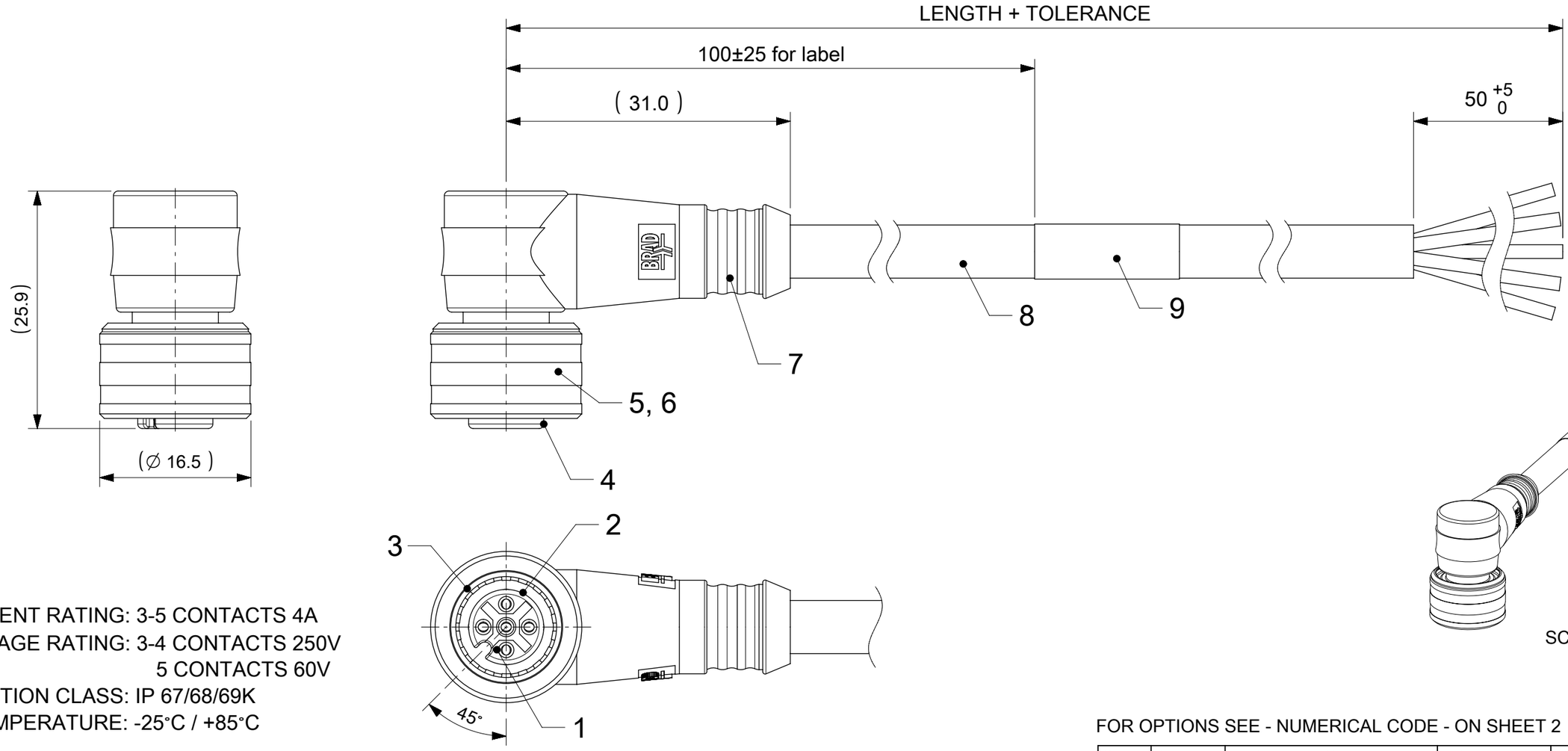
# FEMALE PLUG ULTRA LOCK U12 90° ANGLED






SCALE 1:1

NOTES:

CURRENT RATING: 3-5 CONTACTS 4A

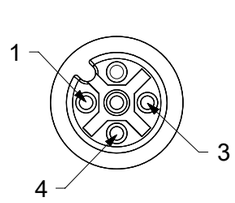
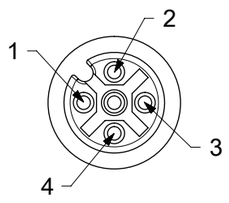
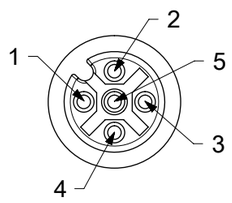
VOLTAGE RATING: 3-4 CONTACTS 250V

5 CONTACTS 60V

PROTECTION CLASS: IP 67/68/69K

TEMPERATURE: -25°C / +85°C

## CONTACTS POSITION FRONT VIEW:

| 3 CONTACTS | | 4 CONTACTS | | 5 CONTACTS | |
|---|---|---|---|---|---|
|  | |  | |  | |
| PIN | WIRE | PIN | WIRE | PIN | WIRE |
| 1 | BROWN | 1 | BROWN | 1 | BROWN |
| 2 | --- | 2 | WHITE | 2 | WHITE |
| 3 | BLUE | 3 | BLUE | 3 | BLUE |
| 4 | BLACK | 4 | BLACK | 4 | BLACK |
| 5 | --- | 5 | --- | 5 | GREY |
| CODING ACCORDING TO IEC 61076-2-101 | | | | | |

FOR OPTIONS SEE - NUMERICAL CODE - ON SHEET 2

| ITEM | QTY. | DESCRIPTION | MATERIAL | FINISH |
|---|---|---|---|---|
| 9 | 1 | LABEL YELLOW | VINYL | --- |
| 8 | - | CABLE | SEE SHEET 2 | --- |
| 7 | - | OVERMOULD BLACK | TPU | --- |
| 6 | 1 | SLEEVE U12 INNER | BRASS | NICKEL |
| 5 | 1 | SLEEVE U12 OUTER | BRASS | NICKEL |
| 4 | 1 | INSERT FEMALE BLACK | PUR | --- |
| 3 | 1 | SPRING U12 | V4A | --- |
| 2 | 1 | ORING GREEN | FPM | --- |
| 1 | 3 / 4 / 5 | CONTACT M12 FEMALE | BRONZE | SELECTIVE GOLD OVER NICKEL |

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

CURRENT REV DESC: OBSOLETED PART NUMBERS AS PER PCN#506884

EC NO: 662770

DRWN: SUGEEB 2021/02/26

CHK'D: GGA 2021/06/02

APPR: GGA 2021/06/02

INITIAL REVISION:

DRWN: JMARSZALEK 2016/06/22

APPR: RSILLER 2016/06/29

THIRD ANGLE PROJECTION | DRAWING: A3-SIZE | SERIES: 120079

molex

CSE U12 XP AC FE RA XM SE UNSH

PRODUCT CUSTOMER DRAWING

| DOCUMENT NUMBER | DOC TYPE | DOC PART | REVISION |
|---|---|---|---|
| 1200790281 | PSD | 000 | A5 |

| MATERIAL NUMBER | CUSTOMER | SHEET NUMBER |
|---|---|---|
| SEE SHEET2 | GENERAL MARKET | 1 OF 2 |

| DOCUMENT STATUS | P1 | RELEASE DATE | 2021/06/02 05:45:52 |
|---|---|---|---|

FORMAT: master-lb-prod-A3
REVISION: J
DATE: 2020/01/14

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

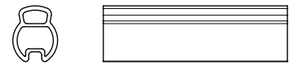
OPTIONS

| W | 0 | X | 0 | 0 | 1 | X | X | X | X | X | X | X | X |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

- W0=U12 Ultra Lock Single ended
- Poles: 3=3 Poles 4=4 Poles 5=5 Poles
- Heads style: 001=Plug Female Angled
- Cable type: See Table
- Units: M=Meter
- Length Examples: 005=0.5 units 010=1 units 100=10 units
- Overmold color: Blank (Standard)=Black A=Grey / G=Black / Y=Yellow

  Ultra Lock Assembly: Blank (Standard)=Brass, Ni Plated 8=Stainless steel, EPDM oring

  H= 2 pcs. of I/D Carrier PVC Transparent (Cables Ixx & P82 always with 2 pcs. of I/D Carrier)



# 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 |
|---|---|---|---|---|---|---|---|---|---|
| E03 | 3 / 4 / 5 | 0.34mm² | PVC BLACK | UL 2464/1729 | C22.2 I/II A/B 80°/300V | -30°C to +80°C, 10xO.D. | -10°C to +80°C, 15xO.D. | - | - |
| H09 | 3 / 4 / 5 | 0.34mm² | PUR BLACK LS0H | UL 21198/10493 | C22.2 I/II A/B 80°/300V | -40°C to +80°C, 5xO.D. | -25°C to +80°C, 10xO.D. | 2 000 000 cycles, Temp max 60°C | - |
| P03 | 3 / 4 / 5 | 0.34mm² | PUR / PVC BLACK | - | - | -30°C to +80°C, 7xO.D. | -5°C to +80°C, 15xO.D. | - | - |

# PART LIST

| No. | Molex P/N | Engineering no. | Cable Length |
|---|---|---|---|
| 1 | 1200200003 | W04001E03M005 | 0.5m |
| 2 | 1200790269 | W04001E03M020 | 2m |
| 3 | 1200790272 | W04001E03M100 | 10m |
| 4 | 1200790281 | W05001E03M020 | 2m |
| 5 | 1200790282 | W05001E03M040 | 4m |
| 6 | 1200795042 | W04001E03M050 | 5m |
| 7 | 1200795044 | W05001E03M050 | 5m |
| 8 | 1200795071 | W04001P03M040 | 4m |
| 9 | 1200795072 | W04001P03M100 | 10m |
| 10 | 1200795073 | W04001P03M060 | 6m |
| 11 | 1200795088 | W05001P03M020 | 2m |
| 12 | 1200795089 | W05001P03M040 | 4m |
| 13 | 1200795090 | W05001P03M050 | 5m |
| 14 | 1200795091 | W05001P03M060 | 6m |
| 15 | 1200795092 | W05001P03M100 | 10m |
| 16 | 1200798007 | W04001P03M050 | 5m |
| 17 | 1200798013 | W04001P03M020 | 2m |
| 18 | 1200798040 | W04001E03M010 | 1m |
| 19 | 1200798047 | W03001H09M020 | 2m |
| 20 | 1200798048 | W05001H09M020 | 2m |

| No. | Molex P/N | Engineering no. | Cable Length |
|---|---|---|---|
| 21 | 1200798051 | W04001H09M020 | 2m |
| 22 | 1200798100 | W05001H09M350 | 35m |
| 23 | 1200798122 | W05001H09M030 | 3m |
| 24 | 1200798143 | W03001E03M020 | 2m |
| 25 | 1200798144 | W03001E03M050 | 5m |
| 26 | 1200798145 | W03001E03M100 | 10m |
| 27 | 1200798159 | W05001H09M050 | 5m |
| 28 | | | |
| 29 | | | |
| 30 | | | |
| 31 | | | |
| 32 | | | |
| 33 | | | |
| 34 | | | |
| 35 | | | |
| 36 | | | |
| 37 | | | |
| 38 | | | |
| 39 | | | |
| 40 | | | |

## 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

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

CURRENT REV DESC: OBSOLETED PART NUMBERS AS PER PCN#506884

EC NO: 662770

| | | |
|---|---|---|
| DRWN: | SUGEEB | 2021/02/26 |
| CHK'D: | GGA | 2021/06/02 |
| APPR: | GGA | 2021/06/02 |

INITIAL REVISION:

| | | |
|---|---|---|
| DRWN: | JMARSZALEK | 2016/06/22 |
| APPR: | RSILLER | 2016/06/29 |

THIRD ANGLE PROJECTION | DRAWING: A3-SIZE | SERIES: 120079

molex

CSE U12 XP AC FE RA XM SE UNSH

PRODUCT CUSTOMER DRAWING

| DOCUMENT NUMBER | DOC TYPE | DOC PART | REVISION |
|---|---|---|---|
| 1200790281 | PSD | 000 | A5 |

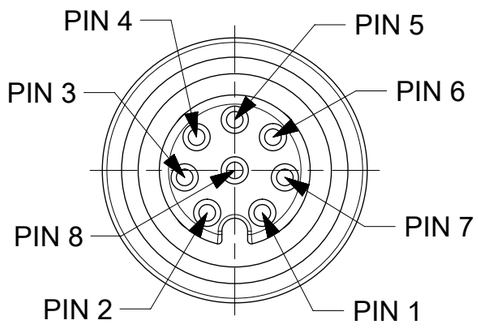
| MATERIAL NUMBER | CUSTOMER | SHEET NUMBER |
|---|---|---|
| SEE SHEET2 | GENERAL MARKET | 2 OF 2 |

| DOCUMENT STATUS | P1 | RELEASE DATE | 2021/06/02 05:45:52 |
|---|---|---|---|

FORMAT: master-tb-prod-A3
REVISION: J
DATE: 2020/01/14

# U12 8 POLE

FEMALE



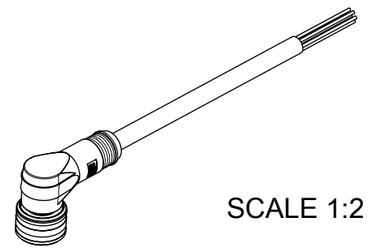

VIEW FROM THE FRONT SIDE

| PIN | WIRE COLOR |
|---|---|
| 1 | WHITE |
| 2 | BROWN |
| 3 | GREEN |
| 4 | YELLOW |
| 5 | GREY |
| 6 | PINK |
| 7 | BLUE |
| 8 | RED |

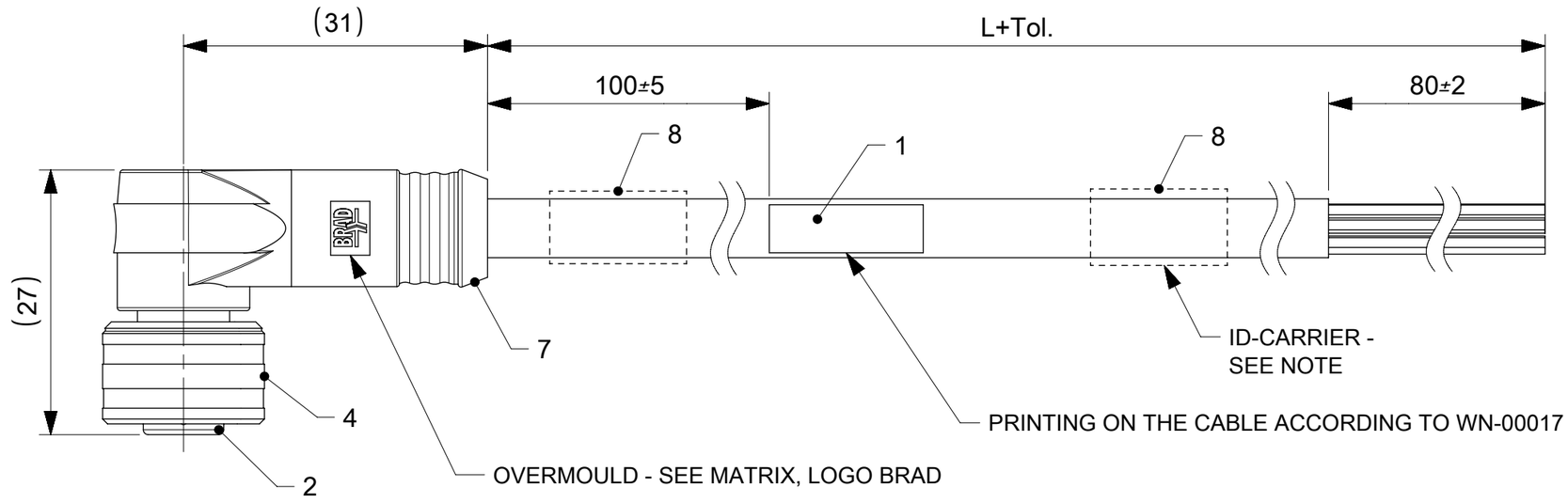
CONNCECTOR SPECFICIATION :

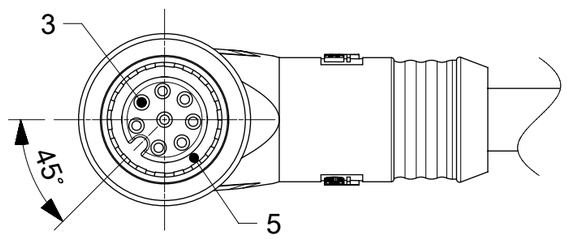
VOLTAGE : 30V AC/DC
AMPERAGE RATING : MAX. 2 AMPS
PROTECTION : IP68
OPERATING TEMPERATURE : -30°C TO +80°C
UL CERTIFICATION : UL RECOGNIZED , FILE NO: E152210

ELECTRICAL TEST SPECIFICATION : PS-120000-001



SCALE 1:2




VIEW FROM THE FRONT SIDE

## BILL OF MATERIAL

| ITEM | QTY. | DISCRIPTION | MATERIAL | FINISH/COLOR |
|---|---|---|---|---|
| 1 | - | CALBE | SEE MATRIX | SEE MATRIX |
| 2 | 1 | INSERT FEMALE | TPU | BLACK |
| 3 | 8 | CONTACT FEMALE | COPPER | SELECTIVE GOLD OVER NICKEL |
| 4 | 1 | NUT | BRASS | Ni-PLATED |
| 5 | 1 | ORING | FPM | GREEN |
| 6 | 1 | SLEEVE | BRASS | Ni-PLATED |
| 7 | - | MOULDING | TPU | SEE MATRIX |
| 8 | SEE MATRIX | ID CARRIER | PVC | TRASPARENT |

NOTE:
IF IN MATRIX IS "H" - ADD ID-CARRIER'S
ON THE BOTH SIDES HARNESS

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

| DIMENSION UNITS | SCALE |
|---|---|
| mm | 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

CURRENT REV DESC:

EC NO: 178454
DRWN: SSM 2018/06/21
CHK'D: SSM 2018/06/27
APPR: RSILLER 2018/06/28

INITIAL REVISION:
DRWN: SSM 2018/06/21
APPR: RSILLER 2018/06/28

molex

CSE M12U 8P FE RA XM

PRODUCT CUSTOMER DRAWING

| DOCUMENT NUMBER | DOC TYPE | DOC PART | REVISION |
|---|---|---|---|
| 1200795114 | PSD | 000 | A |

| THIRD ANGLE PROJECTION | DRAWING | SERIES |
|---|---|---|
| | A3-SIZE | 120079 |

| MATERIAL NUMBER | CUSTOMER | SHEET NUMBER |
|---|---|---|
| SEE SHEET 2 | GENERAL MARKET | 1 OF 2 |

| DOCUMENT STATUS | P1 | RELEASE DATE | 2018/06/28 06:17:14 |
|---|---|---|---|

FORMAT: molex_SD_A3
REVISION: H
DATE: 2018/01/15

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

OPTIONS

| W | 0 | 8 | 0 | 0 | 1 | X | X | X | X | X | X | X | X |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

- W0=U12 Ultra Lock Single ended
- Poles: 8=8 Poles
- Heads style: 001=Plug Female 90°
- Cable type: See Table
- UNIT : M = METER, F = FEET, C = CENTIMETERS, T = 10M
- Length Examples: 005=0.5 units, 010=1 units, 100=10 units
- Overmold color: Blank (Standard)=Black, A=Grey / G=Black / Y=Yellow
  Coupling Nut : Blank = KNU, 7 =Teflon KNU
  H= 2 pcs. of I/D Carrier PVC Transparent



## CABLE SPECIFICATION :

| CABLE TYPE | NO. OF WIRES | CROSS SECTION | CABLE JACKET | UL | CSA | STATIC: TEMP. / BENDING RADIUS | DYNAMIC: TEMP. / BENDING RADIUS | DRAG CHAIN | SHIELD |
|---|---|---|---|---|---|---|---|---|---|
| H08 | 8 | 0.25mm² | PUR BLACK LS0H | 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 | - |
| P02 | 8 | 0.25mm² | PUR / PVC BLACK | - | - | -30°C to +80°C, 7xO.D. | -5°C to +80°C, 15xO.D. | - | - |

## TABLE 1

| No. | Molex P/N | Engineering no. | Cable Length |
|---|---|---|---|
| 1 | 1200795114 | W08001P02M020 | 2m |
| 2 | 1200798043 | W08001H08M020 | 2m |
| 3 | 1200798146 | W08001H08M050 | 5m |
| 4 | 1200798147 | W08001H08M100 | 10m |
| 5 | | | |
| 6 | | | |
| 7 | | | |
| 8 | | | |
| 9 | | | |
| 10 | | | |
| 11 | | | |
| 12 | | | |
| 13 | | | |
| 14 | | | |
| 15 | | | |
| 16 | | | |
| 17 | | | |
| 18 | | | |
| 19 | | | |
| 20 | | | |

## 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

| DIMENSION UNITS | SCALE |
|---|---|
| mm | 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

CURRENT REV DESC:

EC NO: 178454
DRWN: SSM 2018/06/21
CHK'D: SSM 2018/06/27
APPR: RSILLER 2018/06/28

INITIAL REVISION:
DRWN: SSM 2018/06/21
APPR: RSILLER 2018/06/28

molex

CSE M12U 8P FE RA XM

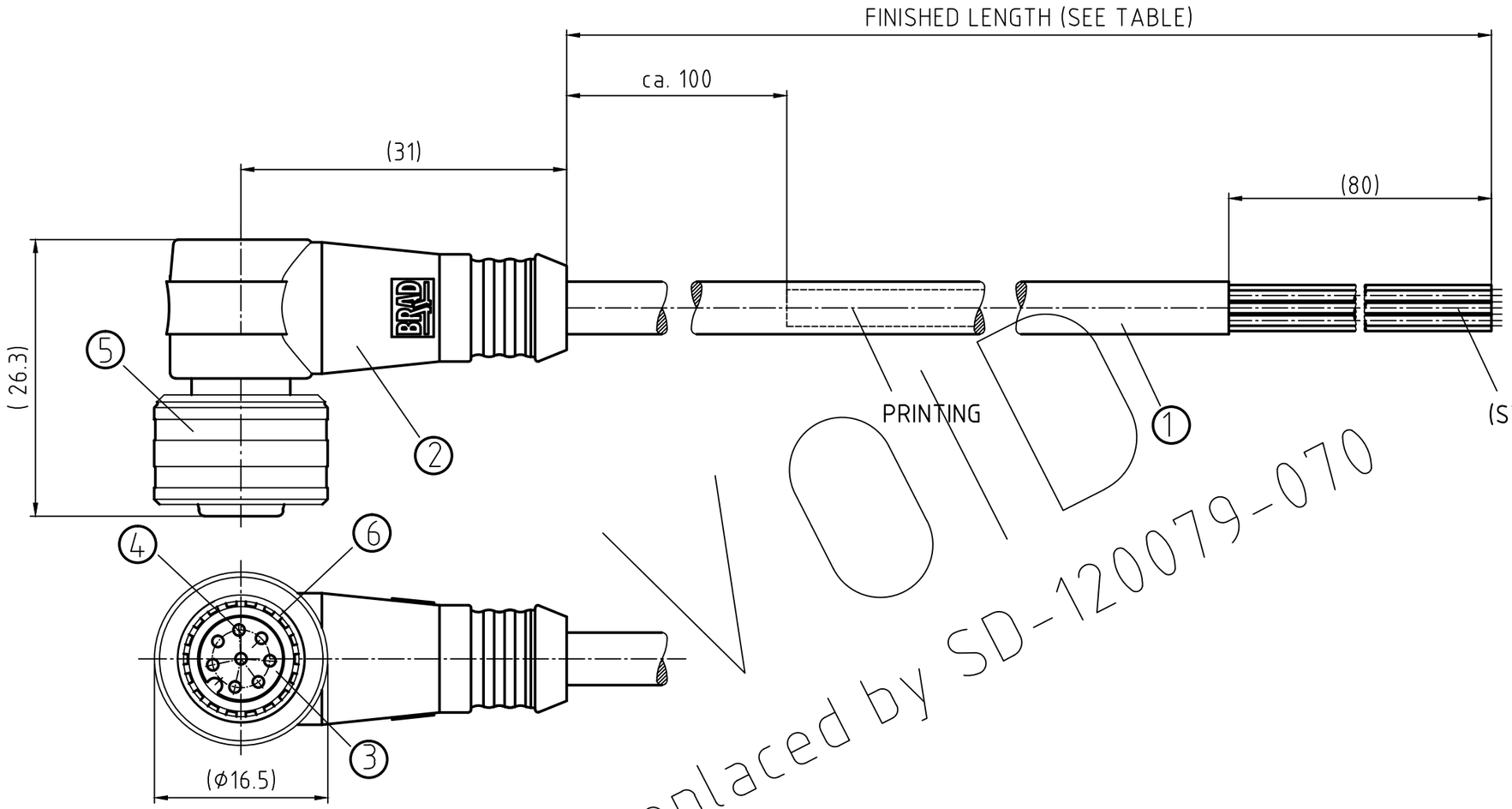
PRODUCT CUSTOMER DRAWING

| DOCUMENT NUMBER | DOC TYPE | DOC PART | REVISION |
|---|---|---|---|
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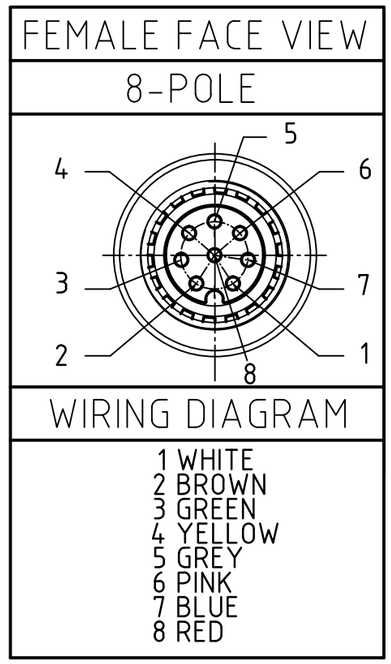
| THIRD ANGLE PROJECTION | DRAWING | SERIES | MATERIAL NUMBER | CUSTOMER | SHEET NUMBER |
|---|---|---|---|---|---|
| | A3-SIZE | 120079 | SEE TABLE 1 | GENERAL MARKET | 2 OF 2 |

| DOCUMENT STATUS | P1 | RELEASE DATE | 2018/06/28 06:17:14 |
|---|---|---|---|

FORMAT: master-tb-prod-A3
REVISION: H
DATE: 2018/01/18




VOID
replaced by SD-120079-070




| POL | MATERIAL NUMBER | ENGINEERING NUMBER | FINISHED LENGTH |
|---|---|---|---|
| 8 | 1200795114 | W08001P02M020 | 2.0M ±25MM |
| | | | |

| CONNECTOR SPECIFICATION: | |
|---|---|
| VOLTAGE RATING | 30V AC/DC |
| AMPERAGE RATING | max. 2 AMPS |
| PROTECTION | IP68 |
| OPERATING TEMPERATURE | -30°C TO +80°C |
| UL CERTIFICATIONS | UL RECOGNIZED, FILE NO. E152210 |
| ASSEMBLY IS | RoHS COMPLIANT |

| ITEM | COMPONENT | MATERIAL | FINISH |
|---|---|---|---|
| 6 | O-RING | VITON | GREEN |
| 5 | COUPLER | BRASS | NICKEL PLATED |
| 4 | CONTACT SOCKET | COPPER ALLOY | GOLD OVER NICKEL |
| 3 | INSERT | PUR | BLACK |
| 2 | OVERMOLD | TPE (PUR) | YELLOW |
| 1 | CABLE 0.25mm²/24AWG (COPPER STRANDING) 8 CONDUCT. | JACKET: PUR/PVC | JACKET: BLACK |

DESCRIPTION
EC NO: IPG2014-0681 2013/10/22
DRWN: RSCHIEBE ----
CH'KD: APOHL
APPR: CBURGER 2010/03/19
DESCRIPTION
2
REV

QUALITY SYMBOLS
▼ = 0
Ⓒ = 0

GENERAL TOLERANCES (UNLESS SPECIFIED)

| | mm | INCH |
|---|---|---|
| 4 PLACES | ±--- | ±--- |
| 3 PLACES | ±--- | ±--- |
| 2 PLACES | ±--- | ±--- |
| 1 PLACE | ±0.3 | ±--- |
| ANGULAR ± | --- ° | |

DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS

DIMENSION STYLE: MM ONLY
SCALE: 2:1
DESIGN UNITS: METRIC
THIRD ANGLE PROJECTION

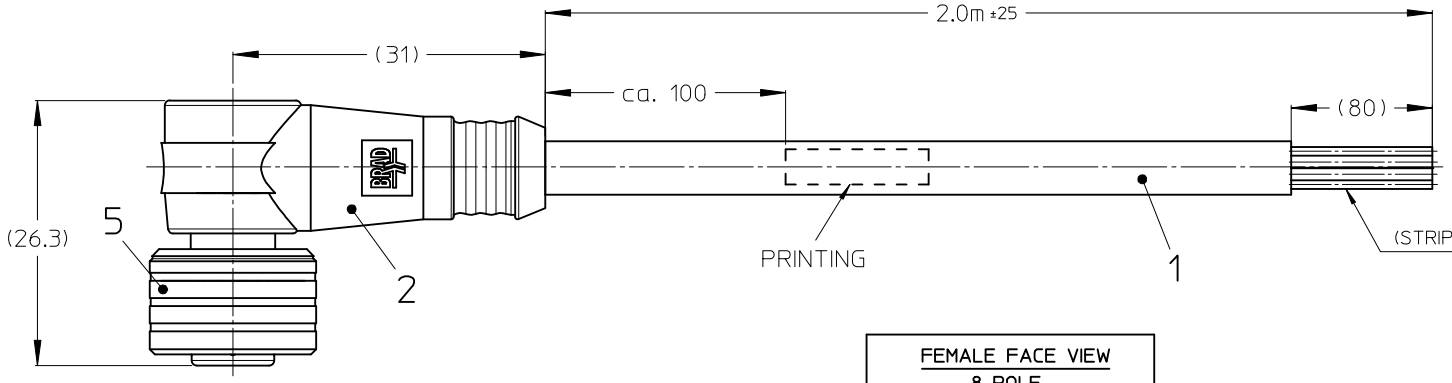
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CHECKED BY: NS DATE: 2010/03/18
APPROVED BY: FPACHER DATE: 2010/03/19

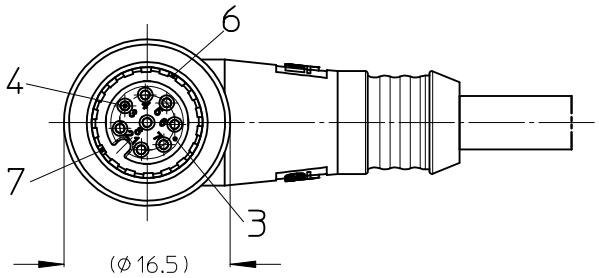
MICRO-CHANGE ULTRA LOCK
8-POLE FEMALE 90
#24AWG PUR BLACK CABLE

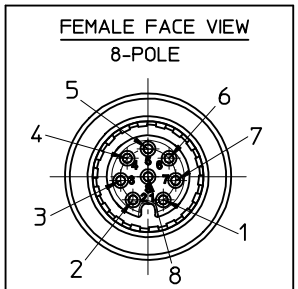
molex MOLEX INCORPORATED

MATERIAL NO.: SEE TABLE
DOCUMENT NO.: SD-120079-048
SHEET NO.: 1 OF 1
SIZE: A3

THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION

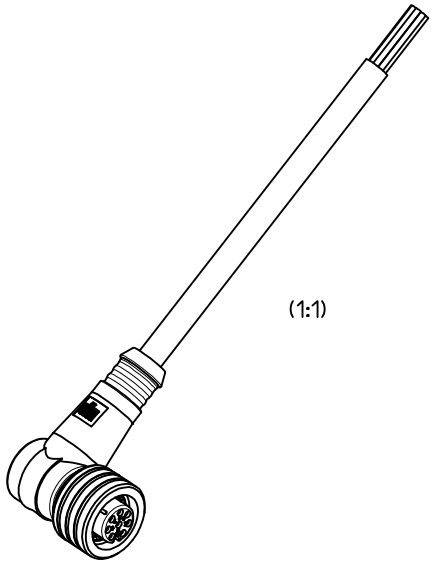



WIRING DIAGRAM

1 WHITE
2 BROWN
3 GREEN
4 YELLOW
5 GREY
6 PINK
7 BLUE
8 RED




| ITEM | QTY | COMPONENT | MATERIAL | FINISH |
|---|---|---|---|---|
| 1 | 1 | CABLE 0.25 mm²/24 AWG (COPPER STRANDING) 8 CONDUCT. | JACKET: OUTER PUR/INNER PVC BK | - |
| 2 | 1 | OVERMOLD | TPU BK | - |
| 3 | 1 | INSERT 8P FE | ELASTOLLAN R3000 NATURAL | - |
| 4 | 8 | CONTACT | CuZn38Pb2 | GOLD OVER NICKEL |
| 5 | 1 | SLEEVE U12 | BRASS | NICKEL PLATED |
| 6 | 1 | GASKET OR 10.3x1.2 | FPM GN | - |
| 7 | 1 | FEATHER | V4A | - |

ENGINEERING NO.: W08001P02M020

NOTES:

1. CONNECTOR SPECIFICATION:
   VOLTAGE RATING: 30V AC/DC
   AMPERAGE RATING: MAX. 2 AMPS
   PROTECTION: IP68
   OPERATING TEMPERATURE: -30°C TO +80°C
   UL CERTIFICATIONS: UL RECOGNIZED, FILE NO. E152210

2. ELECTRICAL TEST SPECIFICATION: PS-120000-001

ENTER DESCRIPTION
EC NO: IPG2014-0681
DRWN:RSCHIEBER 2013/10/15
CH'KD:APOHL 2013/10/15
APPR:CBURGER 2013/10/25
DESCRIPTION
1
REV

QUALITY SYMBOLS
▼=0
Ⓒ=0

GENERAL TOLERANCES (UNLESS SPECIFIED)

| | mm | INCH |
|---|---|---|
| 4 PLACES | ± --- | ± --- |
| 3 PLACES | ± --- | ± --- |
| 2 PLACES | ± 0.05 | ± --- |
| 1 PLACE | ± 0.30 | ± --- |
| 0 PLACE | ± 0.50 | ± --- |

ANGULAR ± 1 °

DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS

DIMENSION STYLE: MM ONLY
SCALE: 2:1
DESIGN UNITS: METRIC
THIRD ANGLE PROJECTION

DRAWN BY: RSCHIEBER DATE: 2013/10/15
CHECKED BY: APOHL DATE: 2013/10/15
APPROVED BY: CBURGER DATE: 2013/10/25

TITLE: CSE U12 8P AC FE RA PUR 2M SE BK BRA AU

molex

MATERIAL NO.: 1200795114
DOCUMENT NO.: SD-120079-070
SHEET NO.: 1 OF 1
SIZE: A3

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