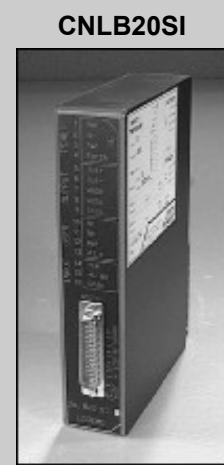


- **All process and temperature inputs**
(Volt, mV, mA, pwr.supply, potentiometer)
(thermocouple,PT100)
- **CNLB20SI: symmetrical DIN rail fastening**
- **CNLR20SI: rack 19" mounting**
- **Fully configurable**
- **Fully insulated**
- **RS485 link (Modbus)**



CNLR20SI



CNLB20SI

CNL20SI is a programmable converter for utilization in association with Ex zone sensors. One reference allows cover all the need of explosible zone measure.

FUNCTIONALITY:

The CNL20SI accepts all the measure functions:
Temperature, thermocouples and RTD probe with linearization,
line length compensation internal or external cold junction
compensation.
mA, mV, V, resistance variation,
Sensor power supply: 24 Vdc,
Potentiometer reference: 100 mV.
and also calculation functions:
Square root extraction,
Scale conversion,
Special programmable linearization (51 points max.).

The CNL20SI fits easily industrial environments :
Power supply: 230 Vac,
Low consumption: 3 VA,
Symmetrical DIN RAIL fastening (CNLB20) or assembly
in 19" rack (CNLR20) 4TE (20 mm).
Standard analog output, current or voltage, configurable,
RS 232-C standard digital output (optional RS485 output)
[EEx ia] IIc intrinsic security according to the EN 50 014 and
EN 50 020 European standards.

CE type certificate n° LCIE 02 ATEX 6152X.

SECURITY :

The CNL20SI has been devised according to the problems met in industrial environments :

- Galvanic insulation input / output / power supply,
- Saving of the configuration parameters in EEPROM,
- Noise immunity and programmable filtering of the measure,
- Watch dog supervising the program process,
- Regeneration of internal parameters on each measure,
- Stability towards ambient temperature changes.

DIALOGUE - CONFIGURATION :

The CNL20SI is configurable via the RS232 serial digital link.
The CNL20SI can interact without any interface,
with any system emulating a terminal (cable on single request).
Transmission format (output on RS232):
9600 bauds, 1 start bit, 8 data bits, 1 stop bit.
Through the terminal, the user will be able to:
visualize the measure, the actual configuration,
make the configuration of the CNL20SI,
shift the measure (MEMO function).

The configuration mode allows to choose:
the type and range of measure,
the type and the value of the input signals,
the type and the range of the output measure,
the type of compensation, ...

OPTION RS485 (422) :

MODBUS communication protocol:
(Besides the configuration of input/output parameters, there is the
configuration of communication parameters for the network start)
network from 1 to 255 converters,
speed from 150 to 19200 bauds.

Transmission format: 1 start bit, 8 data bits,
parity (even, odd or without), 1 stop bit.

Function: configuration, configuration reading, measure reading.

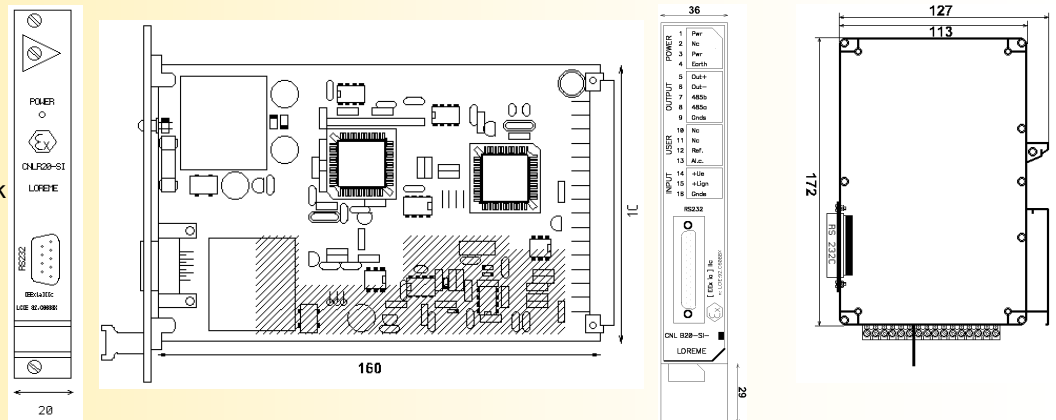
INPUT		
TYPE	RANGE	ACCURACY
Voltage	-10 / 110 mV	+/- 20 µV
Voltage (on attenuator)	-1 / 11 V	+/- 2 mV
Current (on shunt of 5 Ohms)	0 ... 4 ... 20 mA	+/- 2 µA
Resistance	0 / 356 Ohms	+/- 0.1 Ohms
PT100	-200 / 600 °C	+/- 0.3 °C
Tc B	200 / 1800 °C	+/- 2 °C
Tc E	-250 / 1000 °C	+/- 0.25 °C
Tc J	-200 / 600 °C	+/- 0.4 °C
Tc K	-200 / 1350 °C	+/- 0.5 °C
Tc R	0 / 1750 °C	+/- 1.5 °C
Tc S	0 / 1600 °C	+/- 1.5 °C
Tc T	-250 / 400 °C	+/- 0.4 °C
- Zone of compensation: (Other couples on request)	-10 / 60 °C	
- Measures	18 per second	
- Response time	~ 150 ms	
- Input resistance	> 1 MOhms	
- Sensor power supply	19 V (smoothed) for power supply voltage rating	
-Reference potentiometer	100 mV	
OUTPUT		
TYPE	RANGE	ACCURACY
Current	0 ... 4 ... 20 mA	+/- 10 µA
Load	600 Ohms	
Voltage	0 / 10 V	+/- 5 mV
On shunt of 500 Ohms		

POWER SUPPLY	
230 Vac (50-60 Hz) +/- 10% 2 VA Max.	
RECOMMENDED OPERATING CONDITIONS	
Temperature	
Operating	-10 to 60 °C
Storage	-20 to +85 °C
Influence	< 0.005 % / °C of the full scale
Relative humidity	85 % not condensed
Weight, Box / Rack version	380 g / 270 g
Protection	IP20
Dielectric strength	2000 Veff continuous
	Input/Pwr.Supply/Outputs
- Maxi L and C lines parameters wich can be plug in to intrinsic security terminals.	
<i>Model</i>	<i>Terminals</i> <i>L (mH)</i> <i>C (nF)</i>
1 à 4	24 - 28 - 30 - 32 1000 150
1	26 - 32 3.5 150
2	26 - 32 3.8 150
3	26 - 32 4.5 150
4	26 - 32 5.5 150
- U.I.P parameters which can appear to intrinsic security terminals	
<i>Model</i>	<i>Terminals</i> <i>U (V)</i> <i>I (mA)</i> <i>P (mW)</i>
1 à 4	24-28-30-32 27 3.5 24
1	26 - 3227 110 743
2	26 - 3227 100 675
3	26 - 3227 92 621
4	26 - 3227 84 567

Protection against electromagnetic disturbances in accordance with the CEI 801-4 / Level 3.

WIRING AND OUTLINE DIMENSIONS:

The converter CLNR20-SI must be placed into a RL20-SI type rack



SI / NSI zone separation plate

