

## E-DAT™ Shielded Cable Termination Components

# E-DAT Industry™

### IP20 RJ45 Field Plug Product Description

E-DAT Industry™ IP20 RJ45 field plug component # 1401405012-I allows you to use an Ethernet Class E / Cat.6 connection for 10 BaseT, 100 BaseTX, 1000 BaseT and 10000 BaseT (10G) networks and is backwards compatible for any RJ45 Ethernet cabling system. Unique design enables dramatically faster field termination of screened (ScTP and F/UTP) and fully shielded (S/FTP) four-pair 100Ω (balanced) copper cable. Field termination requires no special tools. Finger force press of two mating parts results in secure connection via 8-pole insulation displacement connection (IDC) with integrated shield bonding at plug housing and separate strain relief. With the patented E-DAT Industry IP20 RJ45 field plug you can connect installation cables (26/1 – 22/1 AWG) and patchcords (26/7 – 22/7 AWG). Optional component # 1401400810-I field plug insert enables IP67 ingress protection with the SteadyTec™ application solution when an enhanced MICE environmental rating is required. Wire



color identification on both components per TIA T68A and TIA 568B is standard. Includes passive PC board for proprietary Digital Signal Processing (DSP) compensation (phase and other cable parameters). The E-DAT Industry IP20 RJ45 field plug meets or exceeds all TIA/EIA-568-B-2.10 draft augmented Cat. 6, EN 50173-1:2002 for Class E, and ISO/IEC 60603-7-5 for Cat. 6 component standard requirements at swept frequencies up to 625 MHz. Solid Zinc die-cast housing (Ni plated) provides optimal protection from Alien crosstalk via captive 360° shield connectivity spring and precision design of wire staging or lay area that enables minimal untwisting (0.5 inch or less) of cable pairs. This provides potential balance of shield/screen/foil for EMF/RFI protection and shield attenuation of the link, per ISO/IEC 11801:2002-09 and EN50173-1:2002, meeting requirements of EMI proof per EN 55022-B and EMI emissions per EN 50082-1. These unique design features are what enable fast data rates up to 10G BaseT and the related longer life-cycle expected from this futuristic product when used with a ready for 10G cabling system. BTR test data for both UTP and STP cabling systems are available.

#### Mechanical Data according to IEC 60603-7-5

Effectiveness of connector coupling devices	50 N
Mechanical operations	750 plug-in cycles
Insertion and withdrawal forces	30 N
Contact interface dimensions and plug dimensions at the mating area	according to IEC 60603-7

#### General Guidelines for Field Cabling Specifiers

Cable outer diameter	5.5 - 8.5 mm (0.2- 0.3inch) optionally to 10.5 mm (0.42 inch)
Wire diameter	to 1.6 mm (0.063 inch)
Solid wire	26/1 - 22/1 AWG, 0.40 - 0.64 mm (0.016 - 0.025 inch)
Stranded wire	26/7 - 22/7 AWG, 0.48 - 0.76 mm (0.019 - 0.030 inch)
Shield connection (plug/cable)	360° contact, spring loaded

#### Electrical Data according to IEC 60603-7-5

Nominal current at 50° C	1A
Nominal Voltage	max. 50 V d.c.
Voltage proof	1000 V d.c. or at a.c. peak, contact - to - contact 1500 V d.c. or at a.c. peak, contact - to - screen
Contact resistance	20 m Ohm
Input to output d.c. resistance	200 m Ohm
Insulation resistance	500 M Ohm

## Data Transmission Category / Class

RF Transmission parameter	Cat.6/Class E according to ISO/IEC 11801:9-2002 and EN50173-1:2002
Transfer impedance / shield attenuation	Cat.6/Class E according to ISO/IEC 11801:9-2002 and EN50173-1:2002

## Environmental Classification according to ISO/IEC 24702

### Mechanical

Bump (3 times)	25g (250 m/s <sup>2</sup> )
Shock	25g (250 m/s <sup>2</sup> )
Vibration sinusoidal	2 - 500 Hz 0.35 mm 5g according IEC 60512 Test No. 6d
Tensile strength	Free connector to cable 50 N

### Ingress Protection Category

Protection category	IP20 (optional IP67)
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### Climatic Category

Ambient temperature	40/070/21 according to IEC 60603-7-5
Damp heat cyclic	-40°C to 70°C

### Electromagnetic

Shielding effectiveness	4kV Electrostatic discharge – contact 8kV Electrostatic discharge – air
RF	ISO/IEC 24702
Voltage proof	500V EFT/B and 1000V surge
Residual magnetism	ISO/IEC 24702



## Materials of Construction

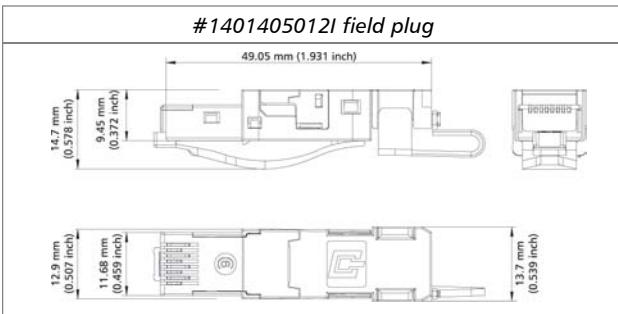
Housing	GD-Zn (die-cast zinc)
Molding parts	PA

## Relevant Standards and UL Listing

Premise cabling	ISO/IEC 11801:2002, EN50173-1:2003, ISO/IEC 24702
Connectors	IEC 60603-7-5
Standard for Communications Accessories	UL 1863



#1401400810-I field plug insert for IP67 rated RJ45 (optional) according to ISO/IEC 24702 ISO 61076-3-106, variant 1



## Part number

1401405012-I	E-DAT Industry IP20 RJ45 field plug black
1401400810-I	E-DAT Industry IP67 RJ45 field plug insert (optional)

## Accessories

1401009101-I	Industry color coding ring field plug orange
1401009103-I	Industry color coding ring field plug lightgrey
1401009104-I	Industry color coding ring field plug white
1401009105-I	Industry color coding ring field plug yellow
1401009106-I	Industry color coding ring field plug blue
1401009107-I	Industry color coding ring field plug green
140301-E	Locking Plyer wrench 1 3/8"



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