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CSQ QUALIFICAZIONE DEI SISTEMI QUALITA' DELLE AZIENDE
UNI - EN1 - ISO 29002
CERTIFICATO 9105-C035

USER MANUAL IM 302-U v. 1.2

TEMPERATURE MONITOR DEVICE
CTT8

INSTALLATION

OPERATOR SAFETY

Read carefully the instructions contained in this manual before installing and utilising the instrument.
The instrument described in this manual / in the following manual is intended for use by properly trained staff only

SAFETY

This instrument was manufactured and tested in compliance with IEC 1010 standards. In order to maintain these conditions and to ensure safe operation, the personnel must comply with the indications and markings contained in the following manual.
When the instrument is received, before beginning installation, check that it's still intact and no damage was incurred during transport.
Before installing / before beginning installation make sure that the operating voltage and mains voltage are compatible with the device instructions. The instrument power supply must not be earthed. Maintenance and/or repair must be carried out only by qualified and authorized personnel. If there is ever the suspicious that, during the operation phase. that safe is no longer possible, the instrument must be taken out of service and precautions taken against accidental use.
-Operation is no longer safe when:

- The instrument no longer functions/ doesn't work.
- There is clearly visible damage.
- After serious damage incurred during transport.
- After lenghty storage in unfavourable conditions.

CONNECTION THERMOMETRIC SENSOR

For the connection of the thermometric sensor RTD PT100 follow the instruction in wiring diagram.
Attention to not invert the position between the wires with red insulator and white insulator.
For reduce external noise to use the following indication:

- use sensor with shielded wires or twisted wires
- use sensor with section wires 0,5 mmq minimum
- use sensor with silvered or watertight wires

ALARM RELAYS

Concerning the connections of outputs contacts relays follow the indications enclosed in wiring diagram CTT box.
Trip and **Alarm** relays switch when the set thresholds are exceeded.
Fault relay switches in case of anomaly on PT100 sensors.

CONTROL UNIT SETUP

After the auxiliary supply providing to the control unit, on displays will flash the internal software index of device.
Successfully the control unit start displaying the temperatures monitored on inputs measurement.
For to enter in **SETUP** phase push **SET** button for a few seconds until to the relative **SET** signalling LED turn on.
The setting up are in sequence as indicated later on.
For to exit from **SETUP** phase without changing the present values, push **SET** button without confirming the modified values with **ENTER** button.
The values variation on condition can be effected with ⇐ and ⇒ buttons and stored through the **ENTER** button.
The pushing button **ENTER** move automatically the **SETUP** to the next value on function.

Selection of the HOLD function.

When we are in menu SETUP the first function to set is that one relative to the HOLD function:
this SETUP step is signalled by the LED HOLD.
for to set this function use⇐ and ⇒ buttons:

ON operating function
OFF no operating function

The HOLD function permits to keep on memorizing the alarm condition that can be reset only manually by **RESET** button when the temperatures are lower to the set thresholds.
Push **ENTER** button to confirm the operation.

Alarm and trip set up.

The **SETUP** step concerning alarm threshold starts from the set of **channel n.1** and its led placed on measurement display turn on.
With the **channel 1 led** lights, in the same time the turn on **ALARM led** which it' s always relative to channel 1 that shows SET step of alarm threshold :
Set range from 5°C to trip threshold value - 1 °C.
ENTER to confirm
Successfully the **TRIP** led lights to indicate the set step of channel 1 TRIP threshold .
Set range from + 1 °C alarm threshold to 200 °C
ENTER to confirm
Repeat all the operations for the successive measurement channels.

Node identifier for MODBUS network

This setting is meaningless for the CTT without serial interface installed.
On display T1-T2-T3-T4 will be displayed **I d**, on display T5-T6-T7-T8 will be displayed the node identifier value.
Setting value range is from 0 to 255
For to set this function use⇐ and ⇒ buttons, select the right value, then confirm with **ENTER** button.

SETUP exit

Push SET button to exit from SETUP.

TRIP AND RESET MODALITIES

Alarm

When value threshold exceed than 1 °C , after 5 seconds, **Alarm** relay is active and we have the **Alarm** led channel lights which underlines the exceeded threshold value.
The alarm condition ri-entry with the consequent release relays and relative turn off led it' s possible when temperature drops 2 °C than set threshold value.

Trip

When value threshold exceed than 1 °C , after 5 seconds, **Trip** relay is active and we have the turn on **Trip** led channel which underlines the exceeded threshold value.
The re-entry of **TRIP** condition it' s possible when the temperature drops 2 °C than the set threshold value.

Alarm acknowledgement.

When **Hold** function isn' t operating it' s possible to acknowledge the alarm condition that it's present on measurement inputs.
When there is an alarm condition, alarm relays and led " **alarm** " set going.
Pushing **RESET** button relay doesn' t work while alarm condition led starts flashing.
If temperature increases until to reach Trip temperature -1°C , relay and led will be ri-activated.
If after the acknowledgement temperature drops under the set threshold value, the flashing led will be set automatically.

DIAGNOSTIC

The control units CTT is provided with diagnostic function probes.
The conditions checked on 8 measurement inputs are the following :

- Pt 100 probe disconnected — indicating **OPE** message on display
- short-circuit of probe — indicating **SHR** message on display

At the moment of control unit switching – on the Fault autodiagnostic relay switches over and keep on excited condition until some anomalies described before arise .
An anomaly condition can be signalled also by flashing **FAULT** led.

OUTPUT RELAY STATUS

RELAY	INACTIVE STATUS	ACTIVATED STATUS	UNPOWERED STATUS
ALARM	ALARM OFF: CLOSED 29-30	ALARM ON: CLOSED 29-31	CLOSED 29-30
TRIP	TRIP OFF: CLOSED 32-33	TRIP ON: CLOSED 32-34	CLOSED 32-33
FAULT	FAULT OFF: CLOSED 38-40	FAULT ON: CLOSED 38-39	CLOSED 38-39

VISUALIZATION OF MAXIMUM VALUES OF MEASUREMENT TEMPERATURE.

Pushing **Tmax** button it's displayed through flashing led, the maximum temperature values reached for 8 seconds. : after that time the unit control returns to display measured temperature values.
With the pushbotton ⇐ and ⇒ is possible to check all the maximum temperature reachead on any measure channels
For to reset maximum temperature values we have to display the Tmax values and successfully to push at the same time **T max** and ← buttons.

VISUALIZATION OF HIGHER TEMPERATURES CHANNELS.

Push **HOT** button for some seconds until the turn-on **Hot** led.
On display placed on the left hand of the frontal panel will be displayed the temperature of measurement warmer channel between the CH1 – CH4 inputs.

On display placed on the right one of the frontal panel will be displayed the temperature of measurement warmer channel between CH5 – CH8 inputs.

To return on standard measurement display modalities, keep on pushing Hot button for some seconds until the turn-off light indicator.

INDICATORS LIGHT TEST

Push at the same time buttons ← and → and all the light indicators will start to flash for some seconds.

MEASUREMENT TEMPERATURES DISPLAY

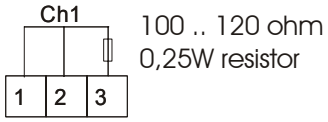
On display placed on the left hand of the frontal panel the temperatures of CH1 - CH4 channels will be displayed between 0 °C +200 °C .range
On display placed on the right one of the frontal panel the temperatures of CH4 - CH8 channels will be displayed between 0 °C + 200 °C range.

To use the ← and → buttons to change the visualization measurement channel.

EXCLUDING INPUTS NOT USED

If one or more inputs are unused, simply connect a low power resistor, value from 100 to 120 ohm, as in example, on the inputs channels to be disabled.

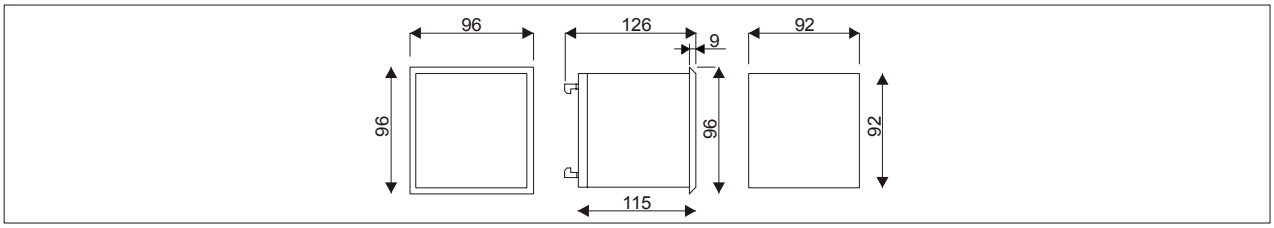
Disabling input Ch1.
Apply proper connection
for others inputs.



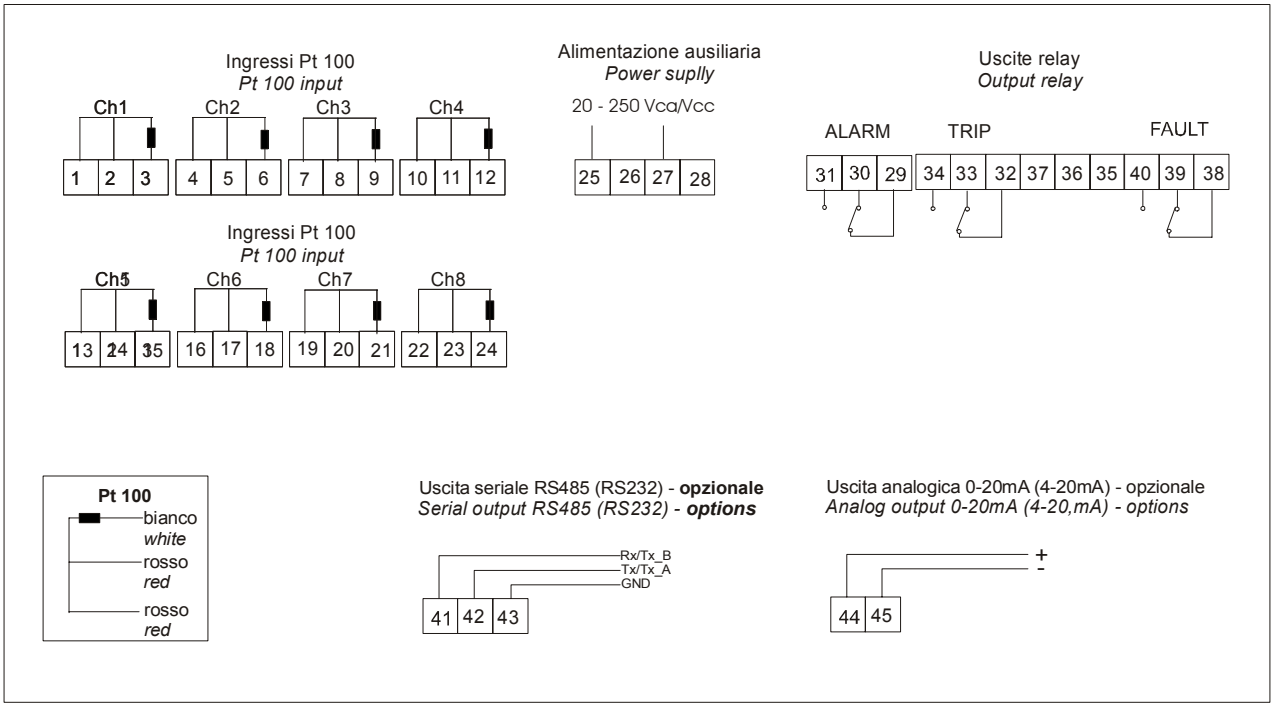
TECHNICAL FEATURES

AUXILIARY SUPPLY	20 ÷ 250 Vac/dc or 110-230V 50-60Hz
POWER CONSUMPTION	max 4 VA
MEASUREMENT INPUTS	8 inputs from 2/3 wires RTD Pt100
MEASUREMENT RANGE	0 °C ÷ 200 °C
ACCURACY	± 2 °C
DISPLAY	2 red led display 3 digit
OUTPUT RELAYS	3 relay NC- C -NO 8 A max PF=1
CONNECTIONS	removable terminal boards max 2,5 mmq.
INSULATION	2500 Vrms 50 Hz per 60 sec withstand between inputs, outputs and power supply
PROTECTION LEVEL	IP40 front panel IP20 back side panel (CEI-EN 60529)
OPERATING TEMPERATURE	0 °C 50 ÷ °C humidity max. 90% without condensation.
STORAGE TEMPERATURE	- 25 °C ÷ +70 °C
REFERENCE STANDARDS	EMC CEI-EN 50081-2 CEI-EN 50082-2
	safety CEI 41.1 CEI EN 60255-6.
HOUSING	Self-extinguishing thermoplastic housing compliance with UL94-V0

Dimensioni - *Dimension*



Schemi d'inserzione CTT-8 - *Wiring diagrams CTT-8*



Per eventuali problematiche applicative e funzionali non trattate nel presente manuale contattare il nostro servizio di assistenza tecnica.

Il costruttore declina ogni responsabilità per eventuali danni a cose o persone derivanti da un uso improprio o non consentito degli strumenti.

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