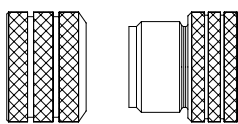
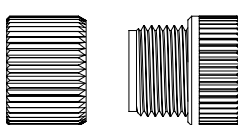
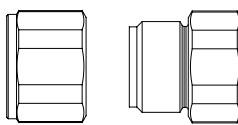
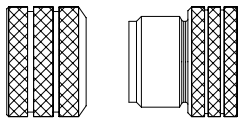
Options

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

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
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	0.34mm²	PVC GREY	-	-	-30°C to +70°C	-5°C to +70°C	-	-
I02	3 / 4 / 8	0.25mm²	PVC CEI GREY	-	-	-30°C to +70°C	-5°C to +70°C	-	-
I03	3 / 4 / 5	0.34mm²	PVC CEI GREY	-	-	-30°C to +70°C	-5°C to +70°C	-	-
I20	3 / 4	0.34mm²	PVC CEI GREY	-	-	-30°C to +70°C	-5°C to +70°C	-	YES
I26	5	0.34mm²	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	0.50mm²	PUR BLACK	-	-	-40°C to +90°C, >7.5xO.D.	-15°C to +90°C, >12.5xO.D.	-	-
P19	8	0.25mm²	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	0.34mm²	PUR BLACK LS0H	-	-	-30°C to +80°C	-	-	YES
P82	3 / 4 / 5	0.34mm²	PUR IRR ORANGE	-	-	-50°C to +105°C, >5xO.D.	-40°C to +105°C, >7.5xO.D.	-	-
S19	8	0.25mm²	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	0.34mm²	PVC YELLOW	UL 2661/1731	C22.2 II A 105°C/300V	-30°C to +105°C	-	-	YES
S26	5	0.34mm²	PVC YELLOW	UL 2661/1731	C22.2 II A 105°C/300V	-30°C to +105°C	-	-	YES

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

QUALITY SYMBOLS

 = 0

 = 0

 = 0

 = 0

 = 0

 = 0

 = 0

 = 0

 = 0

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

2017/05/25

2017/05/30

EC NO: 117457

DRWN: FGAIK

CHK'D: BBRAUCH

APPR: BBRAUCH

REV

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

DIMENSION UNITS

MM

DRWN BY

JMARSZALEK

DATE

2016/09/19

CHK'D BY

DATE

APPR BY

RSILLER

DATE

2016/12/08

DRAWING SIZE

A3

THIRD ANGLE PROJECTION

SCALE

1:1



CSE M12 XP AC FE STR MA STR XM DE

PRODUCT CUSTOMER DRAWING

SERIES

120066

MATERIAL NUMBER

SEE SHEET 3-4

CUSTOMER

GENERAL MARKET

DOCUMENT NUMBER

1200668165

DOC TYPE

PSD

DOC PART

000

SHEET NUMBER

2 OF 4

9				8				7				6				5				4				3				2				1			
PART LIST																																			
E	No.	Part No.	Engineering No.	Cable Length	No.	Part No.	Engineering No.	Cable Length	No.	Part No.	Engineering No.	Cable Length	No.	Part No.	Engineering No.	Cable Length	No.	Part No.	Engineering No.	Cable Length	No.	Part No.	Engineering No.	Cable Length	No.	Part No.	Engineering No.	Cable Length	No.	Part No.	Engineering No.	Cable Length			
	1	1200070023	884030S20M060H	6m	36	1200071066	884030P82M0067	0.6m	71	1200660291	884030A09M070	7m	106	1200660905	884030K03M140	14m	1	1200070095	883030I03M003	0.3m	37	1200071067	884030P82M0037	0.3m	72	1200660683	884030K05M003	0.3m	107	1200660906	884030K03M150	15m			
	2	1200070096	883030I03M006	0.6m	38	1200071068	884030P82M0107	1m	73	1200660684	884030K05M005	0.5m	108	1200660907	884030K03M160	16m	3	1200070097	883030I03M010	1m	39	1200071069	884030P82M0157	1.5m	74	1200660686	884030K05M006	0.6m	109	1200660909	884030K03M200	20m			
	4	1200070098	883030I03M020	2m	40	1200071088	884030P82M0207	2m	75	1200660687	884030K05M010	1m	110	1200660911	884030K03M250	25m	5	1200070099	883030I03M030	3m	41	1200071137	884030S20M030H	3m	76	1200660688	884030K05M015	1.5m	111	1200660915	884030K05M070	7m			
	6	1200070100	883030I03M050	5m	42	1200071141	884030S20M020H	2m	77	1200660689	884030K05M020	2m	112	1200660918	884030K05M140	14m	7	1200070101	883030I03M100	10m	43	1200071161	884030S20M100H	10m	78	1200660690	884030K05M030	3m	113	1200660921	884030K05M200	20m			
	8	1200070110	883030S20M010	1m	44	1200071162	884030P82M006	0.6m	79	1200660691	884030K05M040	4m	114	1200660922	884030K05M210	21m	9	1200070111	883030S20M020	2m	45	1200071178	884030S20M006H	0.6m	80	1200660692	884030K05M050	5m	115	1200661034	885030K03M010	1m			
	10	1200070480	884030I03M010	1m	46	1200071188	884030S20M050H	5m	81	1200660693	884030K05M060	6m	116	1200661035	885030K03M020	2m	11	1200070481	884030I03M020	2m	47	1200071237	884030S20M005H	0.5m	82	1200660694	884030K05M080	8m	117	1200661036	885030K03M030	3m			
	12	1200070483	884030I03M050	5m	48	1200071238	884030S20M015H	1.5m	83	1200660695	884030K05M100	10m	118	1200661038	885030K03M050	5m	13	1200070484	884030I03M060	6m	49	1200071254	884030P82M050	5m	84	1200660696	884030K05M120	12m	119	1200661042	885030K03M090	9m			
	14	1200070485	884030I03M100	10m	50	1200071264	884030S20M040H	4m	85	1200660697	884030K05M150	15m	120	1200661043	885030K03M100	10m	15	1200070486	884030P82M0057	0.5m	51	1200071272	884030S20M005	0.5m	86	1200660698	884030K05M180	18m	121	1200661044	885030K03M150	15m			
	16	1200070494	884030P82M0057	0.5m	52	1200071279	885030I26M050	5m	87	1200660699	884030K05M230	23m	122	1200661434	884030E52M020A	2m	17	1200070499	884030S20M020	2m	53	1200071338	884030I20M030	3m	88	1200660700	884030K05M300	30m	123	1200661438	884030K05M250	25m			
D	18	1200070500	884030S20M030	3m	54	1200071343	883030E52M003A	0.3m	89	1200660857	884030B02M020	2m	124	1200661441	884030K05M190	19m	19	1200070502	884030S20M050	5m	55	1200071428	884030P82M0407	4m	90	1200660860	884030B02M030	3m	125	1200661472	884030E52M050A	5m			
	20	1200070504	884030S20M100	10m	56	1200071501	884030P82M003	0.3m	91	1200660862	884030B02M050	5m	126	1200661543	884030K03M180	18m	21	1200070597	885030S26M010	1m	56	1200071501	884030P82M003	0.3m	92	1200660867	884030B02M100	10m	127	1200661574	888030S19M120	12m			
	22	1200070653	884030E52M200A	20m	57	1200071580	884030P82M030	3m	93	1200660878	884030K03M003	0.3m	128	1200661575	888030S19M030	3m	22	1200070653	884030E52M200A	20m	58	1200071582	884030P82M015	1.5m	94	1200660880	884030K03M006	0.6m	129	1200661576	888030S19M050	5m			
	23	1200070774	884030I03M006	0.6m	59	1200071624	884030E52M030A	3m	95	1200660881	884030K03M010	1m	130	1200661577	888030S19M100	10m	23	1200070774	884030I03M006	0.6m	59	1200071624	884030E52M030A	3m	96	1200660883	884030K03M020	2m	131	1200661664	885030K03M005	0.5m			
	24	1200070785	884030I03M030	3m	60	1200071627	884030I03M0205	2m	97	1200660887	884030K03M030	3m	132	1200661685	885030K03M120	12m	24	1200070785	884030I03M030	3m	60	1200071627	884030I03M0205	2m	97	1200660887	884030K03M030	3m	133	1200661906	884030K03M500	50m			
	25	1200070798	884030P82M010	1m	61	1200071647	884030P82M0307	3m	98	1200660891	884030K03M040	4m	134	1200665012	885030P82M0307	3m	25	1200070798	884030P82M010	1m	61	1200071647	884030P82M0307	3m	98	1200660891	884030K03M040	4m	135	1200665368	884030K05M280	28m			
	26	1200070799	884030P82M020	2m	62	1200072106	885030I26M005	0.5m	99	1200660895	884030K03M050	5m	136	1200668001	884030K03M110	11m	26	1200070799	884030P82M020	2m	62	1200072106	885030I26M005	0.5m	99	1200660895	884030K03M050	5m	137	1200668003	884030K03M005	0.5m			
	27	1200070867	884030E52M100A	10m	63	1200072359	885030I26M015	1.5m	100	1200660898	884030K03M060	6m	138	1200668004	884030K03M240	24m	27	1200070867	884030E52M100A	10m	63	1200072359	885030I26M015	1.5m	101	1200660899	884030K03M070	7m	139	1200668067	884030P82M0507	5m			
	28	1200070890	885030I26M010	1m	64	1200072601	884030P82M0201	2m	102	1200660900	884030K03M080	8m	140	1200668068	884030S20M010	1m	28	1200070890	885030I26M010	1m	64	1200072601	884030P82M0201	2m	102	1200660900	884030K03M080	8m							
	C	29	1200070891	885030I26M020	2m	65	1200658167	884030P82M0807	8m	103	1200660901	884030K03M090	9m					29	1200070891	885030I26M020	2m	65	1200658167	884030P82M0807	8m	103	1200660901	884030K03M090	9m						
30		1200070892	885030I26M030	3m	66	1200658808	884030P04M100	10m	104	1200660902	884030K03M100	10m					30	1200070892	885030I26M030	3m	66	1200658808	884030P04M100	10m	104	1200660902	884030K03M100	10m							
31		1200070937	884030P82M100	10m	67	1200660271	884030A09M020	2m	105	1200660904	884030K03M120	12m					31	1200070937	884030P82M100	10m	67	1200660271	884030A09M020	2m	105	1200660904	884030K03M120	12m							
32		1200070956	883030E52M020A	2m	68	1200660273	884030A09M0208	2m									32	1200070956	883030E52M020A	2m	68	1200660273	884030A09M0208	2m											
33		1200070961	885030I03M030	3m	69	1200660277	884030A09M030	3m									33	1200070961	885030I03M030	3m	69	1200660277	884030A09M030	3m											
34		1200071026	884030E52M010A	1m	70	1200660286	884030A09M0508	5m									34	1200071026	884030E52M010A	1m	70	1200660286	884030A09M0508	5m											
35		1200071035	884030S20M010H	1m													35	1200071035	884030S20M010H	1m															
B																																			
A																																			
																										</									

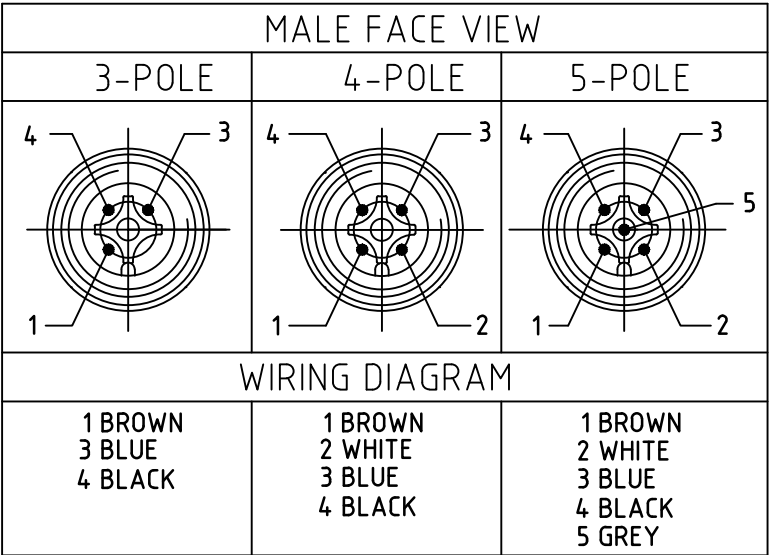
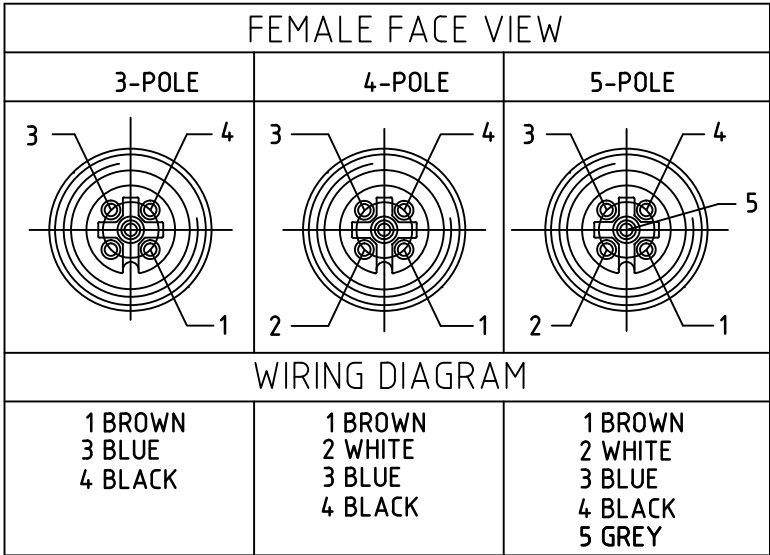
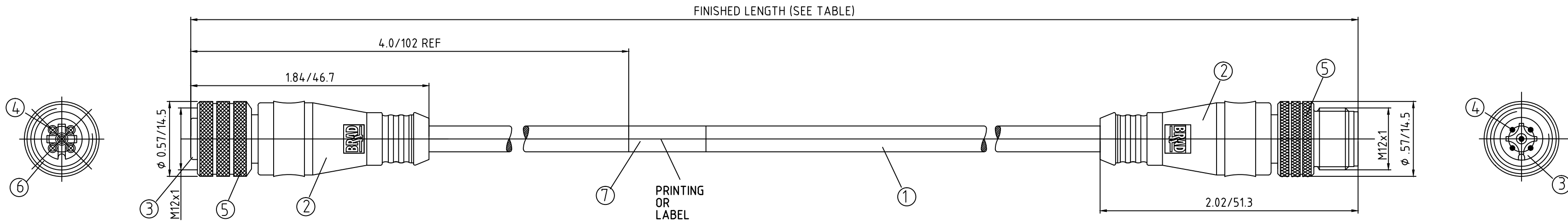
9				8				7				6				5				4				3				2				1			
PART LIST																																			
E	No.	Part No.	Engineering No.	Cable Length					No.	Part No.	Engineering No.	Cable Length					No.	Part No.	Engineering No.	Cable Length					No.	Part No.	Engineering No.	Cable Length							
	141	1200668082	885030I26M006	0.6m					176	1200668699	883030I03M200A	20m					211								246										
	142	1200668090	885030S26M020H	2m					177	1200668735	884030P82M0707Y	7m					212								247										
	143	1200668098	888030P19M010	1m					178	1200668736	885030I26M015Y	1.5m					213								248										
	144	1200668099	888030P19M050	5m					179	1200668773	885030P82M0107	1m					214								249										
	145	1200668165	885030I03M100	10m					180	1200668873	885030I26M050Y	5m					215								250										
	146	1200668172	883030S20M050	5m					181	1200669113	884030A09M0308	3m					216								251										
	147	1200668187	884030P82M050H	5m					182	1200669118	884030P82M0307Y	3m					217								252										
	148	1200668252	888030P19M030	3m					183	1200669149	883030I03M010Y	1m					218								253										
	149	1200668281	885030I26M025	2.5m					184	1200669218	885030I03M100Y	10m					219								254										
D	150	1200668310	883030S20M005	0.5m					185	1200669227	884030K05M500	50m					220								255										
	151	1200668349	884030P82M0101	1m																															

No.	Part No.	Engineering No.	Cable Length
176	1200668699	883030I03M200A	20m
177	1200668735	884030P82M0707Y	7m
178	1200668736	885030I26M015Y	1.5m
179	1200668773	885030P82M0107	1m
180	1200668873	885030I26M050Y	5m
181	1200669113	884030A09M0308	3m
182	1200669118	884030P82M0307Y	3m
183	1200669149	883030I03M010Y	1m
184	1200669218	885030I03M100Y	10m
185	1200669227	884030K05M500	50m
186	1200669228	884030K05M600	60m
187	1200718014	884030P82M0607	6m
188			
189			
190			
191			
192			
193			
194			
195			
196			
197			
198			
199			
200			
201			
202			
203			
204			
205			
206			
207			
208			
209			
210			

No.	Part No.	Engineering No.	Cable Length
246			
247			
248			
249			
250			
251			
252			
253			
254			
255			
256			
257			
258			
259			
260			
261			
262			
263			
264			
265			
266			
267			
268			
269			
270			
271			
272			
273			
274			
275			
276			
277			
278			
279			
280			

FORMAT: master-lb-prod-A3 REVISION: G DATE: 2016/12/14	9	8	
--	---	---	--

FORMAT: master-lb-prod-A3 REVISION: G DATE: 2016/12/14	9	8	
--	---	---	--



CONNECTOR SPECIFICATION:

VOLTAGE RATING 3 - 4 PIN	250V per IEC 60664
VOLTAGE RATING 5 PIN	60V per IEC 60664 250V per UL 2238
AMPERAGE RATING	max. 4 AMPS
PROTECTION	IP67
OPERATING TEMPERATURE	-20°C TO 105°C
ASSEMBLY IS RoHS COMPLIANT	

88X030K03XXXX

POLES

3
4
5

LENGTH

M010 - 1 METER
M100 - 10 METER
F050 - 5 FEET
F500 - 50 FEET

ITEM	COMPONENT	MATERIAL	FINISH
7	LABLE	MYLAR	BLACK/YELLOW
6	O-RING	VITON	RED
5	COUPLER	BRASS	TEFLON/NICKEL
4	SOCKET/PIN CONTACT	COPPER ALLOY	GOLD OVER NICKEL
3	INSERT	PUR	BLACK
2	OVERMOLD	TPE	YELLOW
1	CABLE- #18/3-5 (COPPER STRANDING) 3/4/5 CONDUCT. 300V	JACKET: TPE	JACKET: YELLOW

ADD MATRIX EC NO: PG2017-0318 DRWN: BBRAUCH 2016/09/21 CHKD: RSILLER 2016/09/21 APPR: RSILLER 2010/02/03 REV B2	DESCRIPTION REV	QUALITY SYMBOL ▽=0 ▽C=0	GENERAL TOLERANCES (UNLESS SPECIFIED)			DIMENSION STYLE IN/MM		SCALE NTS	DESIGN UNITS METRIC	THIRD ANGLE PROJECTION				
				mm	INCH	DRAWN BY LSTEMMLE	DATE 2010/02/01	TITLE MICRO-CHANGE CORDSET 3/4/5 P. FE STR/ MA STR 18/3-5 YELLOW TPE CABLE						
			4 PLACES	±---	±---	CHECKED BY TWOLDEGE	DATE 2010/02/02							
			3 PLACES	±---	±.005	APPROVED BY FPACHER	DATE 2010/02/03							
			2 PLACES	±0.13	±.010	molex MOLEX INCORPORATED								
			1 PLACE	±0.25	±.020						MATERIAL NO. SEE MATRIX		DOCUMENT NO. SD-120066-020	SHEET NO. 1 OF 1
			ANGULAR ±.5°											
			DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS			SIZE C	THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION							