CRN TECNOPART, S.A.
Sant Roc 30
08340 VILASSAR DE MAR (Barcelona)
Tel 902 404 748 - 937 591 484 Fax 937 591 547
e-mail:crn@crntp.com http:// www.crntecnopart.com

DO-060.61E

TEMPERATURE TRANSMITTER FOR SENSOR Pt100

HD 688 T SERIE

THE HD 688T MODULAR TEMPERATURE TRANSMITTER FOR SENSOR Pt100 WITH INPUT/OUTPUT AND POWER SUPPLY GALVANIC SEPARATION Analog output: 0 ÷ 20 mA / 4 ÷ 20 mA / 0 ÷ 10 VDC

The HD 688T transmitter is built inside a 2-module DIN box for 35 mm asymmetric guide. The module turns the signal coming from a Pt100 into an analogue signal that can be sorted out through a jumper connection between 0÷20 mA, 4÷20 mA, 0÷10 V.
The signal is galvanically separated among input, output and power supply. The 3-way insulation of the module allows the prevention of reciprocal influences in the presence of various measuring circuits.
The HD 688T transmitter is made up of the following stages:
- input stage including linearization of the curves and equalization of the resistance of the line cable (3 wires) of Pt100, conversion from voltage into frequency;
- universal output stage through jumper connection, conversion from frequency into voltage;
- power supply stage.

The configuration of the measuring range or the output signal can be modified at any time, an outstanding feature being that any variation does not involve the need to calibrate the transmitter again.

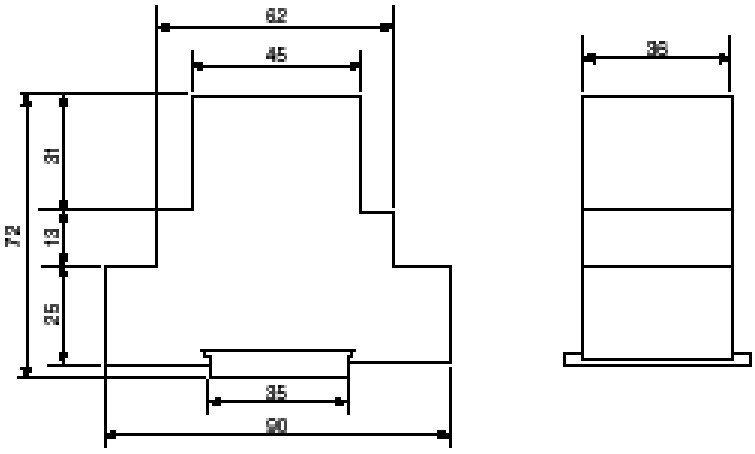
ORDER CODE

HD 688T
HD modular temperature transmitter for Pt100 sensor 688T
Analog output:
0 ÷ 20 mA / 4 ÷ 20 mA / 0 ÷ 10 VDC

FEATURES:

IMPUT:	**CONFIGURATION:**		
Imput signal:	Pt100 (IEC 751)		
Measuring range :	-50...+50°C / 0...+50°C / 0...+100°C 0...+200°C / 0...+400°C		
Measuring current:	1 mA		
OUTPUT:			
Output signal:	0÷10Vcc	0÷20 mA	4÷20 mA
Maximum load:	5 mA	500 Ω	500 Ω
Output impedance:	0,1 Ω	1M Ω	1M Ω
POWER SUPPLY:			
Imput voltaje :	12÷24 V ± 10%, 65 mA		
Linearity:	0.2%		
Zero drift:	0.02%/°C referred to full scale		
Full scale drift:	0.02%/°C referred to applied signal		
Response time:	0.3 seconds at 63% of final value 1 second at 99.9% of final value		
Insulation:	3kV at 50 Hz for 1 minute		
Working temperature:	-10°C...50°C (the maximum temperature in which electronics can operate)		

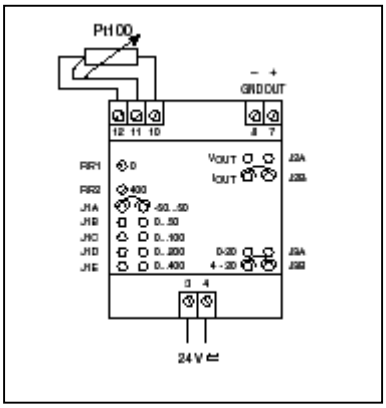
DIMENSIONS

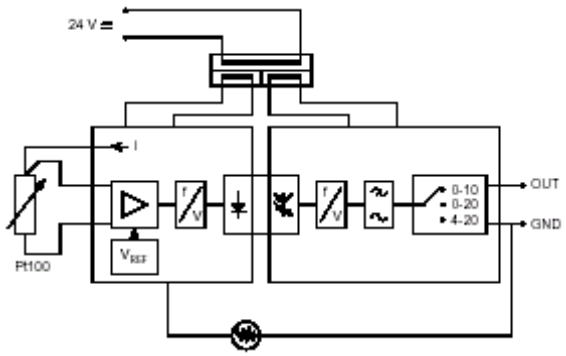


Variation of jumper connections according to the output measuring range, relative retouch trimmers for start of scale and full scale.

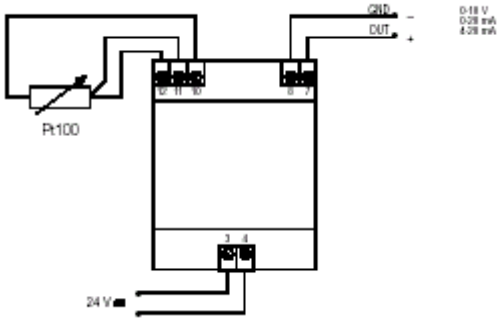
Measuring range		Output	Setup of jumper connections			TRIMMER*	
			J1	J2	J3	Start of scale	Full scale
1	-50 to 50 °C	0÷10Vcc	A	A	A	RR1	RR2
2	0 to 50 °C	0÷10Vcc	B	A	A	RR1	RR2
3	0 to 100 °C	0÷10Vcc	C	A	A	RR1	RR2
4	0 to 200 °C	0÷10Vcc	D	A	A	RR1	RR2
5	0 to 400 °C	0÷10Vcc	E	A	A	RR1	RR2
1	-50 to 50 °C	0÷20mA	A	B	A	RR1	RR2
2	0 to 50 °C	0÷20mA	B	B	A	RR1	RR2
3	0 to 100 °C	0÷20mA	C	B	A	RR1	RR2
4	0 to 200 °C	0÷20mA	D	B	A	RR1	RR2
5	0 to 400 °C	0÷20mA	E	B	A	RR1	RR2
1	-50 to 50 °C	4÷20mA	A	B	B	RR1	RR2
2	0 to 50 °C	4÷20mA	B	B	B	RR1	RR2
3	0 to 100 °C	4÷20mA	C	B	B	RR1	RR2
4	0 to 200 °C	4÷20mA	D	B	B	RR1	RR2
5	0 to 400 °C	4÷20mA	E	B	B	RR1	RR2

* Multiturn trimmers RR1 RR2 are needed for slight calibration adjustments of start of scale and full scale. If not strictly necessary it is advisable not to operate them, calibration being already carried out in the laboratory..





Block diagram



Connections

SIT CALIBRATION CENTRE N° 124

Delta OHM