

Datasheet

ADA-13021MG

Current Loop to ETHERNET converter with MODBUS GATEWAY



APPLICATION

ADA-13021MG converter is used for data transmission between devices equipped with Current Loop interface via LAN/WAN network. In the ETHERNET network converter can operate in Virtual Serial Port mode, TCP serial bridge mode, UDP serial bridge mode, TCP sockets, UDP sockets, MODBUS Data Gateway. The MODBUS Data Gateway converts MODBUS-RTU master/slave and MODBUS-ASCII master/slave protocol to MODBUS-TCP and inversely. This allows for integrate MODBUS-RTU/ASCII with MODBUS-TCP devices within one network. Can be configured and managed via Internet browser – converter has implemented WWW server. ADA-13021MG has plug-in screw terminal block for connecting the Current Loop interface and power supply and RJ45 modular connector for ETHERNET network connection. The converter transmits data via Current Loop interface with maximum baud rate up to 38,4 kbps and uses signals RX+,RX-,TX+,TX- of CL interface. To Current Loop line based on ADA-13021MG can be connected in point-to-point topology devices operate 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. Has galvanic isolation between power supply and Ethernet interface and Current Loop and optoisolation between Current Loop and Ethernet interfaces.

The converter is adapted for powering from the regular voltage external source which value should contain from 10V to 30V.

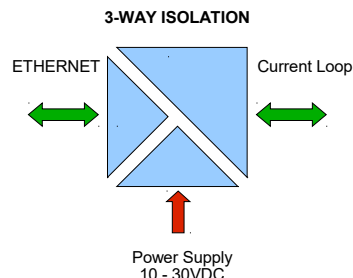
We provide with converter the drivers which installed in the operating systems (Windows 98ME,2000,XP,2003,Vista,7, 8.x, 10 ; Linux), will create an additional COM/TTY port. This port is the next free number eg COM3, can be used like a standard COM port.

TECHNICAL DATA

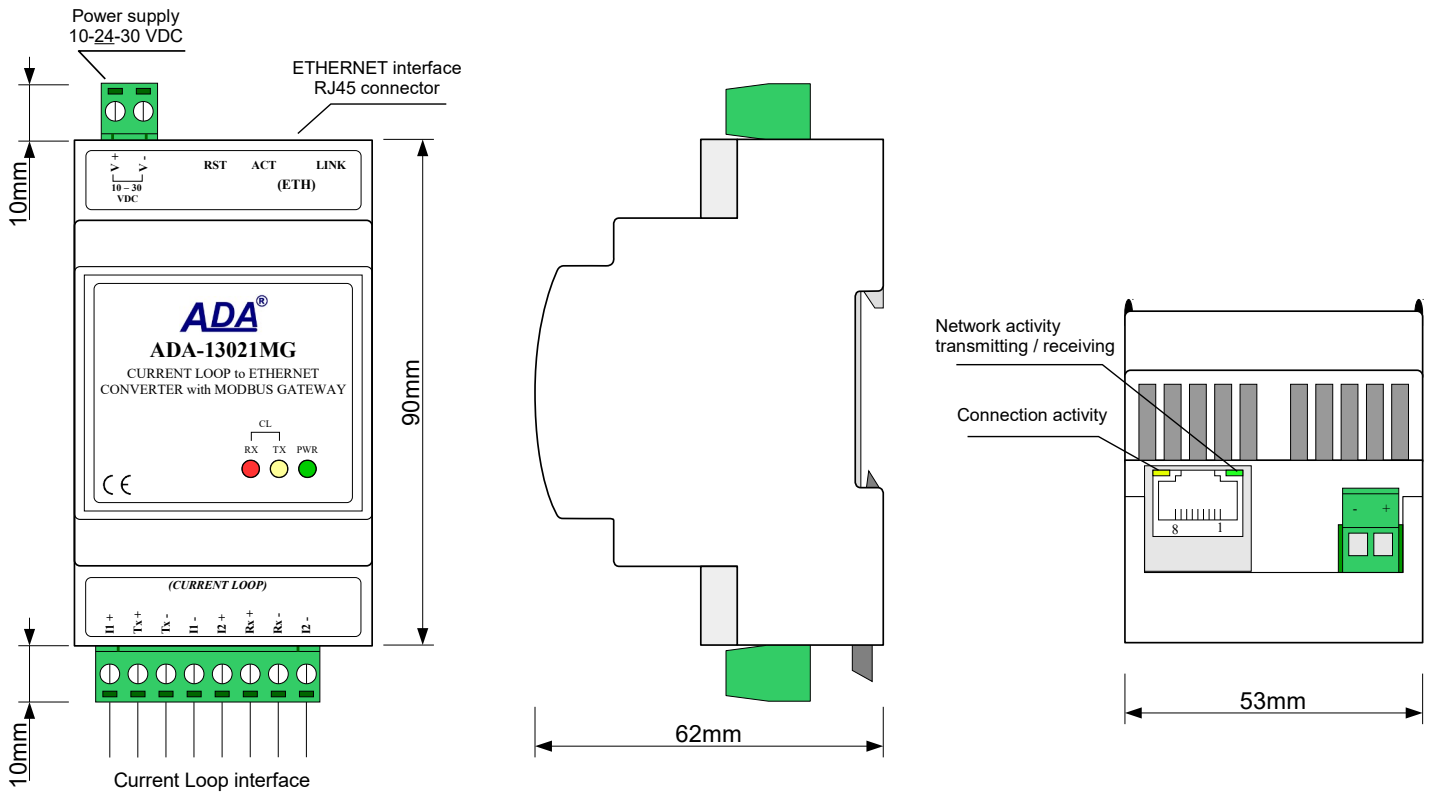
Transmission Parameters		
Interface	ETHERNET	Current Loop
Connector	RJ45	Screw terminal, max. wire Ø 2,5mm².

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



DIMENSIONS AND CONNECTION



VERSIONS

ADA-13021MG -				
Electronics version:				
Standard			1	
Current Loop Voltage:				
24VDC			1	
12VDC (standard)			2	
Current Loop Current:				
0 – 20 mA (standard)			1	
0 – 30 mA			2	
Galvanic isolation:				
1kV= 3-way				2
3kV= 3-way				3

Order example:

Product symbol: **ADA-13021MG-1-2-1-2**

- 1 – standard electronics version,
- 2 – current loop voltage 12VDC,
- 1 – current loop current 0-20mA,
- 2 – galvanic isolation 1kV=,