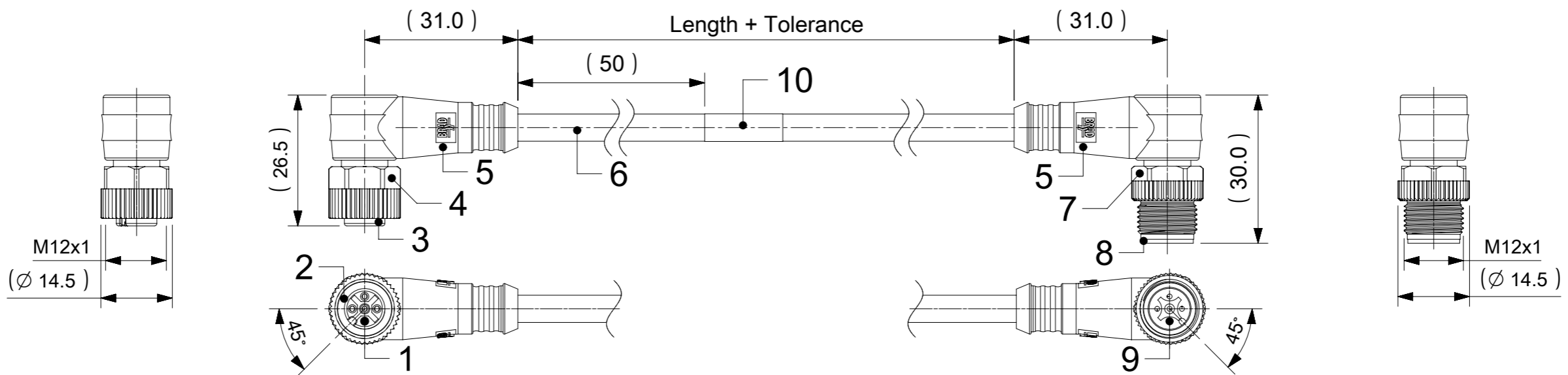
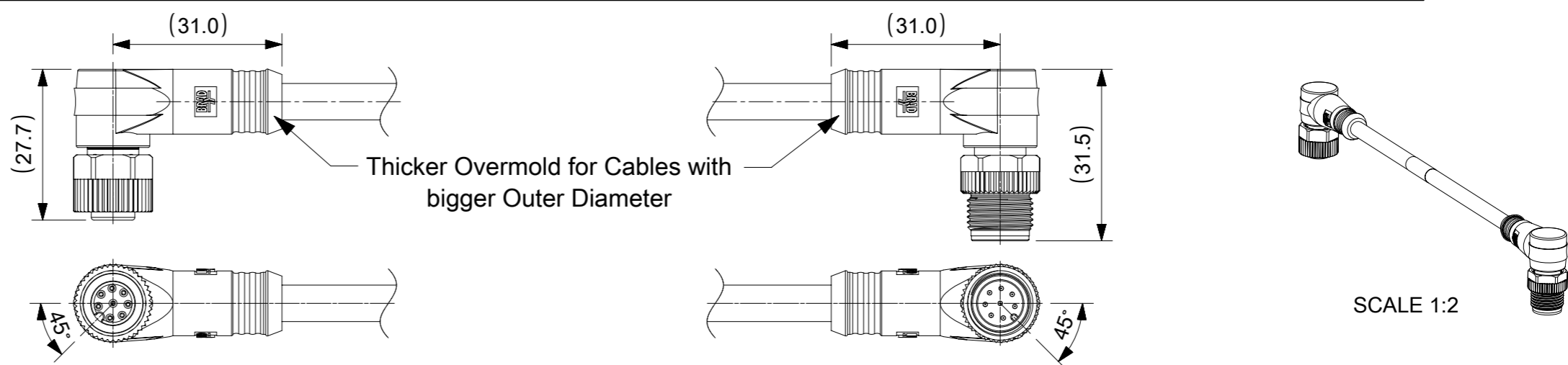


# FEMALE PLUG M12 90° ANGLED TO MALE PLUG M12 90° ANGLED



**NOTES:**

RATED VOLTAGE: 3, 4 contacts 250V  
 5 contacts 60V  
 8 contacts 30V  
 RATED CURRENT: 3, 4, 5 contacts 4A  
 8 contacts 2A  
 PROTECTION CLASS: IP 67  
 TEMPERATURE: -25°C / +85°C



**CONTACTS POSITION FRONT VIEW:**

| CABLE              | 3 CONTACTS | 4 CONTACTS         | 5 CONTACTS         | 5 CONTACTS | 8 CONTACTS |
|--------------------|------------|--------------------|--------------------|------------|------------|
|                    | B30, B55   | B30, B33, B36, B55 | B30, B33, B36, B55 | B42        | B41, B49   |
| <b>FEMALE</b>      |            |                    |                    |            |            |
| <b>MALE</b>        |            |                    |                    |            |            |
| <b>CONNECTIONS</b> | PIN        | PIN                | PIN                | PIN        | PIN        |
|                    | 1          | 1                  | 1                  | 1          | 1          |
|                    | 2          | 2                  | 2                  | 2          | 2          |
|                    | 3          | 3                  | 3                  | 3          | 3          |
|                    | 4          | 4                  | 4                  | 4          | 4          |
|                    | 5          | 5                  | 5                  | 5          | 5          |
|                    |            |                    |                    |            | 6          |
|                    |            |                    |                    |            | 7          |
|                    |            |                    |                    | 8          |            |

CODING REQUIRED TO IEC 61076-2-101

**FOR OPTIONS SEE - NUMERICAL CODE - ON SHEET 2**

| ITEM | QTY.        | DESCRIPTION              | MATERIAL    | FINISH                     |
|------|-------------|--------------------------|-------------|----------------------------|
| 11   | SEE SHEET 2 | I/D CARRIER              | PVC         | TRANSPARENT                |
| 10   | 1           | LABEL YELLOW             | VINYL       | ---                        |
| 9    | 3 / 4 / 5   | CONTACT M12 MALE         | COPPER      | SELECTIVE GOLD OVER NICKEL |
|      | 8           |                          | BRASS       | SELECTIVE GOLD OVER NICKEL |
| 8    | 1           | INSERT MALE BLACK        | TPU         | ---                        |
| 7    | 1           | COUPLING NUT MALE SW13   | BRASS       | SEE SHEET 2                |
| 6    | -           | CABLE                    | SEE SHEET 2 | ---                        |
| 5    | -           | OVERMOULDING             | TPU         | SEE SHEET 2                |
| 4    | 1           | COUPLING NUT FEMALE SW13 | BRASS       | SEE SHEET 2                |
| 3    | 1           | INSERT FEMALE BLACK      | TPU         | ---                        |
| 2    | 1           | ORING RED                | FPM         | ---                        |
| 1    | 3 / 4 / 5   | CONTACT M12 FEMALE       | BRONZE      | SELECTIVE GOLD OVER NICKEL |
|      | 8           |                          | BRASS       | SELECTIVE GOLD OVER NICKEL |

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

**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: 120066  
 MATERIAL NUMBER: SEE SHEET 3  
 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: JMARSZALEK 2016/10/12  
 APPR: RSILLER 2016/10/18

DOCUMENT NUMBER: 1200669011  
 DOC TYPE: PSD  
 DOC PART: 000  
 REVISION: A5

**molex**  
 CSE M12 XP AC FE RA WSOR MA RA XM DE  
 PRODUCT CUSTOMER DRAWING

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

OPTIONS

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

88=M12x1  
Double ended

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

Heads style:  
033=Plug Female 90°  
to Plug Male 90°

Cable type: See Table

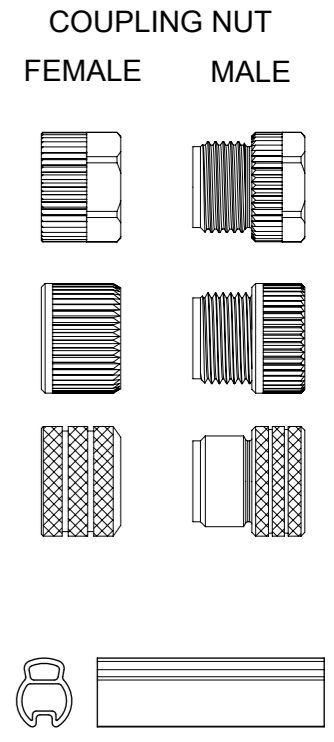
Units:  
M=Meter  
C=Centimeter

Length  
Examples:  
005=0.5 unit  
010=1 unit  
100=10 unit

Overmold color:  
Blank (Standard)=Black  
A=Grey / G=Black / Y=Yellow / R=Red

Coupling Nut:  
Blank (Standard)=Knurled/Hex Brass, Ni Plated  
5=Knurled Derlin  
7=Knurled Brass Ni Plated, Teflon Coated

H= 2 pcs. of I/D Carrier PVC Transparent  
(Cables B36 always with 2 pcs. 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: TEMP. / BENDING RADIUS | DRAG CHAIN                             | CABLE PRODUCT SPECIFICATION | CABLE SPEC. DRAWING |
|------------|--------------|---------------------|--------------|--------------|-------------------------|--------------------------------|---------------------------------|------------------------------------|--|-----------------------------|---------------------|
| B30        | 3 / 4 / 5    | 0.34mm <sup>2</sup> | TPU Black    | UL 21215/758 | C22.2 I/II A/B 80°/600V | -40°C to +90°C<br>>5xO.D.      | -25°C to +80°C<br>>7.5xO.D.     | -5°C to +60°C<br>>7.5xO.D.         | up to 5 000 000 cycles<br>at temp 20°C | 1552200001                  | SD-120209-001       |
| B33        | 4 / 5        | 0.34mm <sup>2</sup> | TPU Gray     |              |                         |                                |                                 |                                    |  |                             | SD-120209-001       |
| B36        | 4            | 0.34mm <sup>2</sup> | TPU Orange   |              |                         |                                |                                 |                                    |  |                             | SD-120209-001       |
| B41        | 8            | 0.25mm <sup>2</sup> | TPU Black    |              |                         |                                |                                 |                                    |  |                             | SD-120209-006       |
| B42        | 5            | 0.34mm <sup>2</sup> | TPU Black    |              |                         |                                |                                 |                                    |  |                             | SD-120209-001       |
| B55        | 4 / 5        | 0.34mm <sup>2</sup> | TPU Yellow   |              |                         |                                |                                 |                                    |  |                             | N/A                 |

CABLE LENGTH TOLERANCES

| LENGTH   | TOLERANCE  |
|----------|------------|
| 0m-1m    | +40 mm     |
| >1m-5m   | +60 mm     |
| >5m-10m  | +80 mm     |
| >10m-20m | +140 mm    |
| >20m-30m | +160 mm    |
| >30m     | +1% length |

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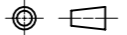
|  |                        |   |                                      |                 |                |
|--|------------------------|---|--------------------------------------|-----------------|----------------|
| DIMENSION UNITS                                      | SCALE                  | CURRENT REV DESC: REMOVED OBSOLETE PART NUMBER AS PER PCN#512871. | <b>molex</b>                         |                 |                |
| mm   | 1:1                    |   | CSE M12 XP AC FE RA WSOR MA RA XM DE |                 |                |
| GENERAL TOLERANCES (UNLESS SPECIFIED)                |                        |   | PRODUCT CUSTOMER DRAWING             |                 |                |
| ANGULAR TOL  | ± 1.0 °                | EC NO: 732259   | DOCUMENT NUMBER                      | DOC TYPE        | DOC PART       |
| 4 PLACES   | ±                      | DRWN: SANTHN 2022/12/21   | 1200669011                           | PSD             | 000            |
| 3 PLACES   | ±                      | CHK'D: GGA 2022/12/21   |                                      |                 | A5             |
| 2 PLACES   | ± 0.05                 | APPR: GGA 2022/12/21  |                                      |                 |                |
| 1 PLACE  | ± 0.3                  | INITIAL REVISION:   |                                      |                 |                |
| 0 PLACES   | ± 0.5                  | DRWN: JMARSZALEK 2016/10/12                                       |                                      |                 |                |
|  |                        | APPR: RSILLER 2016/10/18  |                                      |                 |                |
| DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS | THIRD ANGLE PROJECTION | DRAWING   | SERIES                               | MATERIAL NUMBER | CUSTOMER       |
|  |                        | A3-SIZE   | 120066                               | SEE SHEET 3     | GENERAL MARKET |
|  |                        |   |                                      |                 | SHEET NUMBER   |
|  |                        |   |                                      |                 | 2 OF 3         |

# PART LIST

| No. | Part No.   | Engineering No. | Cable Length (mm) |
|-----|------------|-----------------|-------------------|
| 1   | 1200668942 | 883033B30M006   | 600               |
| 2   | 1200668943 | 883033B30M010   | 1000              |
| 3   | 1200668944 | 883033B30M020   | 2000              |
| 4   | 1200668945 | 883033B30M030   | 3000              |
| 5   | 1200668946 | 883033B30M050   | 5000              |
| 6   | 1200668947 | 883033B30M100   | 10000             |
| 7   | 1200668948 | 884033B30M006   | 600               |
| 8   | 1200668949 | 884033B30M010   | 1000              |
| 9   | 1200668950 | 884033B30M020   | 2000              |
| 10  | 1200668951 | 884033B30M030   | 3000              |
| 11  | 1200668952 | 884033B30M050   | 5000              |
| 12  | 1200668953 | 884033B30M100   | 10000             |
| 13  | 1200668954 | 885033B42M006   | 600               |
| 14  | 1200668955 | 885033B42M010   | 1000              |
| 15  | 1200668956 | 885033B42M020   | 2000              |
| 16  | 1200668957 | 885033B42M030   | 3000              |
| 17  | 1200668958 | 885033B42M050   | 5000              |
| 18  | 1200668959 | 885033B42M100   | 10000             |
| 19  | 1200669009 | 885033B30M006   | 600               |
| 20  | 1200669010 | 885033B30M010   | 1000              |
| 21  | 1200669011 | 885033B30M020   | 2000              |
| 22  | 1200669012 | 885033B30M030   | 3000              |
| 23  | 1200669013 | 885033B30M050   | 5000              |
| 24  | 1200669014 | 885033B30M100   | 10000             |
| 25  | 1200669246 | 883033B30C210   | 210               |
| 26  | 1200669259 | 883033B30M004   | 400               |
| 27  | 1200669279 | 883033B30C260   | 260               |
| 28  | 1200669416 | 885033B42M020H  | 2000              |
| 29  | 1200669565 | 884033B36M0067Y | 600               |
| 30  | 1200669643 | 884033B33M010A  | 1000              |
| 31  | 1200669644 | 884033B33M020A  | 2000              |
| 32  | 1200669645 | 884033B33M030A  | 3000              |
| 33  | 1200669646 | 884033B33M050A  | 5000              |
| 34  | 1200669647 | 884033B33M100A  | 10000             |
| 35  | 1200669648 | 884033B33M150A  | 15000             |

| No. | Part No.   | Engineering No. | Cable Length |
|-----|------------|-----------------|--------------|
| 36  | 1200669702 | 885033B33M010A  | 1000         |
| 37  | 1200669703 | 885033B33M020A  | 2000         |
| 38  | 1200669704 | 885033B33M030A  | 3000         |
| 39  | 1200669705 | 885033B33M050A  | 5000         |
| 40  | 1200669706 | 885033B33M100A  | 10000        |
| 41  | 1200669649 | 884033B30M150   | 15000        |
| 42  | 1200669650 | 884033B55M010Y  | 1000         |
| 43  | 1200669651 | 884033B55M020Y  | 2000         |
| 44  | 1200669652 | 884033B55M030Y  | 3000         |
| 45  | 1200669653 | 884033B55M050Y  | 5000         |
| 46  | 1200669654 | 884033B55M100Y  | 10000        |
| 47  | 1200669655 | 884033B55M150Y  | 15000        |
| 48  | 1200669707 | 885033B55M010Y  | 1000         |
| 49  | 1200669708 | 885033B55M020Y  | 2000         |
| 50  | 1200669709 | 885033B55M030Y  | 3000         |
| 51  | 1200669710 | 885033B55M050Y  | 5000         |
| 52  | 1200669711 | 885033B55M100Y  | 10000        |
| 53  | 1200669898 | 884033B33M005A  | 500          |
| 54  | 1200669899 | 884033B33M200A  | 20000        |
| 55  | 1200669916 | 885033B33M005A  | 500          |
| 56  | 1200669917 | 885033B33M200A  | 20000        |
| 57  | 1200669918 | 885033B33M300A  | 30000        |
| 58  | 1200669919 | 885033B33M400A  | 40000        |
| 59  | 1200669920 | 885033B33M500A  | 50000        |
| 60  |            |                 |              |
| 61  |            |                 |              |
| 62  |            |                 |              |
| 63  |            |                 |              |
| 64  |            |                 |              |
| 65  |            |                 |              |
| 66  |            |                 |              |
| 67  |            |                 |              |
| 68  |            |                 |              |
| 69  |            |                 |              |
| 70  |            |                 |              |

| No. | Part No. | Engineering No. | Cable Length |
|-----|----------|-----------------|--------------|
| 71  |          |                 |              |
| 72  |          |                 |              |
| 73  |          |                 |              |
| 74  |          |                 |              |
| 75  |          |                 |              |
| 76  |          |                 |              |
| 77  |          |                 |              |
| 78  |          |                 |              |
| 79  |          |                 |              |
| 80  |          |                 |              |
| 81  |          |                 |              |
| 82  |          |                 |              |
| 83  |          |                 |              |
| 84  |          |                 |              |
| 85  |          |                 |              |
| 86  |          |                 |              |
| 87  |          |                 |              |
| 88  |          |                 |              |
| 89  |          |                 |              |
| 90  |          |                 |              |
| 91  |          |                 |              |
| 92  |          |                 |              |
| 93  |          |                 |              |
| 94  |          |                 |              |
| 95  |          |                 |              |
| 96  |          |                 |              |
| 97  |          |                 |              |
| 98  |          |                 |              |
| 99  |          |                 |              |
| 100 |          |                 |              |
| 101 |          |                 |              |
| 102 |          |                 |              |
| 103 |          |                 |              |
| 104 |          |                 |              |
| 105 |          |                 |              |

|   |         |   |            |                 |        |                 |                |          |          |              |
|---|---------|---|------------|-----------------|--------|-----------------|----------------|----------|----------|--------------|
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| DIMENSION UNITS   | SCALE   | CURRENT REV DESC: REMOVED OBSOLETE PART NUMBER AS PER PCN#512871.   |            |                 |        |                 |                |          |          |              |
| mm  | 1:1     | <br>CSE M12 XP AC FE RA WSOR MA RA XM DE |            |                 |        |                 |                |          |          |              |
| GENERAL TOLERANCES (UNLESS SPECIFIED)   |         |   |            |                 |        |                 |                |          |          |              |
| ANGULAR TOL   | ± 1.0 ° | PRODUCT CUSTOMER DRAWING  |            |                 |        |                 |                |          |          |              |
| 4 PLACES  | ±       | EC NO: 732259   | 2022/12/15 |                 |        |                 |                |          |          |              |
| 3 PLACES  | ±       | DRWN: SANTHN  | 2022/12/21 |                 |        |                 |                |          |          |              |
| 2 PLACES  | ± 0.05  | CHK'D: GGA  | 2022/12/21 |                 |        |                 |                |          |          |              |
| 1 PLACE   | ± 0.3   | APPR: GGA   | 2022/12/21 |                 |        |                 |                |          |          |              |
| 0 PLACES  | ± 0.5   | INITIAL REVISION:   |            | DOCUMENT NUMBER |        |                 |                |          |          |              |
| DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS  |         | THIRD ANGLE PROJECTION  |            | DRAWING         | SERIES | MATERIAL NUMBER | CUSTOMER       | DOC TYPE | DOC PART | REVISION     |
|   |         |    |            | A3-SIZE         | 120066 | SEE PART LIST   | GENERAL MARKET | PSD      | 000      | A5           |
|   |         |   |            |                 |        |                 |                |          |          | SHEET NUMBER |
|   |         |   |            |                 |        |                 |                |          |          | 3 OF 3       |