

| REVISIONS |     |                        |           |     |      |
|-----------|-----|------------------------|-----------|-----|------|
| REV       | ECO | DESCRIPTION            | DATE      | BY  | APPR |
| 01        | -   | RELEASE NEW DWG FORMAT | -         | -   | -    |
| 02        | -   | ADDED IP69K RATING     | 4/21/2020 | RO  | DR   |
| 03        | -   | VOLTAGE WAS 250VAC     | 1/11/2022 | MRF | DR   |

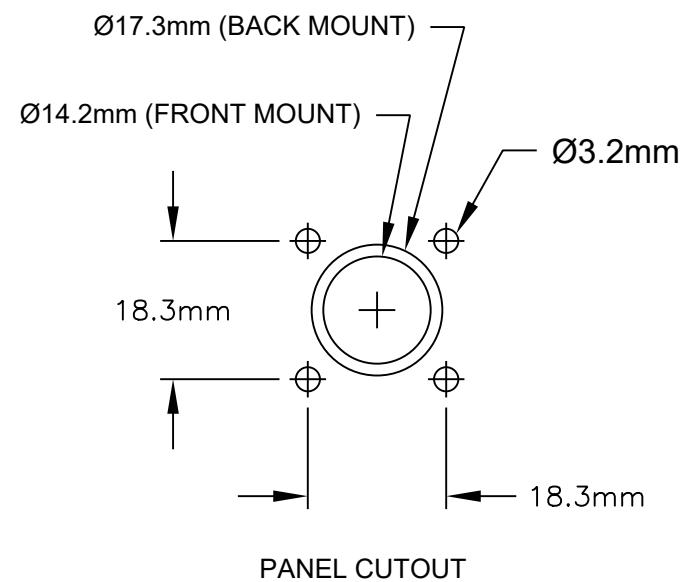
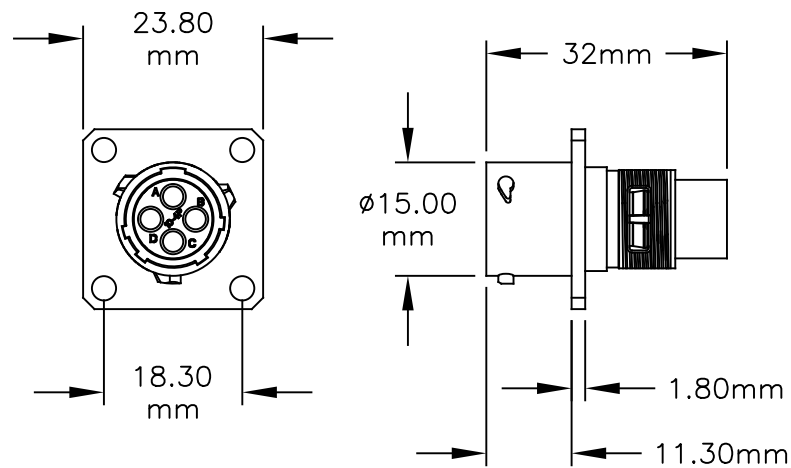
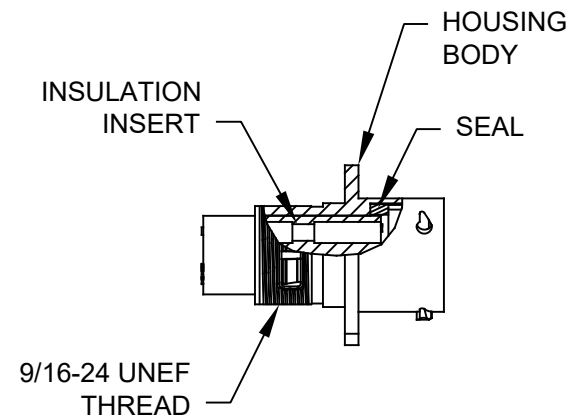
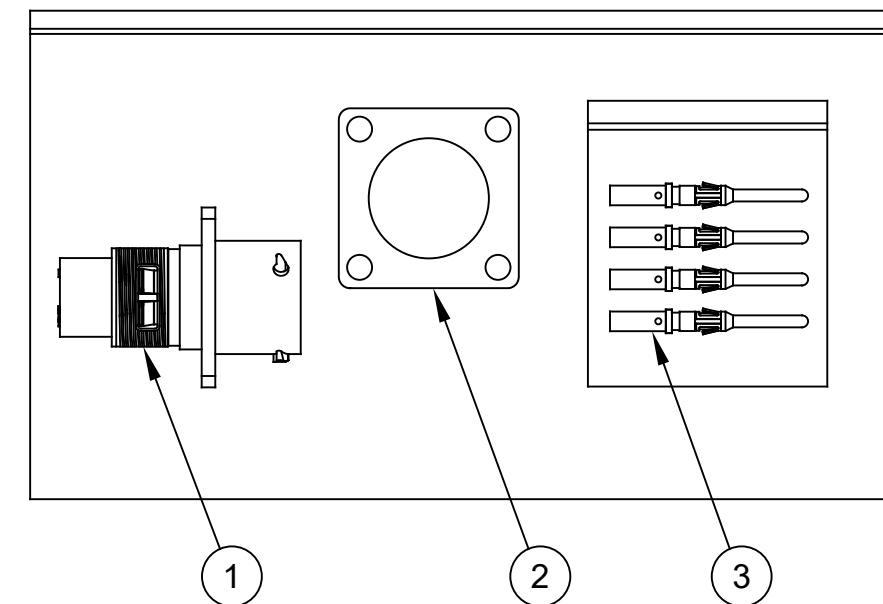


ILLUSTRATION: COMPLETE KIT



NOTES:

- 1) CONTACT BARREL RANGE: 16AWG TO 18AWG
- 2) RECOMMENDED CRIMP TOOLS:  
HAND CRIMPER: MFX-3959  
PNEUMATIC CRIMPER: MFX-3960
- 3) EXTRACTION TOOL: QXRT16
- 4) MATERIALS:  
HOUSING BODY: ZINC DIE CAST, NICKEL PLATED  
INSULATION INSERT: PA66, UL94/V-0  
CONTACT: BRASS, GOLD FLASH PLATED  
SEAL: SILICONE
- 5) ELECTRICAL DATA:  
a) CURRENT (MAX): 13A  
b) VOLTAGE (MAX): 500V AC/DC  
c) INSULATION RESISTANCE (MIN): 5000M OHMS  
d) TEST VOLTAGE (BETWEEN CONTACTS): 3050V

6) TECHNICAL DATA:

- a) TEMPERATURE RANGE: -40°C TO 105°C
- b) PROTECTION: IP67 (IP69K WHEN IN MATED CONDITION)
- c) MATING CYCLES: >500
- d) VIBRATION RESISTANCE PER MIL-STD-202 METHOD 204
- e) THERMAL SHOCK PER MIL-STD-202 METHOD 207
- f) 48 HOUR SALT SPRAY PER MIL-STD-202 METHOD 101

7) RoHS COMPLIANT

| QUANTITY | PART NUMBER   | DESCRIPTION           | ITEM |
|----------|---------------|-----------------------|------|
| 4        | MP16M23F      | CONTACT, PIN, SIZE 16 | 3    |
| 1        | RTFD10B       | GASKET                | 2    |
| 1        | RT00104PKNH03 | CONNECTOR             | 1    |

| MATERIALS LIST  |  |  |                            |
|---|--|--|----------------------------|
| UNLESS OTHERWISE SPECIFIED<br>1) All dimensions are in metric(mm).<br>2) Tolerances are as follows:<br>1 PL DEC ±0.30<br>2 PL DEC ±0.15<br>3 PL DEC ±0.08<br>Fractions ±1/64<br>Angles ±1°<br>3) Note reference = |  | SIGNATURES<br>DRAWN: MRF<br>CHECKED:<br>ENGINEER:<br>APPROVAL:   | DATE<br>15AUG18            |
| MATERIAL SPECIFICATIONS:  |  | CUSTOMER:  |                            |
| PROCESS SPECIFICATIONS:   |  | THIS DRAWING IS SUPPLIED FOR INFORMATION ONLY. DESIGN FEATURES, SPECIFICATIONS AND PERFORMANCE DATA SHOWN HEREON ARE THE PROPERTY OF THE AMPHENOL CORPORATION. NO RIGHTS OF REPRODUCTION ARE IMPLIED. ALL DIMENSIONS ARE SUBJECT TO NORMAL MANUFACTURING VARIATIONS. |                            |
| NEXT ASSY:  |  | SIZE<br><b>B</b>   | TYPE<br><b>C-</b>          |
|   |  | DWG NO.<br><b>RT00104PKNH03-K</b>  | REVISION<br><b>03</b>      |
|   |  | SCALE<br><b>NONE</b>   | SHEET <b>1</b> OF <b>1</b> |

TITLE:

KIT, ECO-MATE RM

DWG NO:

REV: 03

SH: 1

DF: 1

# ecomate® RM/RSSM/Aquarius™ - Contact Size 16 Options

| Machined, Crimp Contacts |            |                    |                               |            |
|--------------------------|------------|--------------------|-------------------------------|------------|
| Part Number              |            | Contact Size (AWG) | Wire Range (mm <sup>2</sup> ) | Plating    |
| Male                     | Female     |                    |                               |            |
| MP14M23F                 | MS14M23F   | 14AWG              | 2.0-2.5mm <sup>2</sup>        | Gold Flash |
| MP14M23G5                | MS14M23G5  | 14AWG              | 2.0-2.5mm <sup>2</sup>        | Gold 5µ"   |
| MP14M23G10               | MS14M23G10 | 14AWG              | 2.0-2.5mm <sup>2</sup>        | Gold 10µ"  |
| MP14M23G15               | MS14M23G15 | 14AWG              | 2.0-2.5mm <sup>2</sup>        | Gold 15µ"  |
| MP14M23G30               | MS14M23G30 | 14AWG              | 2.0-2.5mm <sup>2</sup>        | Gold 30µ"  |
| MP16M23F                 | MS16M23F   | 18-16AWG           | 0.75-1.5mm <sup>2</sup>       | Gold Flash |
| MP16M23G5                | MS16M23G5  | 18-16AWG           | 0.75-1.5mm <sup>2</sup>       | Gold 5µ"   |
| MP16M23G10               | MS16M23G10 | 18-16AWG           | 0.75-1.5mm <sup>2</sup>       | Gold 10µ"  |
| MP16M23G15               | MS16M23G15 | 18-16AWG           | 0.75-1.5mm <sup>2</sup>       | Gold 15µ"  |
| MP16M23G30               | MS16M23G30 | 18-16AWG           | 0.75-1.5mm <sup>2</sup>       | Gold 30µ"  |
| MP20M23F                 | MS20M23F   | 22-20AWG           | 0.34-0.50mm <sup>2</sup>      | Gold Flash |
| MP20M23G5                | MS20M23G5  | 22-20AWG           | 0.34-0.50mm <sup>2</sup>      | Gold 5µ"   |
| MP20M23G10               | MS20M23G10 | 22-20AWG           | 0.34-0.50mm <sup>2</sup>      | Gold 10µ"  |
| MP20M23G15               | MS20M23G15 | 22-20AWG           | 0.34-0.50mm <sup>2</sup>      | Gold 15µ"  |
| MP20M23G30               | MS20M23G30 | 22-20AWG           | 0.34-0.50mm <sup>2</sup>      | Gold 30µ"  |
| MP24M23F                 | MS24M23F   | 26-24AWG           | 0.14-0.25mm <sup>2</sup>      | Gold Flash |
| MP24M23G5                | MS24M23G5  | 26-24AWG           | 0.14-0.25mm <sup>2</sup>      | Gold 5µ"   |
| MP24M23G10               | MS24M23G10 | 26-24AWG           | 0.14-0.25mm <sup>2</sup>      | Gold 10µ"  |
| MP24M23G15               | MS24M23G15 | 26-24AWG           | 0.14-0.25mm <sup>2</sup>      | Gold 15µ"  |
| MP24M23G30               | MS24M23G30 | 26-24AWG           | 0.14-0.25mm <sup>2</sup>      | Gold 30µ"  |

| Stamped & Formed, Crimp Contacts |           |                    |                               |            |
|----------------------------------|-----------|--------------------|-------------------------------|------------|
| Part Number                      |           | Contact Size (AWG) | Wire Range (mm <sup>2</sup> ) | Plating    |
| Male                             | Female    |                    |                               |            |
| SP14M2F                          | SS14M2F   | 14AWG              | 2.0-2.5mm <sup>2</sup>        | Gold Flash |
| SP14M2G5                         | SS14M2G5  | 14AWG              | 2.0-2.5mm <sup>2</sup>        | Gold 5µ"   |
| SP14M2G10                        | SS14M2G10 | 14AWG              | 2.0-2.5mm <sup>2</sup>        | Gold 10µ"  |
| SP14M2G15                        | SS14M2G15 | 14AWG              | 2.0-2.5mm <sup>2</sup>        | Gold 15µ"  |
| SP14M2G30                        | SS14M2G30 | 14AWG              | 2.0-2.5mm <sup>2</sup>        | Gold 30µ"  |
| SP16M2F                          | SS16M2F   | 18-16AWG           | 0.75-1.5mm <sup>2</sup>       | Gold Flash |
| SP16M2G5                         | SS16M2G5  | 18-16AWG           | 0.75-1.5mm <sup>2</sup>       | Gold 5µ"   |
| SP16M2G10                        | SS16M2G10 | 18-16AWG           | 0.75-1.5mm <sup>2</sup>       | Gold 10µ"  |
| SP16M2G15                        | SS16M2G15 | 18-16AWG           | 0.75-1.5mm <sup>2</sup>       | Gold 15µ"  |
| SP16M2G30                        | SS16M2G30 | 18-16AWG           | 0.75-1.5mm <sup>2</sup>       | Gold 30µ"  |
| SP20M2F                          | SS20M2F   | 22-20AWG           | 0.34-0.50mm <sup>2</sup>      | Gold Flash |
| SP20M2G5                         | SS20M2G5  | 22-20AWG           | 0.34-0.50mm <sup>2</sup>      | Gold 5µ"   |
| SP20M2G10                        | SS20M2G10 | 22-20AWG           | 0.34-0.50mm <sup>2</sup>      | Gold 10µ"  |
| SP20M2G15                        | SS20M2G15 | 22-20AWG           | 0.34-0.50mm <sup>2</sup>      | Gold 15µ"  |
| SP20M2G30                        | SS20M2G30 | 22-20AWG           | 0.34-0.50mm <sup>2</sup>      | Gold 30µ"  |
| SP24M2F                          | SS24M2F   | 26-24AWG           | 0.14-0.25mm <sup>2</sup>      | Gold Flash |
| SP24M2G5                         | SS24M2G5  | 26-24AWG           | 0.14-0.25mm <sup>2</sup>      | Gold 5µ"   |
| SP24M2G10                        | SS24M2G10 | 26-24AWG           | 0.14-0.25mm <sup>2</sup>      | Gold 10µ"  |
| SP24M2G15                        | SS24M2G15 | 26-24AWG           | 0.14-0.25mm <sup>2</sup>      | Gold 15µ"  |
| SP24M2G30                        | SS24M2G30 | 26-24AWG           | 0.14-0.25mm <sup>2</sup>      | Gold 30µ"  |

| Machined, Tooling |  |
|-------------------|--|
| Part Number       | Description                                  |
| QXRT16            | Contact Extraction Tool, #16 (Ø 1.6) Contact |
| MFY-3959          | Hand Crimp Tool for Machined Contacts        |
| MFY-3960          | Pneumatic Crimp Tool for Machined Contact    |

| Stamped & Formed, Tooling |  |
|---------------------------|--|
| Part Number               | Description  |
| QXRT16                    | Contact Extraction Tool, #16 (Ø 1.6) Contact           |
| MFY-3954                  | Hand Tool, Stamped & Formed Contact, Size 16, 20-14AWG |
| MFY-3957                  | Crimp Die, Stamped & Formed Contact                    |

| Plating Options, All |  |
|----------------------|--|
| Symbol               | Plating                                    |
| T                    | Tin Plated (for Stamped & Formed Contacts) |
| S                    | Silver Plated 5Um (for Machined Contacts)  |
| F                    | Gold Plated                                |
| G5                   | Gold Plated (Thickness 5µ")                |
| G10                  | Gold Plated (Thickness 10µ")               |
| G15                  | Gold Plated (Thickness 15µ")               |
| G30                  | Gold Plated (Thickness 30µ")               |

| Misc Tooling, All |                            |
|-------------------|----------------------------|
| Part Number       | Description                |
| CA-4020-59        | Sealing Plug, Size 16 & 20 |

| Standard Quantity Order Options |                          |
|---------------------------------|--------------------------|
| Machined                        | Bulk Package, 500 Pieces |
| Stamped & Formed                | Reel, 3000 Pieces        |

# ecomate® RM/RSSM - Contact Size 16, PC Tail Options

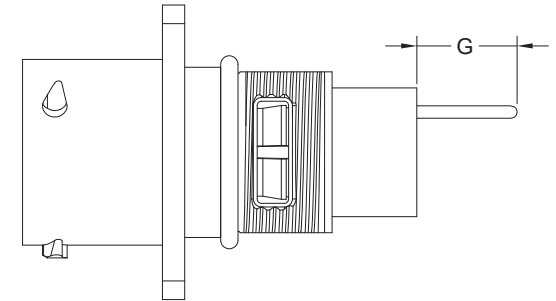
| Machined, PC Tail Contacts |               |                    |               |            |
|----------------------------|---------------|--------------------|---------------|------------|
| Part Number                |               | Contact Size (AWG) | Description   | Plating    |
| Male                       | Female        |                    |               |            |
| MP16M12E06F                | MS16M12E06F   | 16AWG              | Short Version | Gold Flash |
| MP16M12E06G5               | MS16M12E06G5  | 16AWG              | Short Version | Gold 5μ"   |
| MP16M12E06G10              | MS16M12E06G10 | 16AWG              | Short Version | Gold 10μ"  |
| MP16M12E06G15              | MS16M12E06G15 | 16AWG              | Short Version | Gold 15μ"  |
| MP16M12E06G30              | MS16M12E06G30 | 16AWG              | Short Version | Gold 30μ"  |
| MP16M12E09F                | MS16M12E09F   | 16AWG              | Long Version  | Gold Flash |
| MP16M12E09G5               | MS16M12E09G5  | 16AWG              | Long Version  | Gold 5μ"   |
| MP16M12E09G10              | MS16M12E09G10 | 16AWG              | Long Version  | Gold 10μ"  |
| MP16M12E09G15              | MS16M12E09G15 | 16AWG              | Long Version  | Gold 15μ"  |
| MP16M12E09G30              | MS16M12E09G30 | 16AWG              | Long Version  | Gold 30μ"  |

| Stamped & Formed , PC Tail Contacts |        |                    |             |         |
|-------------------------------------|--------|--------------------|-------------|---------|
| Part Number                         |        | Contact Size (AWG) | Description | Plating |
| Male                                | Female |                    |             |         |
| -                                   | -      | -                  | -           | -       |
| -                                   | -      | -                  | -           | -       |
| -                                   | -      | -                  | -           | -       |
| -                                   | -      | -                  | -           | -       |
| -                                   | -      | -                  | -           | -       |
| -                                   | -      | -                  | -           | -       |
| -                                   | -      | -                  | -           | -       |
| -                                   | -      | -                  | -           | -       |
| -                                   | -      | -                  | -           | -       |
| -                                   | -      | -                  | -           | -       |
| -                                   | -      | -                  | -           | -       |

| PCB Contact Dimensions - Nominal Length G<br>(Size 20 PC Tail dimensions for ecomate® RM and ecomate® RSSM connectors only.) |              |              |              |              |              |              |
|--|--------------|--------------|--------------|--------------|--------------|--------------|
| Pin Contact  |              |              |              |              |              |              |
| Shell Size   | MP20W12E06xx | MP20W12E09xx | MP16M12E04xx | MP16M12E06xx | MP10B12E05xx | MP10B12E08xx |
| 10   | 4.0mm        | 9.5mm        | 4.0mm        | 8.0mm        | -            | -            |
| 12   | 4.0mm        | 9.5mm        | 4.0mm        | 8.0mm        | 5.0mm        | -            |
| 14   | 4.0mm        | 9.5mm        | 4.0mm        | 8.0mm        | 5.2mm        | -            |
| 16   | 4.0mm        | 9.5mm        | 4.0mm        | 8.0mm        | -            | -            |
| 18   | -            | 9.5mm        | 4.0mm        | 8.0mm        | -            | -            |
| 20   | -            | 9.5mm        | 4.0mm        | 8.0mm        | -            | -            |
| 24   | -            | -            | -            | 3.9mm        | -            | -            |

| Socket Contact |              |              |              |              |              |              |
|----------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Shell Size     | MP20W12E06xx | MP20W12E09xx | MP16M12E04xx | MP16M12E06xx | MP10B12E05xx | MP10B12E08xx |
| 10             | 3.3mm        | 8.5mm        | 2.4mm        | 3.0mm        | -            | -            |
| 12             | 3.3mm        | 8.5mm        | 2.4mm        | 3.0mm        | -            | -            |
| 14             | 3.3mm        | 8.5mm        | 2.4mm        | 3.0mm        | -            | -            |
| 16             | 3.3mm        | 8.5mm        | 2.4mm        | 3.0mm        | -            | -            |
| 18             | --           | 8.5mm        | 2.4mm        | -            | -            | -            |
| 20             | --           | 8.5mm        | 2.4mm        | -            | -            | -            |
| 24             | -            | -            | -            | -            | -            | -            |

| Standard Quantity Order Options |                  |
|---------------------------------|------------------|
| Machined                        | Bulk, 500 Pieces |
| Stamped & Formed                | -                |



**NOTE:** For ecomate® Aquarius™ PC Tail options, see our **ecomate® Aquarius™ PCB Mount Jam Nut Receptacles Flyer** online at [www.amphenol-sine.com](http://www.amphenol-sine.com).