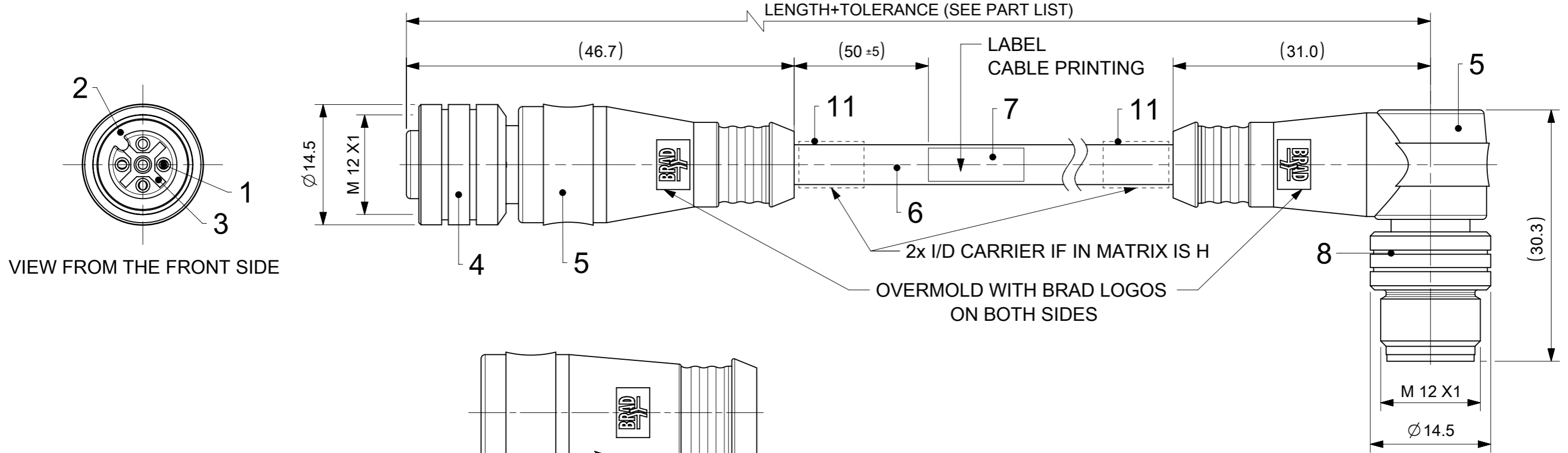


FEMALE PLUG M12 STRAIGHT TO MALE PLUG M12 90° ANGLED



VIEW FROM THE FRONT SIDE

THICKER OVERMOLD FOR CABLES WITH O.D. BIGGER THAN 6

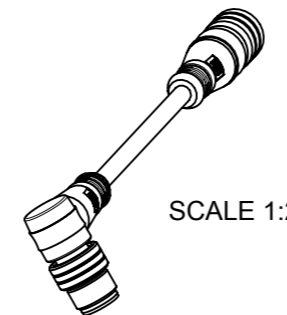
TECHNICAL SPECIFICATION:

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

VIEW FROM THE FRONT SIDE

BILL OF MATERIAL

| ITEM | QTY. | DESCRIPTION | MATERIAL | FINISH/COLOR |
|------|----------------|---------------------|------------------------------------|----------------------------|
| 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 |



| | | | | | | |
|--|---|---|---------------------------|-----------------------------|-------------------------------|-------------------------|
| 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: ADDED PNS 1200669890 & 1200669891 | | molex | | |
| | △/A = 0 | mm | SCALE 2:1 | | | |
| DIVISIONAL SYMBOLS | GENERAL TOLERANCES (UNLESS SPECIFIED) | | EC NO: 698496 | | | |
| | △/E = 0 | ANGULAR TOL ± 1.0° | | DRWN: MDHARMANTI 2022/03/07 | | |
| | △/F = 0 | 4 PLACES ± | CHK'D: RSILLER 2022/03/07 | | PRODUCT CUSTOMER DRAWING | |
| | | 3 PLACES ± | APPR: RSILLER 2022/03/07 | | DOCUMENT NUMBER | |
| | | 2 PLACES ± 0.05 | INITIAL REVISION: | | DOC TYPE DOC PART REVISION | |
| | 1 PLACE ± 0.3 | DRWN: DSOPPIN 2018/09/27 | | 1200070026 PSD 000 A6 | | |
| | 0 PLACES ± 0.5 | APPR: RSILLER 2018/10/22 | | SHEET NUMBER | | |
| DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS | | THIRD ANGLE PROJECTION | DRAWING A3-SIZE | SERIES 120007 | MATERIAL NUMBER SEE PART LIST | CUSTOMER GENERAL MARKET |

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

8 8 X 0 3 2 X X X X X X X X X X X X

SPECIAL TYPES

COUPLING NUT FEMALE MALE

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°

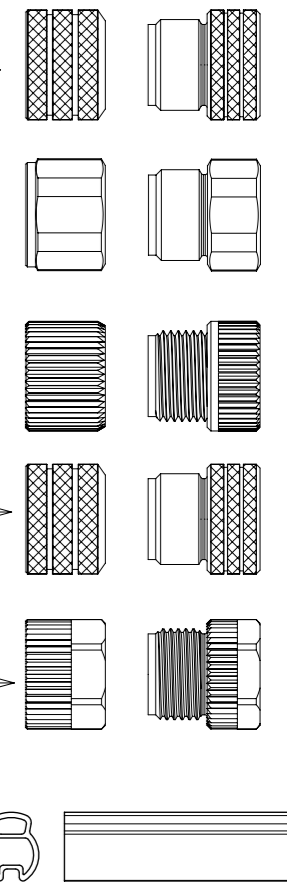
Cable types:
E02=0.25mm² PVC Black
E03=0.34mm² PVC Black
E13=0.75mm² PVC Yellow
E52=0.34mm² PVC Grey(RAL 7001)
E57=0.34mm² PVC Grey(RAL 7001)
H09=0.34mm² PUR Black
H69=0.34mm² PUR Grey LSOH SCR
I02=0.25mm² PVC Grey CEI
I03=0.34mm² PVC Grey CEI
I20=0.25mm² PVC Grey CEI SCR DC
I26=0.34mm² PVC Grey CEI 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 = Kilometer
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 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.)



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 | 0.25mm 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. | - | - |
| E52 | 4 | 0.34mm ² | PVC GRAY | - | - | - 30 to + 70°C | - 5 to + 70°C | - | - |
| H09 | 3 / 4 / 5 | 0.34mm ² | 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 | 0.2mm ² | PUR LSOH | - | - | - | -40°C to +80°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. | - | - |
| P82 | 4 | 0.34mm ² | PUR IRR ORANGE | - | - | -50°C to +105°C, | -50°C to +105°C, | - | - |
| I03 | 4 | 0.34mm ² | 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 | 0.34mm ² | TPE YELLOW | ITC E195601 OR PLTC | AWM I/II A/B FT4 LL54185 | - | -40°C to +105°C | - | - |
| S20 | 4 | 0.34mm ² | 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

FUNCTIONAL SYMBOLS: $\nabla/A = 0$, $\nabla/E = 0$, $\nabla/P = 0$

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: 120007, MATERIAL NUMBER: SEE PART LIST, CUSTOMER: GENERAL MARKET, SHEET NUMBER: 2 OF 4

EC NO: 698496
DRWN: MDHARMANTI 2022/03/07
CHK'D: RSILLER 2022/03/07
APPR: RSILLER 2022/03/07

INITIAL REVISION:
DRWN: DSOPPIN 2018/09/27
APPR: RSILLER 2018/10/22

DOCUMENT NUMBER: 1200070026, DOC TYPE: PSD, DOC PART: 000, REVISION: A6

molex
CSE M12 XP AC FE STR MA RA XM
PRODUCT CUSTOMER DRAWING

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 | PIN | WIRE |
| 1 | BROWN | 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 | WHITE | 2 | BROWN | 2 | BROWN |
| 3 | BLUE | 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 | BLACK | 4 | YELLOW | 4 | YELLOW |
| 5 | - | 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 | | | | | |


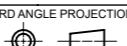
| | | | | | | |
|---|--|--|---|--|---|--|
| FUNCTIONAL SYMBOLS = 0 = 0 = 0 DIVISIONAL SYMBOLS | THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX ELECTRONIC TECHNOLOGIES, LLC AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION DIMENSION UNITS: mm SCALE: 1:1 CURRENT REV DESC: ADDED PNS 1200669890 & 1200669891 | | CSE M12 XP AC FE STR MA RA XM | | | |
| | GENERAL TOLERANCES (UNLESS SPECIFIED) ANGULAR TOL ± 1.0° 4 PLACES ± 3 PLACES ± 2 PLACES ± 0.05 1 PLACE ± 0.3 0 PLACES ± 0.5 | | | | EC NO: 698496 DRWN: MDHARMANTI 2022/03/07 CHK'D: RSILLER 2022/03/07 APPR: RSILLER 2022/03/07 | |
| | DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS THIRD ANGLE PROJECTION | | INITIAL REVISION: DRWN: DSOPPIN 2018/09/27 APPR: RSILLER 2018/10/22 | | DOCUMENT NUMBER: 1200070026 DOC TYPE: PSD DOC PART: 000 REVISION: A6 | |
| | | | DRAWING: A3-SIZE SERIES: 120007 MATERIAL NUMBER: SEE PART LIST CUSTOMER: GENERAL MARKET SHEET NUMBER: 3 OF 4 | | | |

PART LIST

| NO. | MOLEX PN | ENGINEERING PN | LENGTH (mm) |
|-----|------------|----------------|-------------|
| 1 | 1200070158 | 883032E03M003 | 300 |
| 2 | 1200070159 | 883032E03M006 | 600 |
| 3 | 1200070160 | 883032E03M010 | 1000 |
| 4 | 1200070161 | 883032E03M020 | 2000 |
| 5 | 1200668205 | 883032E03M050 | 5000 |
| 6 | 1200072378 | 883032E03M060 | 6000 |
| 7 | 1200668053 | 883032E03M100 | 10000 |
| 8 | 1200668268 | 883032E03M200 | 20000 |
| 9 | 1200072879 | 883032H09M010 | 1000 |
| 10 | 1200070166 | 883032I03M006 | 600 |
| 11 | 1200668007 | 883032I03M010 | 1000 |
| 12 | 1200070171 | 883032P03M006 | 600 |
| 13 | 1200070172 | 883032P03M010 | 1000 |
| 14 | 1200070173 | 883032P03M020 | 2000 |
| 15 | 1200070174 | 883032P03M030 | 3000 |
| 16 | 1200072294 | 883032P03M0305 | 3000 |
| 17 | 1200668341 | 883032P03M050 | 5000 |
| 18 | 1200668763 | 883032P03M0501 | 5000 |
| 19 | 1200072705 | 883032P03M060 | 6000 |
| 20 | 1200070184 | 883032S20M010 | 1000 |
| 21 | 1200070185 | 883032S20M020 | 2000 |
| 22 | 1200668663 | 884032E02M050 | 5000 |
| 23 | 1200668072 | 884032E03M006 | 600 |
| 24 | 1200668073 | 884032E03M010 | 1000 |
| 25 | 1200668755 | 884032E03M012 | 1200 |
| 26 | 1200668756 | 884032E03M014 | 1400 |
| 27 | 1200665032 | 884032E03M020 | 2000 |
| 28 | 1200071014 | 884032E03M030 | 3000 |
| 29 | 1200668074 | 884032E03M050 | 5000 |
| 30 | 1200072163 | 884032E03M0501 | 5000 |
| 31 | 1200668075 | 884032E03M100 | 10000 |
| 32 | 1200668200 | 884032E03M1001 | 10000 |
| 33 | 1200668307 | 884032E03M1005 | 10000 |
| 34 | 1200668309 | 884032E03M1205 | 12000 |
| 35 | 1200668173 | 884032E03M1501 | 15000 |
| 36 | 1200668223 | 884032E03M200 | 20000 |
| 37 | 1200668308 | 884032E03M2005 | 20000 |
| 38 | 1200071277 | 884032E52M010A | 1000 |
| 39 | 1200070841 | 884032E52M020A | 2000 |
| 40 | 1200668494 | 884032H09M010 | 1000 |
| 41 | 1200668290 | 884032H09M020 | 2000 |
| 42 | 1200668311 | 884032H69M010 | 1000 |
| 43 | 1200668076 | 884032H69M030 | 3000 |
| 44 | 1200668312 | 884032H69M050 | 5000 |
| 45 | 1200665040 | 884032H69M100 | 10000 |
| 46 | 1200072424 | 884032I03M003 | 300 |
| 47 | 1200668522 | 884032I03M020 | 2000 |
| 48 | 1200661012 | 884032K03M006 | 600 |
| 49 | 1200661013 | 884032K03M010 | 1000 |
| 50 | 1200661014 | 884032K03M020 | 2000 |
| 51 | 1200661015 | 884032K03M030 | 3000 |
| 52 | 1200661598 | 884032K03M036 | 3600 |

| NO. | MOLEX PN | ENGINEERING PN | LENGTH (mm) |
|-----|------------|----------------|-------------|
| 53 | 1200661017 | 884032K03M050 | 5000 |
| 54 | 1200661018 | 884032K03M060 | 6000 |
| 55 | 1200661021 | 884032K03M090 | 9000 |
| 56 | 1200661022 | 884032K03M100 | 10000 |
| 57 | 1200661023 | 884032K03M120 | 12000 |
| 58 | 1200661480 | 884032K03M200 | 20000 |
| 59 | 1200660398 | 884032K05M005 | 500 |
| 60 | 1200660400 | 884032K05M010 | 1000 |
| 61 | 1200660401 | 884032K05M015 | 1500 |
| 62 | 1200660402 | 884032K05M020 | 2000 |
| 63 | 1200660403 | 884032K05M030 | 3000 |
| 64 | 1200073045 | 884032K05M035 | 3500 |
| 65 | 1200660404 | 884032K05M040 | 4000 |
| 66 | 1200660405 | 884032K05M050 | 5000 |
| 67 | 1200660406 | 884032K05M060 | 6000 |
| 68 | 1200073042 | 884032K05M070 | 7000 |
| 69 | 1200661540 | 884032K05M080 | 8000 |
| 70 | 1200668345 | 884032P03M002G | 200 |
| 71 | 1200072838 | 884032P03M003 | 300 |
| 72 | 1200071519 | 884032P03M006 | 600 |
| 73 | 1200071407 | 884032P03M010 | 1000 |
| 74 | 1200070547 | 884032P03M0105 | 1000 |
| 75 | 1200669261 | 884032P03M015 | 1500 |
| 76 | 1200070026 | 884032P03M020 | 2000 |
| 77 | 1200071520 | 884032P03M030 | 3000 |
| 78 | 1200070914 | 884032P03M050 | 5000 |
| 79 | 1200072213 | 884032P03M1005 | 10000 |
| 80 | 1200668077 | 884032P82M0037 | 300 |
| 81 | 1200668343 | 884032P82M0067 | 600 |
| 82 | 1200668267 | 884032P82M0107 | 1000 |
| 83 | 1200668282 | 884032P82M0157 | 1500 |
| 84 | 1200668078 | 884032P82M0207 | 2000 |
| 85 | 1200668177 | 884032S20M020 | 2000 |
| 86 | 1200668161 | 884032S20M030 | 3000 |
| 87 | 1200070907 | 884032S20M050 | 5000 |
| 88 | 1200668974 | 885032E03M003 | 300 |
| 89 | 1200668979 | 885032E03M006 | 600 |
| 90 | 1200071271 | 885032E03M010 | 1000 |
| 91 | 1200668092 | 885032E03M020 | 2000 |
| 92 | 1200668975 | 885032E03M025 | 2500 |
| 93 | 1200668976 | 885032E03M030 | 3000 |
| 94 | 1200668977 | 885032E03M050 | 5000 |
| 95 | 1200668978 | 885032E03M100 | 10000 |
| 96 | 1200668493 | 885032H09M010 | 1000 |
| 97 | 1200668603 | 885032P03M020G | 2000 |
| 98 | 1200661925 | 885032P03M080 | 8000 |
| 99 | 1200661926 | 885032P03M100 | 10000 |
| 100 | 1200669119 | 885032P03M190 | 19000 |
| 101 | 1200669767 | 888032E02M0201 | 2000 |
| 102 | 1200669768 | 888032E02M0301 | 3000 |
| 103 | 1200669769 | 888032E02M0501 | 5000 |

| NO. | MOLEX PN | ENGINEERING PN | LENGTH (mm) |
|-----|------------|----------------|-------------|
| 104 | 1200669770 | 888032E02M1001 | 10000 |
| 105 | 1200669892 | 884032E03M009 | 900 |
| 106 | 1200669893 | 884032E03M013 | 1300 |
| 107 | 1200669894 | 884032E03M016 | 1600 |
| 108 | 1200669895 | 884032E03M021 | 2100 |
| 109 | 1200669896 | 884032E03M032 | 3200 |
| 110 | 1200669897 | 884032E03M040 | 4000 |
| 111 | 1200669890 | 884032P03M060 | 6000 |
| 112 | 1200669891 | 884032P03M100 | 10000 |
| 113 | | | |
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| 116 | | | |
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| | | | |
|--|---|---|--|
| FUNCTIONAL SYMBOLS | 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: ADDED PINS 1200669890 & 1200669891 |
| $\nabla_A = 0$ | mm | 1:1 |  CSE M12 XP AC FE STR MA RA XM |
| $\nabla_B = 0$ | GENERAL TOLERANCES (UNLESS SPECIFIED) | | |
| $\nabla_C = 0$ | ANGULAR TOL ± 1.0° | | EC NO: 698496 DRWN: MDHARMANTI 2022/03/07 CHK'D: RSILLER APPR: RSILLER 2022/03/07 |
| DIVISIONAL SYMBOLS | 4 PLACES | ± | |
| | 3 PLACES | ± | INITIAL REVISION: DRWN: DSOPPIN 2018/09/27 APPR: RSILLER 2018/10/22 |
| | 2 PLACES | ± 0.05 | |
| | 1 PLACE | ± 0.3 | DOCUMENT NUMBER 1200070026 |
| | 0 PLACES | ± 0.5 | |
| DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS | | THIRD ANGLE PROJECTION | DRAWING |
| | |  | A3-SIZE |
| | | SERIES | 120007 |
| | | MATERIAL NUMBER | SEE PART LIST |
| | | CUSTOMER | GENERAL MARKET |
| | | DOC TYPE | PSD |
| | | DOC PART | 000 |
| | | REVISION | A6 |
| | | SHEET NUMBER | 4 OF 4 |