

- **CNL40** : RTD PT100 and thermocouples input
- **CNL40D**: Double version  
2 independents transmitters in one enclosure
- **CNL40L** : Low cost version
- **Fully configurable** : RS232 USB link
- **Loop powered**  
powered by 4-20mA current loop, without isolation



The CNL40 is a smart in-head mounting temperature sensor transmitter. The CNL40 cover all temperature measurement requirement (PT100 and thermocouple) in all measure range with a unique device.

**DESCRIPTION :**

**Temperature measurement:**

- Thermocouples (B,E,J,K,R,S,T,...)
- Platinum resistance sensor PT100

**Sensor correction:**

- RTD and thermocouple linearization,
- Cold junction compensation for thermocouple,
- Line length compensation for RTD.

**Signal conditioning:**

- Programmable sensor breaking safety value,
- Programmable response time from 0.2 to 60 sec, (measure filtering function)
- Reverse or standard output,
- Measure offset adjustment,
- Neutralization of ambient thermal variation effects.

**Feature:**

- Temperature sensor in-head anti-vibration mounting: optimal fitting of measure element in thermowell with the spring loaded. Improved reliability and response time accuracy.
- wiring on spring terminal block ( stainless, 1.5mm<sup>2</sup> max section ),
- loop voltage presence indicated by Led,
- reverse polarity protected,
- protection rating (enclose/terminal): IP68 / IP20

**Mounting and connection:**

- For DIN B head
- M4 screw (33mm between axis)
- wide central tunnel for wires path (7 mm diameter)

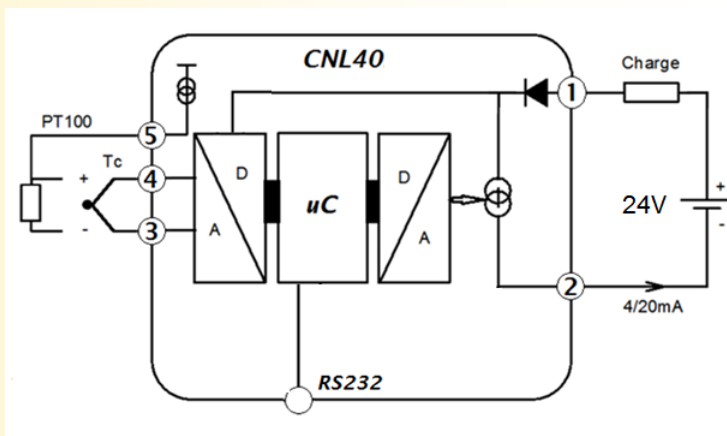
**Performance / Environment:**

- Long-term stability 0.1 %/year,
- Operating temperature up to 85 °C,
- Excellent EMC performance,
- Resistant, protected against collisions and vibrations (silicon bonding resin)

**Configuration:**

- Setting by RS232 serial link (terminal mode without specific software),
- USB-RS232 cable (3 points plug) supply separately.

**Synoptic**



**Versions and ordering codes:**

[Request a quote](#)

- CNL40:** PT100, thermocouple input
- CNL40D:** PT100, thermocouple inputs, duplex version (the two transmitters are isolated between them)
- Option : /L** Low cost version (20 bits input converter)

INPUT			
TYPE	RANGE	ACCURACY	
		(24bits resol.) CNL40	(20bits resol.) CNL40L
Tc B	200 / 1800 °C	+/- 2 °C	+/- 2 °C
Tc E	-250 / 1000 °C	+/- 0.4 °C	+/- 0.7 °C
Tc J	-200 / 600 °C	+/- 0.4 °C	+/- 0.7 °C
Tc K	-200 / 1350 °C	+/- 0.4 °C	+/- 0.7 °C
Tc R	0 / 1750 °C	+/- 1 °C	+/- 1.5 °C
Tc S	0 / 1600 °C	+/- 1.5 °C	+/- 1.5 °C
Tc T	-250 / 400 °C	+/- 0.5 °C	+/- 0.7 °C
Input impedance		> 1 MOhms	
T° Compensation	-20 to 85 °C	+/- 0.3 °C	+/- 0.4 °C
Pt100 (2, 3 wires)	-200/800°C	+/- 0.3 °C	+/- 0.4 °C
PT100 excitation current		300 µA	
Line influence		0.3°C / 10 Ohms	
Response time		~ 200 ms	
Sampling rate		6 per second	
Intrinsic power consumption		<3.6 mA	
Burn out current		3.6 ... 23mA	

POWER SUPPLY / OUTPUT (14 bits resolution)		
TYPE	RANGE	ACCURACY
Supply	9 to 40Vdc ( loop powered )	
Current	4 / 20 mA	± 0.01 mA
Load @ 24Vdc	750 Ohms	
Power supply influence :		0.002 % / V
Load influence :		0.004 % / 100 Ohms
ENVIRONMENT		
Operating temperature		-30 to +65 °C
Storage temperature		-30 to +85 °C
Thermal drift (% of full scale)		< 0.01 % / °C
Humidity		85 % not condensed
Weight		45 g
MTBF (IEC 62380)		> 3 000 000 Hrs @ 30°C
Lifetime		> 250 000 Hrs @ 30°C
<i>Electromagnetic compatibility 2014/30/UE / Low Voltage Directive 2014/35/UE</i>		
Immunity standard for industrial environments <b>EN 61000-6-2</b>		Emission standard for industrial environments <b>EN 61000-6-4</b>
EN 61000-4-2 ESD	EN 61000-4-8 AC MF	EN 55011
EN 61000-4-3 RF	EN 61000-4-9 pulse MF	group 1 class A
EN 61000-4-4 EFT	EN 61000-4-11 AC dips	
EN 61000-4-5 CWG	EN 61000-4-12 ring wave	
EN 61000-4-6 RF	EN 61000-4-29 DC dips	



**RACCORDEMENT ET ENCOMBREMENT:**

