

# Harsh Duty Ethernet Connectors and Cabling

## Overview

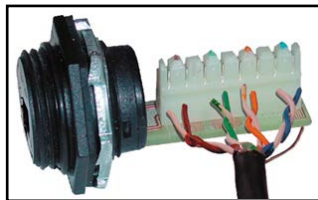
By combining standard RJ-45 connection technology with the industrially-proven mini form factor, these Industrial Ethernet Connectivity products provide a line-up designed to safeguard the integrity of your data even in the harshest manufacturing, processing or commercial settings.

## Features

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

## Receptacles

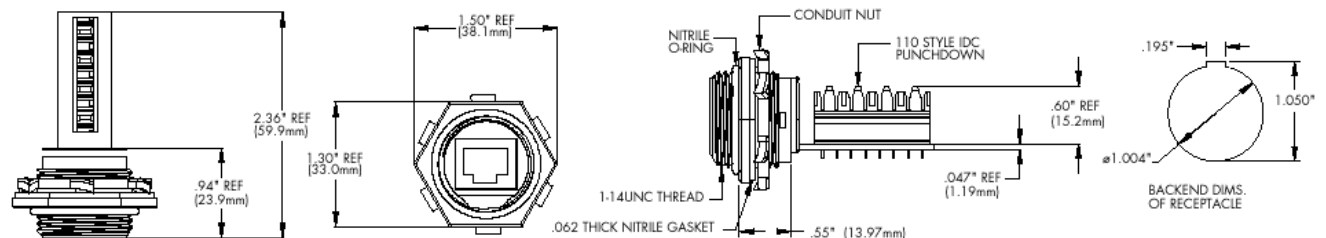
The following receptacles offer solutions for Ethernet field device connectivity, regardless of the operating environment. All receptacles are compatible with commercial RJ-45 connectors, enabling one solution for both harsh and benign environments.



### 110 Punchdown Block

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

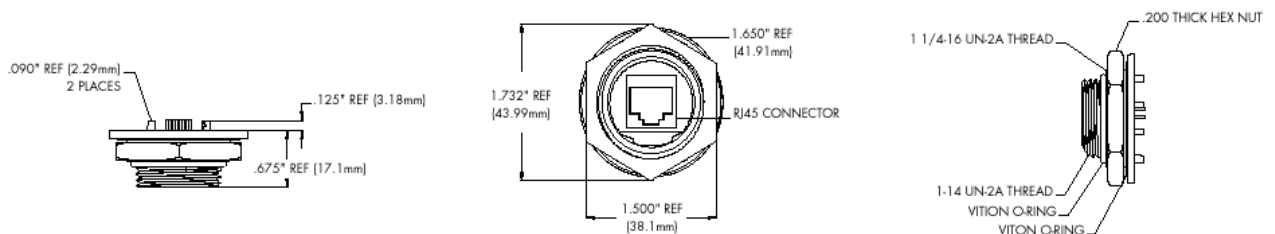
**ENDR2FB5 .....110 receptacle, 568A and 568B wiring, back-side locking nut**



### 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**





## Closure Cap

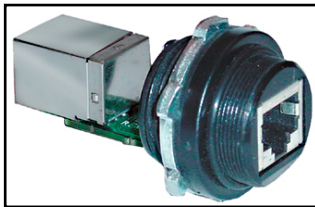
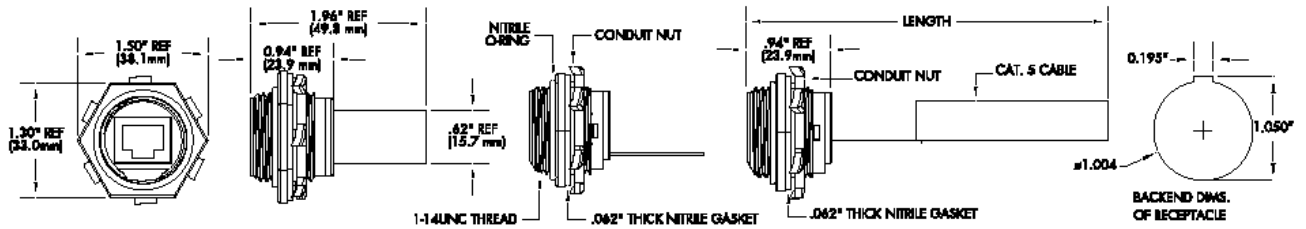
Maintains sealing integrity when a connector is not mated with the receptacle.  
67-0300 ..... IP67 rated closure cap with lanyard



## Standard PCB Board Receptacle

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

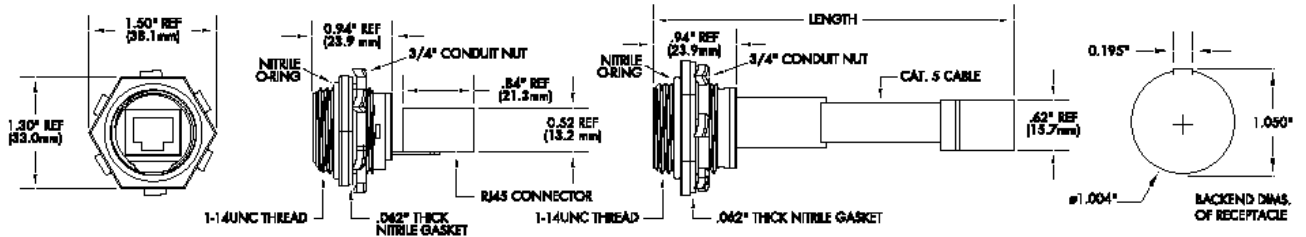
ENSR1FB5..... Receptacle with PC board  
ENSR1FB5C305 .... Receptacle with PCB & 12" of cable (10Base-T)



## 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 μ -inches, gold alloy
Underplating:	2.54 microns of nickel
Mating Cycles:	250, minimum
Current Rating:	1.5 Amp
Voltage Rating:	125 VDC

## 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**

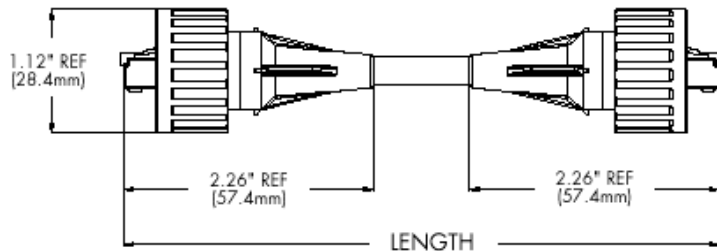
**ENS2135M020..... Male Industrial to Male Standard RJ45, 2 meter, 568A, 8 conductor**

**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**

