PROGRAMMABLE DIGITAL CONVERTER CNL35

- ***CNL35:*** *universal inputs, more than 10 types of inputs (temperature and process)*
- ***CNL35/F:*** *intended for frequency input*
- ***CNL35/R:*** *relay option*
- ***CNL35/S2:*** *second input option*
- ***CNL35/T:*** *reduction of response time*
- ***CNL35/SP:*** *16 bits output*

- ***Fully configurable***

- ***Fully insulated***

The CNL 35 is a digital transmitters of universal use fully configurable, for temperature and process inputs.

FUNCTIONALITY:

Measures:
- temperature, linearized thermocouples with internal or external cold junction compensation, Pt100 with line length compensation,
- process, mA, mV, V, Ohms, Hz, sensor power supply, **strain gauge** (mV differential)

Calculation functions:
- square root extraction,
- special linearization on 26 points max,

Outputs:
- 2 configurables relays in sensor breaking detection and/or threshold detection with direction, threshold, hysteresis, security and delay choice
- 2 analogs outputs in mA or V, with output type, scale, security value, response time and limitation choice

Auxiliary:
- smoothed sensor power supply 20 Vdc - 25 mA, unavailable with CNL35/S2 version,
- potentiometer reference/**strain gauge** power supply 2.5 Vdc.

General characteristics:
- DIN rail mounting symmetrical / asymmetrical,
- connection on 2.5 mm² screw-terminals,
- 1500 V galvanic insulation supply/input/output/relay,
- saving of the configuration parameters in EEPROM, safety of data holding > 10 years,
- noise immunity, programmable filtering of the measure,
- freely adjustable measure offset,
- watchdog supervising the program process,
- regeneration of internal parameters on each measure,
- neutralization of surroundings effects thanks to the self-calibration of the circuit of acquisition,

DIALOGUE - CONFIGURATION:

The device can interact via the serial RS232 link with any system emulating a terminal. Example: Windows HyperTerminal.
Free supply of RS232 cable on single request.

Warning: the RS232 link is not insulated from measure inputs, check if there is no hazardous potential on inputs before any configuration.

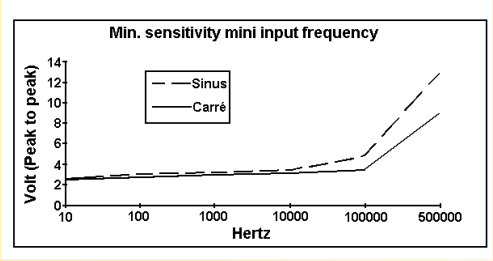
Through the terminal, the user will be able to:
- visualize the measure,
- set the offset,
- configurate device:
  input, relays,
  outputs, specials functions...

Version et order code :

CNL35:	standard version, universal input, 1 analog output.
CNL35/F:	intended for frequency input, 1 analog output.
CNL35/R:	standard version + 2 configurables relays.
CNL35/S2:	standard version + 2nd analog output, insulated among first and independently configurable.
CNL35/T:	standard version + response time reduced to 40 ms for linears inputs, 60 ms for frequency input.
CNL35/SP:	standard version + output 1 resolution extended to 15 bits.
Note:	Options /R and /S2 can not be held concurrently ! /SP option can be only held with /S2 option, the 2nd output keep his resolution to 12 bits.

INPUT (resolution > 16 bits)

TYPE	RANGE	ACCURACY
Low level voltage	from +/- 8 mV	+/- 10 µV
on 8 calibres	to +/- 1024 mV	+/- 100 µV
Input impedance	22 MOhms	
High level voltage	from +/- 1.6 V	+/- 1 mV
on 8 calibers	to +/- 205 V	+/- 100 mV
Input impedance	1 MOhms	
Current	from +/- 8 mA	+/- 10 µA
on 8 calibers	to +/- 512 mA	+/- 100 µA
Input impedance	1 Ohms	
Resistance 2, 3 wires	0 / 320 Ohms	+/- 0.1 Ohms
Measure current	0.1 mA	
Frequency	0.25 / 20 000 Hz	+/- 0.3 % of the
On 2 calibers	20 kHz / 500 kHz	measured value
Input impedance	100 kOhms	
Measure range		
3 to 50 V~ p.t.p.		



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
T° compensation	-10 / 60 °C	+/- 0.2 °C

(Other couples on request)

AUXILIARY

Sensor power supply	18 V smoothed
for power supply voltage rating	

OUTPUT (resolution 12 bits)

TYPE	RANGE	ACCURACY
Current	0 to 20 mA	+/- 10 µA
Load	900 Ohms (S1)	750 Ohms (S2)
Voltage	0 to 10 V	+/- 5 mV
On external shunt	500 Ohms	

Noise < 30mV (p.t.p.) max. on 500 Ohms load.

Response time	300 ms to 60	all inputs
CNL35/T option	60 ms to 60 s	frequency input.
	40 ms to 60 s	other inputs.

RELAY

Insulated reverser contact	1500 Vac
Switching power	1 A / 250 V

POWER SUPPLY

(to specify at the order)
230 Vac 50-60 Hz ,+/- 10 %, 2.3 VA
115 Vac 50-60 Hz, +/- 10 %, 2.3 VA
20 to 70 Vac/Vdc,2.3 VA
80 to 265 Vac/Vdc,2.3 VA
9 to 30 Vdc, 2.3 W
(protected for reverse polarity)

RECOMMENDED OPERATING CONDITIONS

Operating temperature	-10 to +60 °C
Storage temperature	-20 to +85 °C
Influence	0.005 % / °C (% of the full scale)
Relative humidity	85 % (not condensed)
Weight	~ 200 g
Protection	IP20
Dielectric strength	1500 Veff (pwr.supply 115/230Vac)
(Input/Pwr.Supply/Output)	1000 Veff (pwr.supply 24/48 Vdc)
MTBF	400 000 hours

Electromagnetic compatibility

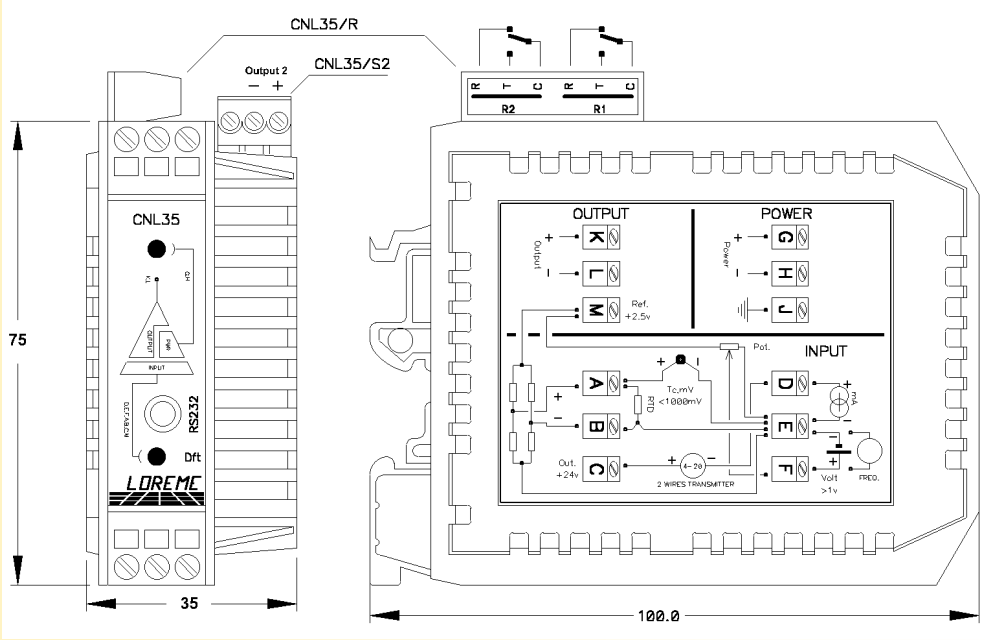
Generic standards: **NFEN50081-2 / NFEN50082-2**

CE

EN55011	meet	group 1 / class A			
EN61000-4-2	no influence	B	**ENV50140**	< +/- 5 %	A
EN61000-4-4	< +/- 5 %	B	**ENV50141**	< +/- 10 %	A
EN61000-4-5	< +/- 5 %	B	**ENV50204**	no influence	A
EN61000-4-8	no influence	A			
EN61000-4-11	< +/- 5 %	B	DBT	**73/23/CEE**	

WIRING AND OUTLINE DIMENSIONS:

Vertical setting
recommended



Afin de garantir leurs caractéristiques techniques, nous préconisons un espacement d'au moins 5 mm entre chaque appareil