

2M804 Push-Pull Quick-Disconnect

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Amphenol's 2M Micro38999 Connector Series... The New Aerospace Standard

Averaging less than half the size and weight of their 38999 ancestors, Amphenol's 2M Micro38999 series are an easy and inexpensive way to take weight out of your system. 2M meet or exceed most environmental and performance requirements listed in MIL-DTL-38999, so modernizing your equipment doesn't mean sacrificing ruggedness. With almost 2,000,000 configurations in every termination style and a full complement of accessories available right out of the catalog, customization has never been easier. Smarter, faster and smaller: Amphenol's 2M... the only connector you'll ever need.

2M804 Features

- Push-pull coupling
- Excellent EMI shielding
- Rated to 38999 immersions
- Quick-disconnect



Why 2M804?

2M804 connectors are the most rugged push-pull connectors on the market. Designed for use in soldier-worn tactical equipment deployed by the United States military, these connectors were built to perform. Waterproof, dustproof, and highly resistant to EMI interference, these connectors are just as at home on the battlefield as they are in use on C4I and IFE systems. With up to 85 signals, panel-mounting options, and customizable separation forces, there's no place on land, sea, or air 2M804 can't go.

2M804 VS 38999		
Specification	2M804	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 +150°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

2M804 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
Canted Coil Spring	Stainless Steel, Gold plated



2M804 Push-Pull Crimp Receptacles

Ordering Guide for 2M804-001, 002, 003, 004



1.	2.	3.	4.	5.	6.	7.
SERIES	SHELL STYLE	SERVICE CLASS	SHELL SIZE-INSERT ARRANGEMENT	CONTACTS	KEYING	SUFFIX
2M804-00X	-06	ZNU	6-7	P	A	

1. SERIES		
Type	Part #	Description
CRIMP	PLUGS	
	2M804-001	Plug with Integral Backshell
	2M804-002	Plug with Accessory Threads
	RECEPTACLE	
	2M804-003	Receptacle with Integral Backshell
PCB/SOLDER	2M804-004	Receptacle with Accessory Threads
	PCB/SOLDER RECEPTACLES	
	2M804-005	Receptacle w/ Epoxy Potting
	2M804-020	Receptacle for Open Face Immersion
	2M804-025	Receptacle with Standoff Flange for Mechanical PCB Strain Relief
	PCB/SOLDER PLUGS	
	2M804-009	Plugs with Solder Cup or PCB termination with Standard Epoxy Potting
	2M804-021	Plugs with Solder Cup or PCB Termination with Special Sealing for Open Face (unmated) Water Immersion Requirements. 100% Leak Tested. To maintain a helium leak rate of 1×10^{-4} cc/sec. pressure differential from -65°C to 150°C.

2. SHELL STYLE RECEPTACLE	
Part #	Description
PLUGS	
-06	Plug
RECEPTACLE	
-00	Jam Nut* for Front Panel
-01	In-Line
-07	Jam Nut* for Rear Panel
PCB/SOLDER RECEPTACLES	
-00	Jam Nut* for Front Panel Mounting
-07	Jam Nut* Rear Panel Mounting
PCB/SOLDER PLUGS	
-00	Jam Nut for Front Panel mounting
-07	Jam Nut for Rear Panel Mounting
-02	Flange Mount, Rear Panel

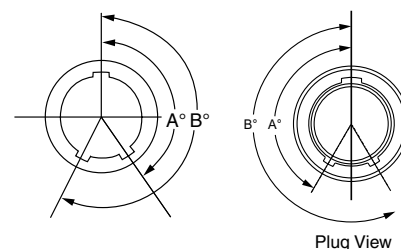
*add "-501" as a suffix to the Jam Nut Part number to include a Hex Nut instead of a Spanner Nut.

5. CONTACTS		
Style	Part #	Description
CRIMP	P	Pin
	S	Socket
	A	Pin-Less Contacts
	B	Socket-Less Contacts
PCB/SOLDER		
PCB/SOLDER	P	Pin-PCB
	S	Socket-PCB
	E	Pin-Solder Cup
	F	Socket-Solder Cup

3. SERVICE CLASS			
Material	Part #	Description	RoHS
ALUMINUM	C	Anodized (Non-conductive)	
	M	Electroless Nickel	
	NF	Olive Drab Cadmium	
	MT	Durmalon (Ni PTFE)	
	ZN	Olive Drab Zinc Nickel	
	ZNU	Black Zinc Nickel	
	BEN	Black Electroless Nickel	
	Z1	Passivated	
STAINLESS STEEL	ZM	Electroless Nickel	

6. KEYING*		
Part #	A°	B°
A	150°	210°
B	75°	210°
C	95°	230°
D	140°	275°

*For single master key omit (leave blank)



4. SHELL SIZE-INSERT ARRANGEMENT

See Table on pages 7-20

2M804

D

2M804 Push-Pull Quick-Disconnect

Connector Weights

SERIES 2M804 WEIGHTS IN GRAMS

Insert Arrg.	Plug	Jam Nut Receptacle		In-Line Receptacle
		Rear Mount	Front Mount	
5-3P	2.2	8.0	9.7	4.0
5-3S	2.4	8.3	9.8	4.1
6-1P	3.1	7.2	11.8	5.2
6-1S	3.4	7.5	12.1	5.5
6-4P	2.8	8.8	11.4	4.8
6-4S	3.0	9.0	11.6	5.1
6-7P	3.0	9.1	11.7	5.3
6-7S	3.2	9.5	12.0	5.5
7-1P	3.7	11.1	16.4	10.1
7-1S	4.3	11.7	16.9	10.7
7-10P	3.7	10.9	16.2	10.0
7-10S	4.2	11.3	16.5	10.3
8-2P	5.0	10.9	13.5	8.0
8-2S	5.7	5.7	11.7	9.0
8-13P	4.3	10.6	12.4	7.4
8-13S	4.8	11.0	13.0	8.1
8-200P	5.3	11.2	13.9	8.4
8-200S	6.1	12.0	14.6	9.1
9-4P	5.7	15.2	21.1	11.0
9-4S	6.7	16.2	22.1	12.0
9-19P	4.6	14.1	20.0	9.9
9-19S	4.8	14.9	21.1	9.8
9-200P	5.2	14.6	20.6	10.5
9-200S	6.3	15.7	21.7	11.6
9-201P	5.8	15.3	21.2	11.1
9-201S	6.9	16.4	22.3	12.2
10-5P	7.3	15.5	23.3	11.9
10-5S	8.7	16.9	24.8	13.3
10-26P	5.4	13.6	20.5	10.1
10-26S	6.2	13.9	21.1	10.5
10-200P	6.2	14.4	22.2	10.8
10-200S	7.6	15.8	23.7	12.2
10-201P	6.3	14.5	22.3	10.9
10-201S	7.7	16.0	23.8	12.3
10-202P	6.3	14.5	22.3	10.9
10-202S	7.8	16.1	23.9	12.4
12-2P	10.7	21.5	26.1	20.8
12-2S	12.3	23.1	27.7	22.4
12-3P	11.7	22.4	27.1	21.8
12-3S	13.4	24.2	28.8	23.4
12-7P	11.9	22.7	27.3	22.0

SERIES 2M804 WEIGHTS IN GRAMS

Insert Arrg.	Plug	Jam Nut Receptacle		In-Line Receptacle
		Rear Mount	Front Mount	
12-7S	14.5	25.3	29.9	24.6
12-37P	10.1	21.5	25.5	22.4
12-37S	11.8	23.1	27.2	22.1
12-200P	10.3	21.1	25.7	20.5
12-200S	12.5	23.3	27.9	22.7
12-201P	10.7	21.5	26.1	22.8
12-201S	13.0	23.8	28.4	23.1
14-5P	15.4	28.3	33.6	26.3
14-5S	18.4	31.2	36.5	29.3
14-12P	16.2	29.0	34.3	27.1
14-12S	19.8	32.7	38.0	30.7
14-55P	12.8	25.6	30.9	23.7
14-55S	15.6	28.3	33.8	26.5

SERIES 2M804 UNMATE FORCE

Layout	Average Force	
	Pounds	Newtons
5-3	10.6	47.1
6-4	10.8	48.0
6-7	11.4	50.7
7-10	12.0	53.4
8-13	12.6	56.0
9-19	13.8	61.4
10-26	15.2	67.6
12-37	17.4	77.4
14-55	21.0	93.4

Note: Contact Amphenol if modified force values are needed.