2M Ram-Lock

Positive-Locking Push-Pull Interface

RAM-LOCK

Amphenol's Ram-Lock Push-Pull interface is now available in the 2M family of products!

Featuring a positive locking interface, the Ram-Lock is perfect for applications where accidental unmating is a concern. The user must pull on the operating sleeve of the plug to unmate rather than pulling on the cable. Utilizing ball bearings for locking and a traditional D38999 EMI band for shell-to-shell conductivity allows for much more consistent and reliable engagement between the plug and receptacle.

2MRAM Features

- Push-pull with positive lock
- Visual, tactile, and audible full-mate indication
- Prevents accidental unmating when cable is pulled
- Full environmental sealing and EMI protectio
- Lower mate/unmate forces compared to 2M804

Applications:

- Soldier worn equipment
- Electric vehicle recharging
- Battery terminal connections
- In-line power and signal connections

Important Note:

Plug and receptacle terminology is reversed compared to 2M804. This is because the user pulls on the operating sleeve to disengage rather than the cable. For example, 2M804-003 is known as a "receptacle", 2M RAM-003 is a "plug."

2MRAM VS 38999		
Specification	**2MRAM**	**MIL-DTL 38999 Series III**
Signal Count	1 to 85	1 to 187
Insulation Resistance	5,000 megaohms min	5,000 megaohms min
Operating Temperature	-65°C to +175°C	-65°C to +175°C
Shock	300 G ± 15	300 G ± 15
Vibration	"37.0 G Random 30.0 G Sine"	"43.9 G Random 60.0 G Sine"
Shielding Effectiveness	"40 dB min. from 100 MHz to 1000 MHz"	"65 dB min. from 100 MHz to 1000 MHz"
Durability	1,000 mating cycles min.	500 mating cycles
Shell to Shell Conductivity	2.5 mV drop max	2.5 mV drop max
Contacts	Per AS39029	Per AS39029

2MRAM MATERIALS AND FINISHES	
Shells	Aluminum Alloy or Stainless Steel
Contacts	Copper Alloy, gold plated
Insulators	Polyphenylene Sulfide (PPS)
Contact Retention	Beryllium Copper Alloy
Grommet, Interfacial Seal, O-Ring	Fluorosilicone Rubber
Ball Bearing	Stainless Steel
Wave Springs	Stainless Steel
EMI Band, Nickel Plated	Beryllium Copper Alloy

2M

2M Ram-Lock Push-Pull Crimp Connectors

Ordering Guide for 2MRAM-001, 002, 003, 004

Micro38999

HOW TO ORDER

Complete steps 1-7 to create your part number (ex: 2MRAM-06ZNU6-7PA)

1. Series	2. Shell Type	3. Service Class	4. Shell Size - Insert Arrangment	5. Contact Type	6. Contact Type	7. Suffix
2MRAM-00X	-06	ZNU	6-7	P	A	

1. SERIES

	Part #	Description
Crimp		CABLE MOUNTED PLUG
	2MRAM-001	Plug with Integral Backshell
	2MRAM-002	Plug with Accessory Threads
		RECEPTACLE
	2MRAM-003	Receptacle with Banding Platform
	2MRAM-004	Receptacle with Accessory Threads
PCB / Solder		PCB/SOLDER CABLE MOUNTED PLUG
	2MRAM-005	Plug with Epoxy Potting
		PCB/SOLDER RECEPTACLES
	2MRAM-009	Receptacle with Solder Cup or PCB termination with Standard Epoxy Potting
	2MRAM-021	Receptacles with Solder Cup or PCB Termination with Special Sealing or Open Face (unmated) Water Immersion Requirements. 100% Leak Tested to maintain a helium leak rate of 1x10-4 cc/sec perssure differential from -65°C to 175°C.

2. SHELL TYPE

CABLE MOUNTED PLUG	
-06	In-Line Plug
RECEPTACLE	
-00	Jam Nut for front panel
-01	In-Line
-02	Square Flange
-07	Jam Nut for rear panel
PCB/SOLDER RECEPTACLE	
-06	In-Line plug
PCB/SOLDER CABLE MOUNTED PLUG	
-00	Jam Nut for front panel
-02	Square Flange
-07	Jam Nut for rear panel

3. SERVICE CLASS

			ROHS
Aluminum	C	Anodized (Non-Conductive	Yes
	M	Electroless Nickel	Yes
	NF	Olive Drab Cadmium	
	MT	Durmalon (Ni PTFE)	Yes
	ZN	Olive Drab Zinc Nickel	Yes
	ZNU	Black Zinc Nickel	Yes
	BEN	Black Electroless Nickel	Yes
Stainless Steel	Z1	Passivated	Yes
	ZL	Electrolytic Nickel	Yes

4. SHELL SIZE - INSERT ARRANGEMENT

See table on pages 7-20 of 2M catalog

5. CONTACT TYPE

CRIMP	P	Pin
	S	Socket
	A	Pin-less contacts
	B	Socket-Less Contacts
PCB/Solder	P	Pin-PCB
	S	Socket-PCB
	E	Pin-Solder Cup
	F	Socket-Solder Cup

6. CONTACT TERMINATION

Part #	A°	B°
A	150°	210°
B	75°	210°
C	95°	230°
D	140°	275°

Visual Representation

Cable Mounted Plug

In-Line Receptable

Square Flange Receptacle