



CeeLok FAS-T Connectors

10 Gb/s Ethernet Connectivity . . . Compact . . . Rugged . . . Reliable

CeeLok FAS-T Connectors

Small Form Factor, Field Terminable Connectors



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

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.



TE Components . . . TE Technology . . . TE Know-how . . .

AMP | AGASTAT | CII | HARTMAN | KILOVAC | MICRODOT | NANONICS | POLAMCO | Raychem | Rochester | DEUTSCH
SEACON Phoenix | LL Rowe | Phoenix Optix | AFP | SEACON

Get your product to market faster with a smarter, better solution.



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 — black zinc nickel per AMS-2417

MATERIALS

- **Shell:** Electroless nickel or black zinc 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

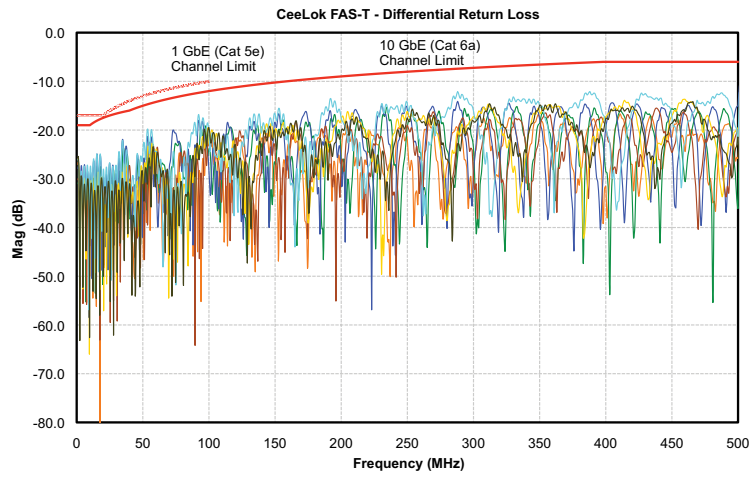
STANDARDS AND SPECIFICATIONS

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

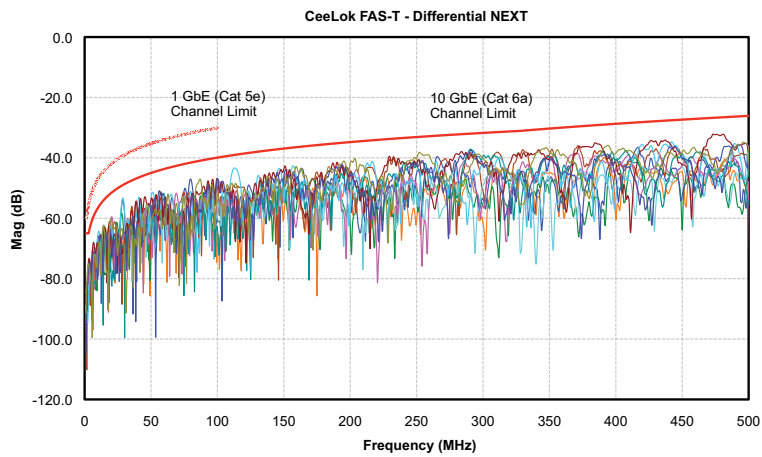




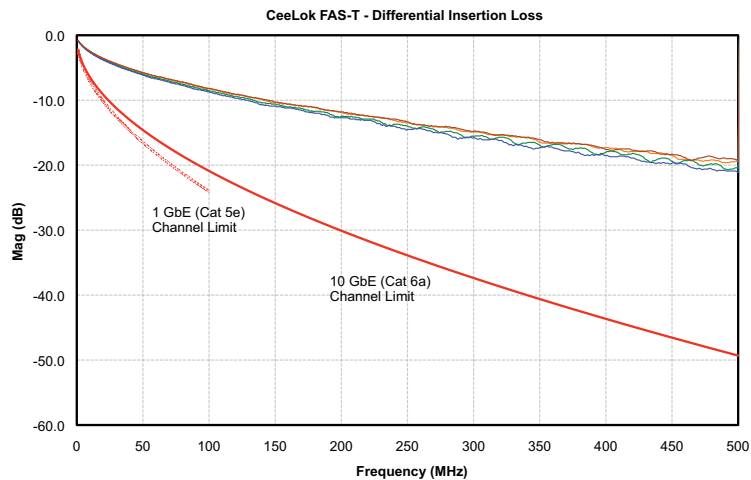
CeeLok FAS-T Connectors



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 | N | N | 2102453-1 | 2102453-2 |
| | A | A | 2102453-3 | 2102453-4 |
| | B | B | 2102453-5 | 2102453-6 |
| Jam Nut Receptacle, PC Tail | N | N | 2102351-1 | 2102351-2 |
| | A | A | 2102351-3 | 2102351-4 |
| | B | B | 2102351-5 | 2102351-6 |

Contacts

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

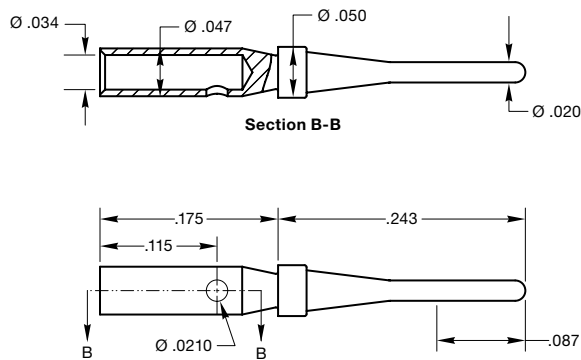
Application Tooling

Hand Crimp Tool:
M22520/2-01

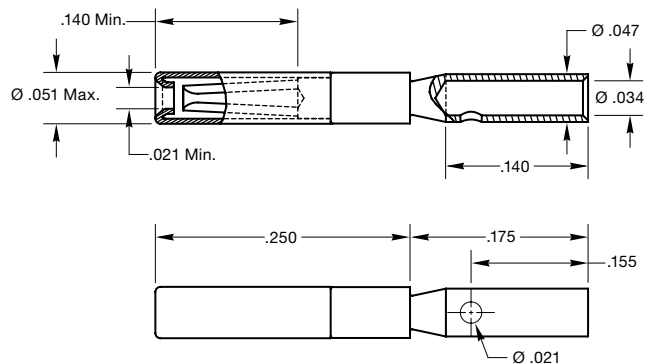
Crimp Positioner:
TE Part No. 2217375-1

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

Pin



Socket



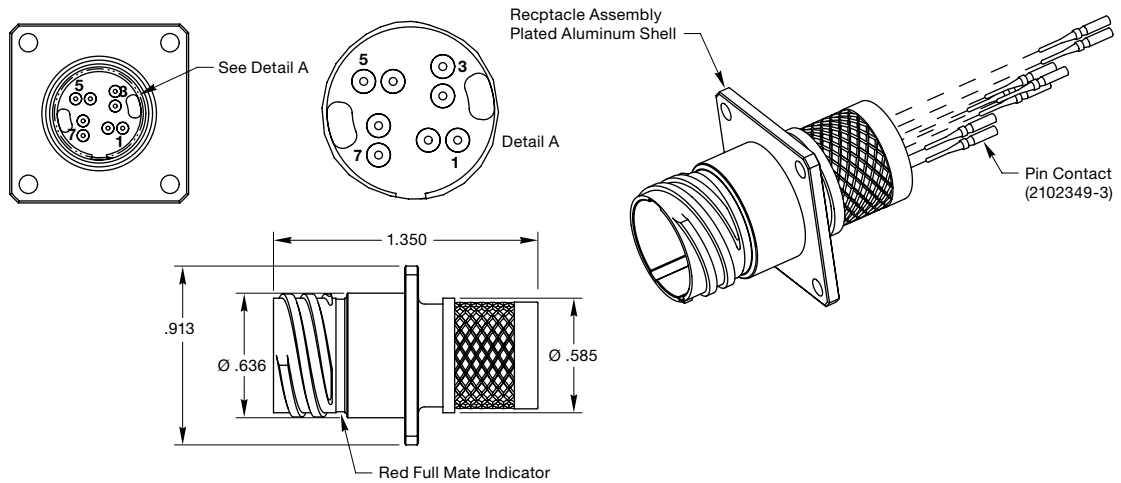


CeeLok FAS-T Connectors

PRODUCT DIMENSIONS

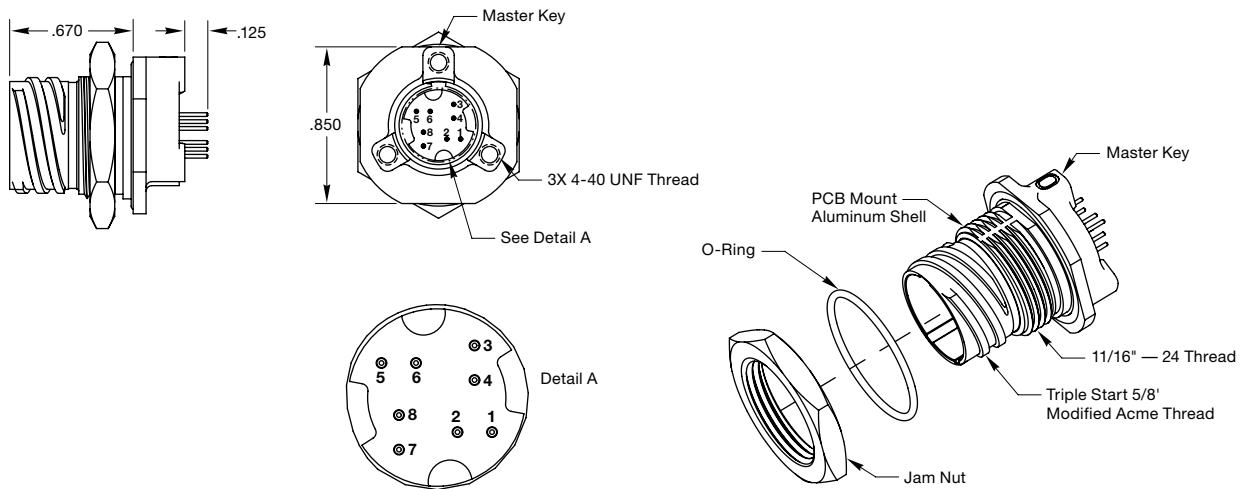
Boxmount Receptacle Kit Assembly

Part No. 2102343



Jam Nut Receptacle Assembly, PC Tail

Part No. 2102351



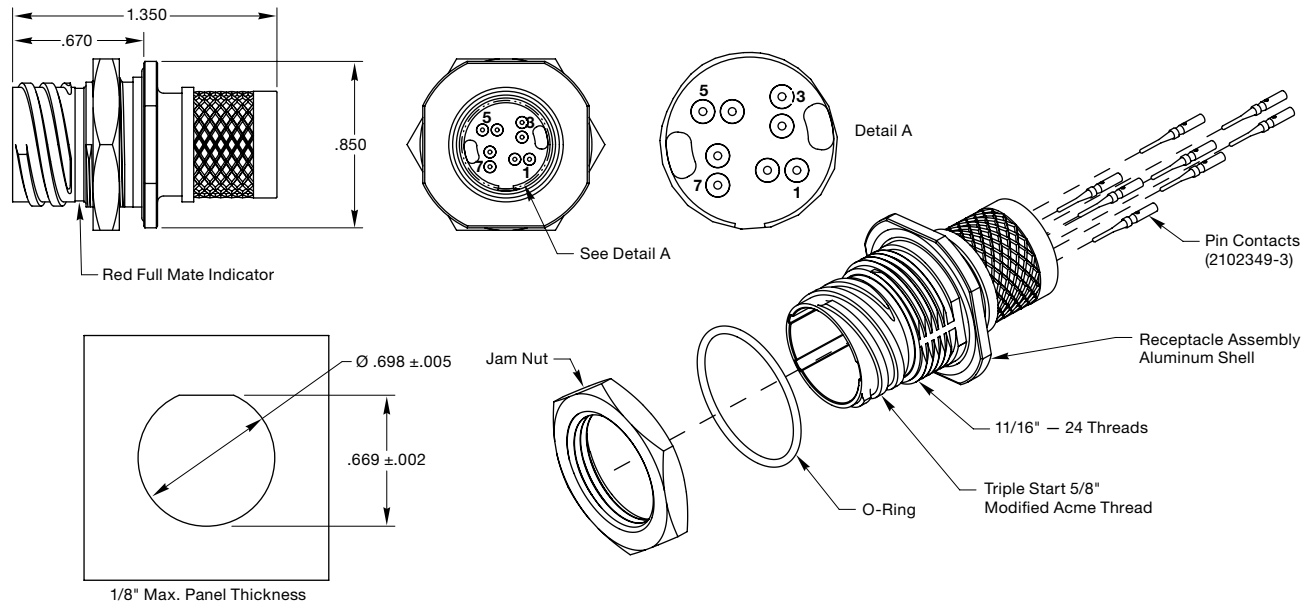


CeeLok FAS-T Connectors

PRODUCT DIMENSIONS

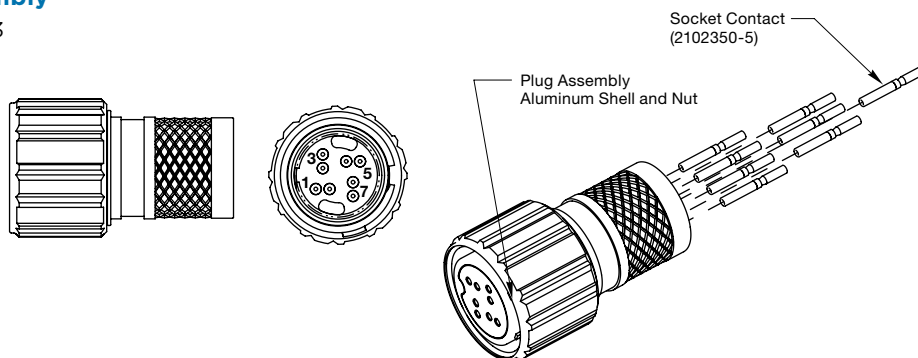
Receptacle Kit Assembly

Part No. 2102352



Plug Kit Assembly

Part No. 2102353



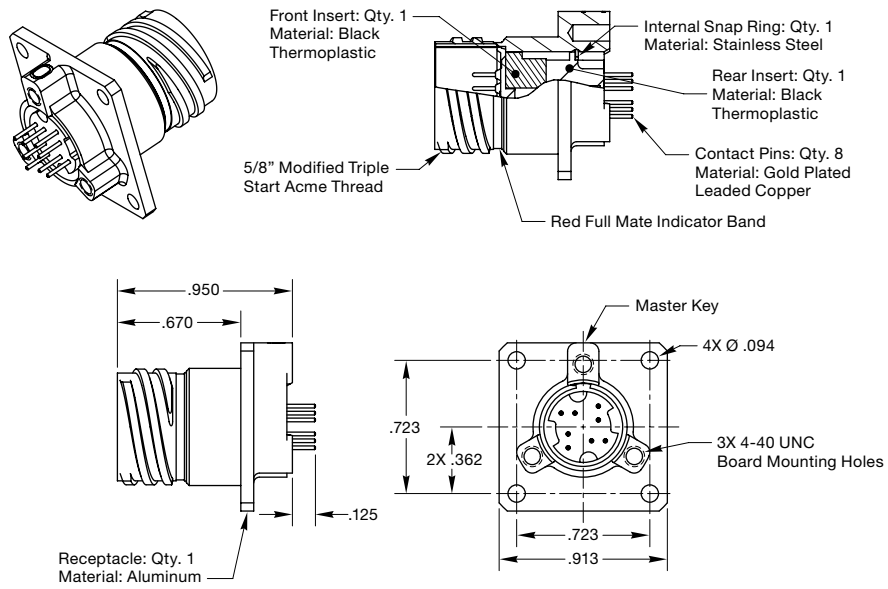


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PRODUCT DIMENSIONS

Boxmount Receptacle Assembly, PC Tail

Part No. 2102453



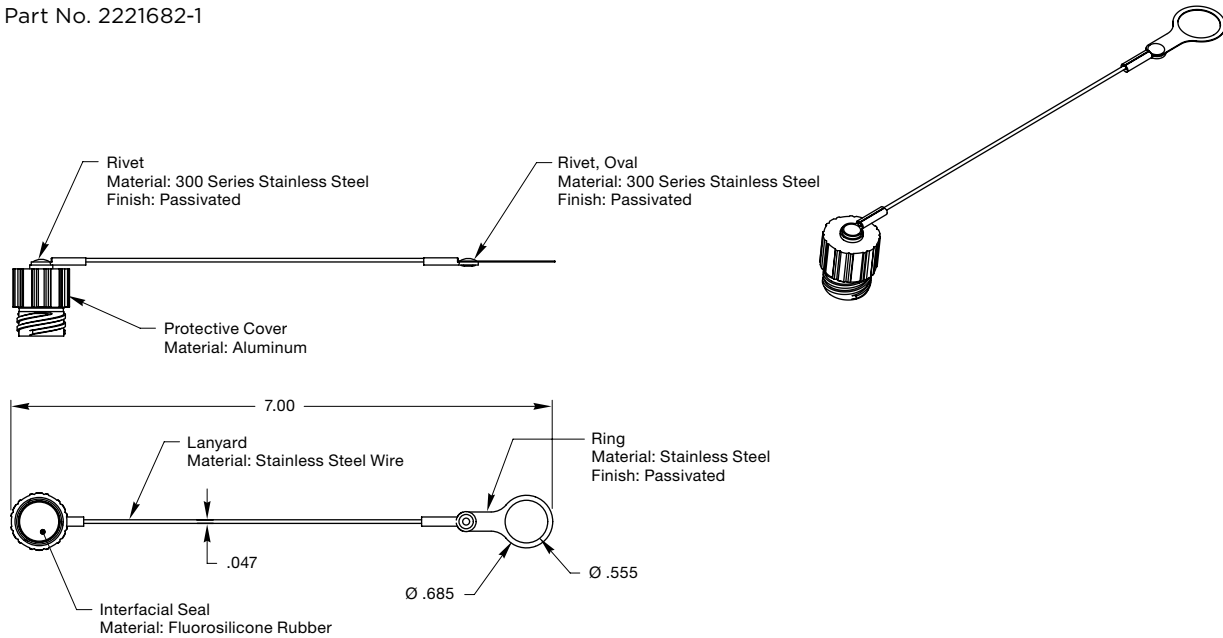


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PRODUCT DIMENSIONS

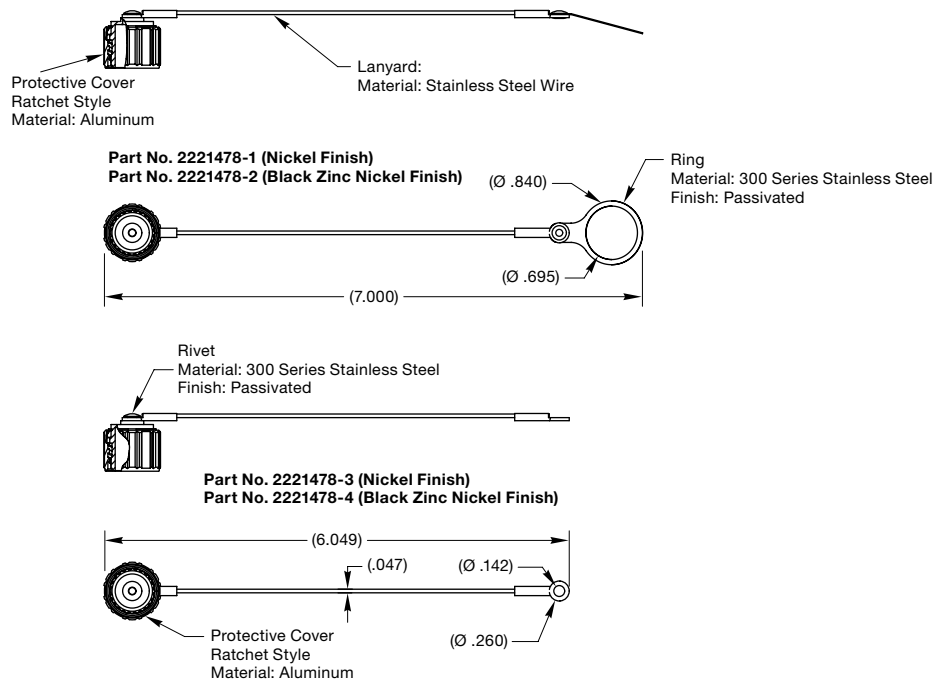
Protective Cover Cap, Plug

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 m Ω 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 |



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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 Quadrx 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

LET'S CONNECT

We make it easy to connect with our experts and are ready to provide all the support you need. Just call your local support number or visit www.te.com/industrial to chat with a Product Information Specialist.

Technical Support

te.com/support-center

| | | | |
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Consult TE for the latest dimensions and design specifications.

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