ADA-1028L

CEL-MAR ®

Datasheet

ADA-1028L

RS232 to Current Loop 2-wire CLO Converter

Transmission line	Cable DB9F/DB9M multi-core 9x0,34 shielded or twisted cable 9-pairs UTP 24AWG shield inside large interferences STP 24AWG.	1-pair twisted cable, UTP Nx2x0,5 (24AWG), shield inside large interferences (STP Nx2x0,5(24AWG)).
Standards	EIA-232, CCITT V.24	Current Loop CLO 0-20mA
Transmission type	Asynchronism half duplex or full duplex,	
Optical Signalization	• PWR – green LED power supply, • RX - red LED data receiving through Current Loop CLO, • TX - yellow LED data transmission through Current Loop CLO.	
Electrical Parameters		
Power requirements	10 - 24 – 30 V DC	
Power Cable	Recommended length of power cable – up to 3m	
Power	2W	
Protection from reverse power polarization	YES	
Galvanic Isolation	1kV= or 3kV= between power circuit and RS232 signal line 1kV= or 3kV= between power circuit and Current Loop signal line	
Optoisolation	Min. 2,5kV - between Current Loop signal line and RS-232	
Electromagnetic compatibility	Resistance to disruptions according to the standard PN-EN 55024. Emission of disruptions according to the standard 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	Noryl UL. 94 V-O	
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.	

APPLICATION

ADA-1028L converter allows connecting devices with two-wire Current Loop interface (CLO) to the RS232 interface (eg. the computer or controller) for example, counters such LZQM without interfering with the format of transmitted data. ADA-1028L transmits data at baud rate up to 19.2 kbps via one pair of the Current Loop twisted-pair cable.
The converter is equipped with screw terminals for connection Current Loop interface and power supply.
Device for operating uses signals:
a) Rx, Tx, GND - the RS232 interface,
b) TX +, TX-/ CLO-, RX +, RX * +, RX-/ CLO + Current Loop CLO interface.
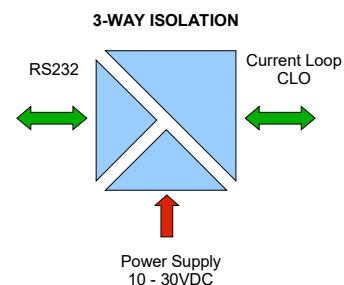It is possible to connect up to four devices operating in half duplex mode to the Current Loop bus. 1kVDC or 3kVDC galvanic isolation and 2,5kVDC opto-isolation in the signal channel separates RS232 interface of converter from CLO interface and protects devices connected to the RS232 interface from surges generated on line CLO and power circuit. The converter has an internal low-energy surge protection for each line of Current Loop interface.
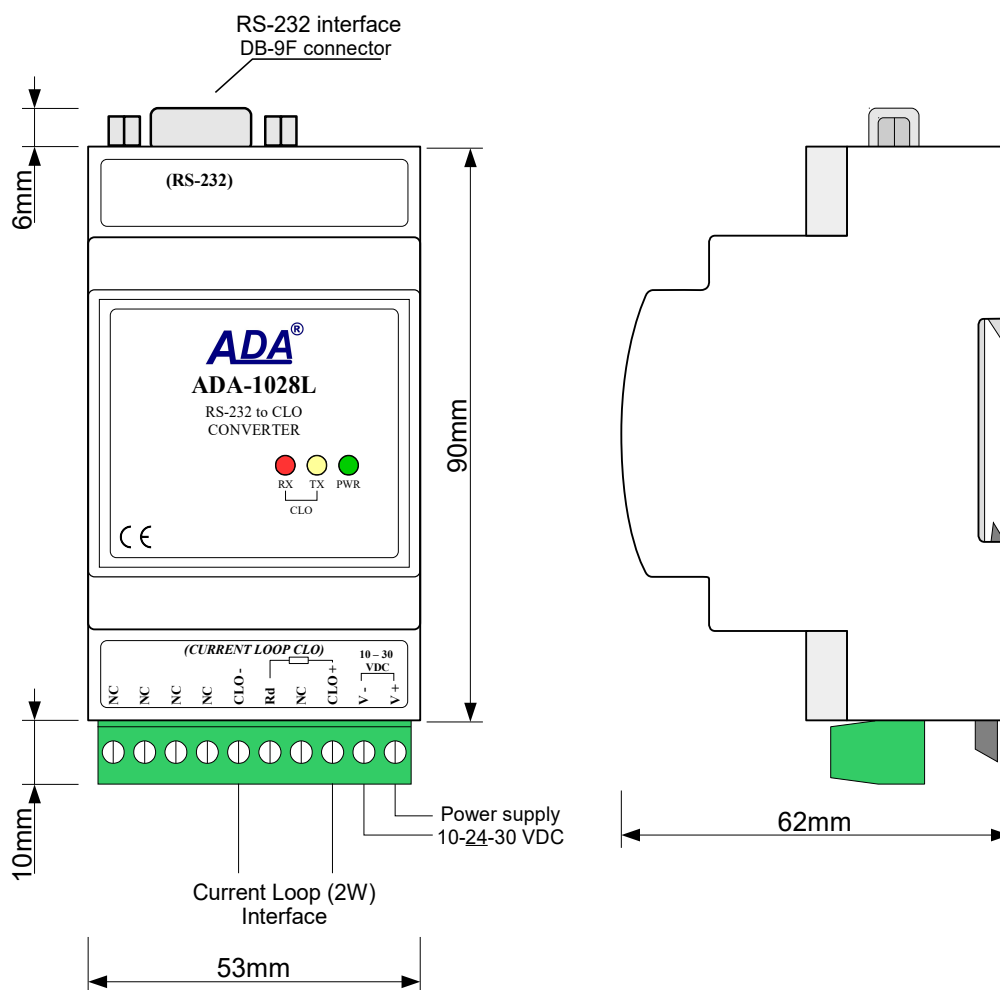
GALVANIC ISOLATION

3-WAY ISOLATION

RS232

Current Loop CLO

Power Supply
10 - 30VDC

TECHNICAL DATA

Transmission Parameters		
Interface	**RS-232**	**Current Loop**
Connector	DSUB-9 Female	Screw terminal, wire max. Ø 2,5mm²
Max. Line length	Up to 15 m	Depends on baud rate up to several hundred meters
Max. number of connected device	1	4
Max. baud rate	19,2 kbps (depend on length of Current Loop CLO line)	

DIMENSIONS AND CONNECTION

RS-232 interface
DB-9F connector

(RS-232)

6mm

ADA®

ADA-1028L

RS-232 to CLO
CONVERTER

RX   TX   PWR
CLO

CE

90mm

(CURRENT LOOP CLO)   **10 – 30 VDC**

NC NC NC NC CLO- Rd NC CLO+ V - V +

10mm

Power supply
10-24-30 VDC

Current Loop (2W)
Interface

53mm

62mm

VERSIONS

ADA-1028L - ☐ - ☐ - ☐ - ☐ ☐ ☐

Electronic versions:	
Standard	**1**

Current Loop Voltage:	
24VDC	**1**
12VDC	**2**

Current Loop Current:	
0 – 20 mA (standard)	**1**
0 – 30 mA	**2**

Current Loop Type:	
Active	**A**
Passive	**P**

Galvanic isolation:	
1kV= 3-way	**2**
3kV= 3-way	**3**

Terminal & Terminal Cover:	
Cover without inlets, screw terminal block	**1**
Cover with inlets, screw terminal block	**2**
Cover without inlets, plug-in screw terminal block	**3**

Order example:

Prod. symbol : **ADA-1028L-1-1-1-A-2-3**

1 – standard electronic version,
1 – current loop voltage 24VDC,
1 – current loop current: 0-20mA,
A – current loop type: Active,
2 – 1kV= galvanic isolation,
3 – cover without inlets, plug-in screw terminal block.