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GEFRAN

4T 72

TEMPERATURE INDICATOR with CONFIGURABLE INPUT



Main applications

- *Thermometry*
- *Hygrometry*
- *Remote repeaters*
- *Test benches*
- *Food processing equipment*

Main features

- *Faceplate configurable input*
- *Protected by a personal code*
- *Configurable by a serial link*
- *Transmitter power supply incorporated*
- *Custom thermocouple linearisation available*
- *Internal linearisation for engineering units*
- *Labels provided for the most common physical units*

GENERAL

Microprocessor based indicator in 72x36 format manufactured with SMT.
The instruments have a lexan membrane faceplate (guaranteed to IP65) which has 3 keys, a 2, 3 / 4-digit display.
The input signal can be selected from a wide range of sensors:

- *Thermocouples of type J, K, R, S, T, B, E, N, L GOST, U, G, D, C*
- *Resistance thermometers Pt100, Pt100J (japanese standard) 2 / 3 wire*
- *PTC and NTC themistors*
- *Linear inputs 0 to 60/12 to 60mV, 0 to 20/4 to 20mA, 0 to 10/2 to 10/0 to 5/1 to 5/0 to 1/0, 2 to1V*

The selection is made using the faceplate keys and correct input contact.
No external shunt or adapter is required.
The programming of the instrument is made easy by grouping the parameters in function blocks and by a simplified data entry menu.
The configuration can be simplified even further using the PC programming kit made up of a connection cable and a menu guide program that runs win windows (see data sheet cod. WINSTRUM).
A configurable personal software protection code (password protection) can be used to restrict the levels of editing and displaying the configuration parameters.

TECHNICAL DATA

INPUTS

Accuracy 0,2% f.s. ±1digit.
Sampling time 120msec for temperature sensors, configurable for linear inputs down to a minimum of 15msec with reduction of the resolution to 2000 steps.
Configurable decimal point position for linear inputs, for TC, RTD, PTC and NTC inputs, only one decimal digit is allowed in the maximum display range of -199.9 to 999.9 (4 digit display), -99.9 to 99.9 (3 digit display with sign), -9.9 to 9.9 (2 digit display with sign) with indication of open circuit thermocouple or RTD, PTC or NTC in open or short circuit, indication of over- and under-range for linear inputs.

TC - Thermocouple

Automatic cold junction compensation
(4 digit)

J	0 to 1000°C / 32 to 1832°F
K	0 to 1300°C / 32 to 2372°F
R	0 to 1750°C / 32 to 3182°F
S	0 to 1750°C / 32 to 3182°F
T	-200 to 400°C / -328 to 752°F
B	44 to 1800°C / 111 to 3272°F
E	-100 to 750°C / -148 to 1382°F
N	0 to 1300°C / 32 to 2372°F
L-GOST	0 to 600°C / 32 to 1112°F

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U	-200 to 400°C / -328 to 752°F
G	0 to 2300°C / 32 to 4172°F
D	0 to 2300°C / 32 to 4172°F
C	0 to 2300°C / 32 to 4172°F
custom	-1999 to 9999

TC - Thermocouple
(3 digit + sign)

J	0 to 999°C / 32 to 999°F
K	0 to 999°C / 32 to 999°F
R	0 to 999°C / 32 to 999°F
S	0 to 999°C / 32 to 999°F
T	-200 to 400°C / -328 to 752°F
B	not available
E	-100 to 750°C / -148 to 999°F
N	0 to 999°C / 32 to 999°F
L-GOST	0 to 600°C / 32 to 999°F
U	-200 to 400°C / -328 to 752°F
G	0 to 999°C / 32 to 999°F
D	0 to 999°C / 32 to 999°F
C	0 to 999°C / 32 to 999°F
custom	-999 to 999

(2 digit + sign)

J	0 to 99°C / 32 to 99°F
K	0 to 99°C / 32 to 99°F
R	0 to 99°C / 32 to 99°F
S	0 to 99°C / 32 to 99°F
T	-99 to 99°C / -99 to 99°F
B	not available
E	not available
N	not available
L-GOST	0 to 99°C / 32 to 99°F
U	-99 to 99°C / -99 to 99°F
G	not available
D	not available
C	not available
custom	-99 to 99

RTD (2 or 3 wire)
(4 digit)
PT100 -200 to 600°C / -328 to 1112°F
JPT100 -200 to 600°C / -328 to 1112°F

(3 digit + sign)
PT100 -200 to 600°C / -328 to 999°F
JPT100 -200 to 600°C / -328 to 999°F

(2 digit + sign)
PT100 -99 to 99°C / -99 to 99°F
JPT100 -99 to 99°C / -99 to 99°F

PTC
990Ω, 25°C
(4 digit and 3 digit + sign)
-55 to 120°C / -67 to 248°F
(2 digit + sign)
-55 to 99°C / -67 to 99°F

NTC
1KΩ, 25°C
(4 digit and 3 digit + sign)
-10 to 70°C / 14 to 158°F
(2 digit + sign)
-10 to 70°C / 14 to 99°F

DC - Linear
With scale configurable within the limits:
-1999 to 9999 (4 digit),
-999 to 999 (3 digit + sign) or
-99 to 99 (2 digit + sign)
0 to 60mV / 12 to 60mV
0 to 10V / 2 to 10V
0 to 5V / 1 to 5V
0 to 1V / 0,2 to 1V
0 to 20mA / 4 to 20mA
Input impedance:
for voltage signals Ri > 500KΩ
for current signals Ri = 50Ω
32-segment configurable linearisation can be used.

POWER SUPPLY
11...27Vdc , 18...27Vac ± 10%
50/60Hz, max. 3VA
(non isolated from sensor input)

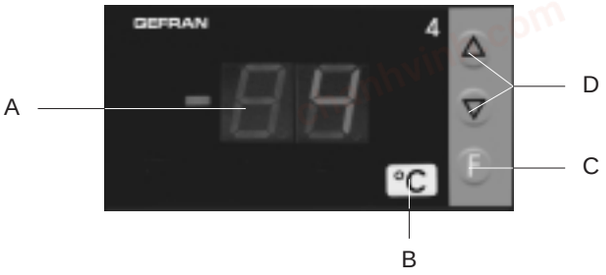
TRANSMITTER POWER SUPPLY
2 wire
18Vdc ±10% unstabilised, max. 50mA
1,2Vdc for potentiometer > 100Ω

AMBIENT CONDITIONS
Working temperature range: 0 to 50°C
Storage temperature range: -20 to 70°C
Humidity: 20 to 85%Ur non-condensing

WEIGHT
90g. in the complete version

FACEPLATE DESCRIPTION

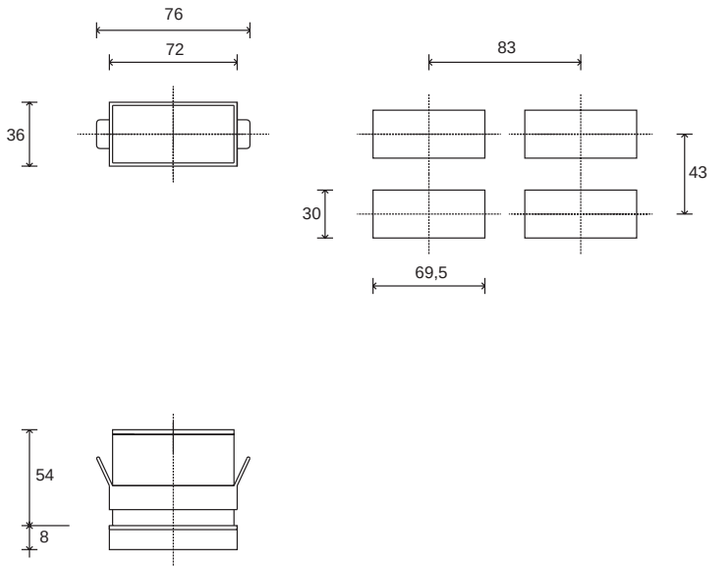
A - PV display: indication of process variable
B - Label for engineering units
C - “Function” key
D - “Raise” and “Lower” keys



Red LED display
IP65 faceplate protection

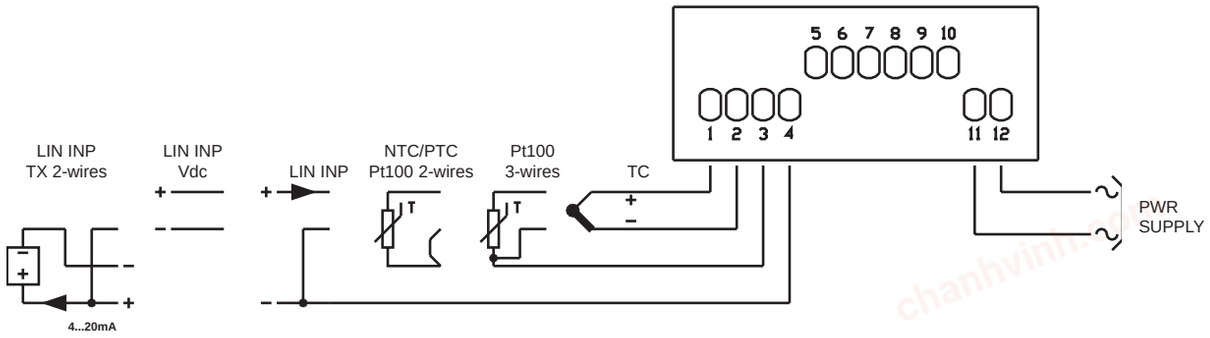
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DIMENSIONS and CUT-OUT



Dimensions: 72x36mm depth 54mm

CONNECTION DIAGRAM



⚠ Apply user's manual warnings for a correct installation

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ORDER CODE

4T 72 □ □□ 9

NR. DIGITS	
2 + sign	2
3 + sign	3
4	4

POWER SUPPLY	
9	11...27Vdc , 18...27Vac non isolated

TRANSMITTER POWER SUPPLY	
None	0 0
For T input (alternative to RTD, PTC, NTC)	
1,2Vdc for potentiometer (*)	0 1
18Vdc, 50mA for 2-wire transmitter	2 4

(*) R77 version for potentiometer input (Rinput >10Mohm

Please, contact GEFRAN sales people for the codes availability.

GEFRAN spa reserves the right to make any modification of the design or function, at any moment without prior notice

CE The instrument conforms to the European Directives 2004/108/CE and 2006/95/CE with reference to the generic standards: **EN 61000-6-2** (immunity in industrial environment) **EN 61000-6-3** (emission in residential environment) **EN 61010-1** (safety)

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