

CeeLok FAS-T CONNECTORS

10 GB/S ETHERNET CONNECTIVITY . . . COMPACT . . . RUGGED . . . RELIABLE

CeeLok FAS-T Connectors

10 Gb/s ethernet connectivity . . . compact . . . rugged . . . reliable



CeeLok FAS-T connectors offer a small form factor, field terminable I/O connector capable of 10 Gb/s Ethernet. Crimp-snap contacts enable easy termination and field repairability. The integral backshell offers easy 360-degree shield termination.

The compact size 8 shell helps designers meet the needs of reduced SWaP (size, weight, and power).

The connector's T-shaped contact pattern provides noise cancellation and decoupling to minimize crosstalk and increase signal integrity.

The CeeLok FAS-T connector is a true 100-ohm impedance connector that is compatible with Cat 5e and Cat 6a cables and protocols ranging from the USB and IEEE 1394 to gigabit and 10G Ethernet.

HIGH SPEED

- Gigabit or 10 Gigabit rates
- Compatible with Cat 5e, Cat 6a or Cat 7 cables
- T-shaped pin pattern improves signal integrity through uniform crosstalk cancellation

SPACE AND WEIGHT SAVINGS

- Compact size 8 shell

EASY TERMINATION AND FIELD REPAIRABILITY

- Crimp-snap, 39029-style contacts

FLEXIBLE BACKSHELL/ SHIELDING OPTIONS

- Backshell integrated in plug body provides low profile, low cost, low weight strain relief and EMI protection
- Compatible with multiple braid termination techniques, adapter styles and seal boots

RUGGED

- Scoop-proof design
- Insert assembly mechanically retained for ≤25 lb. retention force
- Robust coupling ring mechanism









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Performance Characteristics

DATA RATES

- Gigabit and 10 Gigabit Ethernet when used with Cat 5e, Cat 6a or Cat 7 cables

ELECTRICAL

- **Insulation Resistance:** 5000 MΩ ambient, 1000 MΩ @ 175°C
- **Dielectric Withstanding Voltage:** 500 VAC @ sea level 100 VAC @ 70,000 ft.
- **Shielding Effectiveness:** per MIL-DTL-38999
- **Shell-to-Shell Conductivity:** 5 mV initial, 10 mV final

MECHANICAL

- **Vibration, Sine:** MIL-DTL-38999 Series III (60 g), 4 hrs per axis, no elevated temperature
- **Vibration, Random:** EIA-364-28 Condition VI Letter J (43.92 g)
- **Durability:** 500 mating cycles
- **Contact Retention:** 10 lb. min.
- **Coupling Torque:** 8 in-lb. max.

ENVIRONMENTAL PROPERTIES

- **Operating Temperature:** -65°C to +175°C
- **Sealing:** Altitude immersion: 70,000 ft. (mated condition)
- **IP67:** Mated condition
- **IPX6 (water jet):** Receptacle, panel mounted (unmated condition)
- **Corrosion Resistance:** 500 hr. salt mist

MATERIALS

- **Shell:** Electroless nickel for DOD-approved, RoHS-compliance, corrosion resistance (500 hr salt mist)
- **Insert:** High-temperature thermoplastic for excellent temperature endurance
- Low dielectric constant for superior signal integrity
- **Contacts:** Beryllium copper alloy

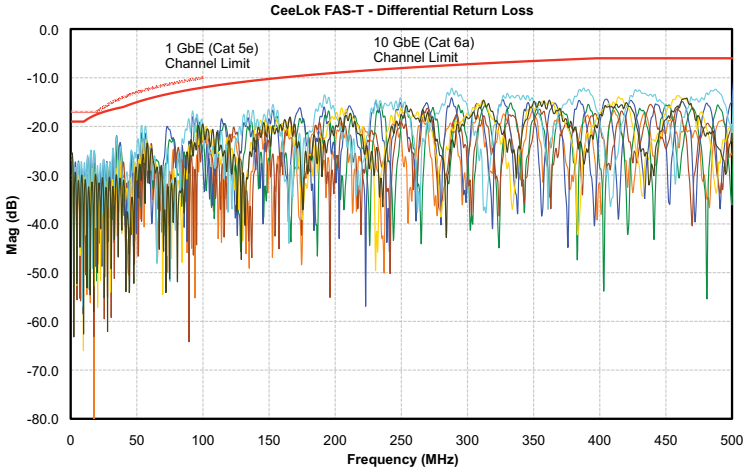
STANDARDS AND SPECIFICATIONS

- **Product Specification:** 108-2482
- **Application Specification:** 114-32025
- **Instruction Sheet:** 408-32046
- **Test Report:** 501-134002
- **Electrical Performance Report:** 505-116000

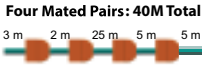


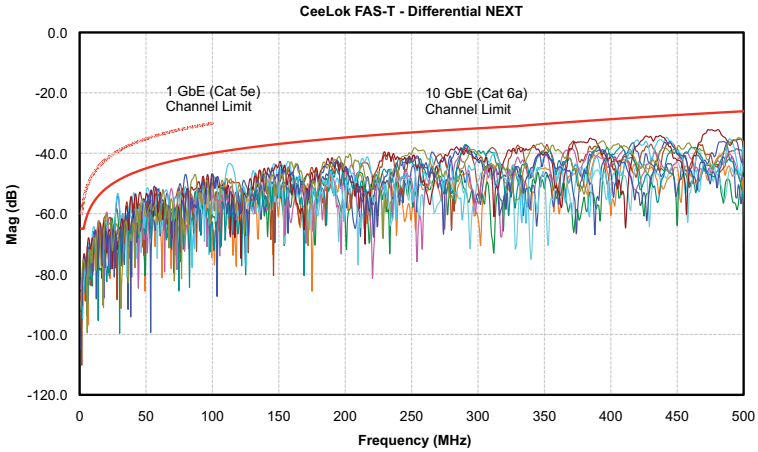


CeeLok FAS-T Connectors

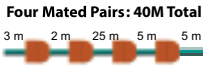


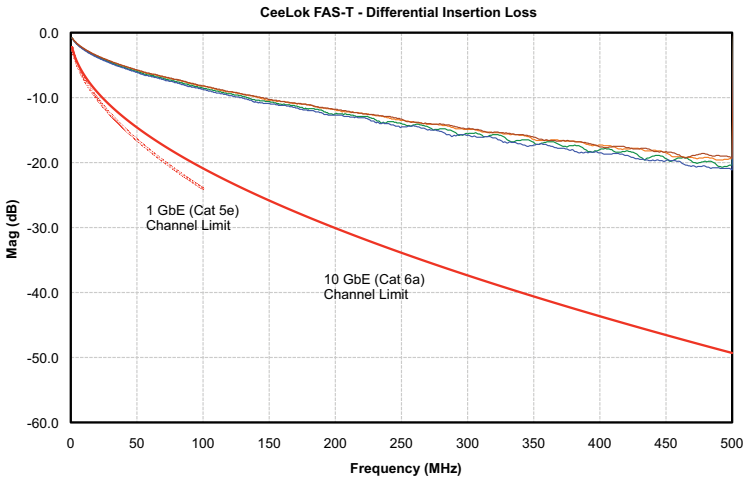
CeeLok FAS-T
Differential Return Loss





CeeLok FAS-T
Differential NEXT





CeeLok FAS-T
Differential Insertion Loss

CeeLok FAS-T Connectors

Type	Contacts Included	Key	Part No.	
			Electroless Nickel	Black Zinc Nickel
Plug	Socket	N	2102353-1	2102353-2
		A	2102353-3	2102353-4
		B	2102353-5	2102353-6
	None	N	2102353-7	2102353-8
		A	2102353-9	1-2102353-0
		B	1-2102353-1	1-2102354-2
Receptacle	Pin	N	2102352-1	2102352-2
		A	2102352-3	2102352-4
		B	2102352-5	2102352-6
	None	N	2102352-7	2102352-8
		A	2102352-9	1-2102352-0
		B	1-2102352-1	1-2102352-2
Box-Mount Receptacle	Pin	N	2102343-1	2102343-2
		A	2102343-3	2102343-4
		B	2102343-5	2102343-6
	None	N	2102343-7	2102343-8
		A	2102343-9	1-2102343-0
		B	1-2102343-1	1-2102343-2
Box-Mount Receptacle, PC Tail	Pin	N	2102453-1	2102453-2
	Pin	A	2102453-3	2102453-4
	Pin	B	2102453-5	2102453-6
Jam Nut Receptacle, PC Tail	Pin	N	2102351-1	2102351-2
	Pin	A	2102351-3	2102351-4
	Pin	B	2102351-5	2102351-6

Contacts

Wire Size	Part No.	
	Pin	Socket, Hooded
24 – 26 AWG	2102349-3	2102350-5

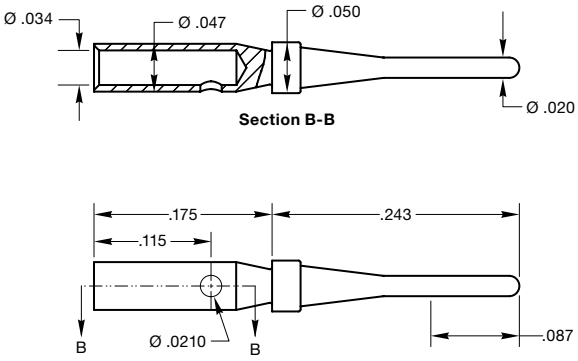
Application Tooling

Hand Crimp Tool:
M22520/2-01

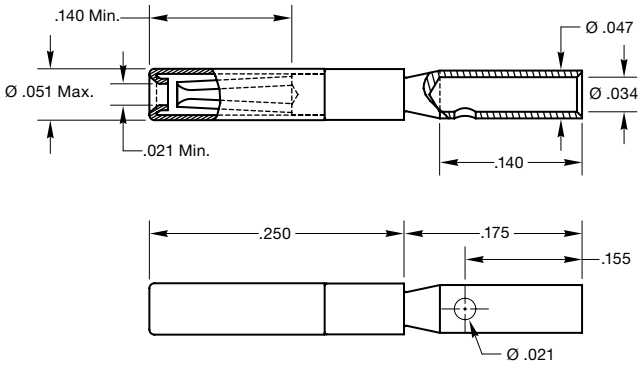
Crimp Positioner:
TE Part No. 2217375-1

Insertion/Extraction Tool:
TE Part No. 2217376-1

Pin



Socket

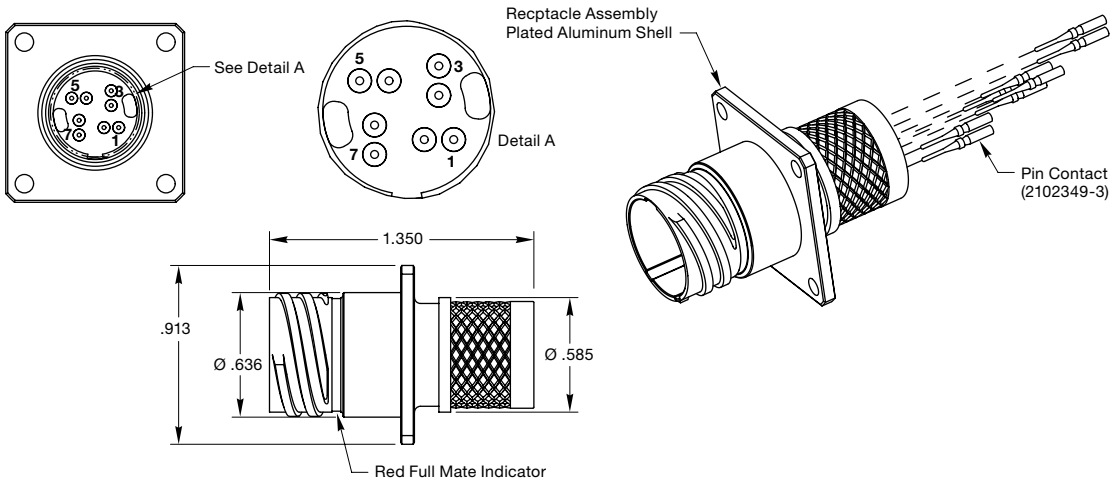


CeeLok FAS-T Connectors

PRODUCT DIMENSIONS

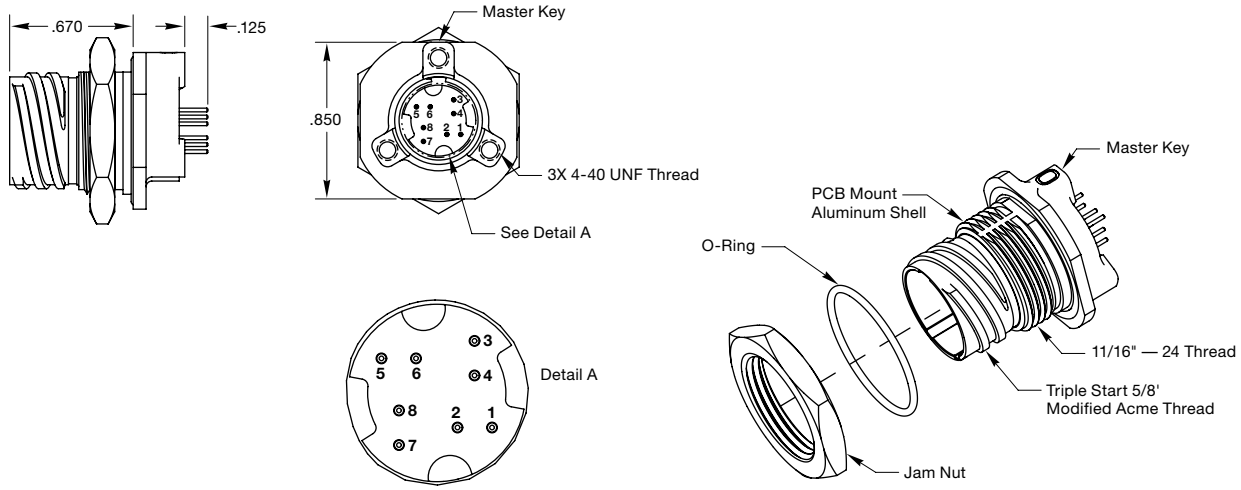
Boxmount Receptacle Kit Assembly

Part No. 2102343



Jam Nut Receptacle Assembly, PC Tail

Part No. 2102351

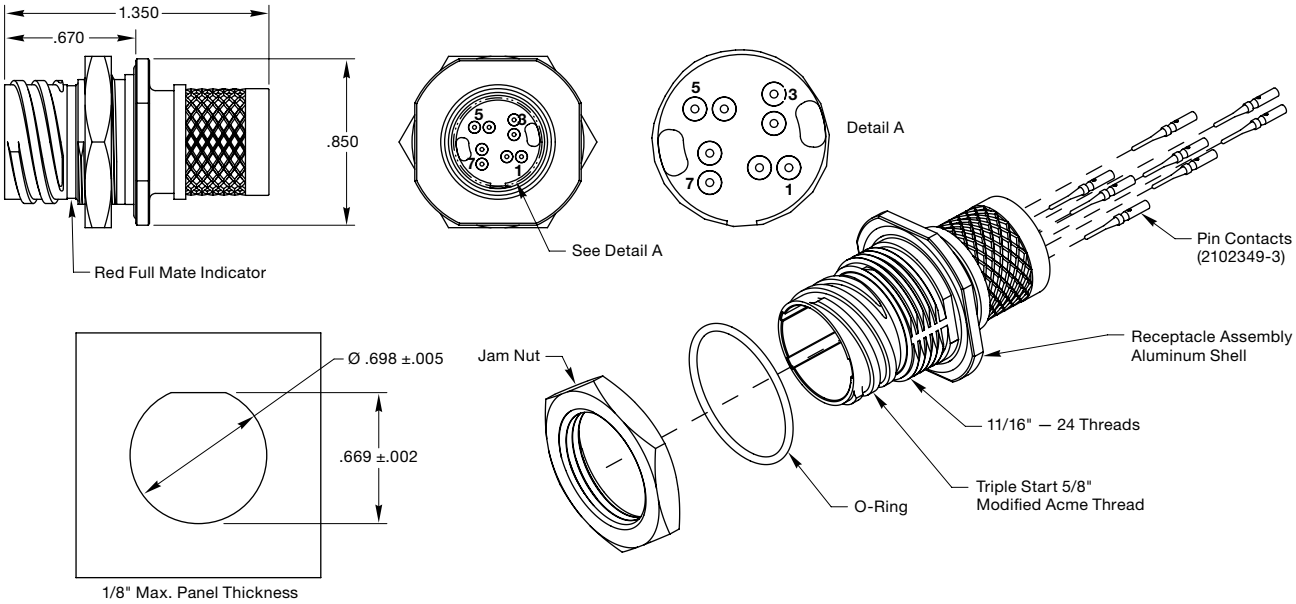


CeeLok FAS-T Connectors

PRODUCT DIMENSIONS

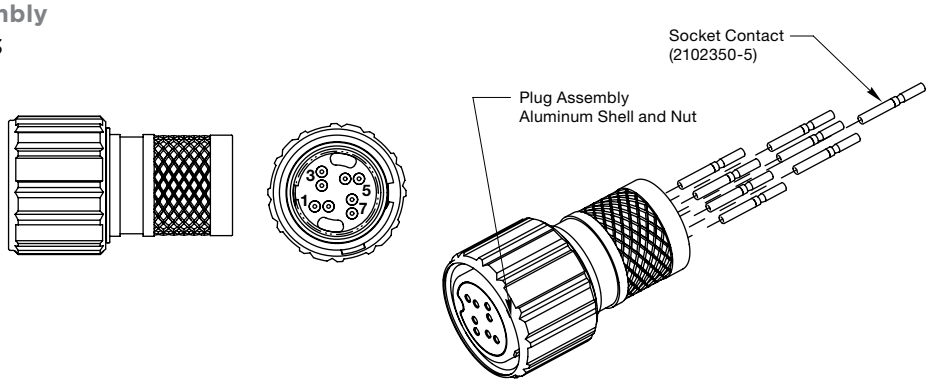
Receptacle Kit Assembly

Part No. 2102352



Plug Kit Assembly

Part No. 2102353

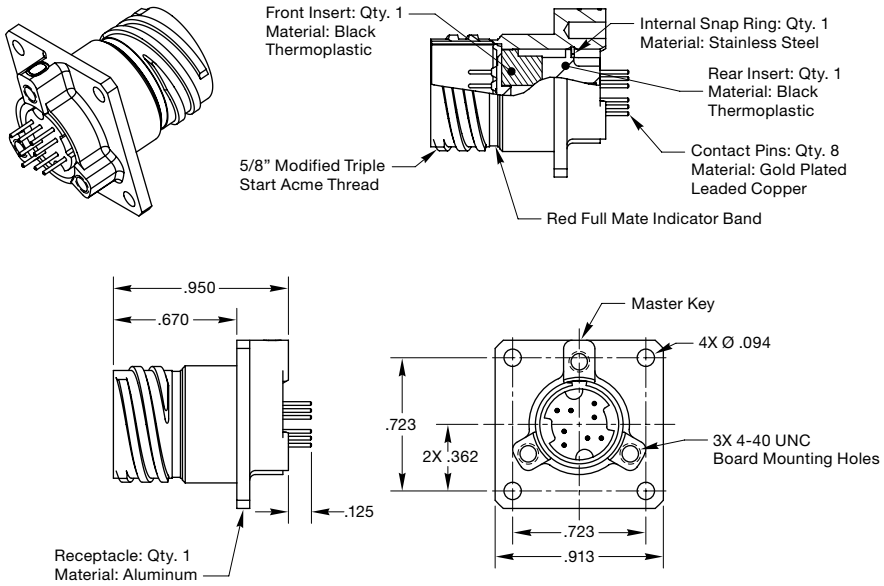


CeeLok FAS-T Connectors

PRODUCT DIMENSIONS

Boxmount Receptacle Assembly, PC Tail

Part No. 2102453

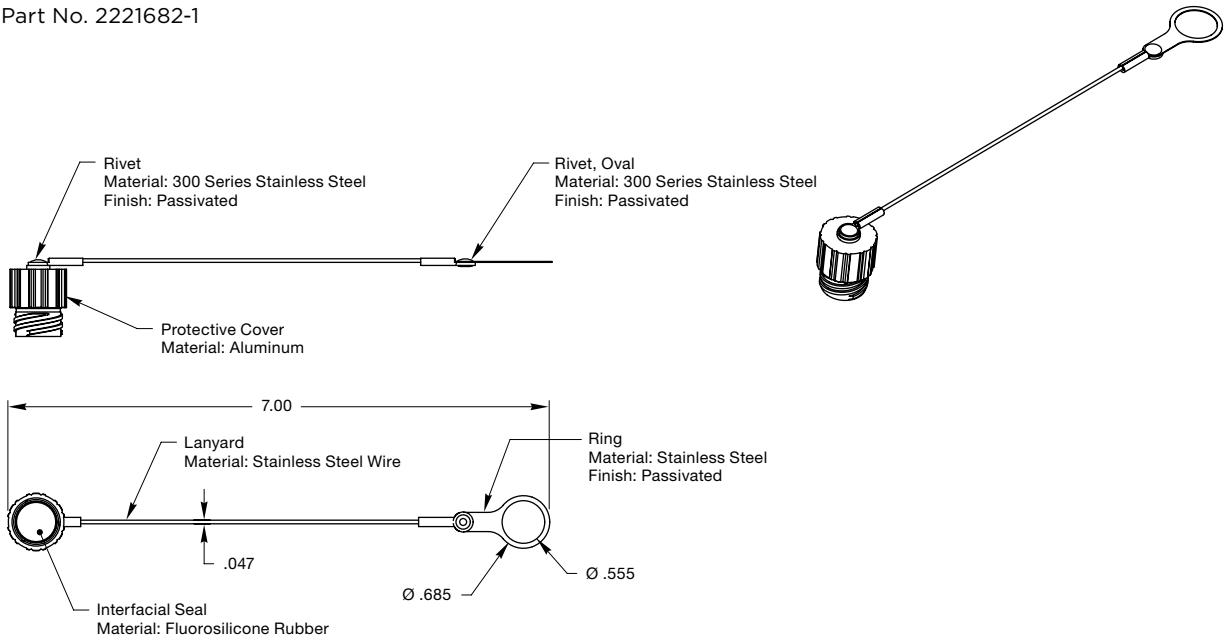


CeeLok FAS-T Connectors

PRODUCT DIMENSIONS

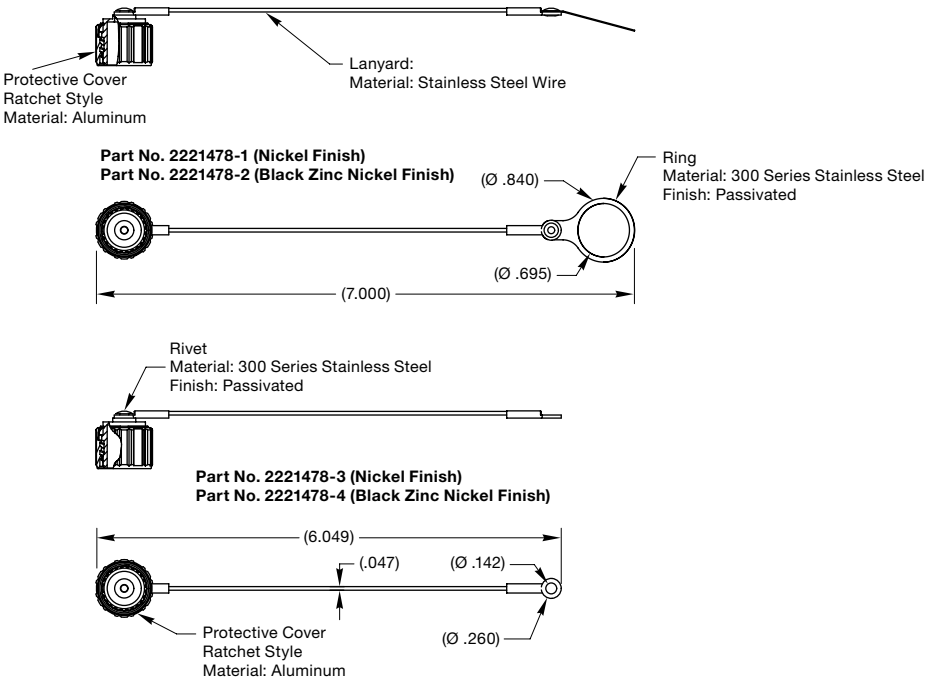
Protective Cover Cap, Plug

Part No. 2221682-1



Protective Cover Cap, Receptacle

Part No. 2221478-x



CeeLok FAS-T Connectors

ACCESSORIES

SolderSleeve Shield Terminators



Convenient and Effective

- Terminates a ground lead to cable shield in order to ground the shield
- Simple, quick termination
- Available with and without pigtails

Versatile

- Center or end strip for ease of termination
- Handles wide range of high data rate cables and diameters

Environmental

- Operating temperature: -55°C to +200˚C
- Environmentally sealed
- Mechanically robust

Physical or Other Properties

- Terminates tin, silver and nickel flat or round braids
- Provides 360° of shielding

Product Offering

- Contact TE for a complete listing of SolderSleeve shield terminators

CRES-Lock Bandstraps



Easy to Use

- Quick, easy, cost-effective and reliable termination of braided shielding

High Performance

- Low profile, one-piece design eliminates EMI leakage paths

Rugged

- Shock, vibration and environmental tested to meet aerospace and defense requirements

Electrical

- Operating Temperature: -65°C to +200°C
- Electrical Resistance: Meets ≤1.0 mΩ requirement of AS85049/128
- Corrosion Resistance: 500 hr. salt spray

Mechanical

- Tensile Strength: 200 lb.
- Braid Retention: Meets 100 lb. requirement of AS85049/128

Application Tooling

- Micro Tie-Dex II, A30199

Description	Part No.
Bandstrap	BND-0812S

CeeLok FAS-T Connectors

ACCESSORIES

Heat-Shrinkable Molded Boots



Hazard Matched

- Different materials to meet different temperature and environmental requirements
- Optional with pre-applied adhesives for quick installation and high-reliability IP67 sealing
- Epoxy sealing kits available

Versatile

- Sealing and strain relief to the wires and cables
- Straight or 90 degree cable exit

Application Tooling

- HL1910E or the HG-501A ThermoGun heat gun and appropriate hot air reflectors

Product Offering

Temperature Range	Material	Adhesive Lined	Size* mm	Descriptive Part No.	
				Straight	90°
-20°C to 60°C	Flexible polyolefin	Yes	24/10.4/5.6	202K121-4/42-0	222K121-4/42-0
	Flexible polyolefin	Yes	30/14.2/5.9	202K132-4/42-0	222K132-4/42-0
-55°C to 120°C	Fluid-resistant elastomer	Yes	30/14.2/5.9	202K132-25/86-0	222K132-25/86-0
-55°C to 135°C	Flexible polyolefin	No	30/14.2/5.9	202K132-4-0	222K132-4-0
-55°C to 200°C	Modified fluoroelastomer	No	30/14.2/5.9	202K132-12-0	222K132-12-0
-75°C to 150°C	Fluid-resistant elastomer	Yes	30/14.2/5.9	202K132-25/225-0	222K132-25/225-0
	Fluid-resistant elastomer	No	30/14.2/5.9	202K132-25-0	222K132-25-0

*Size = as-supplied diameter both ends/recovered diameter connector end/recovered diameter cable end.

High-Data-Rate Cables



Compact and Lightweight

- Thin-wall technology for smaller, lighter cables
- 28 AWG to 22 AWG conductors

Versions for Common Protocols

- Fast and Gigabit Ethernet in Cat 5e and Quadrax configurations
- IEEE 1394
- USB

Rugged

- Specialized TE developed polymer formulations designed to support better mechanical and thermal performance in harsh environments
- State-of-the-art FAA approved foam dielectrics for better signal transmission
- Ruggedized zero halogen jacket for marine applications that passes the rigorous military standards for flammability while meeting stringent smoke and toxicity requirements

Customizable

- Customizable to meet mission-critical needs such as EMI, fluid resistance, and flammability
- Hybrid designs
- Electrical testing capability, including skew and eye patterns

Robust

- Operating temperature range from -55°C to +200°C
- Full range of shielding options for signal integrity

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Unikeyic Electronics

Global Electronic Components Distributor

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TE Connectivity:

539635-1 ROX9J120R 1-350945-0 1622820-6 2008571-3 322335 641763-1 MPT100C8K2F SC30R33KT 1801174-1 ROX9J100R ROX9J160R ROX9J2K4 T4112401051-000 1-316080-2 173796-E 320552 336330-1 1-917659-5 2132781-3 828801-6 ROX9J820R SMF3100KJT 7-2178711-4 967116-2 2149966-1 5174225-5 363549-000 ROX9J4K3 SMA-A0102FTDL10K