



Analog Signal Converter to Optic Fiber

Catalog

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INTRODUCTION

Optical fibers are totally immune to noise, electromagnetic induction, lightning strikes and voltage surges. Thus, its use is highly recommended in power substations, offshore platforms, or environments vulnerable to the aforementioned phenomena.

The signals transmitted through optical fiber have reduced attenuation and, therefore, can travel over longer distances without presenting data loss, power reduction, quality reduction or communication delay.

The speed and rate of data transmission through optical fiber are incomparably superior to installations that use metal pairs.

It is also necessary to take into account the reduction of physical space (cable channels and ducts) and cost in the use of this technology, which together with the advantages already presented, become the best solution for your project.

The Converters were built according to strict quality standards and use state-of-the-art electronic components (SMD), their hardware was designed to withstand severe working conditions, and can be installed directly in power substation panels. It meets the levels of requirements, supportability and reliability according to IEC, DIN, IEEE, ABNT standards.

MAIN FEATURES

This equipment enables reliable communication over long distances by transmitting via fiber optic cables directly from a sensor with a supervisory system that recognizes 0...20 or 4...20 mA and 0...24Vdc input signals.

- Compact housing with 22.5 x 100 x 113.5 mm in ABS for DIN rail 35 mm;
- Universal power supply 24 to 275 Vdc/Vac;
- Easy installation and use;
- 2 years warranty;

Optional Features

- Interface fibra
- Analog Input
- Analog Output
- Output for auxiliary power supply
- RS485 Digital Output (ANSI/TIA/EIA-485-A)

TECHNICAL DATA

ANALOG SIGNAL CONVERTER FOR FIBER CFAD	
Operating Voltage	24 a 275 Vcc/Vca 50/60Hz;
Operating Temperature	-20°C to +70°C;
FIBER INTERFACE TECHNICAL DATA	
Maximum length	3000 meters (multimode optical fiber, 62.5/125 µm);
Fiber Connector	ST Standard;
Minimum transmit power	-14.0 dB.m (multimode optical fiber, 62.5/125 µm);
Maximum Transmit Power	-10.0 dB.m (multimode optical fiber, 62.5/125 µm);
Minimum Receive Sensitivity	-24 dB.m (multimode optical fiber, 62.5/125 µm);
Compatibility	Multimode optical fiber 50/125 µm, 62.5/125 µm, 100/140 µm and 200 µm;
Wavelength	850 µm;
Indication with LED's for status	On, transmitting/receiving data and link;
Interference resistance	EMI/RFI and current surges, ideal for data communications near transformers, heavy electrical equipment, and other electrical or radio interference;
ANALOG INPUT CHARACTERISTIC	
Maximum Analog Input Error	0.1% end-of-scale;
Current Reading	0 to 20 mA;
Voltage Reading	0 to 24 Vdc;
Isolation between bus and power supply	4 KV / 60 Hz / 1 minuto;
Isolation between analog input	3.5 KV / 60 Hz / 1 minuto;
Isolation between RS485 digital output(ANSI/TIA/EIA-485-A)	3.5 KV / 60 Hz / 1 minuto;
ANALOG OUTPUT CHARACTERISTIC	
Maximum Analog Output Error	0.1% end-of-scale;
Current Output	0 to 1, 0 to 5, 0 to 10, 0 to 20 and 4 to 20 mA; , 0 to 5, 0 to 10, 0 to 20, and 4 to 20 mA;
Maximum Load	0 to 1mA – 20KΩ;
	0 to 5mA – 4 KΩ;
	0 to 10mA – 2 KΩ;
	0 to 20mA – 1 KΩ;
	4 to 20mA – 1KΩ;
Voltage Output	0 to 10 Vdc;
Isolation between bus and power supply	4 KV / 60 Hz / 1 minuto;
Isolation between analog input	3.5 KV / 60 Hz / 1 minuto;
Isolation between RS485 digital output(ANSI/TIA/EIA-485-A)	3.5 KV / 60 Hz / 1 minuto;

Table 1 – Technical data

TECHNICAL DATA

RS485 OUTPUT FEATURE (ANSI/TIA/EIA-485-A)	
Maximum cable length	1,200 meters;
Transmission Mode	Half Duplex;
Auto Baud Rate	1,200 to 57,600 bps (Also automatically detects the speed of the communication network);
Maximum capacity of devices on the network	32 pieces of equipment;
Termination Resistor	120 Ohms (jumper-enabled);
RS485 bus protection	± 30 KV ESD. 3-stage protection (Robust);
Interference resistance	Resistant to lightning and electrostatic discharge damage;
Isolation between bus and power supply	4 KV / 60 Hz / 1 minuto;
Isolation between auxiliary input	4 KV / 60 Hz / 1 minuto de 2W / 24Vcc;
Isolation between analog input	3.5 KV / 60 Hz / 1 minuto;
Isolation between analog output	3.5 KV / 60 Hz / 1 minuto;
AUXILIARY POWER FEATURE***	
Voltage	24 Vdc;
Electric Current	82 mA;
Electric Power	2 Watts;
Isolation between bus and power supply	4 KV / 60 Hz / 1 minuto;
Isolation between analog input	3.5 KV / 60 Hz / 1 minuto;
Isolation between RS485 digital output(ANSI/TIA/EIA-485-A)	3.5 KV / 60 Hz / 1 minuto;

Used to power transducers next to the analog input.

Table 2 – Technical Data

CONNECTION DIAGRAM

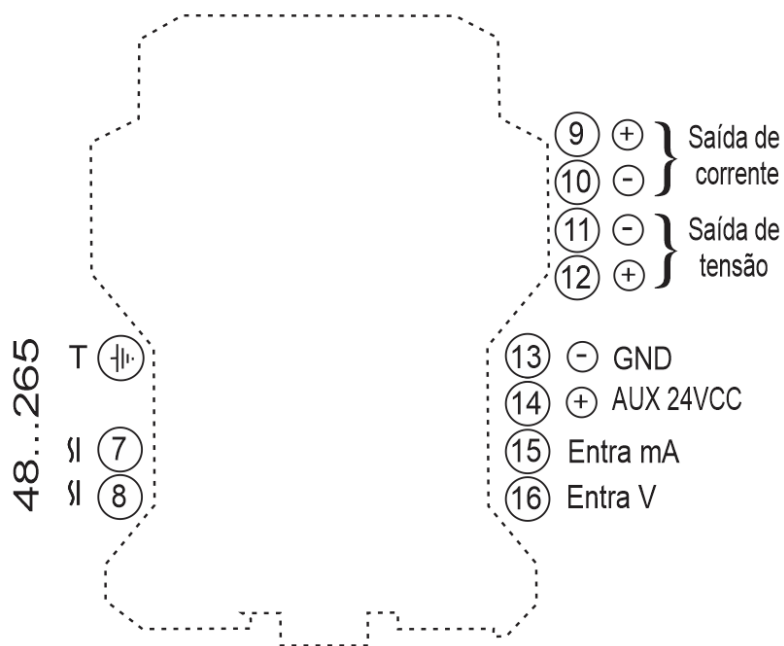


Image 1 – Connection diagram

DIMENSIONS

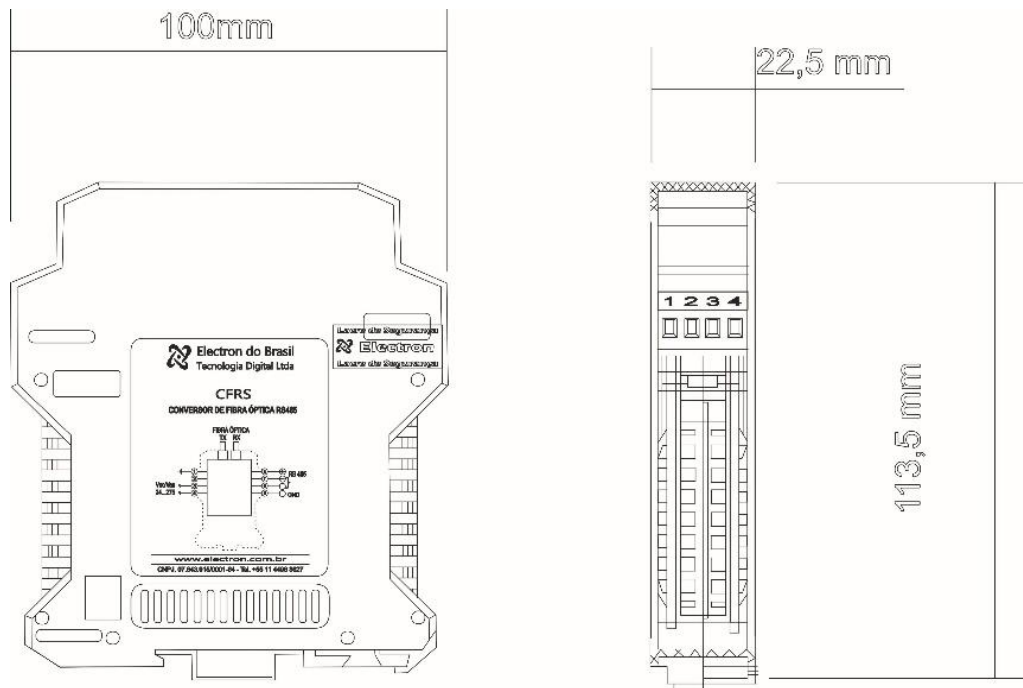


Image 2 – Dimensions

APPLICATION EXAMPLES

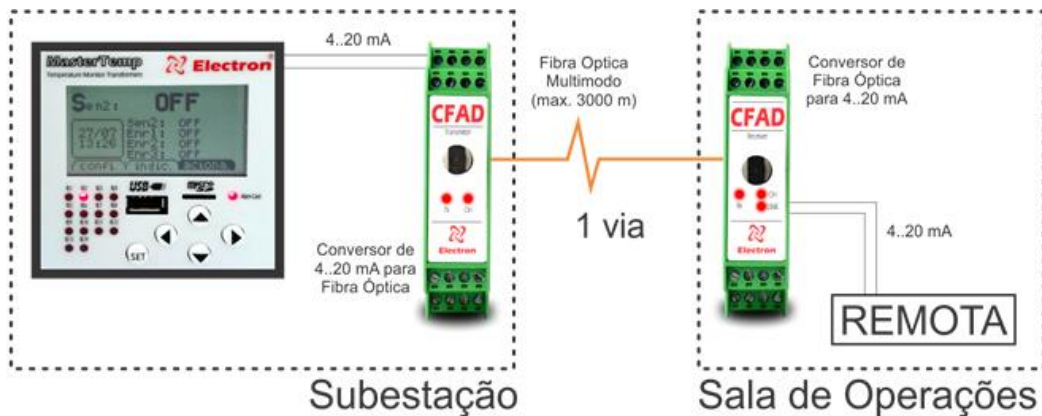


Figure 3 – application examples

SPECIFICATION FOR ORDER

