

Isolated 4 channels analog measurement device. Remote analog acquisition

CML70

LOREME

• 4 isolated analog inputs

- individual configuration of each inputs.
- 1 alarm threshold by input.

CML70T	thermocouple, PT100 3 wires
CML70PT4	thermocouple, PT100 4 wires
CML70P	0..4...20 mA and 0...10V
CML70B	0..24V...48V...127V...150V

• Communication :

- Modbus RTU
- Modbus-TCP (Ethernet) 6 simultaneous connections
- Embedded web server
- SNMP

• Application :

Acquisition interface, measure, control,
monitoring: motor, transformer, alternator ...
protection relay: temperature, pressure, current....



The CML70 is a four channels compact acquisition unit. Designed for demanding application in terms of accuracy and functional safety, the complete isolation of the product provide a total independence of each measurement channel.

Measure inputs:

(All inputs are isolated from each other)

CML70t : thermocouples , Pt100 2, 3 wires, mV, resistance.

CML70pt4 : thermocouples , Pt100 4 wires.

CML70p : 0...20mA; 4...20 mA; 0...10V (process)

CML70B : 0...24V ...48V ...127V ...150Vdc (monitoring battery, supplies)

Special input type on request:

NTC , PTC , 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 mode....).

Alarm:

- 1 configurable alarm by measure channel.
- (Threshold, direction, hysteresis and delay, sensor breaking detection.)
- These alarms control one relay common to all channels.
- The relay can be setting for positive or negative security (NO/NC).

Communication:

In option, the measurement feedback can be carried out via several communication protocols:

- RS485 : Modbus RTU
- Ethernet : Modbus TCP, SNMP

Special functions:

- Selection or inhibition of each measured channels
- Differential alarm for monitoring a temperature gap.

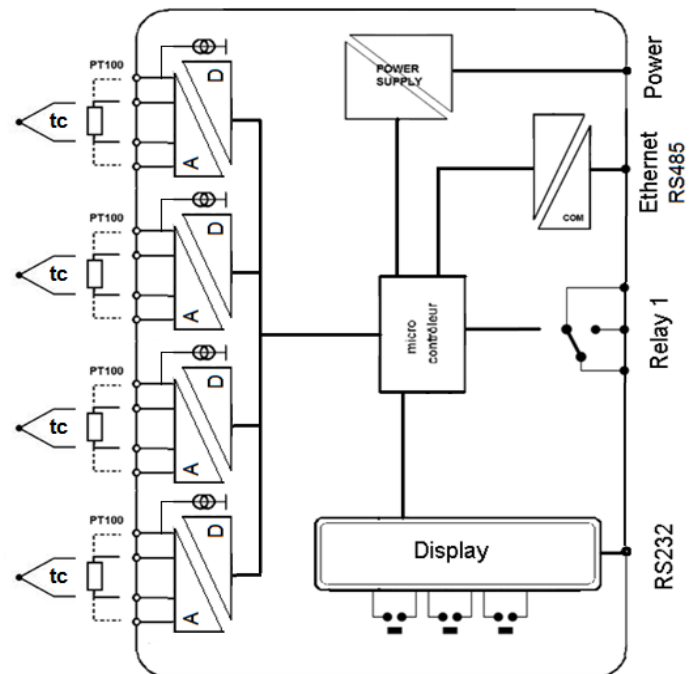
Feature:

- Mounting on DIN rail (symmetrical).
- Connection on spring terminal blocks (max section 1.5 mm²).
- Conformal coating.
- Protection rating: IP20.

Parameters setting:

The device can be configured via the front panel or via the serial RS232 link. USB to 3 points cable available separately.
Firmware update is also possible with this serial link.

Synoptic:



Version and order code:

CML70t:	4 temperature inputs « Tc, PT100 3 wires »
CML70pt4:	4 temperature inputs « Tc, PT100 4 wires »
CML70p:	4 process inputs « mA , V »
CML70B:	4 high level voltage input (up to 150Vdc)

All versions: 1 relay for alarm or watchdog
option -D: device with pluggable terminal blocks

Communication option:

/CM	RS485 link, MODBUS RTU
/CMTCP	Ethernet link, MODBUS TCP
/SNMP	Ethernet link, SNMP protocol

INPUT

TYPE	RANGE	ACCURACY
Version : CML70T (Temperature)		
Voltage	0 / 120 mV	+/- 20 µV
voltage input impedance		> 4 Mohms
Resistance	0 / 380 ohms	+/- 0.15 ohms
Pt100 2 ou 3 wires	-200 / 600 °C	+/- 0.25 °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

Version : CML70P (process)

Voltage	0 / 10 V	+/- 5 mV
Voltage input impedance		250 Kohms
Current	0 / 20 mA	+/- 10 µA
Current	4 / 20 mA	+/- 10 µA
Current input impedance		5 ohms

Cycle time (measure of all channels) < 500 ms

COMMUNICATION

Modbus RTU, RS485 link, baudrate: 9600 , 19200 bauds
 2 wires connection on spring terminal blocks.
 Modbus TCP/ SNMP over Ethernet 10/100 base T (connexion RJ 45)

POWER SUPPLY (to be define at order)

11.....30Vdc or 20....85 Vac-dc or 85....265 Vac-dc : 4VA

RELAY

Resistive breaking capacity 2A / 250 Vac

ENVIRONMENT

Operating temperature	-20 to 60 °C
Storage temperature	-25 to +85 °C
Effect (% of full scale)	< 0.01 % / °C
Humidity	85 % (not condensed)
Weight	~ 200 g
Protection	IP20
Dielectric strength:	
input/power supply/relay/communication	1500 Vrms continuous
Input/input	500 Vrms continuous
MTBF (MIL HDBK 217F)	> 1 500 000 Hrs @ 25°C
Life time	> 180 000 Hrs @ 30°C
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

Electromagnetic compatibility 2014/30/UE / Low Voltage Directive 2014/35/UE

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	

EN 55011



WIRING AND OUTLINE DIMENSIONS:

