

REVISIONS					
REV	ECD	DESCRIPTION	DATE	BY	APPR
01	-	CUSTOMER DRAWING	-	-	-
02	-	ADDED IP69K RATING	4/21/2020	RO	DR
03	-	CHANGED VOLTAGE FROM 250V TO 500V	20JAN22	MRF	DR

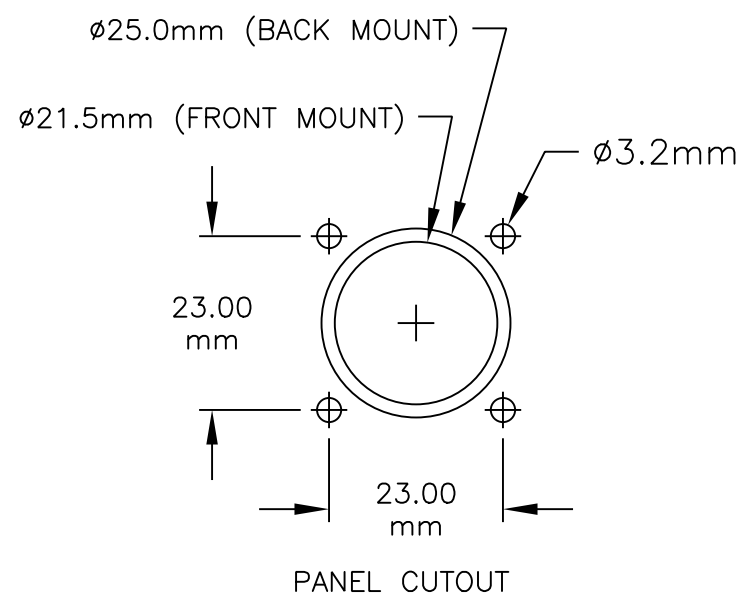
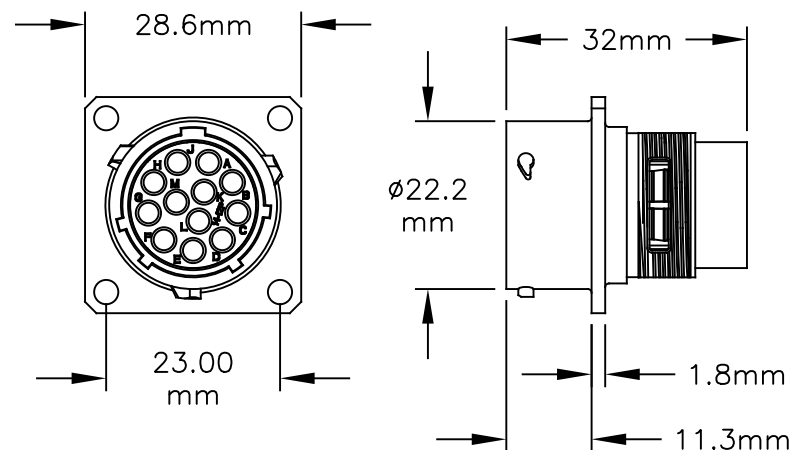
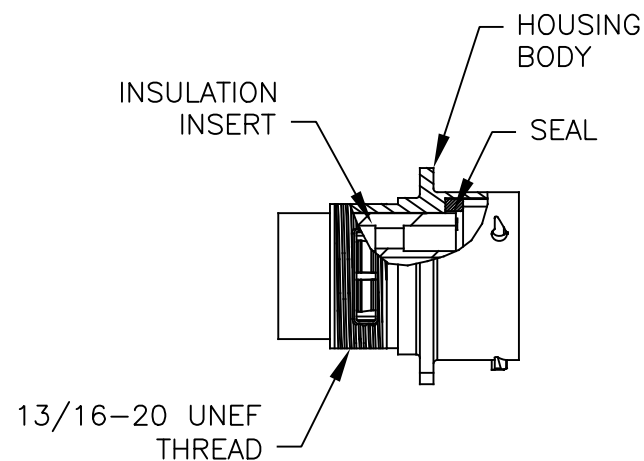
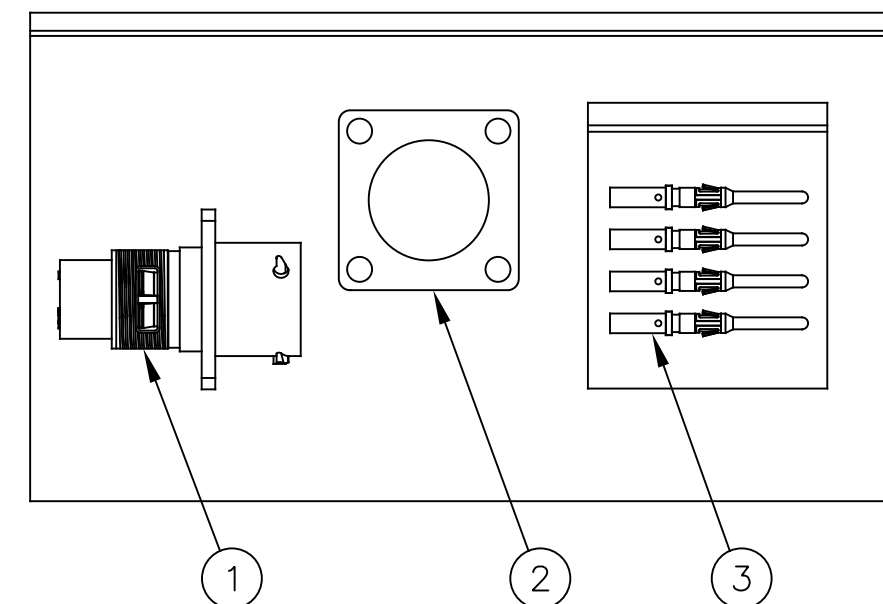


ILLUSTRATION: COMPLETE KIT



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

12	MP16M23F	CONTACT, PIN, SIZE 16	3
1	RTFD14B	GASKET	2
1	RT001412PKNH03	CONNECTOR	1
QUANTITY	PART NUMBER	DESCRIPTION	ITEM

MATERIALS LIST			
UNLESS OTHERWISE SPECIFIED		SIGNATURES	DATE
1) All dimensions are in metric(mm).		DRAWN: MRF	20AUG18
2) Tolerances are as follows:		CHECKED:	
1 PL DEC ±0.30		ENGINEER:	
2 PL DEC ±0.15		APPROVAL:	
3 PL DEC ±0.08		CUSTOMER:	
3) Note reference = \triangle		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.	
MATERIAL SPECIFICATIONS:		KIT, ECO-MATE RM	
PROCESS SPECIFICATIONS:		SCALE: NONE	
NEXT ASSY:		SHEET 1 OF 1	

Amphenol

Sine Systems - www.amphenol-sine.com
44724 Morley Drive
Clinton Township, MI 48036

RT001412PKNH03-K

03

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

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

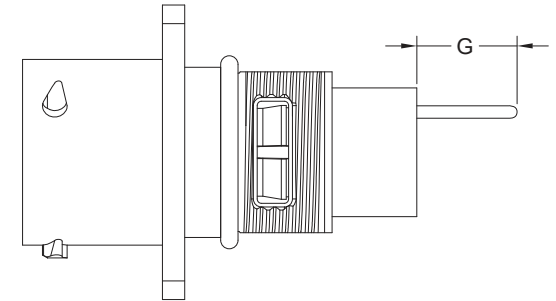
Machined, PC Tail Contacts				
Part Number		Contact Size (AWG)	Description	Plating
Male	Female			
MP16M12E06F	MS16M12E06F	16AWG	Short Version	Gold Flash
MP16M12E06G5	MS16M12E06G5	16AWG	Short Version	Gold 5µ"
MP16M12E06G10	MS16M12E06G10	16AWG	Short Version	Gold 10µ"
MP16M12E06G15	MS16M12E06G15	16AWG	Short 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 (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.