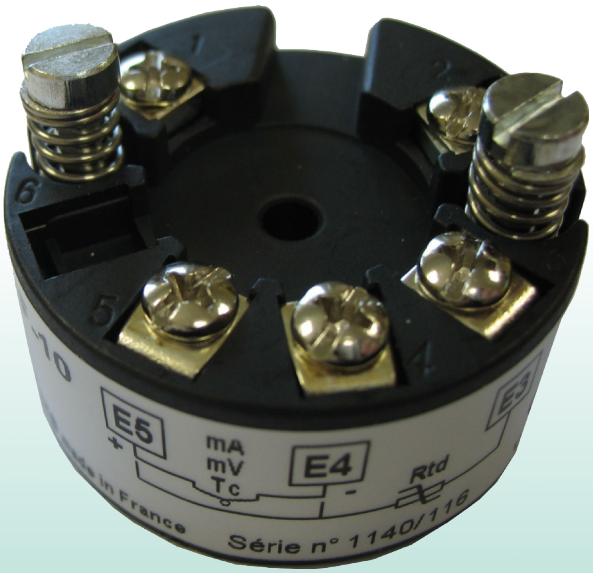
PROGRAMMABLE INSULATED 2-WIRE TRANSMITTER
for mounting in DIN B sensor head

TC2F



- **Universal input: TC2F10**
  ±100mV, ±20mA, Pt100 3 wire, Ni 100, thermocouples
- **Process input: TC2F11**
  ±100mV, ±20mA
- **Temperature input: TC2F12**
  Pt100 3 wire, Ni100, thermocouples
- **Insulated Pt100 input: TC2F13**
  Pt100 3 wire
- **Uninsulated Pt100 input: TC2F3**
  Pt100 3 wire
- **Thermocouple input: TC2F14**
  Thermocouples J,K,B,R,S,T,E,N,L,W,W3,WRE5
- **Power supply:**
  powered by the output loop
- **Analog output:**
  passive 4-20mA insulated

Detection of the sensor rupture

Insul. between input / output (except version TC2F3)

Self-zero and self-diagnosis

Easy programming via the output terminals using the interface TP2F.

The interface TP2F has a µconsole with graphical rear-lit LCD, and a USB 2.0 connection.

The user can configure the TC2F either with the µconsole, or with a computer of the type PC using the software MCVISION.

Operating and storage T°: -40° to +85°C

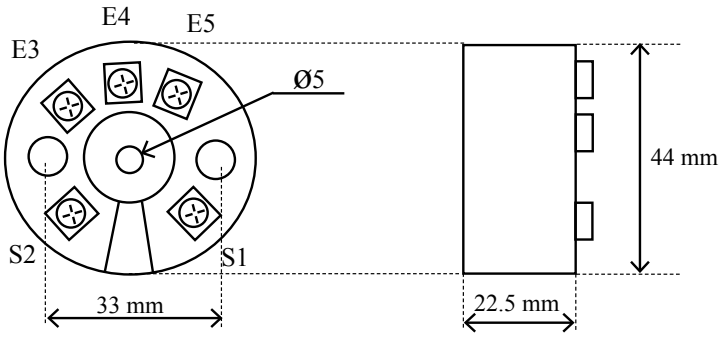
♦ CE according to IEC 61000-6-4, IEC 61000-6-2 (industrial environment).

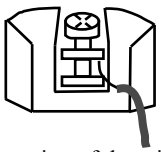
♦ Disturbance immunity according to the standard IEC 61000-6-2(IEC 61000-4-3 level 3, IEC 61000-4-4 level 4, IEC 61000-4-6 level 3)

♦ Limits of the emitted disturbances according to the standard EN55011 class A.

♦ Vibration withstanding according to the standard EN60068-2-6 +/-150µm from 10 to 57Hz and +/-2g peak from 57 to 500Hz.

Dimensions





mounting of the wires between the 2 metalic plates

PBT housing reinforced with glass fiber
Screwed terminals (2.5 mm², flexible or rigid)
Protection degree (enclosure/terminal): IP68/IP00
Weight: 52 g

ARDETEM 69510 SOUCIEU EN JARREST - Tél. : 33(0)4 72 31 31 30 Fax. : 33(0)4 72 31 31 31

Features

Inputs

TC2F 10	TC2F 11	TC2F 12	TC2F 13&3	TC2F 14	Types of INPUTS	Measure range adjustable from:		Basic accuracy (2)	Min. range Delta (3)	Permanent overload	Input impedance
•	•				mA♣	-22 to +22mA		≤ ±2µA	1mA	±100mA	0,9V max. drop
•	•				mV♠♣	-110 to +110mV		≤ ±10µV	5mV	±1V	≥ 1MΩ
•		•		•	Thermocouples ♠ Standard IEC 581	°C	°F	♦		-	≥ 1 MΩ
					J	-160/1200	-256/2192	≤ ±1°C	100°C		
					K	-200/1370	-328/2498				
					T	-270/410	-454/770				
					E	-120/1000	-184/1832				
					N	0/1300	-32/2372				
					L	-150/910	-238/1670				
					W	1000/2300	1832/4172	♦			
					W3	0/2480	32/4496				
					WRE5	0/2300	32/4172				
					B	400/1820	752/3308	≤ ±2°C	400°C		
					R	-50/1770	-58/3218				
					S	-50/1770	-58/3218				
•		•	•		Pt100Ω sensor (1)♠ 3 wire, Standard IEC 751 (DIN 43760)	°C	°F	≤ ±0.3°C	50°C	-	Current 250µA
						-200/850	-328/1562				
•		•			Ni 100 sensor 3 wire (1)♠	-60/260	-76/500			-	
•	•				Special linearisation programming up to 20 points	On input: mV and mA					

(1) Line resistance <25Ω

(2) Total accuracy = basic accuracy +/- 0.1% EEC. (à 23°C)

(3) Other features: consult with ARDETEM

♠ A 12 µA pulsed current allows the detection of line or sensor rupture.

♣ Cut off: the display of the console and the output of the TC2F remain at down scale for an input signal < than the cut off value, programmable from 0% to 100% of the input scale.

♦ CJC efficiency: ±0.03°C/°C ±0.5°C from -40°C to +85°C

Thermic drift ..... < 0.015% of the MR /°C
Influence of a variation of the supply voltage ..... < 0.005% of the EEC /Volt

MR Measure range
EEC Configured scale span

Output

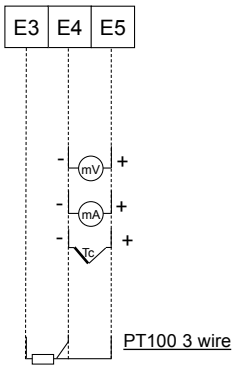
Measure range 3.5 ..... 22mA
Max. load ..... RL≤ (Usupply-11)/0.022 in Ω (TC2F10 to TC2F14)
..... RL≤ (Usupply-10)/0.022 in Ω (TC2F3)

Response time (0 to 90%) programmable:
Input mA/mV ..... 500ms to 6.5s
Temperature input ..... 700ms to 6.5s

Galvanic partition..... 1.5kV - 50Hz - 1mn between inputs and output (for versions TC2F10, TC2F11, TC2F12, TC2F13, TC2F14)

Connectings

Inputs



PT100 3 wire

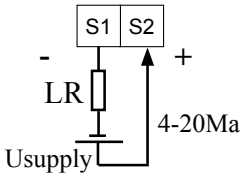
Output

TC2F10 to TC2F14:

11 ≤ Usupply ≤ 35 (in volt)

TC2F3:

10 ≤ Usupply ≤ 35 (in volt)



ARDETEM - CA CO/87 F 10/14 - Any data in this documentation may be modified without prior notice.

ARDETEM®
RCS Lyon 444-429-476 - Printed in France.
e-mail : info@ardetem.com
http : //www.ardetem.com

Route de Brindas
Parc d'activité d'Arbora N°2
69510 SOUCIEU EN JARREST
- FRANCE -
Tél. : 33 (0)4 72 31 31 30
Fax. : 33 (0)4 72 31 31 31

your representative