

### • 8 isolated analog input, temperature and process

- 4 input channels for 4-wires PT100
- 4 input channels for 4...20 mA current

### • Communication :

- Modbus-TCP (Ethernet) 6 simultaneous connections
- Embedded Web Server

### • Application :

- measurement, control, management
- acquisition interface
- monitoring: motor, transformer, generator ...
- protection: temperature, pressure, current ....



The CML106 is a multichannel measurement unit for demanding applications in terms of accuracy and functional safety. This fully isolated product ensures total independence of each measurement channel.

#### Measure inputs:

(All inputs are isolated from each other)

Channel 1 to 4 : 4-wire Pt100  
configurable linearization with 2nd order polynomial.

Channel 5 to 8 : Current 4...20 mA  
configurable display range.

#### Front face :

- LCD display with 2 lines of 16 characters (back-lighted).
- Three push buttons to configure the product.  
(communication, display range, polynomial linearization)
- Configuration locked by password.

#### Communication:

Ethernet 10/100 link, Modbus-TCP protocol (RJ45 connection)  
Data format: 32 bits IEEE floating point.  
Embedded WEB Server.

#### Realization:

- DIN standard modular housing (6 modules, 107 mm).
- Mounting on DIN rail (symmetrical).
- Connection on spring terminal block (max section 1 mm<sup>2</sup>).
- Conformal coating.
- Protection degree: IP20.
- Total galvanic isolation.

#### Configuration:

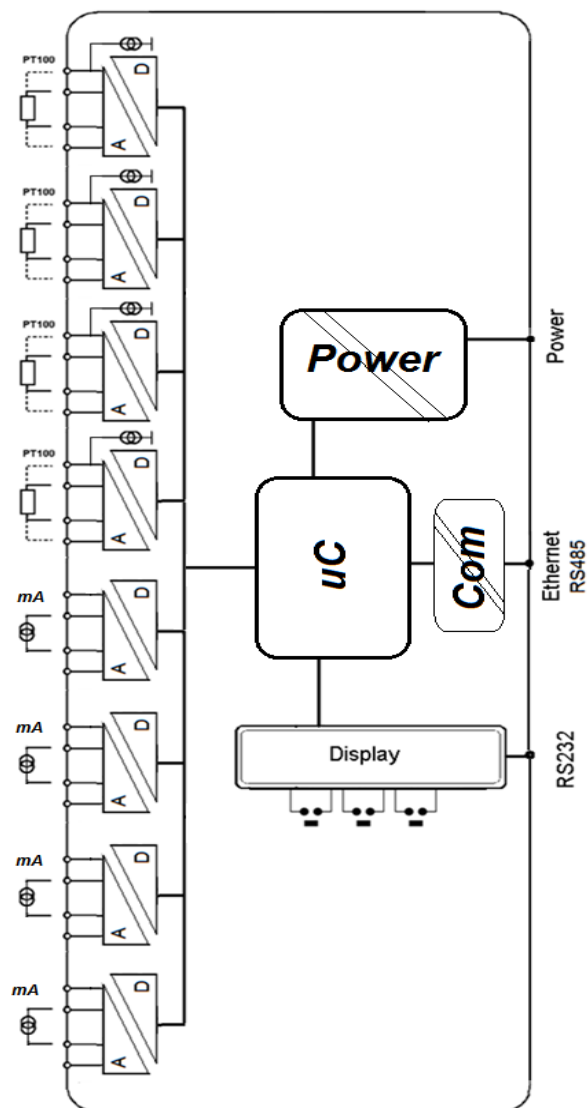
The device can be configured via the front panel or via the serial RS232 link (under the front cover). USB to 3 points plug cable supplied separately. Firmware update can be made via this serial link.

#### Version and order code:

**CML106/CMTCP :** 4 temperature PT100 4 wires inputs  
4 current 4...20mA inputs  
Ethernet Modbus-TCP link

**CML106/CMTCP-20ppm :** Low drift version  
with specific burn-in test procedure  
+ calibration and burn-in certificate.

#### Synoptic



## INPUT

(24 bits ADC , useful resolution: 16 bits , 20 ppm max reference)

| TYPE                                                           | RANGE           | ACCURACY          |
|----------------------------------------------------------------|-----------------|-------------------|
| Pt100 4 wires<br>excitation current : 1.5 mA typical, 2 mA max | 0°C .....200 °C | < +/- 0.04°C@20°C |

|                 |             |                  |
|-----------------|-------------|------------------|
| Current         | 4.....20 mA | < +/- 2 µA @20°C |
| Input impedance | 50 ohms     |                  |

Scanning time (measure of all channels) 1000 ms

## COMMUNICATION

Modbus-TCP over Ethernet 10/100 T base (RJ 45 connection)

## POWER SUPPLY

Universal: (2 versions: Standard and non-polarized low voltage.)  
standard : 20.....265Vac & 20.....300Vdc  
low voltage : 9 Vdc.....to.....30Vdc  
consumption < 4 VA

## RECOMMENDED OPERATING CONDITIONS

|                       |                    |
|-----------------------|--------------------|
| Operating temperature | -10 to 60 °C       |
| Storage temperature   | -20 to 85 °C       |
| Effect                | < 50ppm / °C       |
| "Low drift" version   | < 20ppm / °C       |
| Relative humidity     | 85 % not condensed |

|            |        |
|------------|--------|
| Weight     | ~500 g |
| Protection | IP20   |

|                               |                        |
|-------------------------------|------------------------|
| Dielectric strength:          |                        |
| Power / Communication, Inputs | 2500 Vrms continuously |
| Inputs / Inputs               | 500 Vrms continuously  |
| Inputs / Communication        | 500 Vrms continuously  |
| Insulation resistance         | > 1 Gohms @ 500Vdc     |

|                      |                      |
|----------------------|----------------------|
| MTBF (MIL HDBK 217F) | > 500 000 Hrs @ 25°C |
| Lifetime             | > 130 000 Hrs @ 30°C |

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

| Immunity standard for industrial environments<br>EN 61000-6-2 |                         | Emission standard for industrial environments<br>EN 61000-6-4 |
|---------------------------------------------------------------|-------------------------|---------------------------------------------------------------|
| EN 61000-4-2 ESD                                              | EN 61000-4-8 AC MF      | EN 55011<br>group 1<br>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:

