ED3341 Hardened 10/100BASE-TX Ethernet Extender

Ethernet beyond 100 metres over coaxial cable

Overview

The ED3341 is a point-to-point Ethernet Extender designed to operate in harsh environments that efficiently extends 10/100 Ethernet circuits to over 200M (656ft.) up to 85Mbits using existing coaxial cable, and 1Mbits transmit performance when the distance is up to 2,600 meters (8,530ft.). The ED3341 functions at temperatures ranging from -40°C to 75°C (-40°F to 167°F) and is tested for functional operation @ -40°C to 85°C (-40°F to 185°F). The ED3341 will allow Ethernet connectivity in existing facilities without pulling extra cable. This is the perfect solution to Ethernet on the legacy surveillance infrastructure where systems have been upgraded from analogue to IP-based. Installation is easy with a single switch setting; one end is set for local and the other remote. The ED3341 is used in pairs to extend Ethernet connectivity over existing coaxial cable.

Features

- Complies with NEMATS1 & TS2 Environmental requirements for Traffic control equipment
- Complies with IEC61000-6-2 EMC Generic standard immunity for Industrial environments
- Ethernet Port: 10/100Mbps-Full-duplex, Auto-Negotiation, Auto-MDI/MDIX
  Ethernet Extender Port: Symmetrical on the VDSL, High-speed Full-duplex up to 85 Mbps communications link over existing Coaxial cable

- Ten speeds with speed indicator LEDs on front panel of unit,
- Up to 85Mbps at about 200meters (656ft.)
  Down to 1Mbps at about 2,600meters (8,530ft.)
- -40°C to 75°C (-40°F to 167°F) operating temperature range
- Redundant power inputs with Terminal Block and DC Jack
- DIP switch to select Local or Remote side
- Hardened aluminium case
- Supports DIN-Rail Panel Rack Mounting installation

Ordering Information

ED3341-00Z   Hardened 10/100BASE-TX Ethernet Extender over Coaxial Cable

Power Input Interface:

(Z) =   B: Terminal Block & DC Jack

Power Supply: (Optional)

Option A - The Terminal Block type external power supply are not included. Please order the following part numbers, as required:
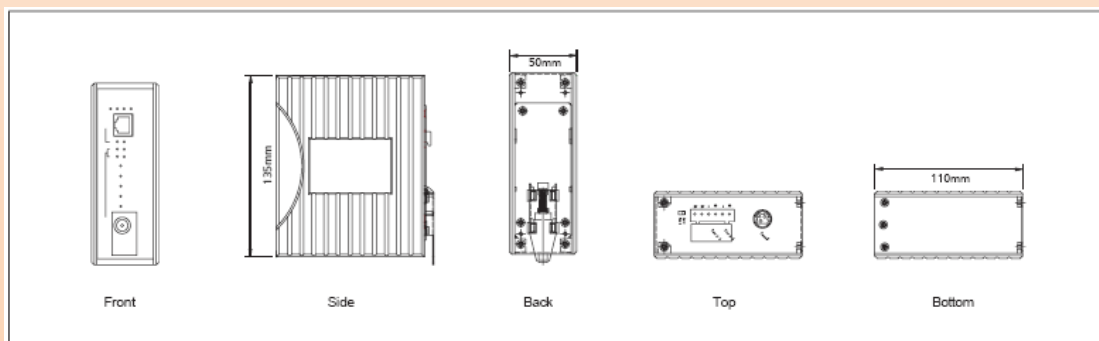DR-30-24, DR-60-24, DR-75-24, DR-120-24 or 41-136046-X X=1, 2,3,4,5

- Option B - The external power adapter and power cord are not included. Please order the following part numbers, as required:
41-136044-X X=1, 2,3,4,5

Installation Type:

Optional Panel mount kit, part number: KP-AA96-480

Diagrams

Front   Side   Back   Top   Bottom

Specifications

Technology

Standards:
- IEEE802.3 10BASE-T, IEEE802.3u 100BASE-TX, IEEE802.3x,
- Ethernet over VDSL

Protocols:
- Transparent to higher layer protocols

Processing Type:
- IEEE802.3x Full-duplex flow control

Power

Input:
- Input Voltage: 12 to 48VDC (Terminal Block);12VDC (DC Jack)

Power Consumption:
- 7.2W Max. 0.6A@12VDC, 0.15A@48VDC

Overload Current Protection:
- Present

Reverse Polarity Protection:
- Present

Mechanical

Casing:
- Aluminium case
- IP30

Dimensions:
- 50mm (W) x 110mm (D) x 135mm (H)
  (1.97" (W) x 4.33" (D) x 5.31" (H))

Weight:
- 0.8Kg (1.76lbs.)

Installation:
- DIN-Rail (Top hat type 35mm), Panel Rack Mounting

Interface

Ethernet Port:
- Port: One RJ-45 port, 10/100BASE-TX Full-duplex
- Auto-Negotiation, Auto-MDI/MDIX
- Speed: 10/100Mbps
- Distance: 100meters (328ft.)
- Cable: 10BASE-T: UTP CAT. 3, 4, 5 (2-pair wire)
- 100BASE-TX: UTP CAT. 5 (2-pair wire)

Ethernet Extender Port:
- Port: One Coaxial Port
- Speed Display: 1/5/10/20/30/40/50/60/70/75Mbps
- Max. Distance: 2,600meters (8,530ft.)
- Cable: Coaxial Cable (5C2V / RG6AU)

Speed / Distance Reference:

Speed	Distance
1-5Mbps	2,600M (8,530ft.)
6-10Mbps	2,400M (7,874ft.)
11-16Mbps	2,000M (6,561ft.)
17-20Mbps	1,800M (5,905ft.)
21-29Mbps	1,600M (5,249ft.)
30-43Mbps	1,400M (4,593ft.)
44-54Mbps	1,200M (3,937ft.)
55-63Mbps	1,000M (3,280ft.)
64-74Mbps	600M (1,968ft.)
75-85Mbps	200M (656ft.)

NOTE:
All speed selections are Symmetrical on the DSL and Full-duplex on the Ethernet.

DIP switch:
- One DIP switch: Local (CO) or Remote (CPE)

LED Indicators:
- Per Unit: Power Status (Power)
- Per Port: 10/100TX: Link/Activity, Full-duplex
- Line: Error, Link, Local, Remote

Environment

Operating Temperature:
- -40°C to 70°C (-40°F to 158°F)
- Tested @ -40°C to 85°C (-40°F to 185°F)

Storage Temperature:
- -40°C to 85°C (-40°F to 185°F)

Ambient Relative Humidity:
- 5% to 95% (non-condensing)

Regulatory Approvals:

ISO:
- Manufactured in an ISO9001 facility

Safety:
- UL508

EMI:
- FCC Part 15, Class A
- EN61000-6-4
- EN55022
- EN61000-3-2
- EN61000-3-3

EMS:
- EN61000-6-2
- EN61000-4-2 (ESD Standards)
  Contact: + / - 4KV; Criteria B
  Air: + / - 8KV; Criteria B
- EN61000-4-3 (Radiated RFI Standards)
  10V/m, 80 to 1000MHz; 80% AM Criteria A
- EN61000-4-4 (Burst Standards)
  Signal Ports: + / - 4KV; Criteria B
  D.C. Power Ports: + / - 4KV; Criteria B
- EN61000-4-5 (Surge Standards)
  Signal Ports: + / - 2KV; Line-to-Line; Criteria B
  D.C. Power Ports: + / - 0.5KV; Line-to-earth; Criteria B
- EN61000-4-6 (Induced RFI Standards)
  Signal Ports: 10Vrms @ 0.15~80MHz; 80% AM Criteria A
  D.C. Power Ports: 10Vrms @ 0.15~80MHz; 80% AM Criteria A
- EN61000-4-8 (Magnetic Field Standards)
  30A/m @ 50, 60Hz; Criteria A

Environmental Test Compliance:
- IEC60068-2-6 Fc (Vibration Resistance)
- 5g @ 10~150KHz, Amplitude 0.35mm
  (Operation/Storage/Transport)
- IEC60068-2-27 Ea (Shock)
  25g @ 11ms (Half-Sine Shock Pulse; Operation)
  50g @ 11ms (Half-Sine Shock Pulse; Storage/Transport)
- IEC60068-2-32 Ed (Free Fall)
  1M (3.281ft.)