

5 digits programmable panel meter for analog inputs 4..20mA / 0..10V / 0..100KHz / ...

INL35L

LOREME

• All process inputs

Volt ,mV, mA, potentiometer,
frequency, strain gauge,
sensor power supply

• 5 digits, 100 000 pts measure display

• option: up to 4 relays

Isolated analog output



RS485 link, Modbus or Profibus
ETHERNET Modbus TCP

• Universal power supply AC and DC

• Fast response time: 35 ms

• INL35L : 96x48mm size

• INL35LD : 96x96mm size

double display version

• Pluggable connectors



INL35L is a compact universal digital indicator for analog process inputs. It has a wide range of options (relays, communication, analog output).

OVERVIEW:

Process inputs:

- Current with or without sensor power supply,
- Voltage,
- Potentiometer,
- Frequency (tachometer) and duty cycle,
- Namur sensor,
- Strain gauge.

Calculation functions:

- square root extraction
- Special linearization on 26 points

Front face :

- Measure display: 7 segments 5 digits of 14,2 mm led display
- 3 push buttons: alarm threshold, tare adjustment, ...
- 4 red leds for visualization of the relays state.

Analog output (/S option)

- 1 isolated analog output configurable in current 0...4...20 mA or voltage 0...2...10 V
- adjustable response time and security value.

Relays (/R option)

- Up to 4 relay output (changeover contact) usable in alarm, ON/OFF regulation, sensor or input loop breaking detection.
- Threshold, direction, hysteresis and delay individually adjustable on each relay (activation and deactivation delays)

Feature:

- DIN panel case: 96x48mm
- Pluggable screw terminal connectors (1.5mm²)
- Universal switching power supply: 20 ... to ... 265Vac/dc or 9Vdc ... to ... 30Vdc
- Conformal coating.
- IP20 Protection. IP65 in option

SECURITY / FIABILITY:

- high noise immunity, higher than the requirements for CE marking.
- saving of the configuration parameters in FLASH, safety of data holding > 40 years,
- possibility of firmware update via serial RS232 link
- watchdog monitoring the program process,
- galvanic insulation inputs/output/power supply,

CONFIGURATION:

INL35L can be configured via the serial RS 232 link (jack 3.5) under any operating system (no specific software to install). USB to jack cable supplied separately.

Warning the RS232 link is not isolated from measure inputs.

Version and order code :

INL35L 5 digits display, without option (96 x 48 mm)
INL35LD double displays, without option (96 x 96 mm)

INL35L/R1 + 1 relay.
INL35L/R2 + 2 relays.
INL35L/R3 + 3 relays.
INL35L/R4 + 4 relays.
INL35L/S + 1 analog output.
INL35L/CM + RS485 link with MODBUS protocol.
INL35L/CP + RS485 link with PROFIBUS-DP protocol.
INL35L/CMTCP + ETHERNET MODBUS TCP link.

options /R4, /S, /CM, /CP, /CMTCP are not combinable.

INPUT		
Type	Range	Accuracy
Low levels voltage	- 250 to 2000mVdc	+/- 40uV to
Input impedance	1 MOhms	+/-1 mV
<i>(on two range : 250mV and 2000 mV)</i>		
Differential voltage	- 50 to +50mVdc	+/- 10 uV
Input impedance	1 MOhms	
High levels voltage	- 25 to +25Vdc	+/- 0.01 V
Input impedance	500 KOhms	
	- 250 to +250Vdc	+/- 0.2 V
Input impedance	5 Mohms	
Current	- 25mA to 25mA	+/- 0.01 mA
Input impedance	50 Ohms	
Frequency	0.25Hz / 100 000 Hz	+/- 0.2 %
Duty cycle	50 Hz 5KHz	+/- 0.2 %
Input impedance	100 Kohms	
Signal level	4 to 50 V~ peak to peak	
with automatic DC component suppression.		
All type of sensor: NPN, PNP, NAMUR		
Sampling configurable for any type of input		
resolution :14 bits @ 60 samples / second)		
resolution :16 bits @ 15 samples / second)		
internal reference stability 5ppm		

AUXILIARY

Sensor power supply	22 V regulated +/- 5% (50mA)
Potentiometer reference	5 V regulated +/- 0.15% (20mA)

COMMUNICATION (INL35L/C--)

RS485 link:	
Modbus (INL35L/CM)	from 1,2 to 38,4 kbps.
Profibus-DP (INL35L/CP)	from 9600 to 1.5M bds.
Wiring	2 wires screw terminal.
Ethernet link (RJ45) (INL35L/CMTCP)	10/100 M

Analogical output (INL35L/S). resolution 12 bits		
Type	Range	Accuracy
Current	0 ... 4 ... 20 mA	+/- 20 uA
Allowable load:	0.....800 Ohms	

Voltage	0 ... 10 V	+/- 10 mV
Impedance output:	500 Ohms (internal shunt 0.1%)	
Programmable response time		35 ms to 60 s

RELAY (INL35L/R)

Switching power	250VAC , 1A (250 VA)
Individual programmable delay (on or off)	0.....600 s

POWER SUPPLY

Universal: (2 versions: standard and low voltage not polarized)	
Standard:	21Vdc, 45Vac... to... 265Vac/dc
low voltage:	12Vdc... to... 30Vdc.
consumption < 3 VA	

ENVIRONMENT

Operating temperature	-10 to +60 °C
Storage temperature	-20 to +85 °C
Temperature drift	< 20 PPM / °C (of full scale)
Relative humidity	85 % (not condensed)
Weight	~ 180 g
Protection rating	IP20
Dielectric strength	1500 Vrms continuous
Shock IEC 60068-2-27 (operating)	15 G / 11 ms
Bump IEC 60068-2-29 (transportation)	40 G / 6 ms
Vibration IEC 60068-2-6 (operating)	1 G / 10 - 150 Hz
Vibration IEC 60068-2-6 (transportation)	2 G / 10 - 150 Hz
Dielectric strength (input/power supply-relay-output)	2500 Vrms
MTBF (MIL HDBK 217F)	> 1 500 000 Hrs @ 25°C
Life time	> 180 000 Hrs @ 30°C

Electromagnetic compatibility 2004/108/CE / Low Voltage Directive 2006/95/EC

Immunity standard for industrial environments EN 61000-6-2		Emission standard for industrial environments EN 61000-6-4
EN 61000-4-2 ESD	EN 61000-4-8 AC MF	group 1 class A
EN 61000-4-3 RF	EN 61000-4-9 pulse MF	
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	



WIRING AND OUTLINE DIMENSIONS:

