
AirBorn
High-Reliability Interconnect Solutions
TRIMATE®
RUGGED CIRCULAR CONNECTORS

TRIMATE®

CONTENTS

TRIMATE®

INTRODUCING TRIMATE®

RUGGED CIRCULAR INTERCONNECT SOLUTIONS

AirBorn builds on its legacy of rugged miniature interconnects by introducing TriMate circular connectors. TriMate's performance meets or exceeds legacy MIL-DTL-38999 connectors yet they are manufactured in a smaller, lighter, and easier-to-install connector package.

TriMate connectors help manufacturers simplify their bill of material (BOM) by employing a common receptacle to mate with three different plug types. TriMate offers a traditional 38999-style ratcheting threaded plug, a push-pull plug for improved density in installations, and a break-away plug ideal for applications requiring quick de mating.










FIELD APPLICATIONS

AirBorn brings quality, new functionality, proven reliability, and added convenience to circular interconnects for Defense, Industrial, and other harsh-environment applications.

MILITARY & DEFENSE

- Radar systems
- Portable radios
- Ground vehicles
- Drones (UAVs)
- Training equipment
- Autonomous equipment
- Robotic systems
- Power distribution systems
- Electronic warfare
- COTS – industrial computing

INDUSTRIAL

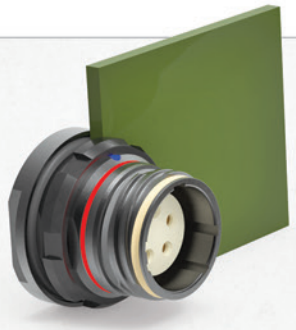
- Factory automation
- Heavy equipment
- Mining electronics
- Off-highway transportation
- Rail
- Construction

ABOUT TRIMATE®

INTRODUCING AIRBORN'S NEXT-GEN CIRCULAR

TriMate connectors are offered in three different forms to support different applications: Threaded, Push/Pull, & Break Away. To reduce manufacturing complexity, all three styles mate with the same receptacle. AirBorn offers both the connectors AND the pre-tested cable assemblies, designed to your specifications.

Overmolded strain reliefs offer benefits in size, weight, and sealing. Save space, weight, part complexity and improve reliability with TriMate circular connectors!

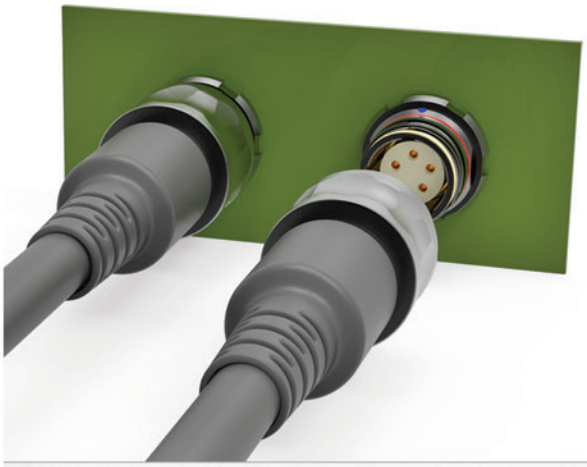


Receptacle installed into a panel

Threaded plug with over-molded strain-relief.

THREADED CONNECTIONS

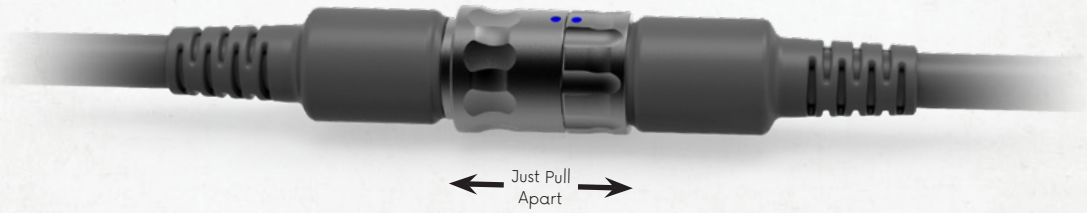
Often used in Commercial and Military aircraft, the ratcheting triple-start thread provides a quick threaded coupling. Threaded connections resist loosening in high-vibration environments.



PUSH-PULL CONNECTIONS

A very popular option in applications where a higher density of connector installations is required. Less space is required to mate and un-mate the push-pull latching style. The design provides a very secure fitting; however is easily un-mated by "pulling" on the coupling ring.

In applications like this, it can be extremely difficult to mate and un-mate threaded connectors as there is little room for a human hand to turn the connectors. Push-pull connectors work well in these applications while still maintaining a very secure connection.



BREAK-AWAY CONNECTIONS

The TriMate Break-away connectors feature an easy push-on, and pull-off design. The un-mating force is great enough to prevent accidental un-mating, while still being easy to disconnect. It is designed for applications where un-mating is more frequent and the desire is for quick de-coupling of the connection. For this version, it is not necessary to pull back the coupling ring. This feature has been used in applications such as soldier-wearable connections, to accommodate the expected need to quickly un-mate in the heat of battle.

MIL-C-39029 Contacts

DEPENDABLE MIL-C-39029 CONTACTS

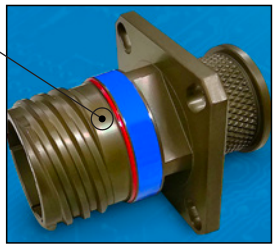
Since electrical connection integrity is vital to safe and successful flights and missions, TriMate connectors use proven MIL-C-39029 contacts, used in countless applications since their introduction. The solid-body pin and socket construction and anti-overstress socket hoods ensure complete reliability.

If a higher-density configuration is required, AirBorn offers alternatives to the MIL-STD contacts. Either contact choice ensures durability and high reliability. With heavy gold (.050 micro-inch) plating and quick (triple-start) ratcheted threaded coupling, TriMate contacts excel in high-vibration environments inherent in Mil-Aero and Industrial applications.

Grey Tin-Nickel — similarly referred to as Black Zinc-Nickel

Highly reflective stainless steel

Compare with many legacy circular connectors

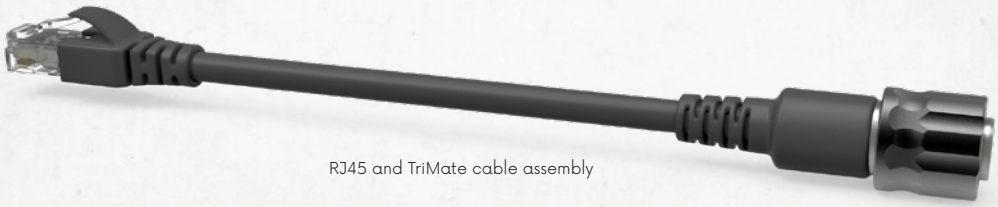


Olive drab cadmium plating – not environmentally friendly

BUILT TOUGH & RESPONSIBLY

Environmentally responsible platings have also been incorporated into the TriMate connectors. AirBorn has chosen a Grey Tin-Nickel electroless finish for reduced reflectivity and superior corrosion resistance.

Grey Tin-Nickel (compare with Black Zinc-Nickel) plated shells offer excellent environmentally safe corrosion resistance while minimizing reflections.

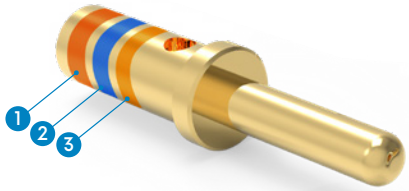


RJ45 and TriMate cable assembly

DESIGNED FOR EASE-OF-USE

TriMate connectors were designed to be easily overmolded to provide an improved ergonomic industrial design. AirBorn can supply 100% tested overmolded cable assemblies, configured to your specifications. For pairing ease, TriMate connectors are designed to accept many available standard MIL-DTL-38999 backshells and banding accessories.

CONTACTS



GENERAL INFORMATION

TriMate was designed to employ industry-standard MIL-C-39029 contacts (now superseded as the SAE-AS39029 specification), used throughout aviation and defense applications. For new applications, responding to customer and market requests, AirBorn also offers contacts that achieve higher density packaging.

Contacts are defined by the maximum termination cross section:
Contact size #16 ⟶ AWG 16–20
Contact size #20MD ⟶ AWG 20–24
Contact size #22D ⟶ AWG 22-26

CURRENT CARRYING CAPACITY

Current carrying capacity is determined by the maximum operating temperature of the contacts. At higher ambient temperature conditions, the contacts have a reduced current carrying capacity. Another standard used to assess UL, CSA and other agency ratings is based on temperature rise. The current applied which produces a 30C temperature rise above ambient, becomes the maximum current per contact. The graphs showing both methods are shown here.

CONTACT DESCRIPTION

BIN (Basic Identification Number):

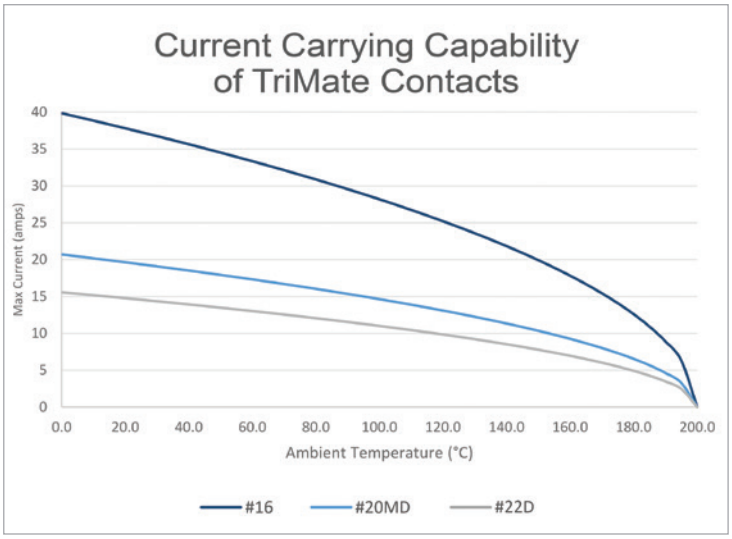
MIL contacts have a BIN (Basic Identification Number) code consisting of three color bands around the crimp barrel. There are 10 colors, which designate a number.

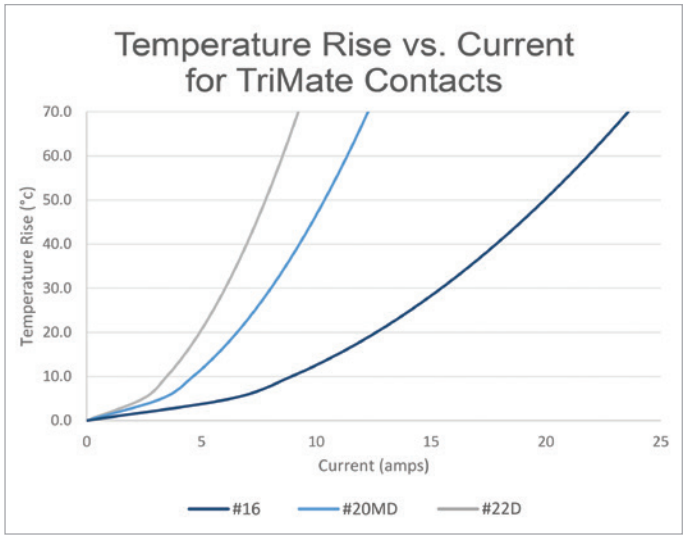
0 - BLACK	1 - BROWN	2 - RED	3 - ORANGE	4 - YELLOW
5 - GREEN	6 - BLUE	7 - VIOLET	8 - GRAY	9 - WHITE

ADVANTAGES

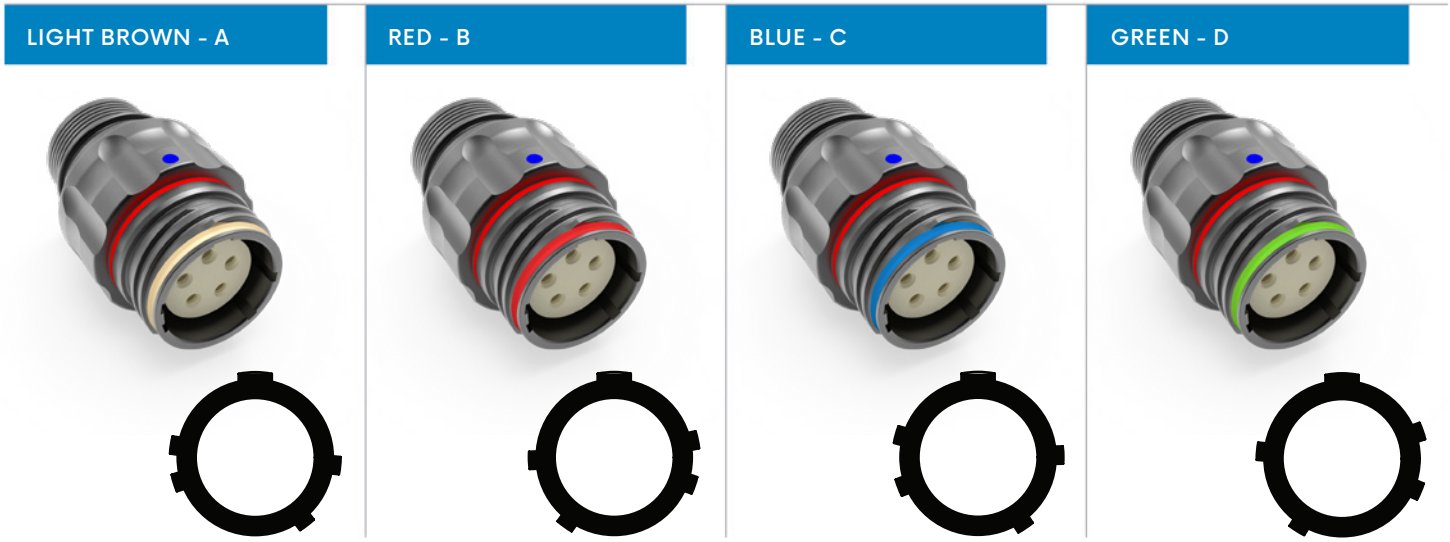
- Long proven and reliable components
- Interchangeable for repair and modification
- Field assembly possible
- Easy identification of contacts

Type	Size	AWG	AirBorn Part No.	MIL Part No.
Pin	16	16-20	N/A	M39029/58-364
Socket			N/A	M39029/57-358
Pin	20MD	20-24	TMC-P20MD	N/A
Socket			TMC-S20MD	N/A
Pin	22D	22-26	N/A	M39029/58-360
Socket			N/A	M39029/57-354





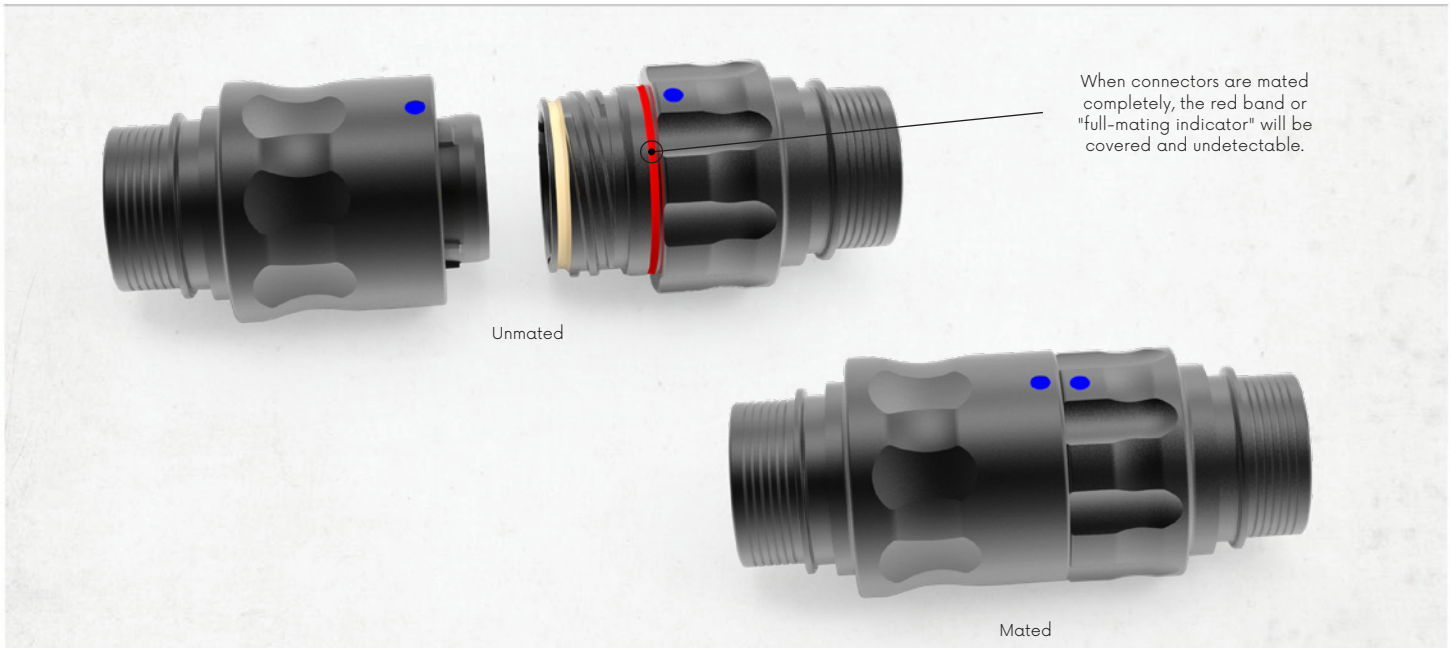
KEYING/CODING



KEYING, CODING, & THE FULL-MATE INDICATOR

The terms "keying" and "coding" are often used interchangeably. The intent is for standard connector sizes and configuration to be specified, while preventing the wrong connectors from being mated. In the graphic above, the TriMate on the far left is manufactured with Key A geometry while the connector on the far right is manufactured to Key D geometry. The only plug that will mate is another shell size 9, 5 position with matching key geometry.

All told, TriMate has 4 different key geometries: A, B, C and D, machined into each plug and receptacle to simplify mating. Each key comes marked with a different color band (light brown, red, blue, and green) to provide a quick and easy visible indicator of the correct connector mate.



FULLY MATED — ULTRA-RELIABLE CONNECTION

The "Full-Mate Indicator" is a colored band which is hidden when the connectors are fully mated. The "unmated" image above shows the red colored band that disappears when both connector halves are joined sufficiently.

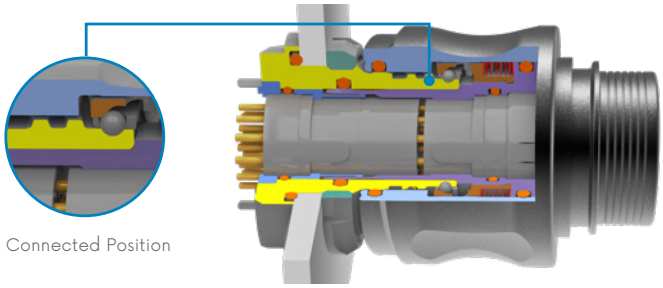
PLUGS

INTEGRATED SHIELD TERMINATION EXIT

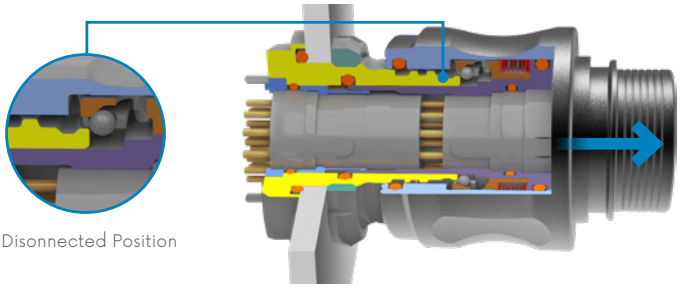
Style P-S Style B-S Style T-S

REAR ACCESSORY THREAD EXIT

Style P-T Style B-T Style T-T



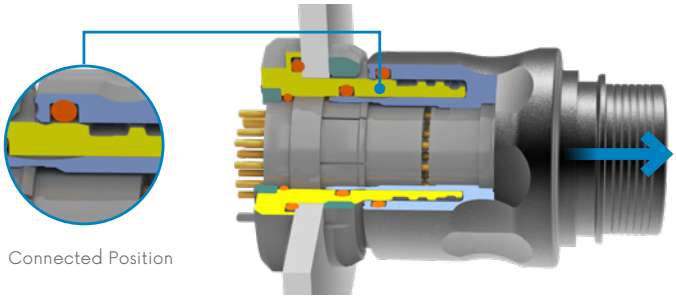
Connected Position



Disonnected Position

PUSH-PULL COUPLING

TriMate's proprietary locking systems uses a ball & groove design to minimize space and ensure a consistent, reliable retention force. Pulling on the cable has no effect on the locking mechanism and uncoupling is initiated by pulling on the coupling ring.



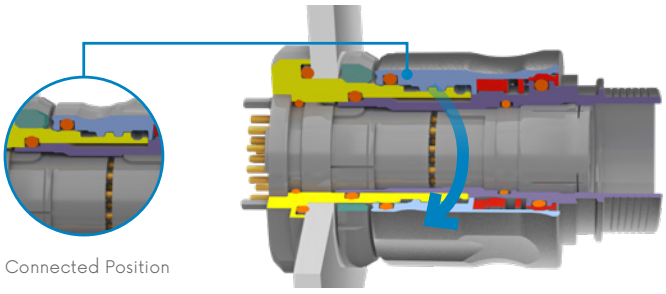
Connected Position

BREAK-AWAY COUPLING

The break-away locking system is similar to the push-pull with the ball locking removed but preserving the stout mating force. To uncouple, simply pull axially along the connector or when using an overmolded cable, pull anywhere along the cable until separated.

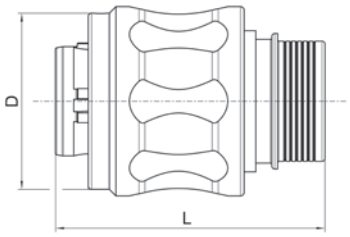
THREADED COUPLING

TriMate connectors have an improved tri-start threaded coupling system, featuring a ratcheting design that resists vibration. While similar to the MIL-DTL-38999 tri-start threads, TriMate also includes additional peripheral sealing to keep dust, dirt, and moisture from the connector interface.



Connected Position

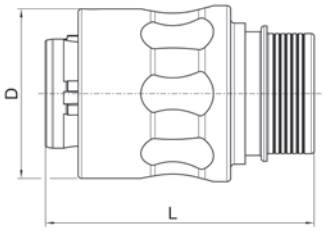
STYLE P-S: PUSH/PULL



Integrated Shield Termination Exit

Shell Size	L inches (mm)	D inches (mm)
09 E	1.20" (30.5)	.755" (19.2)
12 H	1.45" (37)	.952" (24.2)

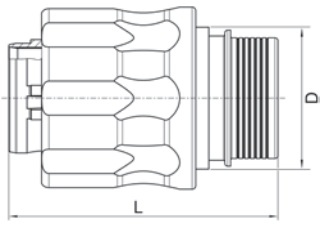
STYLE B-S: BREAK AWAY



Integrated Shield Termination Exit

Shell Size	L inches (mm)	D inches (mm)
09 E	1.20" (30.5)	.692" (17.6)
12 H	1.45" (37)	.917" (23.3)

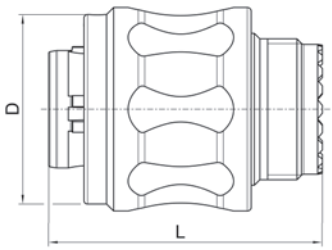
STYLE T-S: THREADED LOCK



Integrated Shield Termination Exit

Shell Size	L inches (mm)	D inches (mm)
09 E	1.20" (30.5)	.527" (13.4)
12 H	1.45" (37)	.763" (19.4)

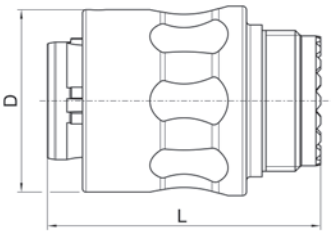
STYLE P-T: PUSH/PULL



Rear Accessory Thread Exit

Shell Size	L inches (mm)	D inches (mm)
09 E	1.12" (28.5)	.755" (19.2)
12 H	1.37" (35)	.952" (24.2)

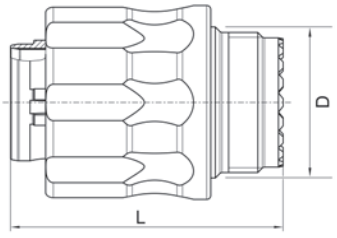
STYLE B-T: BREAK AWAY



Rear Accessory Thread Exit

Shell Size	L inches (mm)	D inches (mm)
09 E	1.18" (30)	.692" (17.6)
12 H	1.37" (35)	.917" (23.3)

STYLE T-T: THREADED LOCK



Rear Accessory Thread Exit

Shell Size	L inches (mm)	D inches (mm)
09 E	1.12" (28.5)	.527" (13.4)
12 H	1.37" (35)	.763" (19.4)

RECEPTACLES

REAR PANEL MOUNT

Style J-N: Solder Cup or PTH

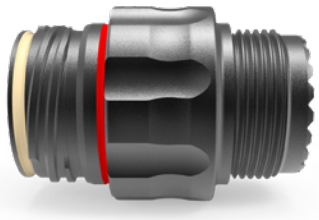
INTEGRATED SHIELD TERMINATION EXIT

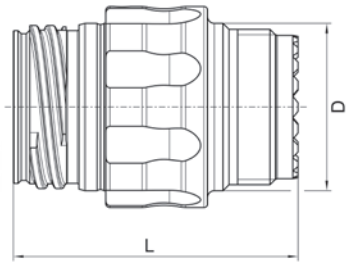
Style L-S Style J-S

REAR ACCESSORY THREAD EXIT

Style L-T Style J-T

STYLE L-T: IN-LINE CABLE-MOUNT

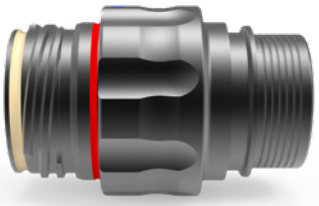


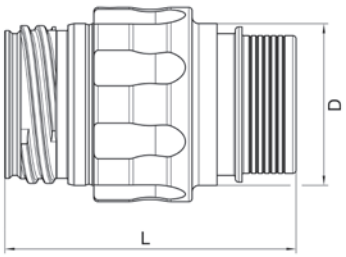


Rear Accessory Thread Exit

Shell Size	L inches (mm)	D inches (mm)
09 E	1.11" (28.4)	.527" (13.4)
12 H	1.29" (33)	.763" (19.4)

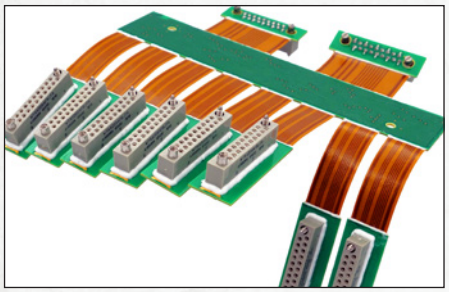
STYLE L-S: IN-LINE CABLE-MOUNT

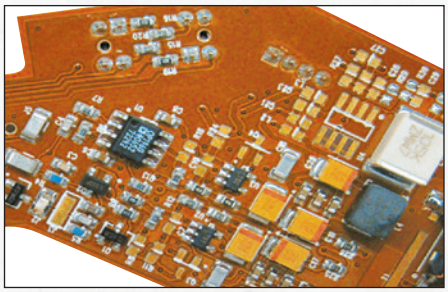


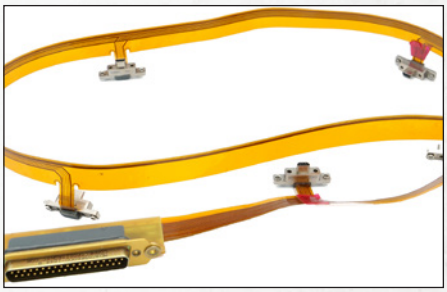


Integrated Shield Termination Exit

Shell Size	L inches (mm)	D inches (mm)
09 E	1.19" (30.4)	.527" (13.4)
12 H	1.37" (35)	.763" (19.4)







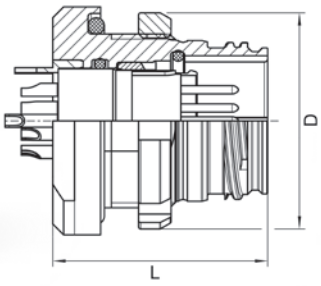
AIRBORN'S FLEXIBLE CIRCUITS

Our flexible circuit business has provided innovative and high-quality flexible printed circuit and assembly solutions for 30+ years. AirBorn is certainly your go-to "Flexperts"!

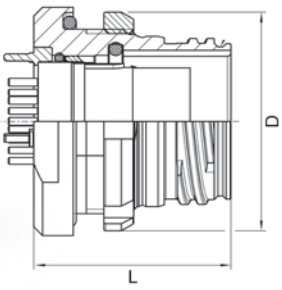
AirBorn's early-stage technical support allows system and device designers to solve interconnect design challenges utilizing a full range of unique flex circuit options. With AirBorn, flexible circuits extend beyond jumpers to fully developed, rigid-flex circuit boards supporting PCB components.

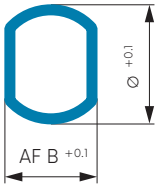
STYLE J-N: REAR PANEL MOUNT

Solder Cup



PTH





Solder Cup

Shell Size	L inches (mm)	D inches (mm)
09 E	.779" (19.8)	.783" (19.9)
12 H	.885" (22.5)	.980" (24.9)

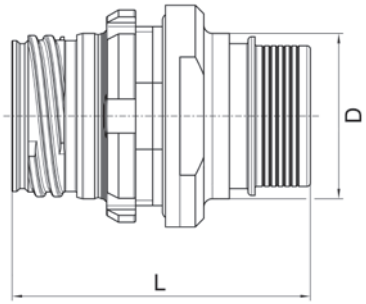
Plated Thru-Hole

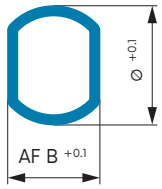
Shell Size	L inches (mm)	D inches (mm)
09 E	.779" (19.8)	.783" (19.9)
12 H	.818" (20.8)	.980" (24.9)

Panel Cut Out

Shell Size	AF B inches (mm)	⌀ inches (mm)
09 E	.594" (15.1)	.633" (16.1)
12 H	.771" (19.6)	.830" (21.1)

STYLE J-S: IN-LINE PANEL-MOUNT JAM-NUT





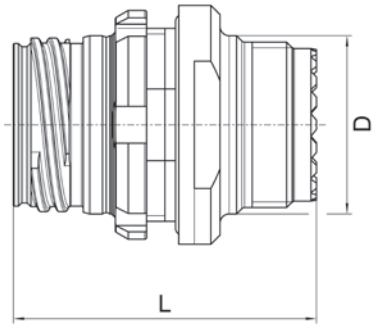
Integrated Shield Termination Exit

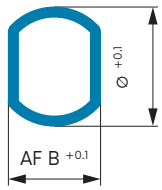
Shell Size	L inches (mm)	D inches (mm)
09 E	1.19" (30.4)	.527" (13.4)
12 H	1.37" (35)	.763" (19.4)

Panel Cut Out

Shell Size	AF B inches (mm)	⌀ inches (mm)
09 E	.594" (15.1)	.633" (16.1)
12 H	.771" (19.6)	.830" (21.1)

STYLE J-T: PANEL-MOUNT JAM-NUT





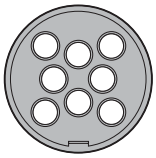
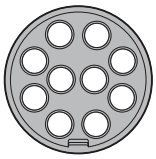
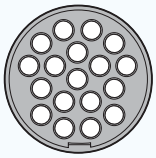
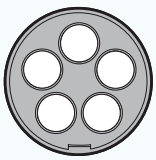
Rear Accessory Thread Exit

Shell Size	L inches (mm)	D inches (mm)
09 E	1.13" (28.9)	.527" (13.4)
12 H	1.29" (33)	.763" (19.4)

Panel Cut Out

Shell Size	AF B inches (mm)	⌀ inches (mm)
09 E	.594" (15.1)	.633" (16.1)
12 H	.771" (19.6)	.830" (21.1)

INSERT SIZES

Shell Size	Insert Code	Insert	# Contacts	Performance	Description
9	008A		8 - Size 22D	Up to 5 amps per contact. Cat 5 up to 1 GB capable	Crimp-snap, removable contacts
	010A		10 - Size 22D	Up to 5 amps per contact.	Crimp-snap, removable contacts
12	018A		18 Contacts 4 20MD 14 22D	Size 22D - 5 amps per contact. Size 20MD - 7.5 amps per contact	Crimp-snap, removable contacts
	005A		5 - Size 16	Up to 13 amps per contact	Crimp-snap, removable contacts

CONFIGURATIONS

PLUGS

Sample Part Number: TMP-TTAN09-008APC00A

TM	P	–			A	N			C	0	0	
SERIES TriMate	**GENDER** P – Plug		**CONNECTOR STYLE** T – Threaded P – Push / pull B – Break away	**CABLE EXIT** T – Rear accessory thread S – Integrated shield termination (IST)	**SHELL MATERIAL** A – Aluminum	**SHELL PLATING** N – TinNickel	**SHELL SIZE - # POS INSERT CODE** 09-008A 09-010A 12-005A 12-018A	**CONTACT GENDER** P – Pin S – Socket	**CONTACT TERMINATION** C – Crimp	**TERMINATION SIZE/LENGTH** 0 – Standard	**CONTACT FINISH** 0 – Standard	**KEYING** A – Lt. Brown B – Red C – Blue D – Green

NOTE: Please consult airborn.com to configure your part number and for the latest revision controlled drawing and technical data.

CABLE RECEPTACLES

Sample Part Number: TMR-LTAN09-008ASC00A

TM	R	–			A	N			C	0	0	
SERIES TriMate	**GENDER** R – Receptacle		**CONNECTOR STYLE** L – In line J – Jam nut mount	**CABLE EXIT** T – Rear accessory thread S – Integrated shield termination (IST)	**SHELL MATERIAL** A – Aluminum	**SHELL PLATING** N – TinNickel	**SHELL SIZE - # POS INSERT CODE** 09-008A 09-010A 12-005A 12-018A	**CONTACT GENDER** P – Pin S – Socket	**CONTACT TERMINATION** C – Crimp	**TERMINATION SIZE/LENGTH** 0 – Standard	**CONTACT FINISH** 0 – Standard	**KEYING** A – Lt. Brown B – Red C – Blue D – Green

NOTE: Please consult airborn.com to configure your part number and for the latest revision controlled drawing and technical data.

PCB & SOLDER CUP RECEPTACLES

Sample Part Number: TMR-JNAN09-008ASS00A

TM	R	–	J	N	A	N				0	0	
SERIES TriMate	**GENDER** R – Receptacle		**CONNECTOR STYLE** J – Jam nut mount	**CABLE EXIT** N – None	**SHELL MATERIAL** A – Aluminum	**SHELL PLATING** N – TinNickel	**SHELL SIZE - # POS INSERT CODE** 09-008A 09-010A 12-005A 12-018A	**CONTACT GENDER** P – Pin S – Socket	**CONTACT TERMINATION** S – Solder cup P – Plated thru hole	**TERMINATION SIZE/LENGTH** 0 – Standard	**CONTACT FINISH** 0 – Standard	**KEYING** A – Lt. Brown B – Red C – Blue D – Green

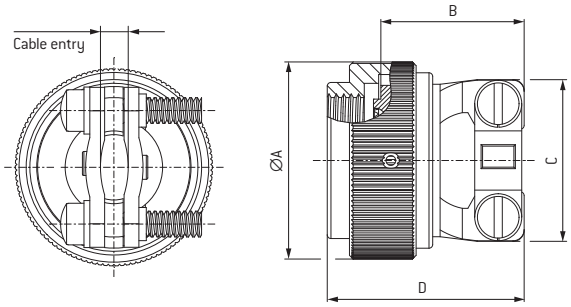
NOTE: Please consult airborn.com to configure your part number and for the latest revision controlled drawing and technical data.

BACKSHELLS/STRAIN RELIEF

WIRE & CABLE PROTECTION

TriMate connectors were designed to be compatible with a wide variety of existing cable clamp strain relief accessories. While just a few are listed below, AirBorn can add your choice of cable clamp to complete your assembly.

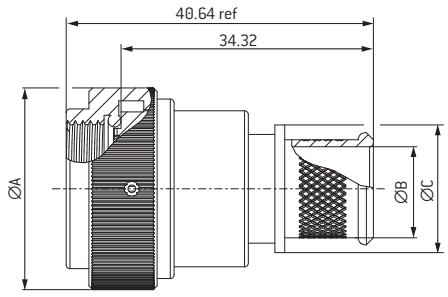
SUITABLE FOR CB / SB / AB / GB / KB



Material	CuTeP
Plating	Nickel

Shell Size		MIL-Part No.	⌀ in inches (mm)	Dimensions in inches (mm)			Cable Entry in inches (mm)	
Connector	Backshell		A	B	C	D	Min.	Max.
9	9	M85049/38S9N	.751" (19.1)	.909" (23.1)	.850" (21.6)	1.09" (27.9)	.098" (2.5)	.232" (5.9)
12	13	M85049/38S13N	1" (25.4)	1.01" (25.7)	1.09" (27.9)	1.21" (30.8)	.188" (4.8)	.326" (8.3)

SUITABLE FOR CB / SB / AB / GB / KB



Material	CuTeP
Plating	Nickel

Shell Size		MIL-Part No.	⌀ in inches (mm)		
Connector	Backshell		A	B (+0.0 / -0.50)	C
9	9	M85049/88-9N03	.859" (21.82)	.259" (6.60)	.559" (14.22)
12	13	M85049/88-13N03	.985" (25.04)	.320" (8.13)	.629" (16)

CRIMP SLEEVES

STYLE 1: LONG VERSION

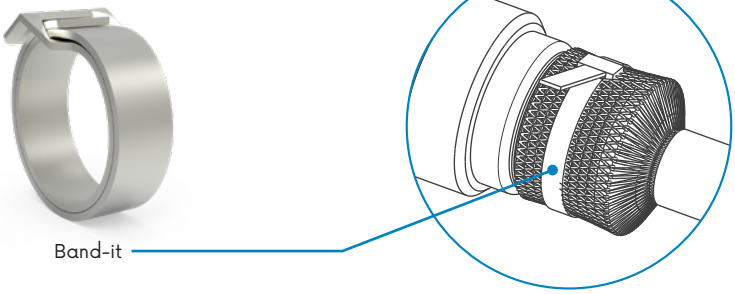
STYLE 2: SHORT VERSION

Crimp Sleeves		
Shell Size	Part Number	Style
9	TMA-C0901	1
	TMA-C0902	2
12	TMA-C1201	1
	TMA-C1202	2

Material	CuTeP
Plating	Nickel

BRAID TERMINATION SLEEVES

SUITABLE FOR: C1 / CB / S1 / SB / A1 / AB / K1 / KB / G6 / GB



Shell Size	Part Number	Material
All	CDG10026	Stainless Steel

ACCESSORIES

Straight

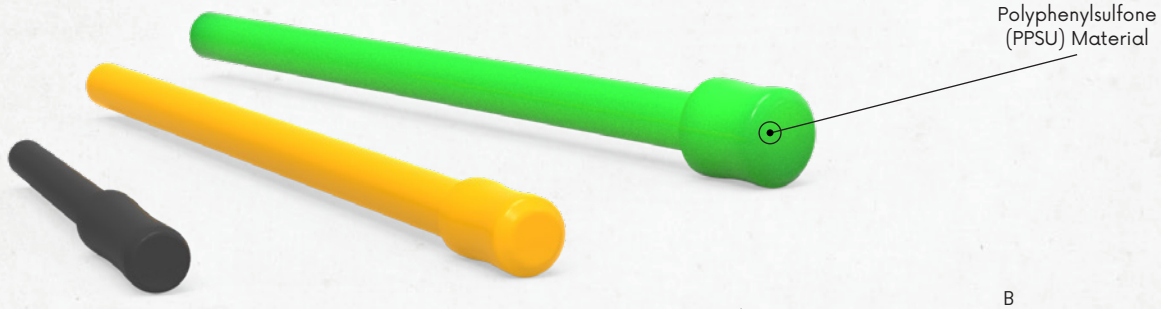
Right Angle

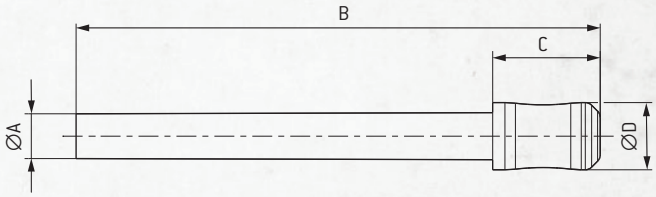
HEAT SHRINK BOOTS

Heat shrinkable tubes are used to insulate wires and cables, providing additional protection against abrasion and environmental influences — especially in the wire transition area of the assembly.

We recommend using heatshrink boot with supplied diameter of .917" [24.0 mm] and recover diameter of .413" [10.5 mm] for both size 9 and 12 connectors.

Heat Shrink Boots	Part Number
Straight Boot	TMA-H0001
Right-Angle Boot	TMA-H0002

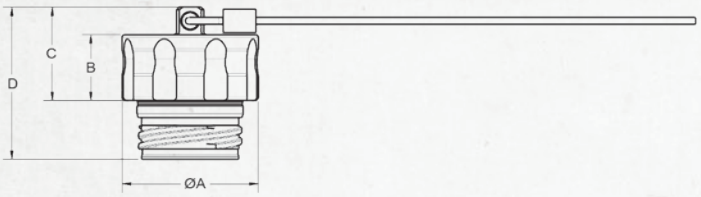


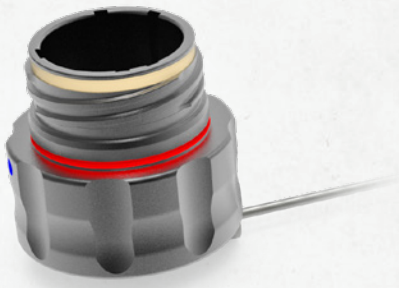


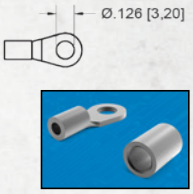
CONTACT CAVITY SEALING PLUGS

The sealing plugs are used to close or open unused contact positions in TriMate connectors. The appropriate sealing plug coincides with the correct contact size. Make sure that all nonfunctional cavities are equipped with unconnected contacts. Install the sealing plug with head towards bottom of the crimp barrel.

Contact Size	Part Number	MIL-Part No.	Color	Dimensions in inches (mm)			
				ø A	B	C	ø D
#16		MS27488-16-2	Green	.070" (1.8)	.854" (21.7)	.090" (2.3)	.125" (3.2)
#20MD	TMA-S0001		Orange	.043" (1.1)	.854" (21.7)	.098" (2.5)	.062" (1.6)
#22D		MS27488-22-2	Black	.039 (1)	.460" (11.7)	.094" (2.4)	.059" (1.5)



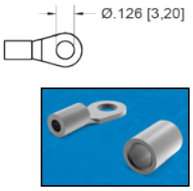




PROTECTION CAPS

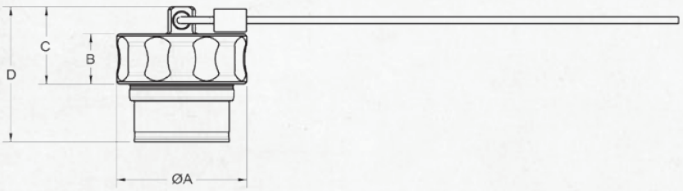
For Use with Threaded Plugs

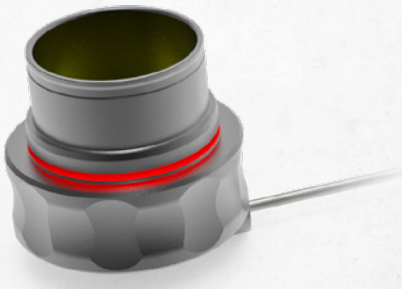
Shell Size	Part Number	Coding	Dimensions in inches (mm)				
			ø A	B	C	D	L
9	TMA-TRAN-09A	A	.724" (18.4)	.314" (8.0)	.511" (13)	.842" (21.4)	7.84" (200)
	TMA-TRAN-09B	B					
	TMA-TRAN-09C	C					
	TMA-TRAN-09D	D					
12	TMA-TRAN-12A	A	.983" (24.9)	.472" (12)	.669" (17)	1.09" (27.7)	7.84" (200)
	TMA-TRAN-12B	B					
	TMA-TRAN-12C	C					
	TMA-TRAN-12D	D					

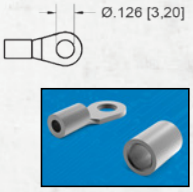


For Use With All Types of TriMate Receptacles

Shell Size	Part Number	Dimensions in inches (mm)			
		ø A	B	C	L
9	TMA-RRAN-09	.724" (18.4)	.531" (13.5)	.393" (10)	7.84" (200)
12	TMA-RRAN-12	.917" (23.3)	.610" (15.5)	.472" (12)	7.84" (200)







For Use With Break-Away & Push/Pull Plugs

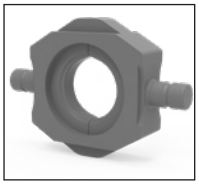
Shell Size	Part Number	Dimensions in inches (mm)				
		ø A	B	C	D	L
9	TMA-PRAN-09	.763" (19.4)	.566" (14.4)	.755" (19.2)	.807" (20.5)	7.84" (200)
12	TMA-PRAN-12	.889" (22.6)	.692" (17.6)	.952" (24.2)	.984" (25)	7.84" (200)

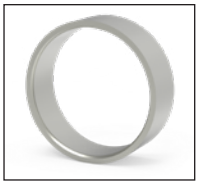
APPLICATION TOOLING

CONTACT CRIMP TOOLS

The 8-point crimping tool is used to crimp turned contacts on to a conductor. The special features of the handcrimping tool are a user-friendly display, ergonomic design and an optimum force transmission for comfortable working.

Part Number	Mil Part Number	Name	Contact Size
N/A	M22520/1-01	Contact Crimp Tool	#16 / #20
N/A	M22520/1-04	Positioner	#16 / #20
N/A	M22520/2-01	Contact Crimp Tool	#20MD, #22D
N/A	M22520/7-06	Positioner Sockets	#20MD, #22D
N/A	M22520/7-06	Positioner Pins	#20MD
N/A	M22520/7-07	Positioner Pins	#22D





TOOLS FOR SHIELD TERMINATION

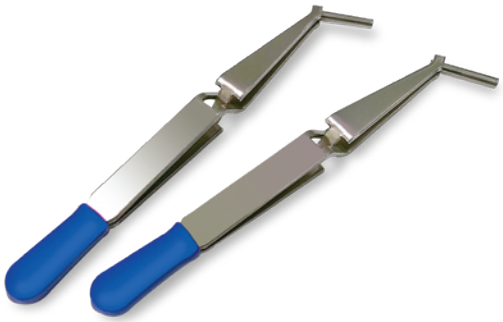
Part Number	Name	Shell Size
CDG10027	Band-It Tool	Universal
CDG27338	Housing Cable Crimp Tool	Universal
TMT-C0009	Crimp Die	09
TMT-C0012	Crimp Die	12

INSERTION & REMOVAL TOOLS

We provide insertion & removal tools for all listed contacts. The use of the correct insertion tool ensures proper seating of the contact in the connector. Removal tools ensures that the contact can be removed without causing damage. In addition, MIL-Standard metal tweezers are offered as a more durable option.

Mil-Standard Plastic Tools

Size	Part Number	MIL-Part No.	Color Code Insertion Side	Color Code Removal Side	Min. Wire ⌀ in inches (mm)	Max. Wire ⌀ in inches (mm)
#16	TMT-I16	M81969/14-03	Blue	White	.064" (1.65)	.109" (2.77)
#22D	TMT-I22	M81969/14-01	Green	White	.029" (0.76)	0.05" (1.27)

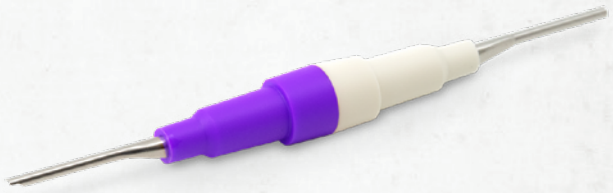


Mil-Standard Metal Tweezers

Size	Type	MIL-Part No.	Min. Wire ⌀ in inches (mm)	Max. Wire ⌀ in inches (mm)
#16	Insertion	M81969/8-07	.064" (1.65)	.109" (2.77)
	Removal	M81969/8-08		
#22D	Insertion	M81969/8-01	.029" (0.76)	0.05" (1.27)
	Removal	M81969/8-02		

Insertion & Removal Tool

Size	Part Number	Color Code Insertion Side	Color Code Removal Side
#20MD	TMT-I20MD	Purple	White



CONTACT RETENTION TOOL

Retention tools are used to validate the retention of the contact into the connector insert. By pressing the tool against the contact mating face, the retention of both pins and sockets are tested.

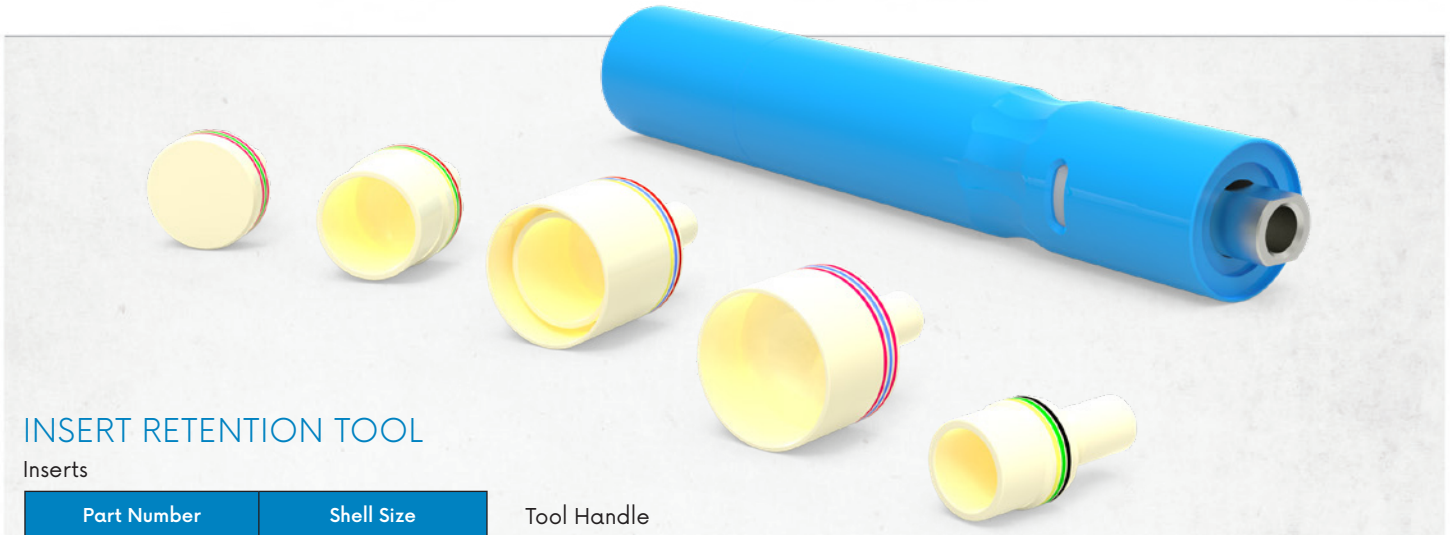
Tool Handle

Size	Part Number	Contact Size
12-16	TMT-RH002	Not Universal
20-28	TMT-RH001	Not Universal

Tool Head

Size	Part Number	Type	Color 1	Color 2	Color 3
#16	TMT-RC016	Pin	Yellow	Red	Green
#16		Socket	Black	Red	Green
#20	TMT-RC020	Pin	Yellow	Yellow	Yellow
#20		Socket	Black	Yellow	Yellow
#22D	TMT-RC022	Pin	Yellow	Blue	Black
#22D		Socket	Black	Blue	Black

APPLICATION TOOLING



INSERT RETENTION TOOL

Inserts

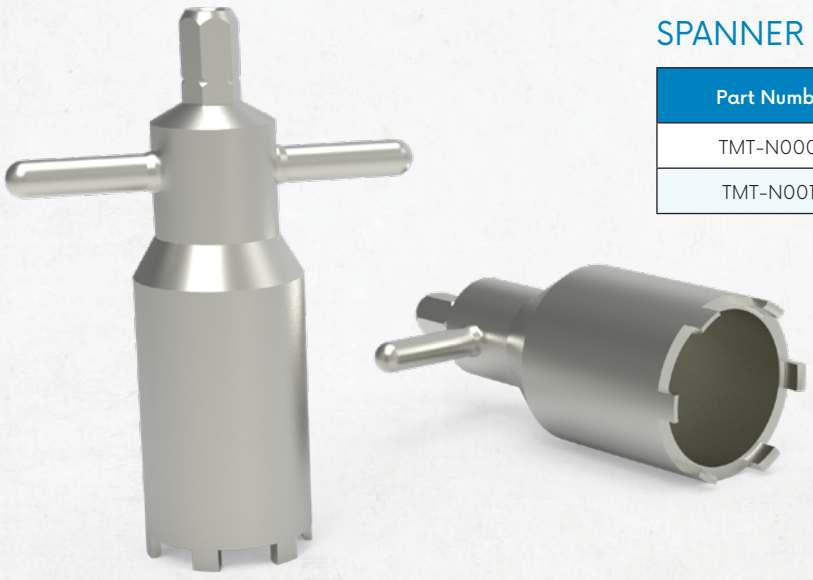
Part Number	Shell Size
TMT-RI009	09
TMT-RI012	12

Tool Handle

Part Number	Shell Size
TMT-RH003	Universal

Tool Head

Part Number	Size Shell	Contact Type	Contact Type	Color 1	Color 2	Color 3
TMT-RI009	09	Plug	Socket	Black	Green	Red
		Plug	Pin	Black	Green	Yellow
		Receptacle	Socket	Black	Green	Red
		Receptacle	Pin	Black	Green	Yellow
TMT-RI012	12	Plug	Socket	Red	Green	Red
		Plug	Pin	Red	Green	Yellow
		Receptacle	Socket	Red	Green	Red
		Receptacle	Pin	Red	Green	Yellow



SPANNER WRENCH

Part Number	Shell Size	Name
TMT-N0009	09	Nut Driver
TMT-N0012	12	Nut Driver

MATERIALS SPECIFICATIONS

Item	Material	Surface Finish	Flammability
Housing / nut	Aluminum AlMgSiSn1Bi	Anthracite tin-nickel over nickel	
EMI-locking ring	CuBe2	Gold over nickel	
Crimp sleeve	CuTeP	Nickel	
Grounding ring	CuZn39Pb3	Tin over nickel	
Insulator	PEEK		UL94 (V0)
Pin contact ODU specific	CuZn38Pb2	1.27 µm gold over nickel	
Pin contact MIL standard	CuZn35Pb2	1.27 µm gold over nickel	
Socket contact body	CuZn35Pb2	Gold over nickel	
Socket contact clip	CuBe2	1.27 µm gold over nickel	
Wave spring	Stainless steel		
Ratchet ring	PEEK		UL94 (V0)
Grommet	FVMQ (fluorosilicone)		
Potting	Potting compound		UL94 (V0)
O-rings	FVMQ (fluorosilicone)		

PERFORMANCE SPECIFICATIONS

Description	Requirement	
Current carrying capacity	Contact Size	Current
	#16	13 A
	#20MD	7.5 A
	#22D	5 A
Insulation resistance at ambient temperature	The insulation resistance between any pair of contacts and between any contact and the shell shall be greater than 5.000 MΩ	
Insulation resistance at elevated temperature	The insulation resistance between any pair of contacts and between any contact and the shell shall be greater than 1.000 MΩ at +175°C	

Type	Performance
Saltspray	96h salt mist
Operating temperature	-65°C up to +175°C
Mating cycles	500
Shell-to-shell conductivity	Voltage drop 2, 5 mV
Random vibration[1]	37.8g
Sine vibration[1]	30g
Mechanical shock[1]	300g

1: Threaded version

WHAT YOU'LL GET WITH YOUR ORDER

Connector

Dust Cover

Contacts

BACK-END ASSEMBLY BY CONNECTOR TYPE

INTEGRATED TERMINATION EXIT VERSION

Connector

+

Crimp Sleeve

+

Heat-Shrink Tube

OR

Connector

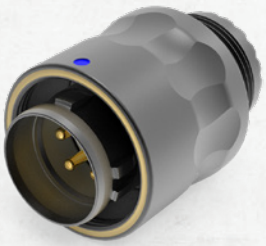
+

Band-it

+

Overmold

REAR ACCESSORY THREAD EXIT VERSION



Connector

+

Backshell

+

Band-it

+

Heat-Shrink Tube

The AirBorn Advantage

Model-To-Market Solutions

Custom Power Systems

COTS VPX Power Supply
Power Blade

Flexible Circuit Assemblies

Cable Assemblies

FUZE Assemblies

Active Optical Assemblies

Rectangular
W Series

Rectangular
R Series

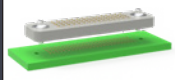
Micro D
M Series

Nano D
N Series

High-Speed Rectangular
verSI

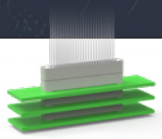
Modular Hybrid
SInergy

Macro D
RocKet



Z Axis Interposer
Z Series

High-Speed Micro D
microSI



Stackable
RC Series

Circulars
Series 360

Strip Connector
AirStrip

PowerAmp
13A or 23A

Rugged Circulars
TriMate

TMC-2.24

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