IEC-1020

10/100 Industrial Media Converter, SC SM 20KM -40 to 75C

Overview

LevelOne IEC-1020 is an industrial Fast Ethernet media converter with a rugged aluminium case which providing superb heat dissipation. This converter is designed to be mounted on an industrial standard DIN-rail, plus the clearly visible status LEDs provide simple monitoring of port link activity. It also features Link Fault Pass Through in order to alert remote location when link status changes

Safety

Complies with NEMA (National Manufacturers Association) TS1 & TS2 Environmental certified for the Traffic Control Equipment that withstand extreme temperatures, operating voltage and humidity fluctuation, vibration and shock commonly experienced in severe outdoor environments.

Fault Detection

Relay contact sends alert signal when the power failed or a port link disconnected, therefore the system operator can respond quickly. This relay contact can be easily configured with a simple DIP switch.

High Reliability

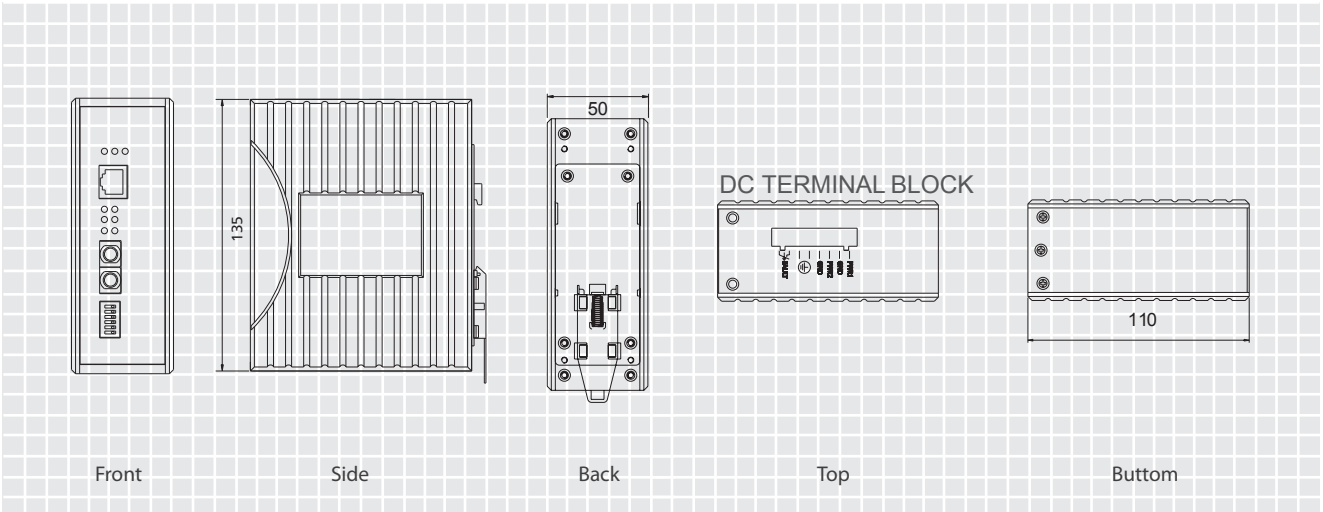
All components are built to withstand harsh environment applications without compromise where humidity, temperature variation and even shock vibration are concerns, including Electric & Utility, Critical Infrastructure, Transportation and Surveillance Security. This device operates under -40 to 75 Celsius (-40 to 167 Fahrenheit) temperature.

Features

- 100Base-FX Single-mode fiber for the link up to 20 kilometers
- Complies with NEMA TS1 & TS2 Environmental requirements for Traffic control equipment
- Complies with IEC61000-6-2 EMC Generic standard immunity for Industrial environment
- ISA 12.12.01 (UL1604) Class I, Division 2 Classified for use in hazardous locations with DC Terminal Block power
- DIP switch configuration for "Link-Fault-Pass-Through," link down alarm, speed, duplex mode
- 128K bits buffer memory
- 10/100Mbps-Full/Half-duplex, Auto-Negotiation, Auto-MDI/MDIX
- Full wire-speed forwarding rate
- Alarms for power and port link failure by relay output
- -40°C to 75°C (-40°F to 167°F) operating temperature range, tested for functional operation @ -40°C to 85°C (-40°F to 185°F)
- IP30 aluminum case
- Supports DIN-rail mounting installation

Diagrams

Unit: mm



Specifications

Technology	
Standards	▪ IEEE802.3 10Base-T, IEEE802.3u 100Base-TX/100Base-FX, IEEE802.3x
Forward and Filtering Rate	▪ 14,880pps for 10Mbps ▪ 148,810pps for 100Mbps
Packet Buffer Memory	▪ 128K bits
Processing Type	▪ Store-and-Forward ▪ Half-duplex back-pressure and IEEE802.3x full-duplex flow control

Power	
Input	▪ Input Voltage: 10 to 48VDC (DC Terminal Block) or 12VDC (DC Jack , optional)
Power Consumption	▪ 4.32W MAX. 0.36A @ 12VDC, 0.09A @ 48VDC
Overload Current Protection	▪ Present
Reverse Polarity Protection	▪ Present

Mechanical	
Casing	▪ Aluminum 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)
Interface	
Ethernet Port	▪ 10/100BASE-TX: 1 port ▪ 100BASE-FX: 1 port
LED Indicators	▪ Per Unit: Power Status (Power 1, Power 2, Fault), Link-Fault-Pass-Through ▪ Per Port: 10/100TX: Link/Activity, Full-duplex/Collision, Speed 100FX: Link/Activity, Full-duplex/Collision
Relay Contact	▪ Relay contact rating with current 1A @ 30VDC, 0.5A @ 120VAC

Environment	
Operating Temperature	▪ -40°C to 75°C (-40°F to 167°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)
MTBF	▪ 108.88 years

Regulatory Approvals	
ISO	▪ Manufactured in an ISO9001 facility
Safety	▪ Hazardous locations: Class 1, Division 2 group A,B,C&D UL60950-1, EN60950-1, IEC60950-1
EMI	▪ FCC Part 15, Class A ▪ EN61000-6-3 - EN55022 - EN61000-3-2 - EN61000-3-3
EMS	▪ EN61000-6-2 - EN61000-4-2 (ESD Standards) Contact: + / - 4KV Air: + / - 8KV - EN61000-4-3 (Radiated RFI Standards) 10V/m, 80 to 1000MHz; 80% AM - EN61000-4-4 (Burst Standards) Signal Ports: + / - 4KV D.C. Power Ports: + / - 4KV - EN61000-4-5 (Surge Standards) Signal Ports: + / - 1KV; Line-to-Line D.C. Power Ports: + / - 0.5KV; Line-to-earth - EN61000-4-6 (Induced RFI Standards) Signal Ports: 10Vrms @ 0.15 - 80MHz; 80% AM D.C. Power Ports: 10Vrms @ 0.15 - 80MHz; 80% AM - EN61000-4-8 (Magnetic Field Standards) 30A/m @ 50, 60Hz
Environmental Test Compliance	▪ IEC60068-2-6 Fc (Vibration Resistance) 5g @ 10 - 150Hz, 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) ▪ FED STD 101C Method 5007.1 (Free fall w/ package) -Tested with Cross Weight and Drop High standard table ▪ NEMA TS1/2 Environmental requirements for traffic control equipment

Order Information

IEC-1020 - 10/100 Industrial Media Converter, SC SM 20KM -40 to 75C

Package Contents

IEC-1020
Quick Installation Guide