

- **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
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- **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 mm<sup>2</sup> 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...

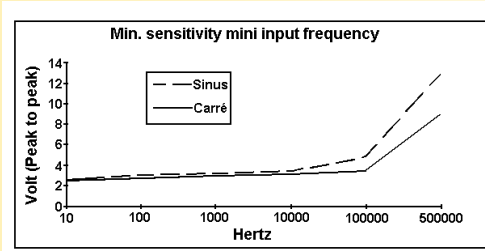
Version et order code :

- 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 on 8 calibres	from +/- 8 mV to +/- 1024 mV	+/- 10 µV +/- 100 µV
Input impedance	22 MOhms	
High level voltage on 8 calibres	from +/- 1.6 V to +/- 205 V	+/- 1 mV +/- 100 mV
Input impedance	1 MOhms	
Current on 8 calibres	from +/- 8 mA to +/- 512 mA	+/- 10 µA +/- 100 µA
Input impedance	1 Ohms	
Resistance 2, 3 wires Measure current	0 / 320 Ohms	+/- 0.1 Ohms
Frequency On 2 calibres	0.25 / 20 000 Hz 20 kHz / 500 kHz	+/- 0.3 % of the 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 for power supply voltage rating 18 V smoothed

**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**

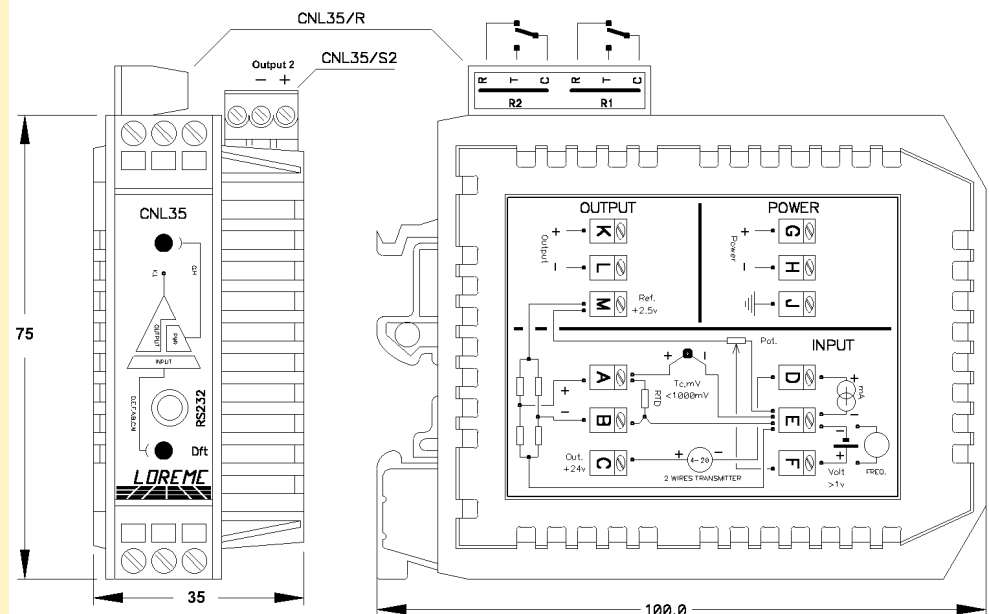
Generic standards: NFEN50081-2 / NFEN50082-2



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