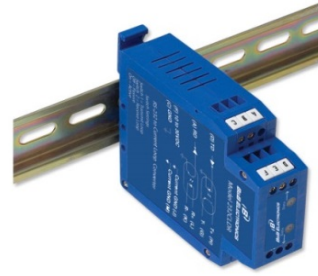


232CLDR - RS232 SERIAL TO CURRENT LOOP CONVERTER

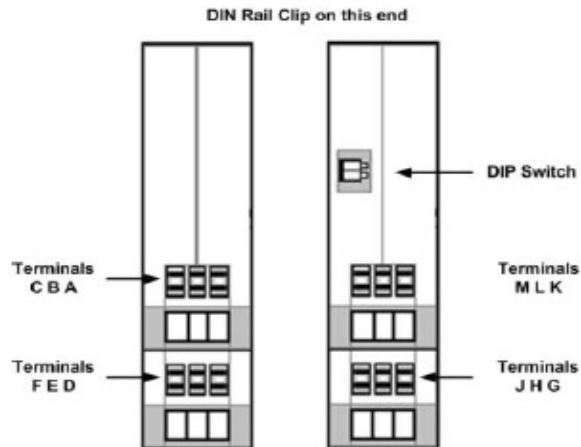
The 232CLDR is a DIN Rail mountable RS-232 to Current Loop Converter. It has one optically isolated 20 mA transmit loop and one optically isolated receive loop. Each loop can be set to either "Active" or "Passive." When set to "Active" an isolated 20 mA current is supplied for each loop (transmit and receive). One 10 to 30 VDC power supply provides power to the converter and both current loops. The 232CLDR communicates at baud rates up to 19.2 kbps and can extend communications up to 2000 feet (600 meters). 2000V Optical Isolation protects equipment from damaging ground loops and surges. Two LED's indicate data flow. Connections are made to a terminal block.



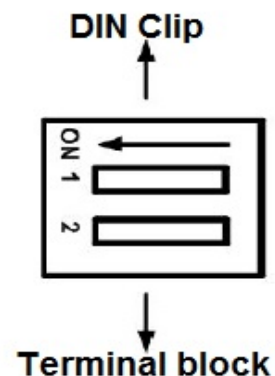
TECHNICAL SPECIFICATIONS

RS232:	terminal Block connector, signals TD, RD, GND
Current loop:	signals T+, T-, R+, R-, GND
Isolations:	optical method
Rating:	2000V
Power:	10 to 30 Vdc, 2.5 W power consumption, external source, terminal block connector
Terminal block:	24 to 14 AWG wire size, 4 kgf-cm torque
LED indicators:	2 Red Data LEDs for RS232 & Current loop (flash when data transmitted)
Enclosure:	plastic
Class protection:	IP20
Dimensions cm:	2.5x7.9x9.5
Mounting:	35 mm DIN
Environmental condition:	temperature -40 to 80°C, 0-95%RH non-condensing
MTBF:	401834 hours
Approvals:	CE, FCC cULus

Terminal Block	Signal
A	RS-232 RD (Output)
B	Not used
C	Ground
D	RS-232 TD (Input)
E	Not used
F	+10 to 30 VDC
G	T (-)
H	T (+)
J	Current ground
K	R (-)
L	R (+)
M	Current ground



Transmit	SW-1
Active	ON
Passive	OFF
Receive	SW-2
Active	ON
Passive	OFF



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13856 VIGLIANO B.SE - Via Milano, 395

Tel. +39 015811102 - 015510156 Fax 0158853029

Mail: info@satema.it <http://www.satema.it>

DAT3022 - RS485 SERIAL TO ANALOG CONVERTER

The DAT 3022 device generates up to 2 output analog signals from digital commands. Data values are transmitted with MODBUS RTU/ASCII protocol on the RS-485 network. It is possible to generate voltage signals up to 10V and current signals up to 20mA, both active or passive loops. By means of a 16 bit converter, the device guarantees a high accuracy and a stable measure versus time and temperature. To ensure the plant safety, two Watch-Dog timer alarms are provided. The 2000 Vac isolation between input, power supply and serial line RS-485 removes eventual ground-loop effects, allowing the use of the device even in the heavy environmental conditions.



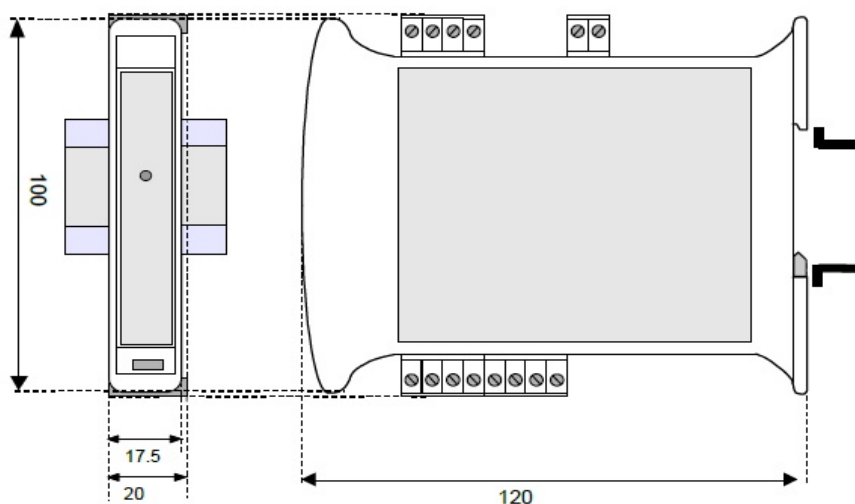
TECHNICAL SPECIFICATIONS

Output type: Voltage 0 to 10V, Current 0 to 20 mA
 Output calibration: Voltage +/- 10 mV, Current +/- 20 μ A
 Load resistance: Voltage > 5 Kohm, Current < 500 Ohm
 Thermal drift: 100 ppm max full scale
 Auxiliary Voltage: 12V @ 20 mA (2 channels)
 Rise time:

Voltage V/s	Current mA/s
0.125	0.250
0.250	0.500
0.500	1.000
1.000	2.000
2.000	4.000
4.000	8.000
Immediate	Immediate

Analog output Slew-rate
 (independent
 programming for each
 channel)

Data transmission: Baud rate 115.2 kbps, 1.2 max distance
 Power supply: 18 to 30 Vdc, 30 mA @ 24Vdc power consumption
 Polarity inversion protection 60 Vdc max
 Isolation: 2000 Vac 50 Hz, 1 min (RS485 input/supply, supply)
 Environmental condition: -10 to 60°C, 0 to 90%RH non-condensing
 Enclosure: self-extinguishing plastic
 Mounting: EN-50022 DIN rail
 Dimensions: 100X20X120



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13856 VIGLIANO B.SE - Via Milano, 395

Tel. +39 015811102 - 015510156 Fax 0158853029

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LTS612 - RS232 or RS485 SERIAL TO ANALOG CONVERTER

The LTS612 serial data input, analog output transmitter accepts RS232 or RS485 serial data using the Modbus protocol or direct ASCII characters, and converts this data to an isolated, scalable 4-20 mA, 0-20 mA, 0-10V or -10V to +10V analog output. The unit is housed in transmitter case which is only 22.5 mm (0.89") thick and fits on a 35 mm DIN rail.

Serial data input, RS232 or RS485. The data to be converted to analog can be specified using the Modbus at data rates to 19200 bps. Modbus implementation is fully compliant with Modbus over Serial Line Specification V1.0 (2002) in RTU or ASCII, half-duplex or full-duplex operation, with up to 247 digital addresses. You can specify character positions, start and stop ASCII characters, how many characters to skip, and how many characters to process. Slave operation requires connection to a master.

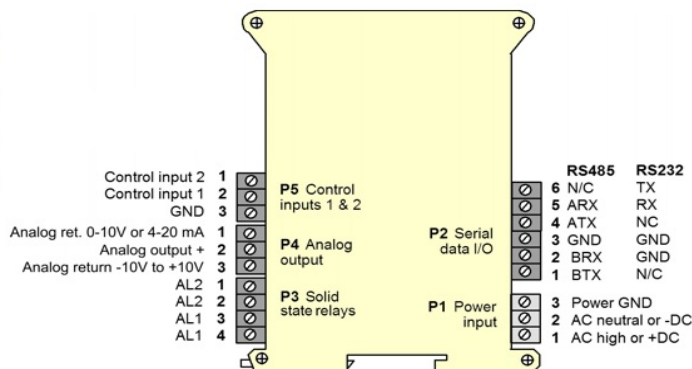
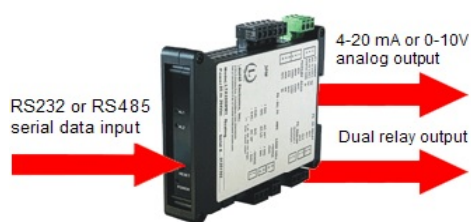
4-20 mA, 0-20 mA, 0-10V or -10V to +10V analog transmitter output, isolated, jumper-selectable and user scalable. All selections provide 16-bit (0.0015%) resolution of output span and 0.02% output accuracy of readings from -99,999 to +99,999 counts. Output isolation from signal and power grounds eliminates potential ground loops.

Dual solid state relays for control or alarm, isolated. Rated 120 mA at 140 Vac or 180 Vdc. The relays can respond to digital readings or to received control characters.



TECHNICAL SPECIFICATIONS

Signal Levels	RS232, full-duplex RS485, half-duplex RS485 (selectable)
Protocol:	Modbus RTU, Modbus ASCII, Custom ASCII
Serial Connector:	Detachable dual 3-position plugs
Analog Output:	0-20 mA, 4-20 mA or 0-10V
Voltage or Current Select.:	Via jumpers
Compliance at 20 mA:	10V (0-500 ohm load)
Compliance at 10V:	2 mA (5 kohm minimum load)
Output resolution/error:	16 bits (65,535 steps); < 0.02% of full span
Dual Relay Output:	Two solid state relays, SPST, normally open, Form A; 130 mA at 140 Vac or 180 Vdc
Relay modes:	Active high or low, latching or non-latching, hysteresis or band deviation
Power supply:	12-30 Vac or 10-48 Vdc
Power Isolation:	250 Vrms between power, analog output, signal input, and serial I/O
Case dimensions:	129 x 104 x 22.5 mm
Case Mounting:	35 mm DIN rail per EN 50022
Environmental condition:	0 to 55°C; 95%RH from 0 to 40°C, non-condensing



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