

4-20mA loop powered temperature transmitter miniature, isolated, programmable

CNL25IG **LOREME**

• Temperature and process inputs

voltage V, mV, mA current, potentiometer

thermocouple, Pt100

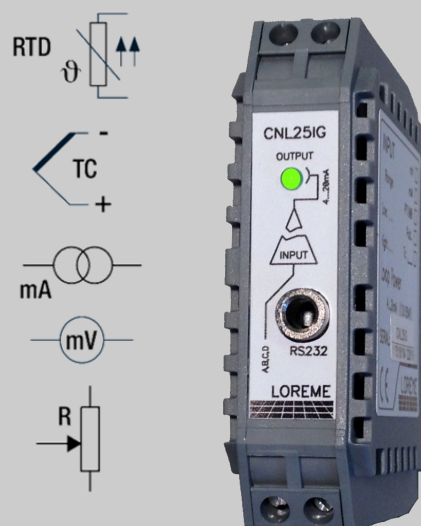
• 2 wires technology

4-20mA loop current powered

• Galvanic isolation

• Fully configurable

• low profile DIN rail mounted enclosure



CNL25ig is an isolated loop powered programmable transmitter. DIN rail mounting, it's low profile is suitable for application constrained by the available volume.

DESCRIPTION:

Temperature inputs :

- thermocouples with linearization and internal cold junction compensation,
- platinum RTD sensor (Pt100 2 or 3 wires mount) with linearization and line length compensation.

Process inputs:

- voltage (mV),
- current (mA) on external shunt.
- potentiometer: 1 kOhms to 200 kOhms,

Signal processing:

- square root calculation (on process inputs),
- user defined security value for sensor breaking detection,
- user defined response time, 0.2 to 60 sec, (filtering measure)
- normal or reverse output,
- offset measure adjustment,
- low sensibility to thermal ambient variations.

Feature:

- symmetrical DIN rail mounting,
- connection on screw terminals (2.5mm²),
- reverse polarity protection,
- LED indicator for loop current presence,
- RS232 link for configuration,
- configuration parameters saving on Flash, data retention > 30 years,
- watchdog controls the programme running,
- input / output galvanic isolation (elimination of measurement errors due to ground loop),
- conformal coating,
- protection rating IP20 (housing / terminals).

CONFIGURATION:

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The device is configured via the serial link, with any system emulating a terminal under any operating system:

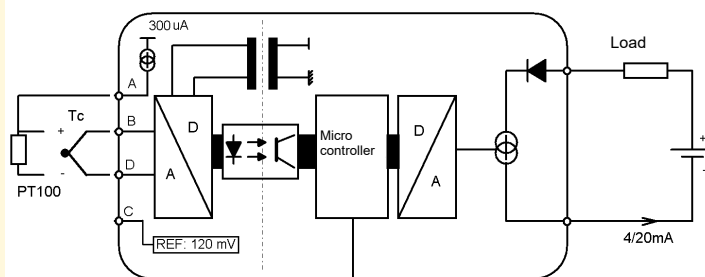
- no specific software to install
- USB ->RS232 cable provide separately

Via the terminal communication, the user is able to :

- see the input measure, shift the measure,
- change the parameters : input range, output range, filter, ...

Attention: the RS232 link is not isolated from the measure inputs (checks that there no dangerous voltage on inputs before all configuration).

Synoptic:



Version and code order :

CNL25ig : Low profile enclosure with fixed connection.

INPUT (24 bits resolution)			OUTPUT	RANGE	ACCURACY
TYPE	RANGE	ACCURACY	Current	4 / 20 mA (14bits resolution)	+/- 0.01 mA
Tc B	200 / 1800 °C	+/- 2 °C	2 wires power supply	14 to 40Vdc	
Tc E	-250 / 1000 °C	+/- 0.4 °C	Max load	500 at 24Vdc	
Tc J	-200 / 600 °C	+/- 0.4 °C	Max output current	22mA	
Tc K	-200 / 1350 °C	+/- 0.4 °C	Output noise	<50mV pp on 500 Ohms	
Tc R	0 / 1750 °C	+/- 1 °C	Response time	0.2s to 60s	
Tc S	0 / 1600 °C	+/- 1.5 °C	Security value	3.7 to 22mA	
Tc T	-250 / 400 °C	+/- 0.5 °C	(sensor breaking condition)		
Other thermocouple on request			Load influence	0.004 % / 100 Ohms	
T° Compensation	-20 / 60 °C	+/- 0.3 °C	Power supply influence	0.002 % / V	
Input impedance		> 1 MOhms	ENVIRONMENT		
breaking sensor current detection		0.25uA	Operating temperature	-20 to 60 °C	
			Storage temperature	-25 to 85 °C	
2, 3 wires Pt100	-200 / 800 °C	+/- 0.3 °C	Influence (% full scale)	< 0.004 % / °C	
Excitation current		300 uA	Humidity	85 % non condensing	
Cable influence		< 0.03 °C / Ohms	Weight	40 g	
(maximum cable resistance: 10 ohms by wires)			Protection rating	IP20	
Voltage	0 / 120 mV	+/- 0.02 mV	Dielectric strength input / output	1000Vrms continuous	
Input impedance		> 1 MOhms	MTBF (MIL HDBK 217F)	> 4 500 000 Hrs @ 25 °C	
			Life time	> 200 000 Hrs @ 30 °C	
Current	0 / 30 mA	+/- 0.015 mA	Electromagnetic compatibility 2014/30/UE / Low Voltage Directive 2014/35/UE		
on external shunt	2,5 Ohms	(provided on request)			
Potentiometer	1 KOhms to 200 KOhms				
(supplied by 120 mV internal reference)					

WIRING AND OUTLINE DIMENSIONS:

