

# FEMALE MICRO-CHANGE M12 STRAIGHT TO MALE MICRO-CHANGE M12 STRAIGHT

## ELECTRICAL SPECIFICATIONS :

VOLTAGE RATING : 3-4P = 250V  
 5P = 60V  
 8P = 30V

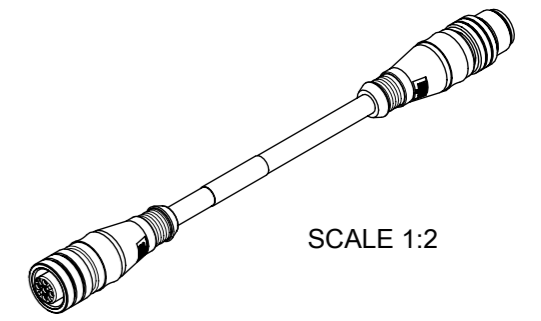
CURRENT RATING : 3-5P = 4 AMPS  
 8P = 2 AMPS

INSULATION RESISTANCE :  $10^8 \Omega$  MN

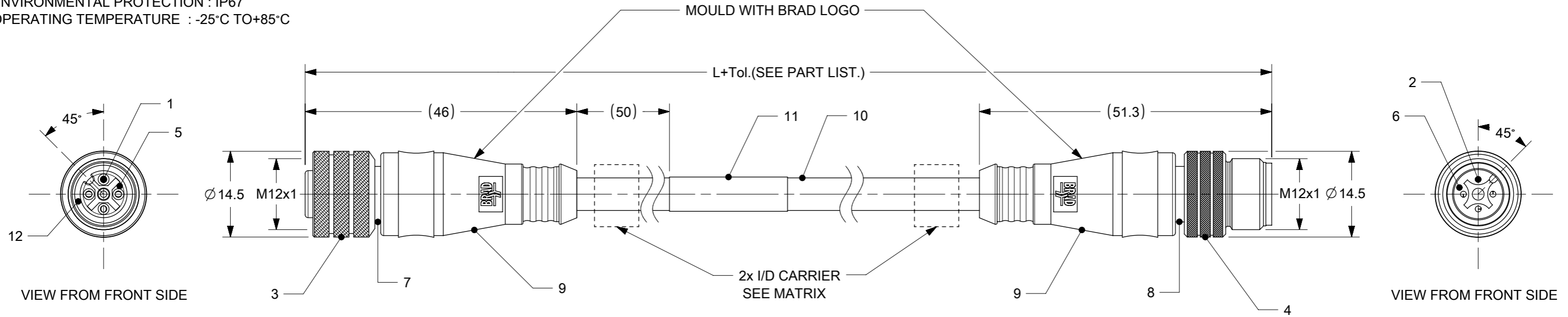
MATING CYCLES : MAX. 100

ENVIRONMENTAL PROTECTION : IP67

OPERATING TEMPERATURE : -25°C TO +85°C



SCALE 1:2



## 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

## BOM

| ITEM | QTY.         | DESCRIPTION         | MATERIAL   | FINISH/COLOR               |
|------|--------------|---------------------|------------|----------------------------|
| 1    | 3/ 4 / 5 / 8 | CONTACT FEMALE      | BRASS      | SELECTIVE GOLD OVER NICKEL |
| 2    | 3/ 4 / 5 / 8 | CONTACT MALE        | BRASS      | SELECTIVE GOLD OVER NICKEL |
| 3    | 1            | COUPLING NUT FEMALE | BRASS      | Ni-PLATED                  |
| 4    | 1            | COUPLING NUT MALE   | BRASS      | Ni-PLATED                  |
| 5    | 1            | M12 INSERT FEMALE   | PUR        | BLACK                      |
| 6    | 1            | M12 INSERT MALE     | PUR        | BLACK                      |
| 7    | 1            | SLEEVE SHLD FEMALE  | BRASS      | Ni-PLATED                  |
| 8    | 1            | SLEEVE SHLD MALE    | BRASS      | Ni-PLATED                  |
| 9    | -            | OVERMOULD           | TPU        | SEE MATRIX                 |
| 10   | -            | CABLE               | SEE MATRIX | SEE MATRIX                 |
| 11   | 1            | LABEL YELLOW        | VINYL      | -                          |
| 12   | 1            | O-RING              | FPM        | RED                        |

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

DIMENSION UNITS: mm SCALE: 2:1

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: 120069

MATERIAL NUMBER: SEE TABLE

CUSTOMER: GENERAL MARKET

SHEET NUMBER: 1 OF 3

EC NO: 732259  
 DRWN: SANTHN 2022/12/15  
 CHK'D: GGA 2022/12/21  
 APPR: GGA 2022/12/21

INITIAL REVISION:  
 DRWN: RSTONE 2017/01/04  
 APPR: BWOODMAN 2017/01/18

DOCUMENT NUMBER: SD-120069-041

DOC TYPE: PSD

DOC PART: 001

REVISION: A5

**molex**

MICRO-CHANGE ASSEMBLY  
 MALE/FEMALE, SHIELDED 3-8 POLE

PRODUCT CUSTOMER DRAWING

# ENGINEERING NO. - NUMERICAL CODE

8 8 X S 3 0 X X X M X X X X X

8 = M12  
MICRO  
CHANGE

8 = M12  
MICRO  
CHANGE

S30= Double-Ended Cordset  
Shielded Female Straight  
to Shielded Male Straight

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

Cable type:  
S20 - Yellow Braided PVC 0.34mm<sup>2</sup>(22AWG)  
P20 - Black Braided PUR 0.34mm<sup>2</sup>(22AWG)  
P19 - Black Braided PUR 0.25mm<sup>2</sup>(24AWG)  
S19 - Yellow Braided PVC 0.25mm<sup>2</sup>(24AWG)

Units:  
M=Meter  
F=Feet

Length  
Examples:  
020=0.5 METERS  
050=5 METERS  
200=20 METERS

Overmold color:  
Blank= PUR (Standard)  
A=Grey / G=Black / Y=Yellow  
BLANK = Yellow TPU for  
cables S19, S20


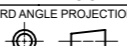
Coupling Nut Material :  
Blank : Standard  
1 = Stainless Steel  
5= Delrin  
7= Teflon Coated  
H= 2x ID Carrier

## CABLE INFORMATION :

| CABLE TYPE | NO. OF WIRES | CROSS SECTION       | CABLE JACKET   | UL      | CSA       | STATIC: TEMP. / BENDING RADIUS | DYNAMIC: TEMP. / BENDING RADIUS | DRAG CHAIN  | SHIELD |
|------------|--------------|---------------------|----------------|---------|-----------|--------------------------------|---------------------------------|---|--------|
| 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, Velocity = 120m/min ; bending 15XO.D. | YES    |
| P20        | 3/4/5        | 0.34mm <sup>2</sup> | PUR BLACK LSOH | -       | -         | -40°C to +90°C                 | -25°C to +90°C                  | -   | YES    |
| S19        | 8            | 0.25mm <sup>2</sup> | PVC YELLOW     | UL 2661 | CSA C22.2 | -30°C to +105°C, 10xO.D.       | -15°C to +105°C, 15xO.D.        | 2 000 000 cycles , speed =4m/sec                        | YES    |
| S20        | 3/4/5        | 0.34mm <sup>2</sup> | PVC YELLOW     | UL 2661 | 1731-CSA  | -30°C to +105°C                | -40°C to +105°C                 | -   | YES    |

## 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 |


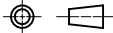
|   |         |  |         |          |                 |                |  |              |  |
|---|---------|--|---------|----------|-----------------|----------------|--|--------------|--|
| THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX ELECTRONIC TECHNOLOGIES, LLC AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION |         |  |         |          |                 |                |  |              |  |
| DIMENSION UNITS   | SCALE   | CURRENT REV DESC: REMOVED OBSOLETE PART NUMBER AS PER PCN#512871.  |         |          |                 |                |  |              |  |
| mm  | 1:1     | <br>MICRO-CHANGE ASSEMBLY<br>MALE/FEMALE, SHIELDED 3-8 POLE |         |          |                 |                |  |              |  |
| GENERAL TOLERANCES (UNLESS SPECIFIED)   |         |  |         |          |                 |                |  |              |  |
| ANGULAR TOL   | ± 1.0 ° | EC NO: 732259<br>DRWN: SANTHN 2022/12/15<br>CHK'D: GGA 2022/12/21<br>APPR: GGA 2022/12/21  |         |          |                 |                |  |              |  |
| 4 PLACES  | ±       |  |         |          |                 |                |  |              |  |
| 3 PLACES  | ±       | INITIAL REVISION:<br>DRWN: RSTONE 2017/01/04<br>APPR: BWOODMAN 2017/01/18  |         |          |                 |                |  |              |  |
| 2 PLACES  | ± 0.05  |  |         |          |                 |                |  |              |  |
| 1 PLACE   | ± 0.3   | DOCUMENT NUMBER  |         | DOC TYPE |                 | DOC PART       |  | REVISION     |  |
| 0 PLACES  | ± 0.5   | SD-120069-041  |         | PSD      |                 | 001            |  | A5           |  |
| DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS  |         | THIRD ANGLE PROJECTION   | DRAWING | SERIES   | MATERIAL NUMBER | CUSTOMER       |  | SHEET NUMBER |  |
|   |         |   | A3-SIZE | 120069   | SEE TABLE       | GENERAL MARKET |  | 2 OF 3       |  |

|                 |    |              |            |          |
|-----------------|----|--------------|------------|----------|
| DOCUMENT STATUS | P1 | RELEASE DATE | 2022/12/21 | 07:37:43 |
|-----------------|----|--------------|------------|----------|

# PART LIST

| No.. | MOLEX PN   | ENGINEERING NO. | LENGTH |
|------|------------|-----------------|--------|
| 1    | 1200695045 | 883S30P20M010   | 1m     |
| 2    | 1200698080 | 883S30P20M050   | 5m     |
| 3    | 1200698035 | 884S30P20M010   | 1m     |
| 4    | 1200698036 | 884S30P20M050   | 5m     |
| 5    | 1200698128 | 884S30P20M100   | 10m    |
| 6    | 1200698129 | 884S30P20M150   | 15m    |
| 7    | 1200695054 | 885S30P20M003   | 0.3m   |
| 8    | 1200699582 | 885S30P20M006H  | 0.6m   |
| 9    | 1200698395 | 885S30P20M010   | 1m     |
| 10   | 1200699583 | 885S30P20M010H  | 1m     |
| 11   | 1200698342 | 885S30P20M015   | 1.5m   |
| 12   | 1200698039 | 885S30P20M020   | 2m     |
| 13   | 1200699584 | 885S30P20M020H  | 2m     |
| 14   | 1200698448 | 885S30P20M030   | 3m     |
| 15   | 1200699585 | 885S30P20M030H  | 3m     |
| 16   | 1200698040 | 885S30P20M050   | 5m     |
| 17   | 1200699586 | 885S30P20M050H  | 5m     |
| 18   | 1200698544 | 885S30P20M060   | 6m     |
| 19   | 1200699587 | 885S30P20M060H  | 6m     |
| 20   | 1200695053 | 885S30P20M100   | 10m    |
| 21   | 1200699588 | 885S30P20M100H  | 10m    |
| 22   | 1200698590 | 885S30P20M120   | 12m    |
| 23   | 1200699589 | 885S30P20M150H  | 15m    |
| 24   | 1200699590 | 885S30P20M200H  | 20m    |
| 25   | 1200698140 | 885S30P20M250   | 25m    |
| 26   | 1200699591 | 885S30P20M300H  | 30m    |
| 27   | 1200699592 | 885S30P20M350H  | 35m    |
| 28   | 1200698111 | 888S30P19M010   | 1m     |
| 29   | 1200100233 | 888S30P19M050   | 5m     |
| 30   | 1200695005 | 888S30P19M100   | 10m    |

| NO. | MOLEX PN   | ENGINEERING NO. | LENGTH |
|-----|------------|-----------------|--------|
| 31  | 1200695011 | 888S30P19M250   | 25m    |
| 32  | 1200100128 | 883S30S20M050   | 5m     |
| 33  | 1200100203 | 884S30S20M100   | 10m    |
| 34  | 1200698091 | 888S30S19M010   | 1m     |
| 35  | 1200699605 | 885S30P20M070   | 7m     |
| 36  | 1200699606 | 885S30P20M055   | 5.5m   |
| 37  | 1200699703 | 885S30P20M090   | 9m     |
| 38  |            |                 |        |
| 39  |            |                 |        |
| 40  |            |                 |        |
| 41  |            |                 |        |

|   |  |       |  |   |         |        |                 |   |              |   |          |              |
|---|--|-------|--|---|---------|--------|-----------------|---|--------------|---|----------|--------------|
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| DIMENSION UNITS   |  | SCALE |  | CURRENT REV DESC: REMOVED OBSOLETE PART NUMBER AS PER PCN#512871.                         |         |        |                 |  |              |   |          |              |
| mm  |  | 1:1   |  |   |         |        |                 |   |              |   |          |              |
| GENERAL TOLERANCES (UNLESS SPECIFIED)   |  |       |  | EC NO: 732259<br>DRWN: SANTHN 2022/12/15<br>CHK'D: GGA 2022/12/21<br>APPR: GGA 2022/12/21 |         |        |                 |   |              | MICRO-CHANGE ASSEMBLY<br>MALE/FEMALE, SHIELDED 3-8 POLE |          |              |
| ANGULAR TOL ± 1.0°  |  |       |  |   |         |        |                 | PRODUCT CUSTOMER DRAWING  |              |   |          |              |
| 4 PLACES ±  |  |       |  | INITIAL REVISION:<br>DRWN: RSTONE 2017/01/04<br>APPR: BWOODMAN 2017/01/18                 |         |        |                 | DOCUMENT NUMBER   |              | DOC TYPE  | DOC PART | REVISION     |
| 3 PLACES ±  |  |       |  |   |         |        |                 | SD-120069-041   |              | PSD   | 001      | A5           |
| 2 PLACES ± 0.05   |  |       |  | DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS                                      |         |        |                 | MATERIAL NUMBER   |              | CUSTOMER  |          | SHEET NUMBER |
| 1 PLACE ± 0.3   |  |       |  |   |         |        |                 | SEE TABLE   |              | GENERAL MARKET  |          | 3 OF 3       |
| 0 PLACES ± 0.5  |  |       |  | THIRD ANGLE PROJECTION  | DRAWING | SERIES | MATERIAL NUMBER | CUSTOMER  | SHEET NUMBER |   |          |              |
|   |  |       |  |      | A4-SIZE | 120069 |                 |   |              |   |          |              |

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|-----------------|----|--------------|------------|----------|
| DOCUMENT STATUS | P1 | RELEASE DATE | 2022/12/21 | 07:37:43 |
|-----------------|----|--------------|------------|----------|