



IEC-1820

10/100 Industrial Media Converter, SC SM 20KM, -40 to 75C IEC61850

Overview

LevelOne IEC-1820 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.

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.

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.

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.

Plug & Play

This Industrial media converter is designed for the demanding industrial environments at businesses in need of instant connectivity with no setup or configure required, truly plug and play.

Substation & Railway Applications

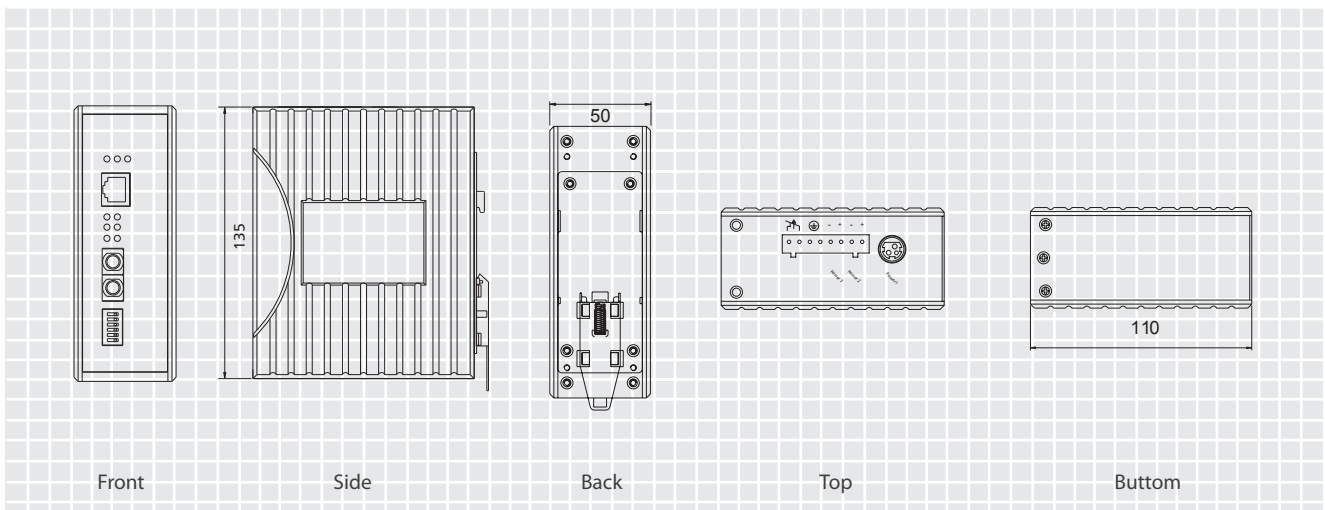
This device is complied with IEC 61850-3 / IEEE 1613 for the power substations and EN 50121-4 for the railway applications. IEC 61850-3 is an international standard for electrical substation systems. The standard enables integration of all control, measurement, monitoring and protection functions within a substation.

Features

- Complies with IEC61850-3 and IEEE1613 Environmental requirements for power substation automation systems
- Complies with NEMA TS1 & TS2 Environmental requirements for Traffic control equipment
- 100Base-FX Single-mode fibre for the link up to 20 kilometers
- 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	<ul style="list-style-type: none"> IEEE802.3 10BASE-T, IEEE802.3u 100BASE-TX/100BASE-FX, IEEE802.3x
Forward and Filtering Rate	<ul style="list-style-type: none"> 14,880pps for 10Mbps 148,810pps for 100Mbps
Packet Buffer Memory	<ul style="list-style-type: none"> 128K bits
Processing Type	<ul style="list-style-type: none"> Store-and-Forward Half-duplex back-pressure and IEEE802.3x full-duplex flow control

Power	
Input	<ul style="list-style-type: none"> Input Voltage: 12 to 48VDC (Terminal Block) / 12VDC(DC Jack)
Power Consumption	<ul style="list-style-type: none"> 2.4W MAX. 0.2A @ 12VDC, 0.05A @ 48VDC
Overload Current Protection	<ul style="list-style-type: none"> Present
Reverse Polarity Protection	<ul style="list-style-type: none"> Present

Mechanical	
Casing	<ul style="list-style-type: none"> Aluminum case IP30
Dimensions	<ul style="list-style-type: none"> 50mm (W) x 110mm (D) x 135mm (H) (1.97" (W) x 4.33" (D) x 5.31" (H))
Weight	<ul style="list-style-type: none"> 0.8Kg (1.76lbs.)
Installation	<ul style="list-style-type: none"> DIN-Rail (Top hat type 35mm), Panel, Rack Mounting

Interface	
Ethernet Port	<ul style="list-style-type: none"> 10/100BASE-TX: 1 port 100BASE-FX: 1 port
LED Indicators	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> Relay contact rating with current 1A @ 30VDC, 0.5A @ 120VAC

Environment	
Operating Temperature	<ul style="list-style-type: none"> -40°C to 75°C (-40°F to 167°F) Tested @ -40°C to 85°C (-40°F to 185°F)
Storage Temperature	<ul style="list-style-type: none"> -40°C to 85°C (-40°F to 185°F)
Ambient Relative Humidity	<ul style="list-style-type: none"> 5% to 95% (non-condensing)
MTBF	<ul style="list-style-type: none"> 55.10 years

Regulatory Approvals	
ISO	<ul style="list-style-type: none"> Manufactured in an ISO9001 facility
Safety	<ul style="list-style-type: none"> UL508
EMI	<ul style="list-style-type: none"> FCC Part 15, Class A EN61000-6-4 <ul style="list-style-type: none"> EN55022 EN61000-3-2 EN61000-3-3
EMS	<ul style="list-style-type: none"> IEC61850-3 & IEEE1613: Substation & Power automation Applications EN50121-4: Railway Applications EN61000-6-2 <ul style="list-style-type: none"> EN61000-4-2 (ESD Standards) Contact: + / - 8KV Air: + / - 15KV EN61000-4-3 (Radiated RFI Standards) 35V/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: + / - 2KV; Line-to-Line D.C. Power Ports: + / - 2KV; 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) 1000A/m @ 50, 60Hz
Environmental Test Compliance	<ul style="list-style-type: none"> 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

Order Information

IEC-1820 - 10/100 Industrial Media Converter, SC SM 20KM, -40 to 75C IEC61850

Package Contents

IEC-1820

Quick Installation Guide