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GEFRAN

4T 96

TEMPERATURE INDICATOR with CONFIGURABLE INPUT



Main applications

- *Extrusion lines*
- *Rubber presses*
- *Test benches*
- *Food processing equipment*
- *Thermometry*
- *Hygrometry*

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 both 96x48 (1/8 DIN) formats manufactured with SMT.
The instrument have a lexan membrane faceplate (guaranteed to IP65) which has 3 keys, a 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, JPt100; 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 under 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 4000 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) and -99.9 to 99.9 (3 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
(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
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

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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

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

PTC
990Ω, 25°C -55 to 120°C / -67 to 248°F

NTC
1KΩ, 25°C -10 to 70°C / 14 to 158°F

DC - Linear
With scale configurable within the limits:
-1999 to 9999 (4 digit);
-999 to 999 (3 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 > 1MΩ f.s. 60mV and 1V,
Ri > 10KΩ f.s. 5V and10V.
For current signals Ri = 50Ω
32-segment configurable linearisation can be used.

POWER SUPPLY
Standard:
100 to 240Vac/dc ± 10% max 18VA
optional:
11 to 27Vac/dc ± 10% max 11VA

50/60Hz, Protected by an internal fuse (not replaceable by the operator).

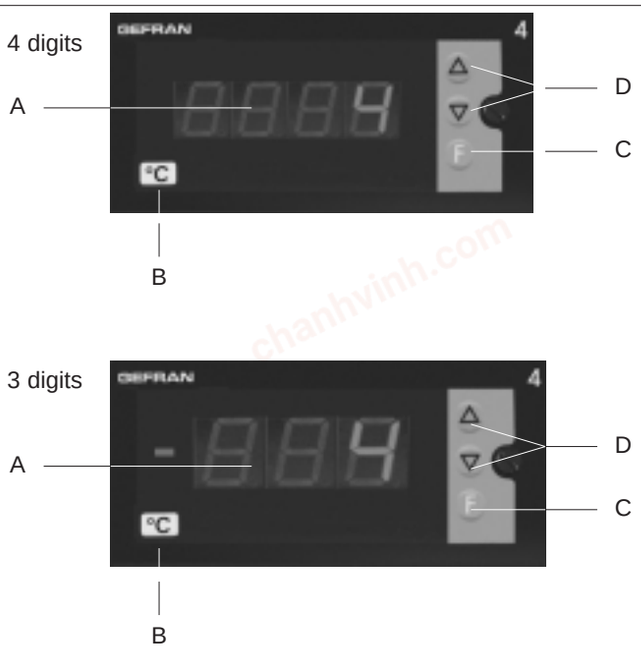
POWER SUPPLY TRANSMITTER
24V ±10% unstabilised, 50mA
15V for transmitter, 50mA
1,2V for potentiometer > 100Ω

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

WEIGHT
280g in the complete version

FACEPLATE DESCRIPTION

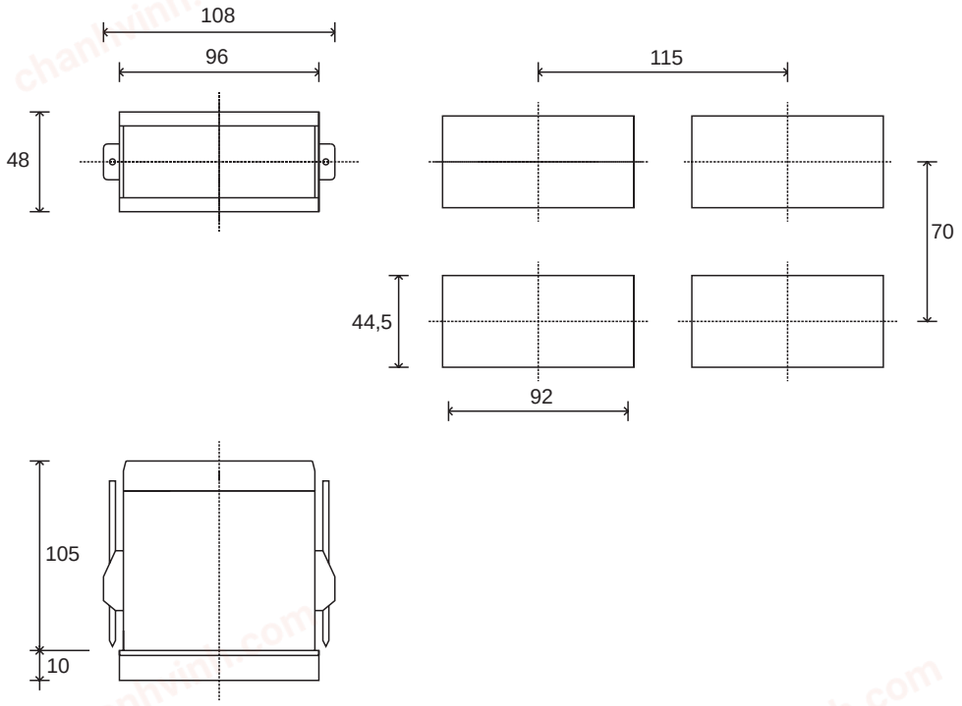
A - PV display: indication of process variable;
20mm for 3 digit; 14mm for 4 digit; Red LED display
B - Label for engineering units
C - “Function” key
D - “Raise” and “Lower” keys



IP65 faceplate protection

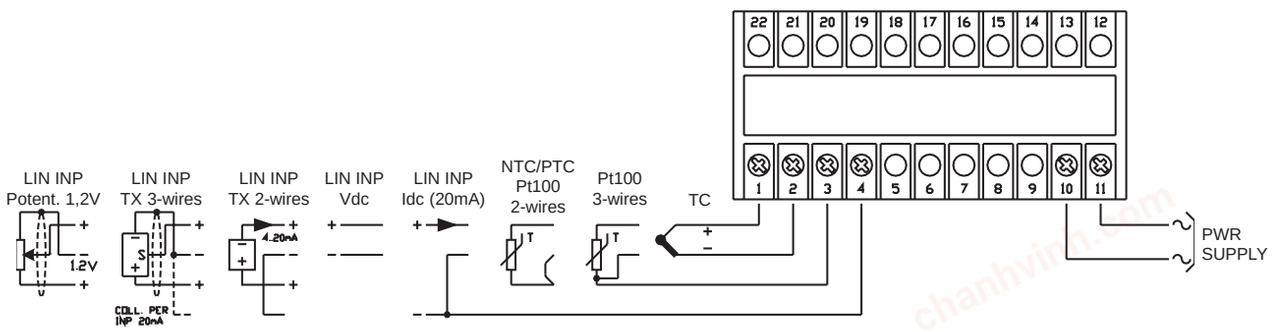
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DIMENSIONS and CUT-OUT



Dimensions: 96x48mm (1/8DIN) 105mm

CONNECTION DIAGRAM



Apply user's manual warnings for a correct installation

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ORDER CODE

4T 96 □ □□ □

POWER SUPPLY	
0	11 to 27Vac/dc
1	100 to 240Vac/dc

NR. DIGITS	
3 + sign	3
4	4

TRANSMITTER POWER SUPPLY	
0 0	None
For T input (alternative to RTD, PTC, NTC)	
0 1	1,2Vdc for potentiometer (*)
1 5	15Vdc for transmitter
2 4	24Vdc, 50mA
99	ALL **

(*) R77 for version with potentiometer input (Rinput > 10MΩ)

** Selectable (standard 24Vdc)

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

UL C US	Conformity C/UL/US File no. E198546
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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