Amphenol SOCAPEX

2M Micro Miniature Mil/Aero Connectors Series for Europe A selection of references with huge service

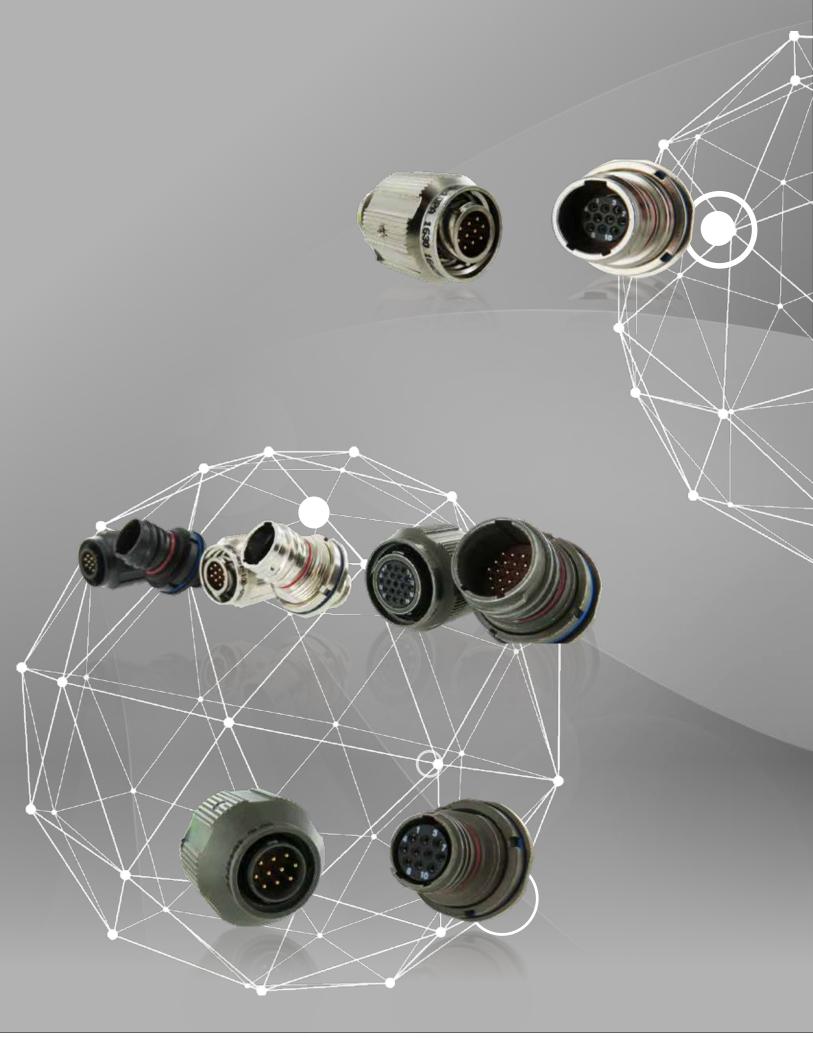


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Amphenol Socapex | 2M MICRO MINIATURE

ABOUT AMPHENOL SOCAPEX



Proven excellence in interconnect solutions

Since **1947**, Amphenol Socapex has prescribed, designed and manufactured reliable and innovative interconnection solutions for **harsh environments**, specializing in standard and customized electrical and fiber optic connectors, contacts, accessories and cabling solutions.

Located in the **Mont Blanc** region of France and Pune in India, Amphenol Socapex has a presence in over 100 countries around the world.

Amphenol Socapex is part of the international Amphenol Corporation.



1000+ employees



Net Sales 2020: **81,9 M€** 72% Export - 28% France



Two facilities : **Thyez** (France), **Pune** (India)



INTERNATIONAL EXPERTISE



Our expertise has no boundaries

Integrated Production in France & India

- **24 000 m²** manufacturing capacity on 2 sites
- Design centers in France and India
- State-of-the-art manufacturing technology



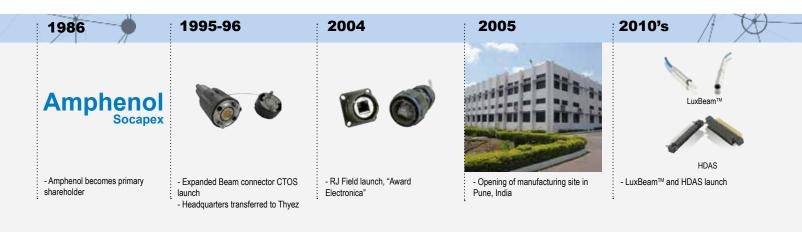
Our markets



Communication Systems - Radios - C4ISR / Ground vehicles - Vetronics / Marine / Missiles



Commercial & military / Avionics / Engines / Landing gear / Actuators



Today and tomorrow | Sustainable development \searrow



Respect for nature and the environment Optimization of natural resources Optimization of natural resource Recycling Goodwill Goodwill Optimization of natural resources Waste Management Waste Management

PRODUCING FASTER, SMALLER, STRONGER CONNECTORS...



Technologies & innovation



Engineering Laboratory for product testing and qualification, product expertise and metrology - Mechanical and electrical skills

- RF and fiber optics expertise



Strong expertise in high-speed signals - 3D EM simulation software & EM models - Time Domain and frequency domain

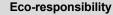
(VNA 20GHz, TDR and eye diagram)



Focus on materials expertise and manufacturing techniques to produce faster, smaller and stronger products

- 3D CAD mechanical software, simulation & analysis
 - Disruptive metal alloys, additive

manufacturing





Sustainable environment approach, with pro-active management of regulations (REACH / RoHS / Conflict minerals...)

New materials development, plating, and suitable processes
Recycling and rational resources consumption

Our workshops

Our workshops located in France & India provide consistent quality adapted to your volume requirements.

Tooling : Tools for our different activities : molding, machining, assembly
 Molding : Solid expertise in thermoplastic elastomer and thermoset molding
 Machining : Manufacturing of cylindrical shells from 10 to 90 mm in diameter and rectangular shells
 Screw Machining : Cylindrical production parts up to 10 mm in diameter
 Plating : Plating with cadmium, nickel, electroless nickel, silver, black zinc nickel, gold
 Assembly : Connector and harness assembly (electrical & optical)

Our certifications







AOAP 2110



System Certified Management System

Product certifications : MIL-DTL38999, EN3645, EN3155, VG

Our memberships



Member of CMG (Connecting Manufacturing Group) Consortium

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Amphenol SOCAPEX

DELIVERING GREAT CUSTOMER EXPERIENCE



▶ We have a strong reputation for helping customers solve their toughest challenges. This approach of serving your needs is ingrained in our company – from our sales team to our product development engineers.

A partner you can trust



Buy our solutions

You can access our solutions through our global network of sales offices or through our distributors.

Field Sales Team :

- 4 12 in France
- 15 in Europe
- 100+ in North America and rest of the world.
 Environment Managem support
- 5 Business Development Managers supporting local sales force Europe, North America and the rest of the world
- Technical Support & Multilingual Customer Service : 15 people

Worldwide Distribution Network :

Including qualified distributors (QPL approved) for assembling : MIL-DTL-38999, PT/451/VG95328 & Fiber Optics connectors



COMPLETE 2M SERIES BY AMPHENOL

Selection table





Description More rug F Contacts Coupling Threade Tu Water MIL-S	gged keys and threads. mee Faster mating. f	Tri-Start ACME Thread "Anti-Decoupling" ratchet chanism and ground spring for military airframes and vionics boxes. Fast mating	Push-Pull Breakaway connector for headsets and tactical equipment. Gold-plated spring for long mating life and superior EMI shielding.	Bayonet Quick-mating, light duty, general purpose. Not rated for immersion, 50 milliohms shell-to-shell resistance.
Description F Contacts Threade Coupling Threade Water MIL-S immersion, mated 1 M EMI EMI	gged keys and threads. Faster mating. f	chanism and ground spring for military airframes and vionics boxes. Fast mating	headsets and tactical equipment. Gold-plated spring for long mating life and	general purpose. Not rated for immersion, 50 milliohms
Coupling Threade Tu Water immersion, mated EMI	1 to 130	1 to 120		
Coupling Tu Water MIL-S immersion, mated EMI		1 to 130	1 to 85	1 to 55
Water 1 M immersion, mated EMI	led Coupling with 1 ½ urns to Full Mate	Tri-Start Thread	Push-Pull Quick-Disconnect	¼ turn lock Bayonet
	STD-810 Method 512 Meter for 1 Hour IPX8	MIL-STD-810 Method 512 1 Meter for 1 Hour IPX8	MIL-STD-810 Method 512 1 Meter for 1 Hour IPX8	Splashproof IPX6
	Very Good	Excellent	Excellent	Fair
Vibration and shock Sin	's Random Vibration, 43 ne Vibration 60 g; 300 g's Shock	3.9 g's Random Vibration, Sine Vibration 60 g; 300 g's Shock	37 g's Random Vibration; 300 g's Shock	37 g's Random Vibration; 300 g's Shock
Mating cycles) Cycles (-16 Plugs) Cycles (-26 Plugs)	500 Cycles	2000 Cycles	1000 Cycles Aluminum 2000 Cycles Stainless Steel
	23 AMP, 1800 VAC 13 AMP, 1800 VAC	#12: 23 AMP, 1800 VAC #16: 13 AMP, 1800 VAC #20: 7.5 AMP, 750 VAC #23: 5 AMP, 500 VAC	#12: 23 AMP, 1800 VAC #16: 13 AMP, 1800 VAC #20: 7.5 AMP, 750 VAC #23: 5 AMP, 500 VAC	#12: 23 AMP, 1800 VAC #16: 13 AMP, 1800 VAC #20: 7.5 AMP, 750 VAC #23: 5 AMP, 500 VAC

vailable at Amphenol Aerospace Please consult us for resales

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2M TOP RUNNERS FOR EUROPE BY AMPHENOL SOCAPEX

2M Micro Miniature connectors Series for Europe

By Amphenol, the 2M connector series has been a flagship product since years, with huge attends from our customers, especially for new design projects and harnesses. First developed by our sister company Amphenol Aerospace Operation and popularized all around the world, Amphenol Socapex is now taking over the charge of this product range for the European market.

The 2M connector series is very well adapted for new design which require smaller and lighter connectors with less than half of size and weight than usual military connectors. Developed specially for the needs of the military and aviation markets, the 2M connector is ideally suited to applications such as armored vehicles, data acquisition equipment, aeroplanes, helicopters, avionic calculators, missiles and drones where electrical performance, miniaturization and weight reduction are essential.

Amphenol Socapex's main goal is the satisfaction of our clients providing the **same services than the standard MIL-DTL-38999 series** from Amphenol in terms of price and lead time. In this sense, we established the **selection of more than 1 000 "Top Runner"** for our customers in Europe, including **805** and **801 series** corresponding to the Tri-start and Dual-start series, with **19 different arrangements** and **3 platings**. These configurations are the most common on the market including plugs, jam nut and square flange receptacles, both with integrated backshell or soldering on PCB versions for receptacles. Obviously all corresponding accessories are also available : caps, shrink boots or tools.



Find your dream configuration with ours online configurators !



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AMPHENOL SOCAPEX HARNESSES CAPABILITIES

Since 2014, Amphenol Socapex offer an electrical harness option around connectors, to provide our customers a turnkey solution !



- → 200 experienced team members dispatched in 8 dedicated cabling lines dedicated by product type, in a 700m² assembly shop in Pune, India.
- → A cost advantage for all harnesses that include our legacy products, 2M, 38999, PT/451, RJF & USBF, High speed solutions (Quadrax, Octomax, Twinax, Coax, RF contacts), Accessories,...
- → State of the art capabilities :

Engineering

Flattening (form boards) of electrical harness, Wiring Diagram and hook-up to manufacturing files Data base & configuration management, pins allocation, routing files Programming for automatic electrical test Integration of mechanical parts Following your installation constraints on your Structure/Vehicle : Cutting plates, feedthrough, racks, brackets.

Full production capabilities

Stripping & crimping hand tools for standard wires Sleeve Heat-shrinking Manufacturing jigboards Dedicated workstations for 1st extremities Laser stripping for smaller wires / nick free stripping.



Both in France and India, our team have capability to make your drawings, to take dimensions on your mockup and perform modifications or reparations in situ



Full testing capabilities in climate controlled area

Fully automated / programmable electrical testing machines. Network analyzer for Ethernet and high-speed cable assemblies VNA for co-axial / RF cable assemblies

Improved logistics flows

Our self Management of the connectors and accessories supply chain to reduce and secure the harness lead times

A real expertise

Whether in the harsh evironments applications and market, on the components or harnesses, we rely on all Amphenol know-how to provide you with the best products, to fit all your needs.

2M SERIES OVERMOLDING CAPABILITIES

Amphenol Socapex offers overmolding solutions on 2M products.

The overmolding technology is particularly well adapted to micro miniature connectors such as 2M, and is suitable for many applications such as military, industrial, telecom, etc. This technology confers a very strong and sealed junction between the connector/backshell and the cable, and the appearance is very clean.

For your special needs for very harsh environment, we can help you by performing tests in our technical laboratory (pulling tests, bending moment, thermal shocks,...)

Amphenol Socapex is qualified by Wiring Harness Manufacturer's Association.



Example of overmoded Cordset made by Amphenol Socapex



Injection molding machines YUH-DAK YC-40 2S (40 Tonnage for both)

2M805 Series Integrated Backshell Overmolding



⇒ New mold time development : 8 weeks, do not hesitate to consult us for your configuration

GENERAL CHARACTERISTICS

Markets and applications



Military vehicules

Vetronics Video Battlefield Communication systems Threat detection systems





Threat detection system Soldier wearable equipment Rugged computer & digital radio Satellite reception unit









Commercial Avionics & Airframe

IFE in Flight Entertainment Cockpit None compressed high resolution video





Missiles & UAVS

Air missiles and UAVS Ground control station & launchers Radars Video







Navy

Threat detection systems Radars Network infrastructure



Technical Characteristics

GENERAL CHARACTERISTICS

Description



- Inspired by MIL-DTL Series III
- 2M801 & 2M805 available
- 2M805 (Tri-start thread) EN & QPL standards in progress
- Dedicated to harsh environment applications
- Perfectly suitable for new design project
- Integrated backshell
- 19 arrangements
- 6 sizes
- 3 platings: Olive drab cadmium, Nickel and Black zinc nickel

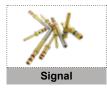
Material and platings

Component	Material
Aluminum shell, barrel and coupling nut	Aluminum alloy 6061 T6
Shell finish	- Electroless Nickel ∽ - Olive Drab Cadmium - Black Zinc Nickel ∽
Front and rear inserts	Polyphenylene sulfide (PPS)
Contact retention clip	Beryllium copper, heat-treated
Grommet, peripheral seal and interfacial seal	Fluorosilicone rubber
Contacts	Gold plated copper alloy
Socket contact hood	Passivated stainless steel
Adhesives	Various epoxies & RTV's
Potting compound, PCB versions	High strength epoxy

✓ : RoHS compliant

Contacts

- Standard contacts plated with a minimum of $1.27 \mu m$ gold
- Size 16, 20HD and 23



All dimensions are given for information only and are in mm

2M805

TECHNICAL CHARACTERISTICS

Materials characteristics

Shell Material	F	Salt Spray exposure	Operating temperature (C°)	
		per EIA 364-26	Min	Мах
	Electroless Nickel 🗸	48		
Aluminum	Olive Drab Cadmium	500	-65	+150
✓ : RoHS compliant	Black Zinc Nickel 🗸	500		

Mechanical characteristics

Characteristics	Performance	Procedure
Durability	500 mating cycles	EIA-364-09
Shock	300 G ± 15	EIA-364-27 Condition D 300 G, halfsine, 3ms, 3 axes
Random vibrations	43,9 g RMS	EIA-364-28 Test Condition V Letter I 100 milliamp test current 50- 2,000 Hz @ temp.
Sine vibrations	60 g RMS	MIL-STD-202 Method 204, test Condition G 12 sweep cycles per axes, 20 min. per 10-2000-10Hz @ temp.

Environmental characteristics

Characteristics	Requirement	Procedure	
Humidity	No deterioration which will adversely affect the connector. 100 Mohms minimum insulation resistance during the final cycle. Following the recovery period, connectors shall meet contact resis- tance, shell-to-shell resistance and DWV requirements.	EIA-364-31 Condition B Method III 80-98% RH 10 cycles (10 days) +25° C to +65° C Step 7b vibration deleted. 24 hour recovery period.	
Altitude immersion	No evidence of moisture on connector interface or contacts. Connector shall meet dielectric withstanding voltage.	EIA-364-03	
Fluid Immersion	No visible damage from immersion in various fuels and oils. Connector shall meet coupling torque and dielectric withstanding voltage requirements.	EIA-364-10 Unmated connectors	
Nater immersion, mated	No evidence of water penetration into mated connectors. $\ge 100\Omega$ insulation resistance.	MIL-STD-810F Method 512.4 1 meter immersion 1 hour	
Thermal shock	hermal shock No mechanical damage or loosening of parts. Following thermal shock, connector shall meet contact resistance, DWV, insulation resistance and shell-to-shell resistance requirements.		
Sand and dust	Mated connectors shall withstand the effects of blowing sand and dust	MIL-STD-810F, Method 510.4	

All dimensions are given for information only and are in mm

2M805

TECHNICAL CHARACTERISTICS

Electrical characteristics

Procedure	Characteristic		2M801 Series	2M805 Series
Shell-to-shell conductivity	Initial After 48 hours salt spray		2,5 mV	2 mV
per EIA-364-83 Electroless Nickel Plated Connectors			2,5 mV	2 mV
		100 MHz	75 dB Min	90 dB Min
	Low frequency	200 MHz	70 dB Min	88 dB Min
		300 MHz	65 dB Min	88 dB Min
Shelding effectiveness		400 MHz	63 dB Min	87 dB Min
per EIA-364-21		800 MHz	58 dB Min	85 dB Min
Electroless Nickel Plated Connectors	ess Nickel Plated Connectors High frequency	1 GHz	55 dB Min	85 dB Min
		3 GHz	50 dB Min	69 dB Min
		5 GHz	45 dB Min	66 dB Min
		19 GHz	40 dB Min	65 dB Min

Service rating

Dielectric withstanding voltage (Vrms)					
At sea level	40 000 feet 12 000 meters				
Unmated	Mated				
500	100				
750	150				
1 800	1 000				
•	At sea level Unmated 500 750				

Contacts characteristics

Characteristic	#23	#20HD	#16
Crimp Contacts Maximum Current Rating (Amps)	5	7,5	13
Contact resistance (Test Current)	73mV drop at 5A	55 mV drop at 7,5A	49 mV drop at 13A
Insultation resistance		5 000 MΩ min	
Contact retention per EIA-364-29 (N)	45	45	111
Separation forces per SAE AS39029 (N)	0.14	0.19	0.56
AWG	#22 - #28	#20 - #24	#16 - #20

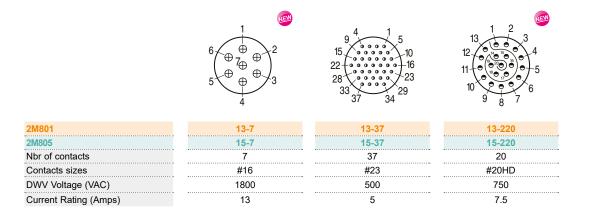
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SELECTION OF INSERT ARRANGEMENTS

Contact Size	16	the major keyway is 20HD	23		
Caption	\oplus	Ð	0		
		(\oplus)			
M801 M805 Jbr of contacts Contacts sizes DWV Voltage (VAC) Current Rating (Amps)		6-1 8-1 1 #16 1800 13	6-4 8-4 4 #23 500 5	6-6 8-6 6 23 500 5	6-7 8-7 7 #23 500 5
			$3 \xrightarrow{2}{7 - \underbrace{\circ \circ \circ \circ}_{9 \xrightarrow{9}} 4} 1$		
M801 M805 Jbr of contacts Contacts sizes DWV Voltage (VAC) Current Rating (Amps)		6-23 8-23 3 #20HD 750 7.5	7-10 9-10 10 #23 500 5	7-25 9-25 5 #20HD 750 7.5	8-2 10-2 2 #16 1800 13
		$9 \\ 2 \\ 8 \\ 10 \\ 4 \\ 11 \\ 5 \\ 12 \\ 12 \\ 12 \\ 12 \\ 13 \\ 12 \\ 13 \\ 12 \\ 13 \\ 12 \\ 12 \\ 13 \\ 12 \\ 12 \\ 12 \\ 12 \\ 12 \\ 12 \\ 12 \\ 12$			$ \begin{array}{c} 3 & 2 \\ 7 & & & 4 \\ 12 & & & & 4 \\ 12 & & & & & & 8 \\ 16 & & & & & & & 13 \\ 19 & 18 & 17 \\ \end{array} $
M801 M805 Jbr of contacts Contacts sizes DWV Voltage (VAC) Current Rating (Amps)		8-13 10-13 13 #23 500 5	8-28 10-28 8 #20HD 750 7.5	9-4 11-4 4 #16 1800 13	9-19 11-19 19 #23 500 5
		$4\underbrace{\oplus}_{6}^{2}\underbrace{\oplus}_{5}^{1}$			$ \begin{array}{c} $
M801 M805 Ibr of contacts Contacts sizes DWV Voltage (VAC) Current Rating (Amps)		9-200 11-200 2 4 #16 #23 1800 500 5 13	•••••••••••••••••••••••••••••••••••••••	10-5 12-5 5 #16 1800 13	10-26 12-26 26 #23 500

All dimensions are given for information only and are in mm

SELECTION OF INSERT ARRANGEMENTS



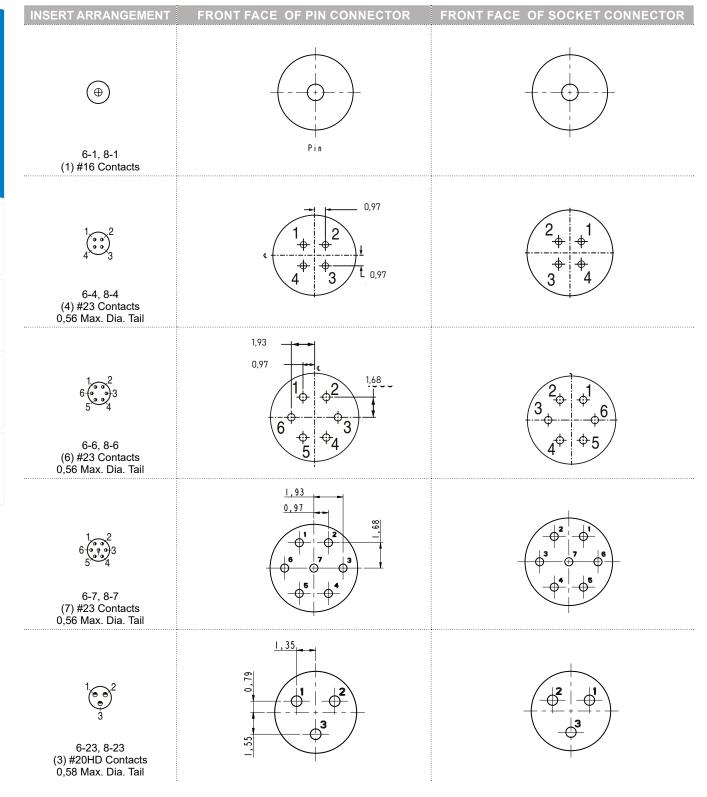
Insert arrangements table

Inserts Arr	rangements	c	Contact Quantit	y	Current Rating	Dielectric	Wire size
2M801	2M805	#23	#20HD	#16	(A)	withstanding voltage (VAC)	AWG
6-1	8-1			1	13	1800	#16 - #20
6-4	8-4	4			5	500	#22 - #28
6-6	8-6	6			5	500	#22 - #28
6-7	8-7	7			5	500	#22 - #28
6-23	8-23		3		7,5	750	#20 - #24
7-10	9-10	10			5	500	#22 - #28
7-25	9-25		5		7,5	750	#20 - #24
<mark>8-2</mark>	10-2			2	13	1800	#16 - #20
8-13	10-13	13			5	500	#22 - #28
8-28	10-28		8		7,5	750	#20 - #24
9-4	11-4			4	13	1800	#16 - #20
9-19	11-19	19			5	500	#22 - #28
9-200	11-200	4		2	5 - 13	-	-
9-210	11-210		10		7,5	750	#20 - #24
10-5	12-5			5	13	1800	#16 - #20
10-26	12-26	26			5	500	#22 - #28
13-7	15-7			7	13	1800	#16 - #20
13-37	15-37	37			5	500	#22 - #28
13-220	15-220		20		7,5	750	#20 - #24

All dimensions are given for information only and are in mm

2M805

Socket inserts are a mirror image of pin side. Socket side shown for cavity locations only, reference pin side for dimensions.



All dimensions are given for information only and are in mm

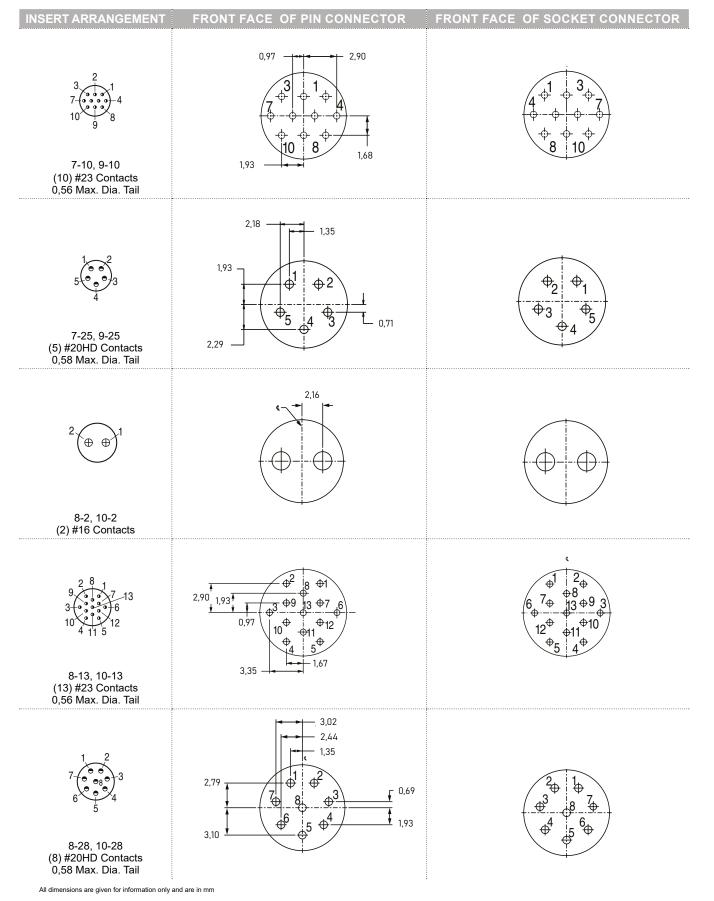
2M805

2M801

Accessories

How to order

Socket inserts are a mirror image of pin side. Socket side shown for cavity locations only, reference pin side for dimensions.



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Technical Characteristics

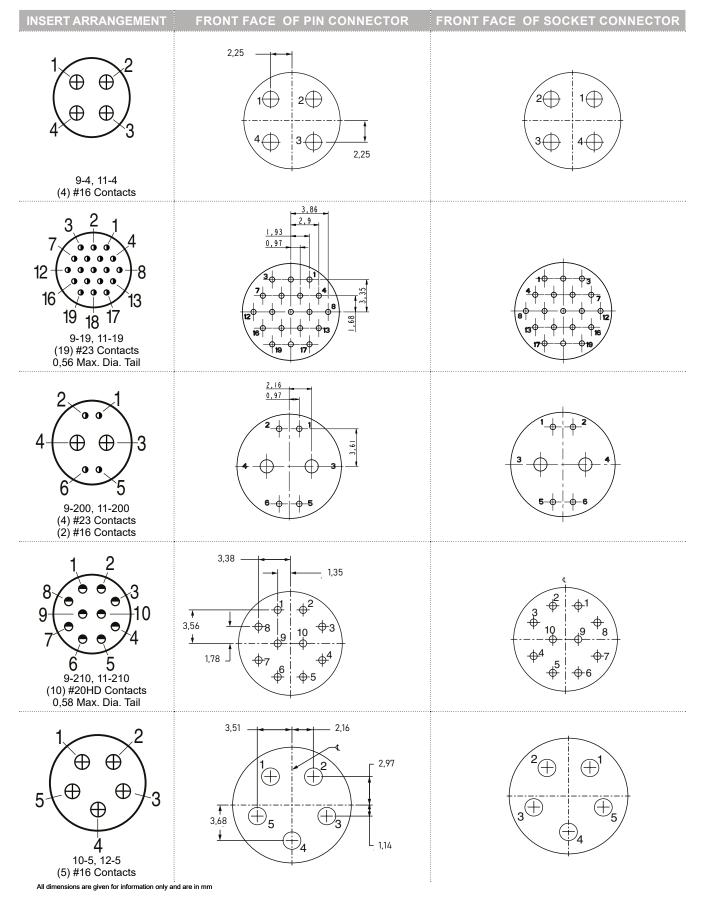
2M805

2M801

Accessories

How to order

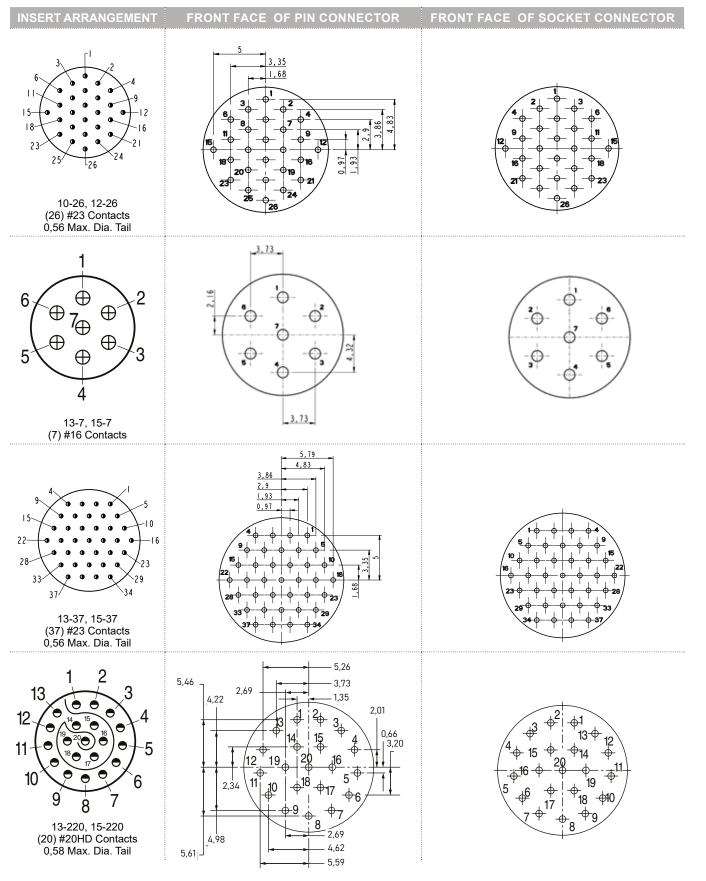
Socket inserts are a mirror image of pin side. Socket side shown for cavity locations only, reference pin side for dimensions.



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2M805

Socket inserts are a mirror image of pin side. Socket side shown for cavity locations only, reference pin side for dimensions.



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GENERAL INFORMATION

Description

- Tri-start fast coupling
- Excellent EMI shielding
- Superior vibration resistance
- Waterproof

9

(5)

Nickel plated ground spring

8

(1))

Contact retention

Grommet, Interfacial Seal, O-Ring

1



1

2

3

4

(5)

6

Ø

8

9 10

0

0

`©

4

3

Coupling nut

Socket insert

Receptacle shell

Integrated Backshell

Contact retention clip

Interfacial seal

Grommet

Plug shell

Torlon rod

Pin Insert

O'Ring

Grounding ring

Aluminum Alloy
- Electroless Nickel ∽ - Olive Drab Cadmium - Black Zinc Nickel ∽
Copper Alloy, gold plated
Polyphenylene sulfide (PPS)

2

1

MATERIALS AND FINISHES

Beryllium Copper Alloy

Fluorosilicone rubber

✓ : RoHS compliant

	2M805 VS MIL-DTL-38999	
Specification	2M805	D38999
Signal Count	1 to 130	1 to 187
Insulation Resistance (MΩ)	5 000	5 000
Operating Temperature	-65°C to +150°C	-65°C to +175°C / 200°C
Shock	300 G ± 15	300 G ± 15
Vibration	«43.9 G Random 60.0 G Sine»	«43.9 G Random 60.0 G Sine»
Shielding Effectiveness	«85 dB min. from 100 MHz to 1000 MHz»	«65 dB min. from 100 MHz to 1000 MHz»
Durability	500 mating cycles min	500 mating cycles min
Shell to Shell Conductivity	2.5 mV drop max	2.5 mV drop max
Contacts	Per AS39029	Per AS39029

SELECTION OF 2M805 TRI-START

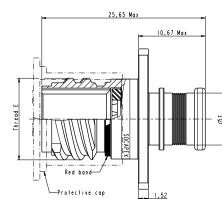


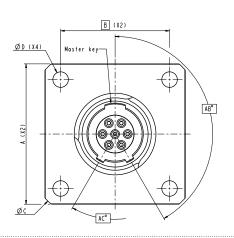
Overall dimensions

Square Flange Receptacle with integrated backshell:

2M805-003-02

Technical Characteristics

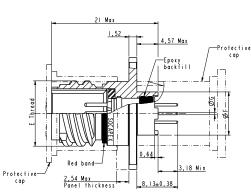


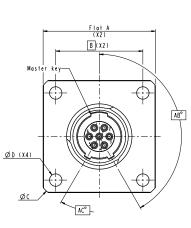


* Grommet protrudes for power/combo arrangement

Shell Size	A (mm)	B (mm)	Ø C (mm)	Ø D ± 0.08 (mm)	E Thread	ØF (mm)
8	21,67	16,76	29,29	2,31	0.50001P3L-TS-2A	8,05
9	23,27	18,36	31,32	2,31	0.56251P3L-TS-2A	10,08
10	24,84	19,94	33,86	2,31	0.62501P3L-TS-2A	12,01
11	26,47	21,54	35,89	2,31	0.68751P3L-TS-2A	13,18
12	27,99	23,09	38,18	2,31	0.75001P3L-TS-2A	14,86
15	32,79	26,87	44,53	3,18	0.93751P3L-TS-2A	17,45

Square Flange Receptacle PCB: 2M805-005-02





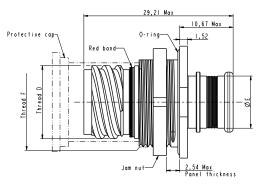
Shell Size	A Flat (mm)	B (mm)	Ø C (mm)	Ø D (mm)	E Thread	Ø F (mm)	ØG (mm)
8	21,67	16,76	29,29	2,31	0.50001P3L-TS-2A	8,38	
9	23,27	18,36	31,32	2,31	0.56251P3L-TS-2A	10,97	#23 0.46/0.56
10	24,84	19,94	33,86	2,31	0.62501P3L-TS-2A	12,52	-,,-
11	26,47	21,54	35,89	2,31	0.68751P3L-TS-2A	14,00	#20HD 0,64/0,69
12	27,99	23,09	38,18	2,31	0.75001P3L-TS-2A	15,78	#16
15	32,79	26,87	44,53	3,18	0.93751P3L-TS-2A	17,86	1,52/1,63

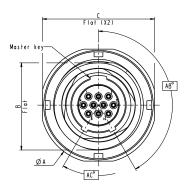
Others shell styles available from Amphenol Aerospace (USA), please consult us for more information. All dimensions are given for information only and are in mm, except as otherwise specified |*in mm: 1mm=0.03937 inch

SELECTION OF 2M805 TRI-START

Overall dimensions

Jam Nut Receptacle with integrated backshell: 2M805-003-07

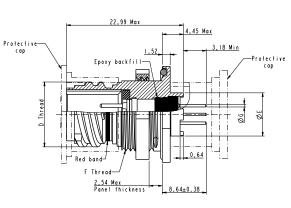


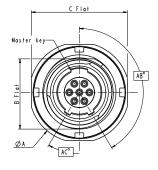


Shell Size	Ø A (mm)	B Flat (mm)	C Flat (mm)	D Thread	Ø E (mm)	F Thread
8	19,30	13,59	18,54	0.50001P3L-TS-2A	8,05	0.5625-28 UN-2A
9	22,35	16,79	21,59	0.56251P3L-TS-2A	10,08	0.6875-28 UN-2A
10	22,35	16,79	21,59	0.62501P3L-TS-2A	12,01	0.6875-28 UN-2A
11	24,26	18,31	23,50	0.68751P3L-TS-2A	13,18	0.7500-28 UN-2A
12	27,05	19,91	26,39	0.75001P3L-TS-2A	14,86	0.8125-28 UN-2A
15	30,56	24,64	29,79	0.93751P3L-TS-2A	17,45	1.0000-28 UN-2A

Jam Nut Receptacle PCB:

2M805-005-07





Shell Size	Ø A (mm)	B Flat (mm)	C Flat (mm)	D Thread	Ø E (mm)	F Thread	ØG (mm)
8	19,30	13,59	18,54	0.50001P3L-TS-2A	8,38	0.5625-28 UN-2A	#23
9	22,35	16,79	21,59	0.56251P3L-TS-2A	10,97	0.6875-28 UN-2A	0,46/0,56
10	22,35	16,79	21,59	0.62501P3L-TS-2A	12,52	0.6875-28 UN-2A	#20HD
11	24,26	18,31	23,50	0.68751P3L-TS-2A	14,00	0.7500-28 UN-2A	0,64/0,69
12	26,92	19,91	26,29	0.75001P3L-TS-2A	15,78	0.8125-28 UN-2A	#16
15	30,56	24,64	29,79	0.93751P3L-TS-2A	17,86	1.0000-28 UN-2A	1,52/1,63

Others shell styles available from Amphenol Aerospace (USA), please consult us for more information. All dimensions are given for information only and are in mm, except as otherwise specified *in mm: 1mm=0.03937 inch 29,21 Max

SELECTION OF 2M805 TRI-START

Protective cap

> ØB C Ihread



C Thread 0.5000-.1P-.3L-TS-2B 0.5625-.1P-.3L-TS-2B 0.6250-.1P-.3L-TS-2B 0.6875-.1P-.3L-TS-2B 0.7500-.1P-.3L-TS-2B 0.9375-.1P-.3L-TS-2B

-Master key

A

Overall dimensions

Straight plug with integrated backshell:

2M805-001-16

Technical naracteristics

Shell Size	Ø A (mm)	Ø B (mm)
8	8,05	17,55
9	10,08	19,99
10	12,01	20,98
11	13,18	23,50
12	14,86	24,94
15	17.45	28.07

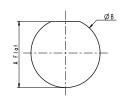
SELECTION OF 2M805 TRI-START

Panel drilling

Jam Nut Receptacle Crimp version: 2M805-003-07

Jam Nut Receptacle PCB:

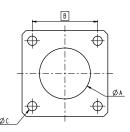
2M805-005-07



Panel Cutout						
Shell Size	Ø A ± 0,05 (mm)	Ø B ± 0,13 (mm)				
8	13,79	14,53				
9	16,99	17,73				
10	16,99	17,73				
11	18,51	19,30				
12	20,17	20,88				
15	24,84	25,65				

Square Flange Receptacle Crimp version: 2M805-003-02

Square Flange Receptacle PCB: 2M805-005-02

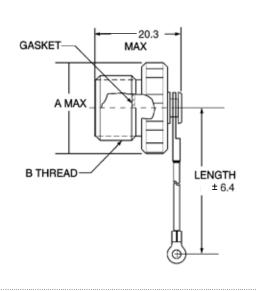


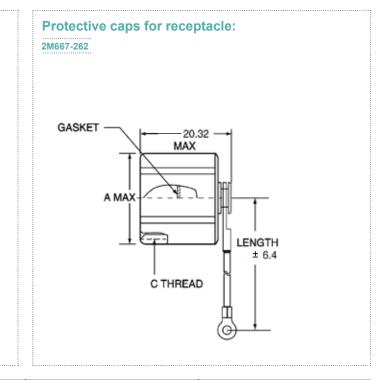
Panel Cutout						
Shell Size	Ø A (mm)	B (mm)	Ø C ± 0,08 (mm)			
8	13,07	16,76	2,31			
9	14,66	18,36	2,31			
10	16,25	19,94	2,31			
11	17,83	21,54	2,31			
12	19,42	23,09	2,31			
15	24,18	26,87	3,18			

SELECTION OF 2M805 TRI-START

Overall dimensions - Protective caps







Shell Size	A Max. (mm)	B Thread	C Thread
8	16,66	.50001P3L-TS-2A	.50001P3L-TS-2B
9	18,24	.56251P3L-TS-2A	.56251P3L-TS-2B
10	19,84	.62501P3L-TS-2A	.62501P3L-TS-2B
11	21,44	.68751P3L-TS-2A	.68751P3L-TS-2B
12	23,01	.75001P3L-TS-2A	.75001P3L-TS-2B
15	27,79	.93751P3L-TS-2A	.93751P3L-TS-2B

MATERIALS AND FINISHES					
Cover	Aluminum Alloy or Stainless Steel				
Shell finish	- Electroless Nickel ∽ - Olive Drab Cadmium - Black Zinc Nickel ∽				
Wire, harware	Stainless steel, passivated				
Gasket	Fluorosilicone rubber				

✓ : RoHS compliant

CONNECTOR WEIGHT

Insert Arrangement	Plug (g)	Jam nut Recept. Crimp (g)	Jam nut Recept. PCB (g)	Square Flange Recept. Crimp (g)	Square Flange Recept. PCB (g)	
8-1P	7,5	5,8	5,7	5,8	4,6	-
8-1S	7,9	6,3	6,2	6,3	5,1	••
8-4P	8,3	6,6	6,5	6,6	5,4	••
8-4S	8,8	7,2	7	7,2	5,9	
8-6P	-	-	-	-	-	
8-6S	-	-	-	-	-	
8-7P	7,3	5,6	5,5	5,6	4,4	
8-7S	7,7	6,1	5,9	6,1	4,8	
8-23P	-	-	-	-	-	
8-23S	-	-	-	-	-	
9-10P	10,7	8,8	8,8	6,6	7,5	
9-10S	11,6	9,7	9,7	7,5	8,4	
9-25P	-	-	-	-	-	
9-25S	-	-	-	-	-	
10-2P	13,3	10,2	10,3	8,9	9,4	
10-2S	14,1	11	11,1	9,7	10,1	••
10-13P	12,7	9,6	9,7	8,3	8,7	••
10-13S	13,4	10,3	10,5	9	9,5	••
10-28P	-	-	-	-	-	
10-28S	-	-	-	-	-	
11-4P	15,4	12,1	13,1	10,3	11,3	••
11-4S	16,4	13,1	14,1	11,3	12,3	
11-19P	14,3	11	12	9,2	10,2	
11-19S	15,4	12,1	13,1	10,3	11,3	••
11-200P	14,9	11,6	12,5	9,8	10,8	
11-200S	16	12,7	13,6	10,9	11,9	
11-210P	-	-	-	-	-	
11-210S	-	-	-	-	-	
12-5P	17,6	13,9	16,3	12,2	13,1	
12-5S	19	15,3	17,7	13,6	14,5	
12-26P	15,8	12,1	14,5	10,5	11,3	
12-26S	17,4	13,6	16,1	12	12,9	••
15-7P	21,9	21,5	23	18,3	20,7	••
15-7S	24,5	24,1	25,6	20,9	23,3	
15-37P	20,1	19,7	21,2	16,5	18,9	••
15-37S	23	22,6	24,1	19,4	21,8	
15-220P	-	-	-	-	-	••
15-220S	-	-	-	-	-	



GENERAL INFORMATION

Description

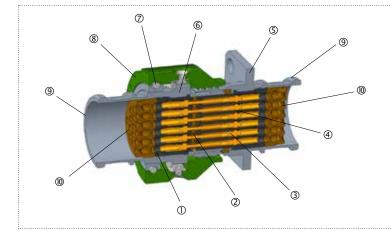
- Heavy Dual-Start ACME Thread
- Most durable of the 2M series
- Up to 2,000 mating cycles
- Ratcheting Anti-Decoupling Plug





MATERIALS AND FINISHES				
Shells	Aluminum Alloy			
Shell finish	- Electroless Nickel ∽ - Olive Drab Cadmium - Black Zinc Nickel ∽			
Contacts	Copper Alloy, gold plated			
Insulators	Polyphenylene sulfide (PPS)			
Contact retention	Beryllium Copper Alloy			
Grommet, Interfacial Seal, O-Ring	Fluorosilicone rubber			

✓ : RoHS compliant



Pin insert
Interfacial seal
Socket insert
Contact retention clip
Receptacle shell
Plug shell
Torlon rod
Coupling nut
Integrated Backshell
Grommet

5 6

2M801 VS MIL-DTL-38999					
Specification	2M801	MIL-DTL-38999			
Signal Count	1 to 130	1 to 187			
Insulation Resistance (MΩ)	5 000	5 000			
Operating Temperature	-65°C to +150°C	-65°C to +175°C / 200°C			
Shock	300 G ± 15	300 G ± 15			
Vibration	« 43.9 G Random 60.0 G Sine »	« 43.9 G Random 60.0 G Sine »			
Shielding Effectiveness	« 55 dB min. from 100 MHz to 1000 MHz »	« 50 dB min. from 100 MHz to 1000 MHz »			
Durability	500 mating cycles min	500 mating cycles min			
Shell to Shell Conductivity	2.5 mV drop max	2.5 mV drop max			
Contacts	Per AS39029	Per AS39029			



Overall dimensions

Square flange receptacle with integrated backshell:

Mas

øc

ß

AC°

AB°

ØD (X4)

Lechnical
aracteristicsSquare fla2M801-009-02

Shell Size	A (mm)	B (mm)	Ø C (mm)	Ø D (mm)	E Thread	Ø F (mm)
6	14,99	10,74	19,05	2,36	.375005P1L-2A	7,37
7	16,51	12,27	21,59	2,36	.437505P1L-2A	9,91
8	18,08	13,84	23,88	2,36	.500005P1L-2A	11,30
9	21,59	15,42	28,58	3,25	.562505P1L-2A	12,70
10	22,61	17,02	30,23	3,25	.625005P1L-2A	14,22
13	26,16	20,62	34,93	3,25	.81251P2L-2A	16,51

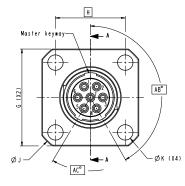
Thread

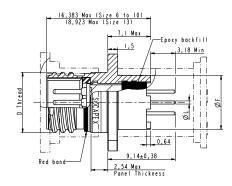
Protective cap

4

Red ban

Square Flange receptacle PCB: 2M801-011-02





20,32 Max (Size 6 to 10) 22,86 Max (Size 13)

10,8 Max

(1,52)

<u>2,54 Max</u> Panel Thickness

Shell Size	G (mm)	H (mm)	ØJ (mm)	ØK (mm)	Ø L (mm)	D Thread	ØF (mm)
6	14,99	10,74	19,05	2,36	#23	0.375005P1L-2A	8,38
7	16,51	12,27	21,59	2,36	0,46/0,56	0.437505P1L-2A	10,97
8	18,08	13,84	23,88	2,36	20HD	0.500005P1L-2A	12,52
9	21,56	15,42	28,58	3,25	0,64/0,69	0.562505P1L-2A	14,00
10	22,61	17,02	30,23	3,25	#16	0.625005P1L-2A	15,75
13	26,16	20,62	34,93	3,25	1,52/1,63	0.81251P2L-2A	17,86

Others shell styles available from Amphenol Aerospace (USA), please consult us for more information.

All dimensions are given for information only and are in mm, except as otherwise specified | *in mm: 1mm=0.03937 inch

Due to technical modifications, all information provided is subject to change without prior notice Designed by Amphenol Socapex

Jam Nut Receptacle with integrated backshell:



Technical Characteristics

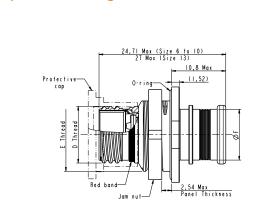
2M801

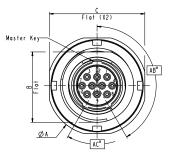
Accessories

How to order

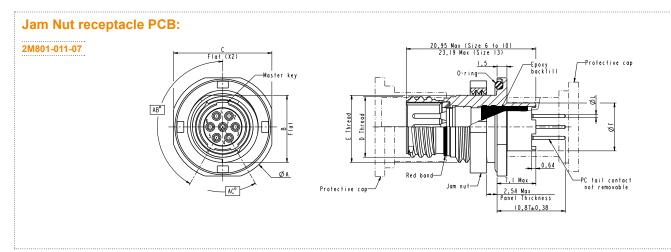
Overall dimensions

2M801-009-07





Shell Size	Ø A (mm)	B Flat (mm)	C Flat (mm)	D Thread	E Thread	ØF (mm)
6	16,13	10,41	15,11	0.375005P1L-2A	.4375-28 UNEF-2A	7,37
7	19,18	13,61	18,36	0.437505P1L-2A	.5625-32 UN-2A	9,91
8	19,18	13,61	18,36	0.500005P1L-2A	.5625-32 UN-2A	11,30
9	21,08	15,14	20,07	0.562505P1L-2A	.6250-28 UN-2A	12,70
10	22,61	16,71	21,72	0.625005P1L-2A	.6875-28 UN-2A	14,22
13	27,38	21,46	26,52	0.81251P2L-2A	.8750-28 UN-2A	16,51



Shell Size	Ø A (mm)	B Flat (mm)	C Flat (mm)	D Thread	E Thread	Ø F (mm)	Ø L (mm)
6	16,13	10,41	15,11	0.375005P1L-2A	.4375-28 UNEF-2A	8,38	#23
7	19,18	13,61	18,36	0.437505P1L-2A	.5625-32 UN-2A	10,97	0,46/0,56
8	19,18	13,61	18,36	0.500005P1L-2A	.5625-32 UN-2A	12,52	#20/20HD
9	21,08	15,14	20,07	0.562505P1L-2A	.6250-28 UN-2A	14,00	0,64/0,69
10	22,61	16,71	21,72	0.625005P1L-2A	.6875-28 UN-2A	15,75	#16
13	27,38	21,46	26,52	0.81251P2L-2A	.8750-28 UN-2A	17,86	1,52/1,63

Others shell styles available from Amphenol Aerospace (USA), please consult us for more information.



Overall dimensions

Straight Plug with integrated backshell:

2M801-007-26

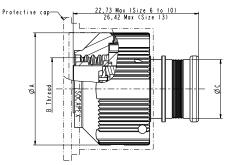
Technical

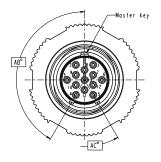
2M805

2M801

I





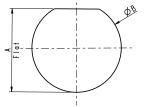


Shell Size	Ø A (mm)	B (mm)	Ø C (mm)
6	18,03	0.375005P1L-2B	7,37
7	20,07	0.437505P1L-2B	9,91
8	21,84	0.500005P1L-2B	11,30
9	23,37	0.562505P1L-2B	12,70
10	25,02	0.625005P1L-2B	14,22
13	29,21	0.81251P2L-2B	16,51

Others shell styles available from Amphenol Aerospace (USA), please consult us for more information.

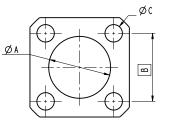
Panel drilling

Jam Nut Receptacle Crimp version: 2M801-009-07 Jam Nut Receptacle PCB: 2M801-011-07



Panel Cutout				
Shell Size	A Flat ± 0,05 (mm)	Ø B ± 0,05 (mm)		
6	10,57	11,35		
7	13,77	14,53		
8	13,77	14,53		
9	15,29	16,13		
10	16,62	17,70		
13	21,62	22,48		

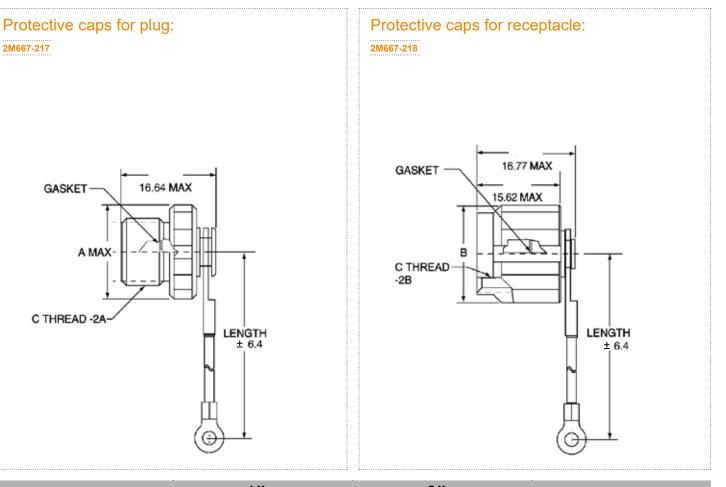
Square Flange Receptacle Crimp version: 2M801-009-02 Square Flange Receptacle PCB: 2M801-011-02



Panel Cutout				
Shell Size	Ø A (mm)	B (mm)	Ø C ± 0,08 (mm)	
6	9,91	10,74	2,36	
7	11,43	12,27	2,36	
8	12,95	13,84	2,36	
9	14,61	15,42	3,25	
10	16,26	17,02	3,25	
13	20,96	20,65	3,25	

2M805

Overall dimensions - Protective caps



Accessories

Technical

2M805

2**M801**

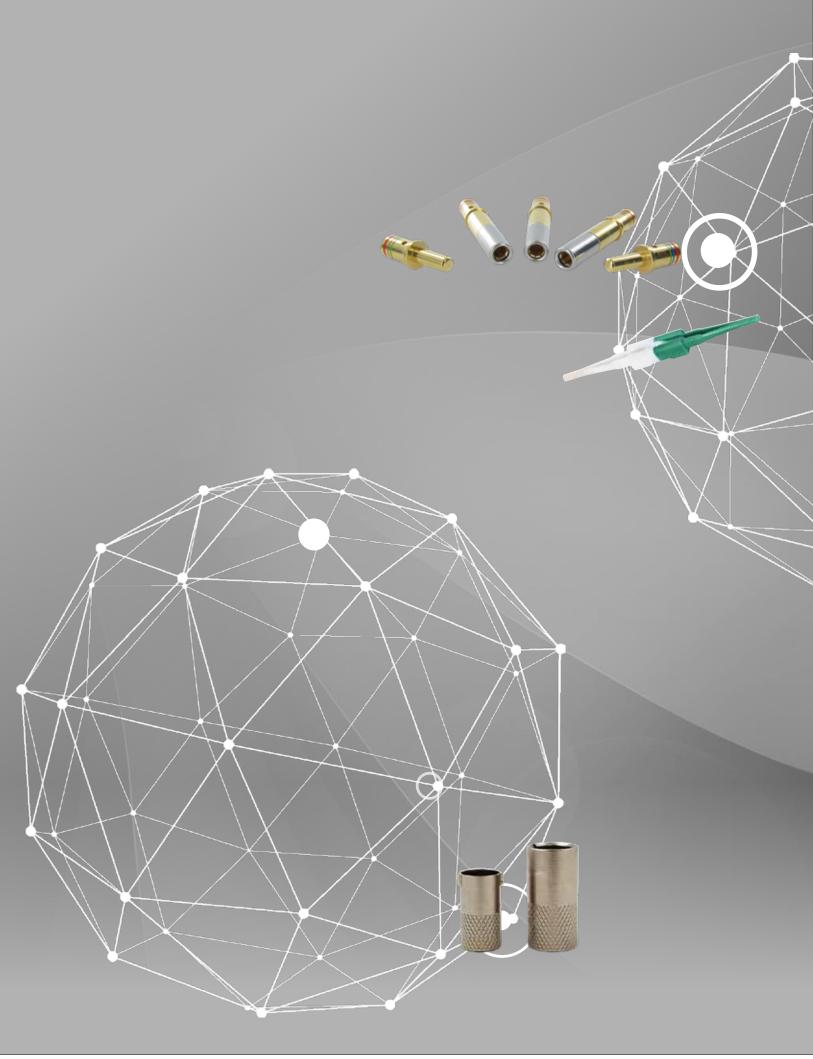
Shell Size	A Max. (mm)	B Max (mm)	с
6	13,28	15,57	.375005P-1L
7	14,94	17,78	.437505P-1L
8	16,46	19,25	.5000051L
9	18,11	20,65	.562505P1L
10	19,63	22,68	.625005P-1L
13	24,46	27,00	.81251P2L

MATERIALS AND FINISHES		
Cover	Aluminum alloy or stainless steel \checkmark	
Shell finish (Aluminium only)	- Electroless Nickel ∽ - Olive Drab Cadmium - Black Zinc Nickel ∽	
Gasket for plug	Fluorosilicone rubber	
Gasket for receptacle	Silicone rubber	
Wire, harware	Stainless steel, passivated	

✓ : RoHS compliant

CONNECTOR WEIGHT

Insert Arrg.	Plug (g)	Jam Nut Recept. Crimp (g)	Jam Nut Recept. PCB (g)	Sq. Flange Recept. Crimp (g)	Sq. Flange Recept. PCB (g)	Technical Characteristics
6-1P	5,6	4,3	4,6	2,7	2,9	hnic
6-1S	5,9	4,6	4,9	3	3,2	Tec
6-4P	21,9	21,5	23	18,3	20,7	ū
6-4S	24,5	24,1	25,6	20,9	23,3	
6-6P	-	-	-	-	-	02
6-6S	-	-	-	-	-	2M805
6-7P	5,4	4,1	4,6	2,9	3,4	
6-7S	5,6	4,4	4,7	3,2	3,5	
6-23P	-	-	-	-	-	
6-23S	-	-	-	-	-	
7-10P	7,6	6,3	7,7	4,3	5	
7-10S	8	6,7	7	4,7	5,2	
7-25P	-	-	-	-	-	2M801
7-25S	-	-	-	-	-	SN 1
8-2P	8,9	7,7	7,2	5,6	6,8	
8-2S	9,6	8,4	8,7	6,3	7,5	
8-13P	8,3	7,1	9,4	5	6,2	
8-13S	8,9	7,6	8,1	5,6	6,5	
8-28P	-	-	-	-	-	
8-28S	-	-	-	-	-	
9-4P	10,9	8,7	10,7	7,6	8,6	Accessor
9-4S	11,8	10,6	11,6	8,5	9,5	Acc
9-19P	10,1	7,9	9,2	5,8	7,1	
9-19S	10,9	8,7	9,7	6,6	7,6	e
9-200P	10,4	9,2	10,2	7,1	8,1	to order
9-200S	11,4	10,2	11,2	8,1	9,1	w to
9-210P	-	-	-	-	-	How
9-210S	-	-	-	-	-	
10-5P	15,8	12,6	13,5	14,1	12,8	
10-5S	17,1	13,9	14,8	15,4	14,1	
10-26P	14,2	11	11,9	12,5	8,7	
10-26S	15,3	12,1	12,5	16,7	9,2	
13-7P	20	18,3	18,3	18,3	16,2	
13-7S	22,4	20,7	20,7	20,7	18,6	
13-37P	18,4	16,7	16,7	16,7	14,6	
13-37S	19,9	17,6	17,6	17,6	15,5	
13-220P	-	-	-	-	-	
13-220S	-	-	-	-	-	



2M SERIES CONTACTS AND TOOLS

Crimp Contacts

	Type Amps	A	Wire Size AWG	Part Number	Color Band		
Contact Size		Amps		Part Number	1st	2nd	3rd
	Pin		#22-#28	2M809-001	-	-	-
	Pin	_	#26-#30	2M809-042*	Blue	-	-
#23	Socket	5	#22-#28	2M809-002	-	-	-
	Socket		#26-#30	2M809-043*	Blue	-	-
	Pin	7.5	#20-#24	2M809-204	-	-	-
#20HD	Socket		#20-#24	2M809-205	-	-	-
	Pin		#16-#20	M39029/58-364	Orange	Blue	Orange
#16	Socket	13	#16-#20	M39029/57-358	Orange	Green	Gray



Nickel Coated Copper

Wire

8

6

3

2

1.5

*Special order please consult Amphenol Socapex for information.

Contact Tools

	Tooling Part Numbers				
Contact Size	Crimper	Positioner	Insertion/ Removal Number		
"00	M22520/2-01	K1461-1*	DAK225-22* (Daniels Insertion Only)		
#23		(Daniels)	2M809-23R (Removal only)		
#20HD	M22520/2-01	2M809-206	2M809-20HDR (Removal only)		
#16	M22520/1-01	M22520/1-04	M81969/14-03		

#23 Tensile Strength for size #23 and #20HD only

Values represent minimums and are in pounds

Crimp Tensile Strength

Silver or Tin Coated

Copper wire

12

8

5

3

1.5

Wire

Gage

#22

#24

#26

#28

#30

Contact Size

#23, #20HD

#23, #20HD

#23

#23

*Daniels Manufacturing Co. part number

Please note that the contacts tools have to be ordered from distribution.

Series 2M Torque Values

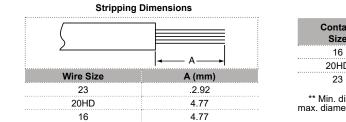
Shell Size Series		Coupling Torque (N-m)		Jam Nut Tightening (N-m)		Backshell Tightening (N-m)	
2M801	2M805	Min.	Max.	Min.	Max.	Min.	Max.
6	8	4,0	4,5	2,2	2,8	2,0	2,5
7	9	4,0	4,5	2,2	2,8	3,4	4,5
8	10	4,5	5,7	2,2	2,8	3,4	4,5
9	11	4,5	5,7	2,2	2,8	4,0	5,1
10	12	5,7	6,8	2,8	3,3	4,0	5,1
13	15	5,7	6,8	2,8	3,3	4,0	5,1

Wire Stripping

1. Strip wire to required length. (See Figure at right). When using hot wire stripping, do not wipe melted insulation material on wire strands; with mechanical strippers do not cut or nick strands.

- 2. See Table 1 for proper finished outside wire dimensions.
- 3. Twist strands together to form a firm bundle.

4. Insert stripped wire into contact applying slight pressure until wire insulation butts against wire well. Check inspection hole to see that wire strands are visible. If there are strayed wire strands, entire wire end should be re-twisted. When wire is stripped and properly installed into contact, the next step is to crimp the wire inside the contact by using the proper crimping tool.



Wire Dimension (mm)**							
Min.	Max.						
1.651	2.769						
1.016	1.956						
0.635	1.219						
	Min. 1.651 1.016						

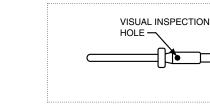
Table 1

 ** Min. diameters to insure moisture proof assembly; max. diameters to permit use of metal removal tools.

Crimping

See table on preceding page for more information on crimp contacts, contact tools, and crimp tensile strength.

- 1. Insert stripped wire into contact crimp pot. Wire must be visible through inspection hole.
- 2. Using correct crimp tool and locator, cycle the tool once to be sure the indentors are open, insert contact and wire into locator. Squeeze tool handles firmly and completely to insure a proper crimp. The tool will not release unless the crimp indentors in the tool head have been fully actuated.
 - 3. Release crimped contact and wire from tool. Be certain the wire is visible through inspection hole in contact.





Examples of M22520 Series Crimping Tools: Shown top: tool used for small size 23 contacts.

Shown bottom: tool used for size 20, 16 contacts and has a positioner that can be dialed for each contact size.

Watch our video

Contact Crimping Instructions



Contact Insertion

1. First remove hardware from the plug and receptacle and slide the hardware over wires in proper sequence.





Note: All plastic tools are double-ended. The colored side is the insertion tool and the white side is the removal tool.

4. Remove tool and pull back lightly on wire, making sure contact stays properly seated and isn't dragged back with the tool. Repeat operation with remainder of contacts to be inserted, beginning with the center cavity and working outward in alternating rows.



Contact removal

1. Remove hardware from plug or receptacle and slide hardware back along wire bundle.



Watch our video **Contact Insertion Instructions**



All dimensions are given for information only and are in mm, except as otherwise specified *in mm: 1mm=0.03937 inch

2. Use proper plastic or metal insertion tool for corresponding contact. (Consult Insertion Tool table). Slide correct tool (with plastic tool use colored end) over wire insulation and slide forward until tool bottoms against rear contact shoulder.



Plastic tool with contact in proper position.



Metal tool with contact.

CAUTION: when inserting or removing contacts, do not spread or rotate tool tips.

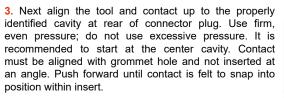
5. After all contacts are inserted, fill any empty cavities with wire sealing plugs.



2. Use proper plastic or metal removal tool for corresponding contact. Slide correct size tool over wire insulation.



Use white end of plastic tool fo removal of contacts.





6. Reassemble plug or receptacle hardware slide forward and tighten using connector pliers. Connector holding tools are recommended while tightening back accessories. When using strain relief, center wires at bar clamp. Slide clamp grommet into position and tighten clamp bar screws. When tightening screws, pressure should be applied in the same direction that clamp is threaded to rear threads of connector. When not using clamp grommet, build up wire bundle with vinyl tape so clamp bar will maintain pressure on wires.



3. Insert plastic or metal removal tool into contact cavity until tool tips enter rear grommet and come to a positive stop. Hold tool tip firmly against positive stop on contact shoulder. Grip wire and simultaneously remove tool and contact. (On occasion, it may be necessary to remove tool, rotate



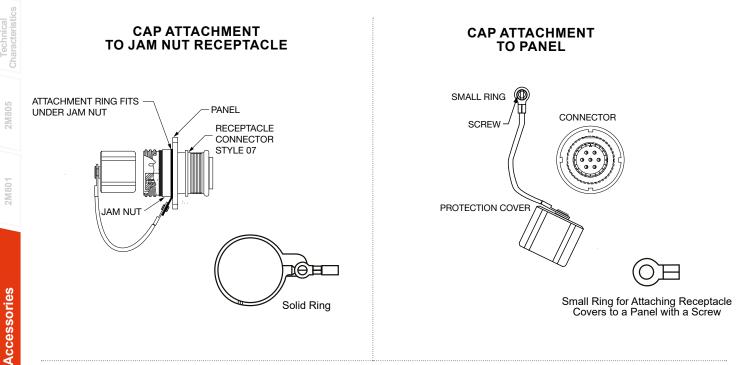
< Removal of contacts with metal tool.



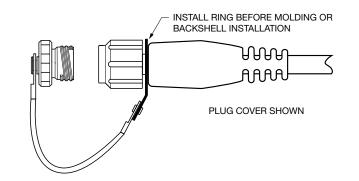
Accessories

How to order

Cap attachment



CAP ATTACHMENT TO CABLE ASSEMBLY



All dimensions are given for information only and are in mm, except as otherwise specified | *in mm: 1mm=0.03937 inch

Solid Ring

[0]日

Micro Band Shield Termination System:

Micro Band Termination: For assembling cables to overmolded style 2M connectors or backshells, the Micro Band System offers quick termination of cable shields and flexibility to be utilized on a wide range of parts with just one band size. These rugged straps have passed numerous hazardous environmental testing, including shock and vibration. Approved for use in military and aerospace applications.

MATERIALS:

Micro Band Installation Tool. Use with 3.05 mm wide bands. 172 mm. length, 0.6 Kg

Micro Band, 3.05 mm wide. Available in two lengths, flat or pre-coiled. Stainless steel.

Micro Band Installation Tool: 2M600-061

Length (mm)	Part Number (Flat)	Accommodates Diameters (mm)
206,38	2M600-057	22,35
361,95	2M600-083	47,75



Micro Band Shield Termination Instruction:

1. Prepare cable braid for termination process (Figure 1).

2. Push braid forward over adapter retention lip to the adapter incline point (10.2mm minimum braid length). Milk braid as required to remove slack and winsure a snug fit around the shield termination area (Figure 2).

3. Prepare the band in the following manner:

IMPORTANT: Due to connector/adapter circumference, it may be necessary to prepare the band around the cable or retention area.

A. Roll band through the buckle slot twice. (Band must be double-coiled!)

B. Pull on band until mark is within approximately 6.4mm of buckle slot (Figure 3). The band may be tightened further if desired.

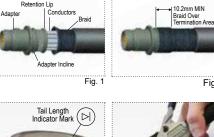
NOTE: Prepared band should have this mark visible approximately whereshown in Figure 3.Shield Termination Clamping Process (Figures 4 thru 8)

NOTE: To free tool handles, squeeze handles together and move holding clips to center of tool. 4. Squeeze gray gripper release lever and insert band into the front end opening of the tool. (Circular portion of looped band must always face downward.)

5. Aligning the band and tool with the shield termination area, squeeze blue pull-up handle repeatedly in full strokes until it locks against tool body. (This indicates the band is compressed to the tool precalibrated tension.)

NOTE: To loosen or remove band before locking and cut-off, squeeze gray grip per release lever on tool and pull band out. To loosen or remove band after blue pull-up handle locks against tool body, squeeze pull-up handle and push tension release lever on top of tool forward. Let tension handle return to original position and use the gripper release lever to remove band.

6. Complete the clamping process by squeezing the black cut-off handle to form lock and trim excess band. To remove excess band from tool, squeeze gray gripper release handle, pull out and dispose. Inspect shield termination.





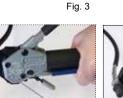


Fig. 5



Technical

Fia. 2

Fig. 4

Fig. 6

2M SERIES SHRINK BOOTS

2M809S060, 2M809A060 SHRINK BOOTS

The 2M Series of Shrink Boots is intended for use with the 2M series of connectors supplied with Integral Backshells. All shrink boots are supplied pre-coated with Hi-Temperature, Hot-Melt adhesive that will seal the boot to both the cable and connector. The boots also contains a lip that will lock on to a groove on the connector for improved strain relief.



High Performance Elastomer - Lipped Shrink Boot

- Pre-coated with Adhesive
- Operating Temperature: -70°C to +150°C
- Rated for 3000 hrs. Continuous operation at +150°C
- Excellent resistance to fuels, oils, and solvents

Material	Spec
Fluid Resistant Polymer	VG 95343 Part 6

Boot	Shell Size		Straight Shrink Boots Part Number	Right Angle Boots Part Number
Size	Series 2M801	Series 2M805	Pre-Coated with Hi- Temp Hot-Melt Adhesive	Pre-Coated with Hi- Temp Hot-Melt Adhesive
2	6, 7	8, 9	2M809S060-2G	2M809A060-2G
3	8, 9	10, 11	2M809S060-3G	2M809A060-3G
4	10, 13	12, 15	2M809S060-4G	2M809A060-4G

Zero Halogen - Lipped Shrink Boots

- Low Smoke, Zero Halogen
- Toxicity Requirements: Meets U.S. and EU standards
- Pre-coated with Adhesive
- Operating Temperature: -30°C to +125°C
- · Good resistance to fuels, oils, and solvents

Material	Spec
Low Smoke Halogen Free	NAVSEA 5617649

Boot	Shell Size		Straight Shrink Boot Part Number	Right Angle Shrink Boots Part Number
Size	Series 2M801	Series 2M805	Pre-Coated with Hi- Temp Hot-Melt Adhesive	Pre-Coated with Hi- Temp Hot-Melt Adhesive
2	6, 7	8, 9	2M809S060-2H	2M809A060-2H
3	8, 9	10, 11	2M809S060-3H	2M809A060-3H
4	10	12, 15	2M809S060-4H	2M809A060-4H

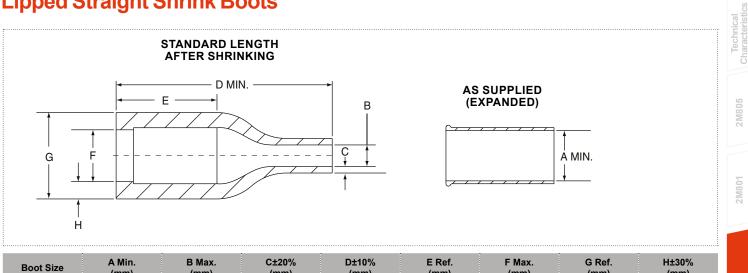
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2M SERIES SHRINK BOOTS

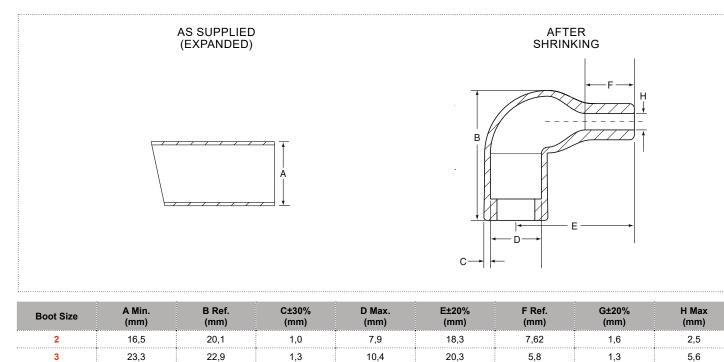
2M809S060, 2M809A060 SHRINK BOOTS

Lipped Straight Shrink Boots



Boot Size	A Min. (mm)	B Max. (mm)	C±20% (mm)	D±10% (mm)	E Ref. (mm)	F Max. (mm)	G Ref. (mm)	H±30% (mm)
2	16,5	3,8	1,27	25,4	14,2	6,05	10,5	2,29
3	23,4	5,6	1,52	38,1	21,1	8,59	13,46	2,54
4	28,4	6,6	1,78	54,9	27,7	12,40	17,8	2,79

Lipped Right Angle Shrink Boots



All dimensions are given for information only and are in mm, except as otherwise specified | *in mm: 1mm=0.03937 inch

28,5

1,5

28,5

4

1,5

6,3

14,2

29,8

7,1

HOW TO ORDER - 2M805 TRI-START

1.	2.	3.	4.	5.	6.	7.
Series	Connector type	Shell type	Service Class	Shell size & arrangement	Contacts	Keying
2M805	-001	-16	Μ	8-1	Ρ	Α

2M805	2M805 Tri-start		
<mark>2</mark> . Co	nnector type		
-001 -003	Crimp	Plug Receptacle	Integrated backs
-005	Straight PCB	Receptacle	Epoxy potting
<mark>3</mark> . Sh	ell type		
<mark>3</mark> . Sh -16	ell type Plug (001)	Se	If-Locking Ratchet

Accessories

Technical

4. Service Class

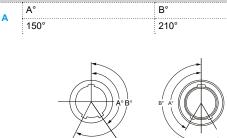
	-
Μ	Electroless Nickel 🗸
NF	Olive Drab Cadmium

ZNU Black Zinc Nickel ~

✓ : RoHS compliant

. •	
Ρ	Pin
S	Socket
Α	Without Pin contacts
В	Without Socket contacts

7. Keying



Receptacle View

5	. Shell	Size & Insert arrangement
	8-1	1 contact #16
	8-4	4 contacts #23
	8-6	6 contacts #23
	8-7	7 contacts #23
	8-23	3 contacts #20HD
	9-10	10 contacts #23
	9-25	5 contacts #20HD
	10-2	2 contacts #16
	10-13	13 contacts #23
	10-28	8 contacts #20HD
	11-4	4 contacts #16
	11-19	19 contacts #23
	11-200	2 contacts #16 - 4 contacts #23
	11-210	10 contacts #20HD
	12-5	5 contacts #16
	12-26	26 contacts #23
	15-7	7 contacts #16
	15-37	37 contacts #23
	45 000	20 contacto #20UD

15-220 20 contacts #20HD

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2M805 Configurator



All dimensions are given for information only and are in mm, except as otherwise specified | *in mm: 1mm=0.03937 inch

Plug View

HOW TO ORDER - 2M805 PROTECTIVE CAPS

1.	2.	3.	4.	5.	6.	7.	tics
Series	Cap type	Service class	Attachement type	Shell size	Attachement code	Attachement lenght	Technica
2M667	-261	М	G	8	01	-5	C

1. Ser	ies
2M667	2M805 Protective caps
2. Caj	p type
-261	

	Ring		I.D (mm)	For shell size
01	©=	Small	3,20	All
17			16,13	8
18	$\cap \sim$	Large	17,65	9,10
19			22,48	11,12
20			27,17	15

10

11

12

4. Attachement type G Nylon Rope

-262

Μ

NF

ZNU

✓ : RoHS compliant

3. Service class

For receptacle

Electroless Nickel ~

Olive Drab Cadmium

Black Zinc Nickel 🗸

H Stainless Steel Wire Rope, Teflon Jacket

7. Attachement length

Inch lenght Example -5 for five inch length

5. Shell Size

9

8

How to order

2M801

Accessories

15

HOW TO ORDER - 2M801 DUAL-START

cics	1.	2.	3.	4.	5.	6.	7.
lecrinica	Series	Connector type	Shell type	Service Class	Shell size & arrangement	Contacts	Keying
Ch	2M801	-007	-26	Μ	6-1	Ρ	Α

1. Series 2M801 2M801 2M801 Dual-start

2. Cor	nnector type		
-007 -009	Crimp	Plug Receptacle	Integrated backshell
-011	Straight PCB	Receptacle	Epoxy potting

3. Shell type				
-26	Plug (007)	Self-Locking Ratchet		
-02	Decentacia (000 8 011)	Square Flange		
-07	Receptacle (009 & 011)	Jam Nut		

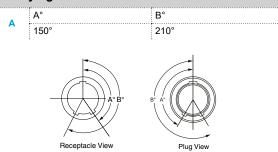
4. Service Class

- Electroless Nickel ~ Μ NF Olive Drab Cadmium
- ZNU Black Zinc Nickel 🗸

✓ : RoHS compliant

6. Contacts				
Р	Pin			
S	Socket			
Α	Without Pin contacts			
В	Without Socket contacts			

7. Keying



All dimensions are given for information only and are in mm, except as otherwise specified *in mm: 1mm=0.03937 inch

5. Shel	I Size & Insert arrangement
6-1	1 contact #16
6-4	4 contacts #23
6-6	6 contacts #23
6-7	7 contacts #23
6-23	3 contacts #20HD
7-10	10 contacts #23
7-25	5 contacts #20HD
8-2	2 contacts #16
8-13	13 contacts #23
8-28	8 contacts #20HD
9-4	4 contacts #16
9-19	19 contacts #23
9-200	2 contacts #16 - 4 contacts #23
9-210	10 contacts #20HD
10-5	5 contacts #16
10-26	26 contacts #23
13-7	7 contacts #16
13-37	37 contacts #23
13-220	20 contacts #20HD

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2M801 Configurator



Due to technical modifications, all information provided is subject to change without prior notice Designed by Amphenol Socapex

HOW TO ORDER - 2M801 PROTECTIVE CAPS

1.	2.	3.	4.	5.	6.	7.
Series	Cap type	Service class	Attachement type	Shell size	Attachement code	Attachement lenght
2M667	-261	М	G	6	01	-5

1. Ser	ies
	2M801 Protective caps

6	7		8	9	10	13	
C							
o. Attac	hemen	t code)				
o. Attac	hemen	t code Ring		I.D (mm)	Fo	r shell size	

Large

(OB

11,30

14,48

16,13

17,35

22,48

6

7,8

9

10 13

3. Ser	vice class
Μ	Electroless Nickel 🗸
NF	Olive Drab Cadmium
ZNU	Black Zinc Nickel 🗸
C: RoHS	compliant

4. Attachement	type
----------------	------

G Nylon Rope

2. Cap type

Plug

Receptacle

-217

-218

Н Stainless Steel Wire Rope, Teflon Jacket 7. Attachement length

5. Shell Size

15

16

17

18

19

Inch lenght Example -5 for five inch length

Accessories

NOTES

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Amphenol has a diversified presence as a leader in high growth areas of the interconnect industry and provides solutions for customers in the automotive, broadband, industrial, information technology and data communications, military and aerospace, mobile devices, and mobile networks markets.

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