Remote acquisition unit with isolated inputs for Temperature or process

CML105

LOREME

• 8 isolated analog inputs, temperature and process

CML105T *mV, thermocouple, PT100*
CML105P *4-20 mA and 0-10V*
Individual configuration of each input.
2 alarm thresholds per input.

• Communication :

Modbus RTU RS485

Modbus TCP (Ethernet), 6 simultaneously connections
Embedded Web Server
SNMP

• Application :

Acquisition interface,
protection relay

The CML105 is a multichannel acquisition unit for application requiring a high level of functional safety. The full isolation of the product ensures total independence of each measurement channel.

Measure inputs:
 (***All the inputs are isolated from each other***)
CML105t : thermocouples , Pt100 , mV, resistance.
CML105p : 4 - 20 mA and 0 - 10V.

Special inputs on request:
CTN, CTP, NI100, CU10, PT1000, potentiometer, 0...100V, …….

Front face :
- LCD display with 2 lines of 16 characters (back-lighted).
- Three push buttons to configure the product.
  (choice of input type, thresholds setting, communication, display ....).

Alarms :
The device have 2 configurable alarms per measure channel.
(parameters: Threshold, direction, hysteresis, delay, sensor breaking detection.)
These alarms respectively control two relays,
common to all channels.
Each relay can be setting for positive or negative security (NO/NC).

Communication:
Sending back of the measurements may be performed in option by several communication protocol:
      - RS485 : Modbus
      - Ethernet : Modbus TCP, SNMP

Special functions:
- Selection of the scanning sequence by individual enabling or disabling channels.
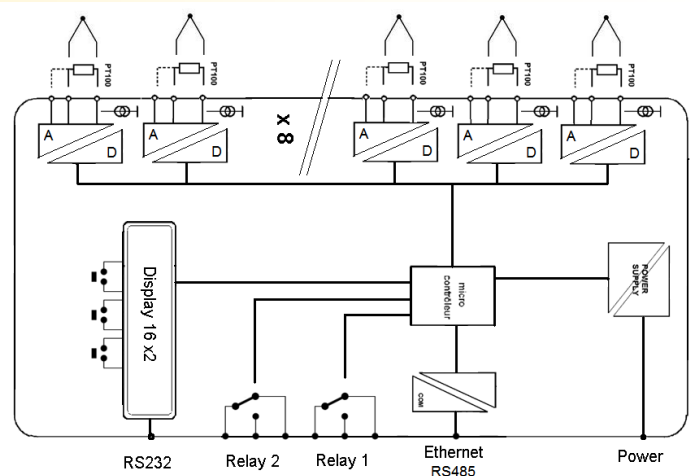- Differential alarm for monitoring temperature difference.

Features:
- Mounting on DIN rail (symmetrical).
- Connection on spring terminals (max section 1.5 mm ²).
- Conformal coating.
- Protection rating: IP20.

Configuration / update:
The device can be configured via the front panel or via the serial RS232 link. USB to 3 points plug cable supplied separately.
Firmware update is also possible via this serial link.

Synoptic:

RS232   Relay 2   Relay 1   Ethernet RS485   Power

Version and order code:

Request a quote ✉

CML105T: 8 Temperature inputs « Tc, 3-wire PT100 »
CML105P: 8 Process inputs « mA , Volt »

OPTION :

  -pt4f: measurement board with 4-wire PT100 inputs

  /R: 2 alarms relays. Common to all measures channels

  /CM   RS485 MODBUS / JBUS link
  /CMTCP   Ethernet MODBUS TCP link
  /SNMP   Ethernet SNMP protocol link

INPUT

TYPE	RANGE	ACCURACY
Version : CML105T (Temperature)		
Voltage	0 / 120 mV	+/- 20 µV
Input impedance	> 4 MOhms	
Resistance	0 / 380 ohms	+/- 0.2 Ohms
Pt100 2 or 3 wires	-200 / 600 °C	+/- 0.3 °C
Pt100 4 wires	-200 / 600 °C	+/- 0.1 °C
Tc B	200 / 1800 °C	+/- 3 °C
Tc E	-250 / 1000 °C	+/- 0.5 °C
Tc J	-200 / 700 °C	+/- 0.7 °C
Tc K	-200 / 1350 °C	+/- 0.8 °C
Tc R	0 / 1750 °C	+/- 3 °C
Tc S	0 / 1600 °C	+/- 3 °C
Tc T	-250 / 400 °C	+/- 0.7 °C
Compensation T°	-10 / 60 °C	+/- 0.2 °C
Other couples on request.		

Version : CML105P (process)		
Voltage	0 / 10 V	+/- 5 mV
Input impedance	250 kOhms	
Current	0 / 20 mA	+/- 10 µA
Current	4 / 20 mA	+/- 10 µA
Input impedance	5 Ohms	

Scanning time (measure of all channels)   1000 ms

RELAYS

Resistive breaking capacity   1 A / 250 Vac

POWER SUPPLY (to be define at order)
11…..30 Vdc or 20….265 Vac-dc, 4 VA

COMMUNICATION
Modbus RTU over RS485 (9600, 19200 bauds).
Connection: 2 wires screw terminal.
Modbus TCP/ SNMP over Ethernet 10/100 T base (RJ 45 connection).

ENVIRONMENT
Operating temperature	-10 to 70 °C
Storage temperature	-20 to 85 °C
Effect	< 0.01 % / °C
Relative humidity	85 % not condensed
Weight	~500 g
Protection rating	IP20 as standard

Dielectric strength:
Input/Relay/Power Supply/Communication: 1500 Vrms continuously
input / input   : 500 Vrms continuously

MTBF (MIL HDBK 217F)   > 4 000 000 Hrs @ 25°C
Life time   > 200 000 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	EN 55011
EN 61000-4-3 RF	EN 61000-4-9 pulse MF	
EN 61000-4-4 EFT	EN 61000-4-11 AC dips	group 1
EN 61000-4-5 CWG	EN 61000-4-12 ring wave	class A
EN 61000-4-6 RF	EN 61000-4-29 DC dips	CE

WIRING AND OUTLINE DIMENSIONS:

On account of the constant technologies and standards evolution, LOREME keeps the possibility to modify the specifications of the included products without notice.