

REVISIONS					
REV	ECO	DESCRIPTION	DATE	BY	APPR
01	-	CUSTOMER DRAWING	-	-	-
02	-	ADDED IP69K RATING	4/21/2020	RO	DR
03	-	UPDATED AMPERAGE TO 7.5A	2/21/2023	RO	RO

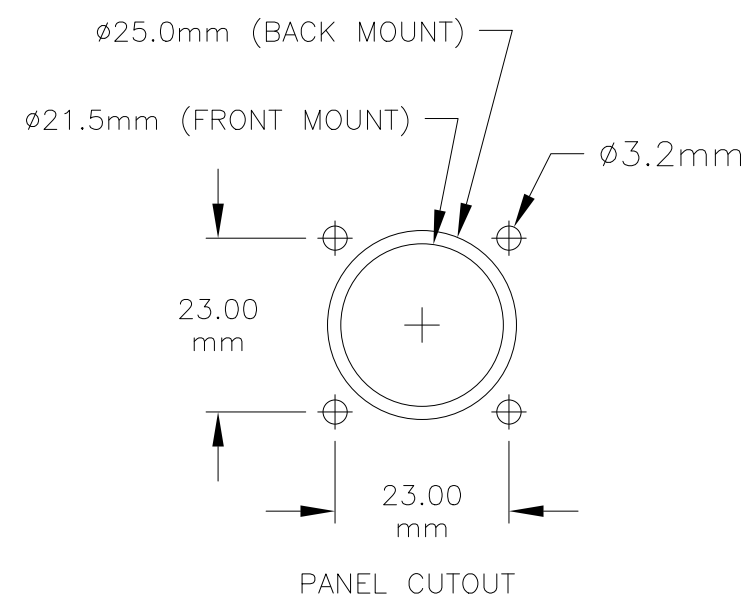
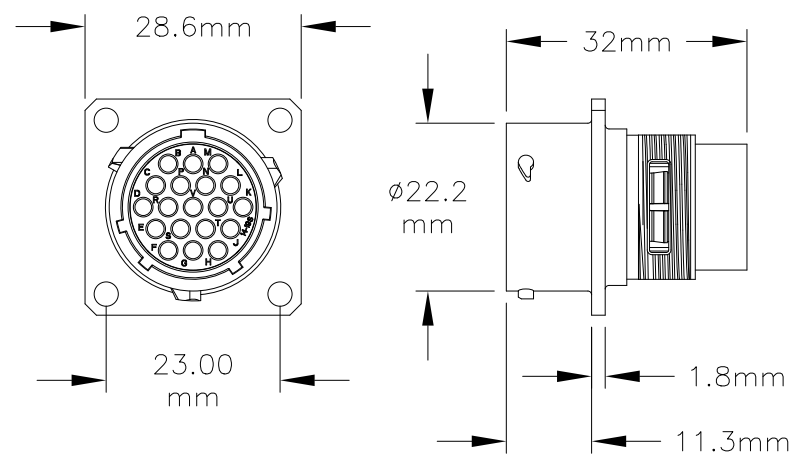
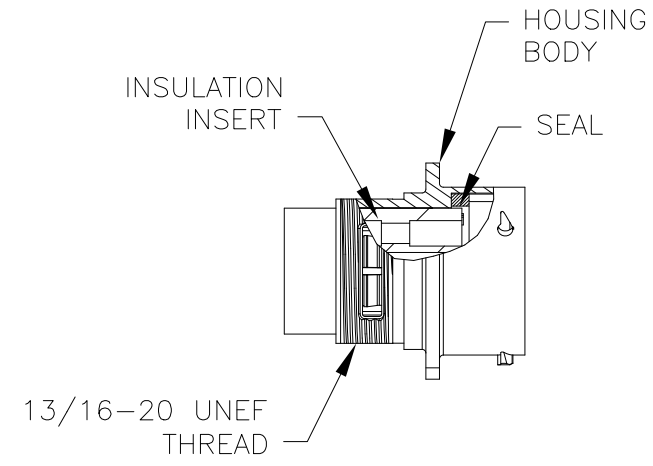
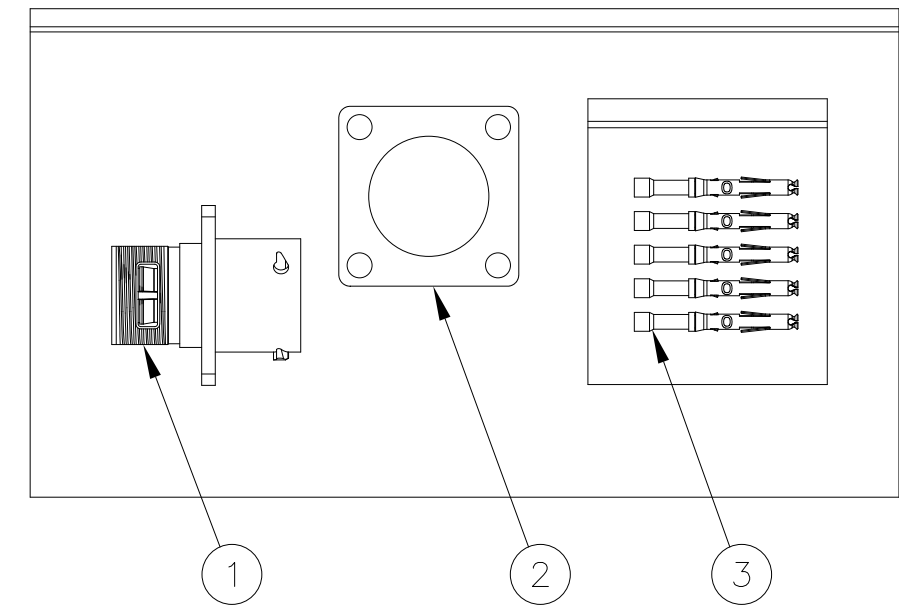


ILLUSTRATION: COMPLETE KIT



NOTES:

- CONTACT BARREL RANGE: 20AWG TO 22AWG
- RECOMMENDED CRIMP TOOLS:
HAND CRIMPER: MFX-3959
PNEUMATIC CRIMPER: MFX-3960
- EXTRACTION TOOL: QXRT20
- MATERIALS:
HOUSING BODY: ZINC DIE CAST, NICKEL PLATED
INSULATION INSERT: PA66, UL94/V-0
CONTACT: BRASS, GOLD FLASH PLATED
SEAL: SILICONE
- ELECTRICAL DATA:
a) CURRENT (MAX): 7.5A
b) VOLTAGE (MAX): 250VAC
c) INSULATION RESISTANCE (MIN): 5000M OHMS
d) TEST VOLTAGE (BETWEEN CONTACTS): 1500V

6) TECHNICAL DATA:

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

7) RoHS COMPLIANT

19	MP20W23F	CONTACT, PIN, SIZE 20	3
1	RTFD14B	GASKET	2
1	RTOW01419PKNH03	CONNECTOR	1
QUANTITY	PART NUMBER	DESCRIPTION	ITEM

MATERIALS LIST			
UNLESS OTHERWISE SPECIFIED 1) All dimensions are in metric(mm). 2) Tolerances are as follows: 1 PL DEC ±0.30 2 PL DEC ±0.15 3 PL DEC ±0.08 3) Note reference = \triangle X		SIGNATURES DRAWN: MRF CHECKED: ENGINEER: APPROVAL:	DATE 20AUG18
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:		SCALE: NONE	
		<p style="text-align: center;">Amphenol</p> <p style="text-align: center;">Sine Systems - www.amphenol-sine.com 44724 Morley Drive Clinton Township, MI 48036</p>	
KIT, ECO-MATE RM			
SIZE	TYPE	DWG NO:	REVISION
B	C-	RTOW01419PKNH03-K	03
SHEET 1 OF 1			

TITLE: KIT, ECO-MATE RM DWG NO: REV: 03 SH: 1 OF: 1

ecomate® RM/RSSM/Aquarius™ - Contact Size 20 Options

Machined, Crimp Contacts				
Part Number		Contact Size (AWG)	Wire Range (mm ²)	Plating
Male	Female			
MP20W23F	MS20W23F	22-20AWG	0.34-0.50 mm ²	Gold Flash
MP20W23G5	MS20W23G5	22-20AWG	0.34-0.50 mm ²	Gold 5μ"
MP20W23G10	MS20W23G10	22-20AWG	0.34-0.50 mm ²	Gold 10μ"
MP20W23G15	MS20W23G15	22-20AWG	0.34-0.50 mm ²	Gold 15μ"
MP20W23G30	MS20W23G30	22-20AWG	0.34-0.50 mm ²	Gold 30μ"
MP24W23F	MS24W23F	26-24AWG	0.14-0.25 mm ²	Gold Flash
MP24W23G5	MS24W23G5	26-24AWG	0.14-0.25 mm ²	Gold 5μ"
MP24W23G10	MS24W23G10	26-24AWG	0.14-0.25 mm ²	Gold 10μ"
MP24W23G15	MS24W23G15	26-24AWG	0.14-0.25 mm ²	Gold 15μ"
MP24W23G30	MS24W23G30	26-24AWG	0.14-0.25 mm ²	Gold 30μ"
MP28W23F	MS28W23F	30-28AWG	0.05-0.08 mm ²	Gold Flash
MP28W23G5	MS28W23G5	30-28AWG	0.05-0.08 mm ²	Gold 5μ"
MP28W23G10	MS28W23G10	30-28AWG	0.05-0.08 mm ²	Gold 10μ"
MP28W23G15	MS28W23G15	30-28AWG	0.05-0.08 mm ²	Gold 15μ"
MP28W23G30	MS28W23G30	30-28AWG	0.05-0.08 mm ²	Gold 30μ"

Stamped & Formed, Crimp Contacts				
Part Number		Contact Size (AWG)	Wire Range (mm ²)	Plating
Male	Female			
SP20W2F	SS20W2F	22-20AWG	0.34-0.50 mm ²	Gold Flash
SP20W2G5	SS20W2G5	22-20AWG	0.34-0.50 mm ²	Gold 5μ"
SP20W2G10	SS20W2G10	22-20AWG	0.34-0.50 mm ²	Gold 10μ"
SP20W2G15	SS20W2G15	22-20AWG	0.34-0.50 mm ²	Gold 15μ"
SP20W2G30	SS20W2G30	22-20AWG	0.34-0.50 mm ²	Gold 30μ"
SP24W2F	SS24W2F	26-24AWG	0.14-0.25 mm ²	Gold Flash
SP24W2G5	SS24W2G5	26-24AWG	0.14-0.25 mm ²	Gold 5μ"
SP24W2G10	SS24W2G10	26-24AWG	0.14-0.25 mm ²	Gold 10μ"
SP24W2G15	SS24W2G15	26-24AWG	0.14-0.25 mm ²	Gold 15μ"
SP24W2G30	SS24W2G30	26-24AWG	0.14-0.25 mm ²	Gold 30μ"
SP28W2F	SS28W2F	30-28AWG	0.05-0.08 mm ²	Gold Flash
SP28W2G5	SS28W2G5	30-28AWG	0.05-0.08 mm ²	Gold 5μ"
SP28W2G10	SS28W2G10	30-28AWG	0.05-0.08 mm ²	Gold 10μ"
SP28W2G15	SS28W2G15	30-28AWG	0.05-0.08 mm ²	Gold 15μ"
SP28W2G30	SS28W2G30	30-28AWG	0.05-0.08 mm ²	Gold 30μ"

Machined, Tooling	
Part Number	Description
QXRT20	Contact Extraction Tool, #20 (Ø 1.0) Contact
MFY-3959	Hand Crimp Tool for Machined Contacts
MFY-3960	Pneumatic Crimp Tool for Machined Contact

Stamped & Formed, Tooling	
Part Number	Description
QXRT20	Contact Extraction Tool, #20 (Ø 1.0) Contact
MFY-3958	Hand Tool, Stamped & Formed Contact, Size 20, 20-28AWG
MFY-3957	Crimp Die for 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 20, PC Tail Options

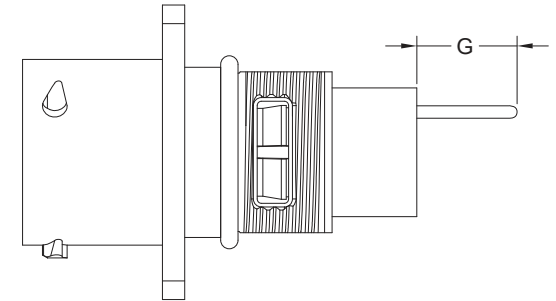
Machined, PC Tail Contacts				
Part Number		Contact Size (AWG)	Description	Plating
Male	Female			
MP20W12E06F	MS20W12E06F	20AWG	Short Version	Gold Flash
MP20W12E06G5	MS20W12E06G5	20AWG	Short Version	Gold 5μ"
MP20W12E06G10	MS20W12E06G10	20AWG	Short Version	Gold 10μ"
MP20W12E06G15	MS20W12E06G15	20AWG	Short Version	Gold 15μ"
MP20W12E06G30	MS20W12E06G30	20AWG	Short Version	Gold 30μ"
MP20W12E09F	MS20W12E09F	20AWG	Long Version	Gold Flash
MP20W12E09G5	MS20W12E09G5	20AWG	Long Version	Gold 5μ"
MP20W12E09G10	MS20W12E09G10	20AWG	Long Version	Gold 10μ"
MP20W12E09G15	MS20W12E09G15	20AWG	Long Version	Gold 15μ"
MP20W12E09G30	MS20W12E09G30	20AWG	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.