

# Harsh Duty Ethernet Connectors and Cabling

## Overview

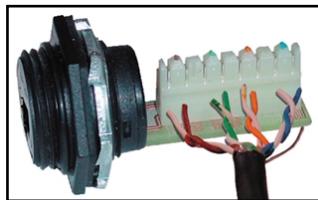
By combining standard RJ-45 connection technology with the industrially-proven mini form factor, these Industrial Ethernet Connectivity products provide a line-up designed to safeguard the integrity of your data even in the harshest manufacturing, processing or commercial settings.

## Features

- Environmental Sealing
- Vibration Resistance
- Secure Robust Connections
- Performance in Electrically Noisy Conditions

## Receptacles

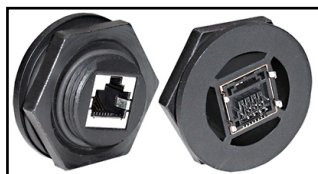
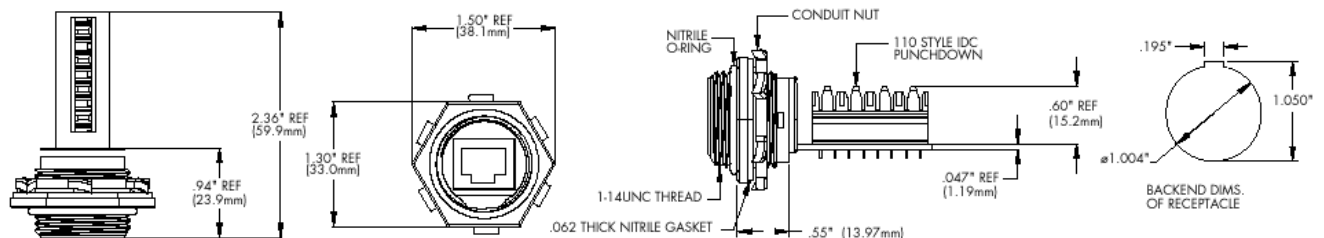
The following receptacles offer solutions for Ethernet field device connectivity, regardless of the operating environment. All receptacles are compatible with commercial RJ-45 connectors, enabling one solution for both harsh and benign environments.



### 110 Punchdown Block

Simple termination via Insulation Displacement Connections (IDC) with the use of commonly available punchdown tools. Ideal for premise wiring applications.

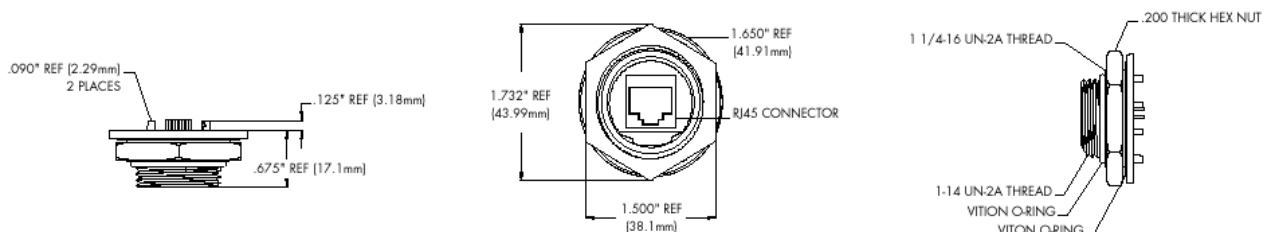
ENDR2FB5 ..... 110 receptacle, 568A and 568B wiring, back-side locking nut



### Direct PCB Mount Receptacle

Short depth receptacle that solders directly to a Printed Circuit Board (PCB)-intended for OEMs who wish to incorporate a robust, sealed connection into their field equipment.

ENPR1FF5 ..... Direct PCB-mount, 8-pin through-hole receptacle, front coupling nut



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### Closure Cap

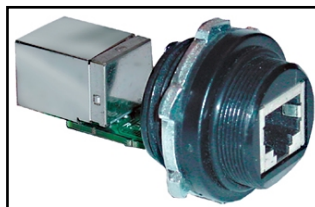
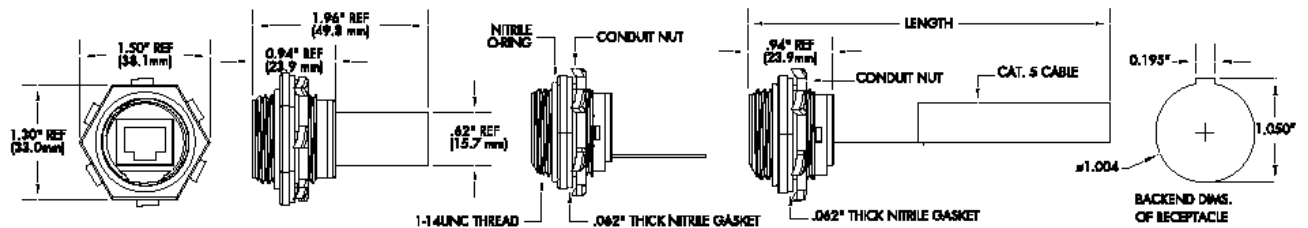
Maintains sealing integrity when a connector is not mated with the receptacle.  
67-0300 ..... IP67 rated closure cap with lanyard



### Standard PCB Board Receptacle

Highly flexible, enables an OEM or end-user to solder a cable lead to an internal Ethernet connection.

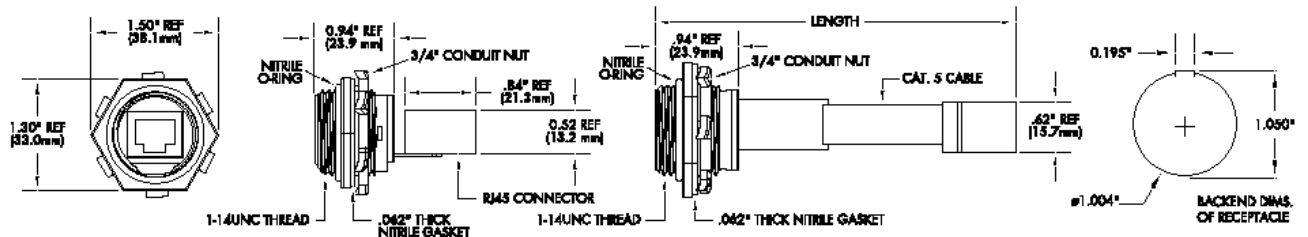
ENSR1FB5..... Receptacle with PC board  
ENSR1FB5C305.... Receptacle with PCB & 12" of cable (10Base-T)



### Bulkhead Passthrough

To bring Ethernet into a cabinet or control box, simply create the sealed connection on the outside of the enclosure, and run a commercial patch cord from the backside RJ-45 jack to your PLC, I/O, or Ethernet Control Board. No conduit entry is required.

ENSP1F5 .....RJ-45 Bulkhead passthrough with backside jack  
ENSP1F5C305....RJ-45 Bulkhead passthrough with 12" of patch cord



### Receptacle Specifications

O-Ring Material:	Nitrile Rubber
Receptacle Shell Material:	Acrylonitrile-Butadiene-Styrene (ABS)—standard version
Knockout Hole for Receptacle:	1.031
Mating Thread:	UNC 1" - 14
Operating Temperature:	-20 to 80 °C
Return Loss:	5 dB @ 100 MHZ
Shock/Vibration:	Per IEC 60068-2-6
Environmental Rating:	IEC IP67
<b>TIA/EIA Rating</b>	
110 Punchdown:	Category 5e compliant
Bulkhead Passthrough:	Category 5e compliant
Direct PCB Mount:	Category 5 compliant
Standard PC Board:	Not Rated—additional customer termination is required
<b>RJ-45 Jack</b>	
Base Material:	Copper alloy w/30 $\mu$ -inches, gold alloy
Underplating:	2.54 microns of nickel
Mating Cycles:	250, minimum
Current Rating:	1.5 Amp
Voltage Rating:	125 VDC

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## Cordsets

Cordsets utilize a standard RJ-45 plug, but add strain relief and a locking mechanism that creates a seal when mated with a receptacle. Cordsets can be ordered to length as an overmolded cordset, or as an attachable device that can be assembled in the field.

**Overmolded Cordsets** are available in two configurations. When both cord ends are in a harsh environment, order with two industrial sealed connectors; for a cable with one end in a harsh environment, and the other in a sealed or office area, order with one industrial connector and one commercial grade plug for a better fit into a standard patch panel.

**ENS1115M020** ..... Male Industrial to Male Industrial RJ45, 2 meter, 10 Base-T, 4 conductor

**ENS1115M040** ..... Male Industrial to Male Industrial RJ45, 4 meter, 10 Base-T, 4 conductor

**ENS1115M050** ..... Male Industrial to Male Industrial RJ45, 5 meter, 10 Base-T, 4 conductor

**ENS1135M020** ..... Male Industrial to Male Standard RJ45, 2 meter, 10 Base-T, 4 conductor

**ENS1135M040** ..... Male Industrial to Male Standard RJ45, 4 meter, 10 Base-T, 4 conductor

**ENS1135M050** ..... Male Industrial to Male Standard RJ45, 5 meter, 10 Base-T, 4 conductor

**ENS2115M020** ..... Male Industrial to Male Industrial RJ45, 2 meter, 568A, 8 conductor

**ENS2115M040** ..... Male Industrial to Male Industrial RJ45, 4 meter, 568A, 8 conductor

**ENS2115M050** ..... Male Industrial to Male Industrial RJ45, 5 meter, 568A, 8 conductor

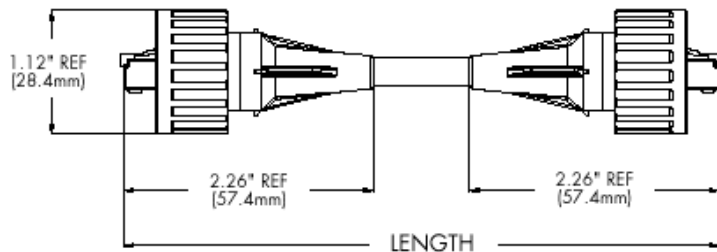
**ENS2135M020** ..... Male Industrial to Male Standard RJ45, 2 meter, 568A, 8 conductor

**ENS2135M040** ..... Male Industrial to Male Standard RJ45, 4 meter, 568A, 8 conductor

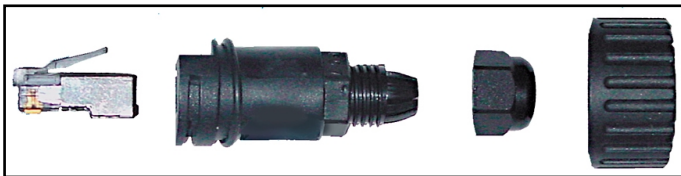
**ENS2135M050** ..... Male Industrial to Male Standard RJ45, 5 meter, 568A, 8 conductor

## Connector Specifications

Insert Material:	Acrylonitrile-Butadiene-Styrene (ABS)
Overmold Material:	Polyurethane (Solid Core & Proplex)
Coupling Nut Material:	Acrylonitrile-Butadiene-Styrene (ABS)—standard version Acrylonitrile-Styrene-Acrylate (Luran™ S778 T/TE)—UV stabilized version
Recommended Mating Torque:	12-inch-lbs.



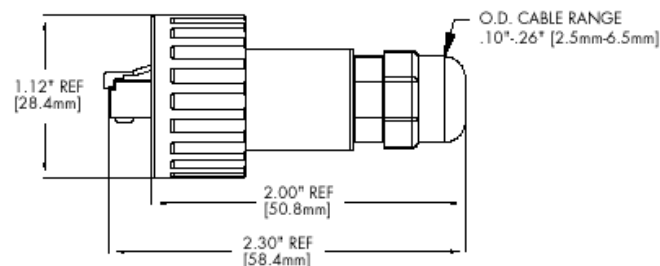
## Field Attachable Connector



Assemble the connection in the field using a standard crimping tool, and still enjoy the same IP67 sealed connection as the overmolded cordset. One thousand foot bulk cable put-ups are available for both Solid Core PUR and Proplex cable.

**ENSAM315**.....Field attachable RJ-45 connector for solid core C5 cable

**ENQAM315** .....Field attachable RJ-45 connector for stranded core C5 cable



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