Thank you for choosing a NIVELCO instrument!

THERMOCONT

TFP RESISTANCE THERMOMETER (RTD)

USER'S MANUAL

1. APPLICATION

Resistance thermometers are fundamental elements of industrial process control. The TFP-□□□-□ resistance thermometer-family measures temperature in industrial applications. Primarily, they are used as sensors for heated tools and bearings. The sensor tip of the TFP-500/600 types is made from copper to provide a faster response time. The TFP-300/400 has a process connection with a suitable mounting bolt. TFP-100/200/500/600 devices have different types of mounting bolts that are ordered separately. The mounting bolts allow the sensors to be screwed into various threads.

2. TECHNICAL DATA

Type	TFP-1□□-□, TFP-2□□-□ TFP-3□□-□, TFP-4□□-□	TFP-5□□-□ TFP-6□□-□
Process temperature	–50…+200 °C (–58…+392 °F)	
Ambient temperature	–30…+100 °C (–22…+212 °F)	
Sensor	Pt100	
Accuracy class	"A" or "B" (MSZ EN 60751), as per order codes	
Measuring current	max. 5 mA	
Time constant (9 / 10)	~45 s	~35 s
Material of sensor tube	DIN 1.4571 stainless steel	
Insertion length (L)	max. 500 mm (19.7"), As per order code	
Electrical connection	Teflon-coated wire, 0.35 mm² (AWG22) wire cross section	
Cable shielding	Tinned copper braid	
Cable length	0.6…12 m (23.6…472.4"), as per order code	
Ingress protection	IP54	
Electrical protection	Class III	
Weight	max. 0.6 kg (as per order length)	

2.1. ACCESSORIES

- User's manual
- Warranty Card
- EU Declaration of Conformity

2.2. ORDER CODES (NOT ALL COMBINATIONS POSSIBLE)

THERMOCONT T F P – □ □ □ – □

PROCESS CONNECTION	CODE
Ø6 mm	1*
Ø8 mm	2*
Ø8 mm, M12x1.5 (special)	3
Ø6 mm, M8x1 (special)	4
Ø6 mm, fast response	5*
Ø8 mm, fast response	6*

** Mounting bolts are ordered separately*

*** Only with TFP-300, TFP-400 types*

SENSOR DESIGN	CODE
Class "A", single	1
Class "B", single	2
Only with Ø8 mm tube diameter	
Class "A", dual	4
Class "B", dual	5
Class "B", single, 4-wire	6
Class "A", single, 4-wire	7

PROBE LENGTH	CODE
60 mm	1
100 mm	2
160 mm	3
250 mm	4
10 mm**	5
30 mm**	6
400 mm	7
500 mm	8

CABLE LENGTH	CODE
0.6 m	0
1 m	1
2 m	2
3 m	3
6 m	4
12 m	5

Available mounting bolts (Material: DIN 1.4571 stainless steel)

Process connection	TFP-1□□-□ TFP-5□□-□		TFP-2□□-□ TFP-6□□-□	
M10	TFP-511-0M-000-	01	TFP-611-0M-000-	–
M12		02		02
M12x1.5		03		03
M14x1		04		04
M20x1.5		05		05
⅛" BSP		06		–
¼" BSP		07		07
⅜" BSP		08		08
½" BSP		09		09

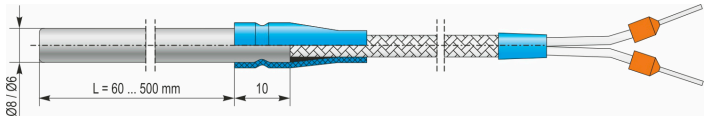
Manufacturer:
NIVELCO Process Control Co.
H-1043 Budapest, Dugonics u. 11.
Tel.: +36-1-889-0100
E-mail: sales@nivelco.com www.nivelco.com

CE

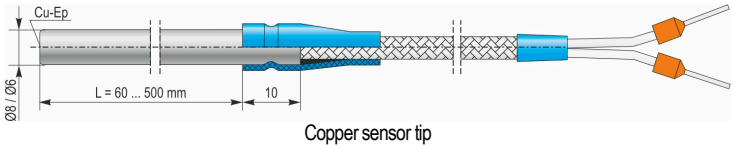
2.3. DIMENSIONS

Standard version

TFP-1□□-□, TFP-2□□-□



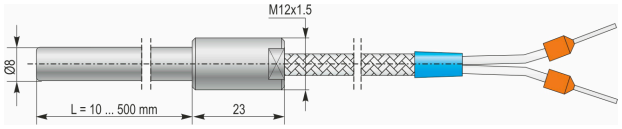
TFP-5□□-□, TFP-6□□-□



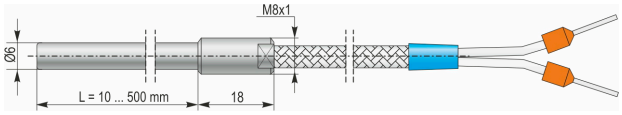
Copper sensor tip

Special version

TFP-3□□-□

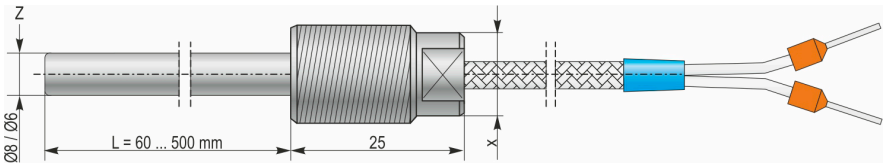


TFP-4□□-□

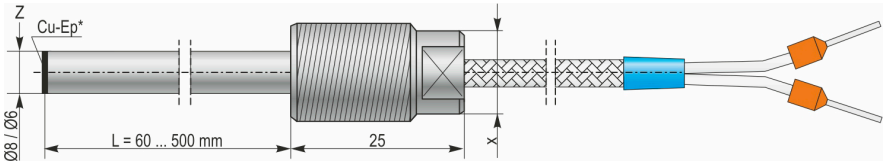


Standard version with mounting bolt

TFP-1□□-□, TFP-2□□-□

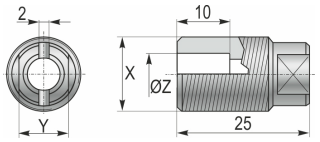


TFP-5□□-□, TFP-6□□-□



** Copper sensor tip (Cu-Ep)*

Mounting bolt



		TFP-511-□M-000-□□	TFP-611-□M-000-□□
X (thread)	Y [mm]	ØZ [mm]	
M10	7	6	–
M12	8	6	8
M12x1.5	8	6	8
M14x1	10	6	8
M20x1.5	13	6	8
⅛" BSP	7	6	–
¼" BSP	8	6	8
⅜" BSP	13	6	8
½" BSP	16	6	8

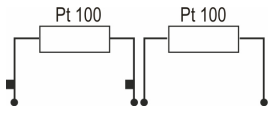
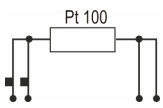
3. MOUNTING

The temperature sensor can be mounted into a hole, suitable for the probe length, tube size, and threaded connection. The tube length under the shrink tube is 10 mm (0.4"). The mounting bolt can be tightened with a wrench on the notches (Y) or a tool that fits the groove.

The plastic shrink tube seal must be removed when using the mounting bolt!

The probe length (L) does not change with the use of a mounting bolt!

4. WIRING

Dual	4-wire
 Wires with identical color	 Wires with identical color

On the 4-wire version, the same sensor wires are marked with the same color. On the dual sensor version, the wires of one of the sensors are marked with the same color.

5. MAINTENANCE, REPAIR

The device does not require regular maintenance. The warranty card contains the terms and conditions. Before returning the device for repairs, it must be cleaned thoroughly. The parts in contact with the medium may contain harmful substances; therefore, they must be decontaminated.

Our official form (Returned Equipment Handling Form) must be filled and enclosed in the parcel. Download it from our website www.nivelco.com. The device must be sent back with a declaration of decontamination. A statement must be provided in the declaration that the decontamination process was successfully completed and that the device is clean from any hazardous substances.

6. STORAGE CONDITIONS

Ambient temperature: –25…+55 °C (–13…+131 °F)

Relative humidity: max. 98%

tfp121en22h06

June 2022