

Datasheet

ADA-13021

ETHERNET to Current Loop converter



APPLICATION

ADA-13021 converter is used for data transmission between devices equipped with Current Loop interface via LAN/WAN network without interfering with data format. In the ETHERNET network converter can operate in Virtual Serial Port mode, TCP serial bridge mode, UDP serial bridge mode, TCP sockets, UDP sockets.

ADA-13021 converter transmits data via Current Loop interface with the baud rate 38,4kbps by the use of 2-pair of twisted-pair cable. The converter has screw terminal block for connection of Current Loop interface and power supply and RJ45 connector for Ethernet network connecting. ADA-13021 uses for operating the signals: RX+,RX-,TX+,TX- of Current Loop interface.

Over-voltage protection was made on base safety diodes and fuses on each Current Loop lines.

To Current Loop interface can be connected one device in point-to-point topology, operates in half duplex or full duplex mode.

This converter has internal, low energy surge protection for each Current Loop lines however it is recommended to use the external lightning arresters (typical protection of telephone line) for the lightning protection of lines.

TECHNICAL DATA

Transmission Parameters		
Interface	ETHERNET	Current Loop
Connector	RJ45	Screw terminal, max. wire \varnothing 2,5mm ² .
Max. Line length	LAN up to 150 m	Depend on baud rate up to few hundred meters
Transmission line	4-pair twisted cable, UTP 4x2x0,5 (24AWG), shield inside large interferences STP 4x2x0,5 (24AWG)).	2-pair twisted cable eg UTP Nx2x0,5 (24AWG), shield inside large interferences eg STP Nx2x0,5 (24AWG).

Standards	IEEE 802.3	current signal, 0-20mA (TTY)
Baud rate	10/100 Mbit/s	Do 38,4 kbps (depend on current loop line length)
Transmission type	Current Loop asynchronous half duplex or full duplex	
Optical Signalization	<ul style="list-style-type: none"> • PWR – green LED power supply, • RX - red LED data receiving from Current Loop side, • TX - yellow LED data transmission through Current Loop interface. 	
Electrical Parameters		
Power requirements	10 - 24 – 30 V DC	
Power Cable	Recommended length – up to 3m	
Power	3W	
Protection from reverse power polarization	yes	
Galvanic Isolation	1kV= or 3kV= (between power circuit and ETHERNET signal line) 1kV= or 3kV= (between power circuit and Current Loop signal line)	
Optoisolation	~3kV= (between signal lines Current Loop and ETHERNET)	
Electromagnetic compatibility	Resistance to disruptions PN-EN 55024. Emission of disruptions PN-EN 55022.	
Safety requiring	According to the PN-EN60950 norm.	
Environment	Commercial and light industrial.	
Environmental Parameters		
Operating temperature	-30 + 60°C	
Humidity	5 + 95% - non-condensing	
Storage temperature	-40 + 70°C	
Casing		
Dimensions (W x D x H)	53mm x 90mm x 62 mm	
Material	PC/ABS	
Degree of casing protection	IP40	
Degree of terminal protection	IP20	
Weight	0,10 kg	
According to standards	DIN EN50022, DIN EN43880	
Location during work	Free	
Mounting method	On the rail compliant with DIN35 / TS35 standard.	

GALVANIC ISOLATION



