Thank you for choosing a NIVELCO instrument.

1. APPLICATION

THERMOCONT TXP resistance thermometers with a drilled thermo-well case are used as temperature measurement sensors in industrial process control, especially in the gas industry. The temperature sensors are suitable for temperature measurement of various gaseous media inside pipelines, tanks, and furnaces. The heat sink on the outer protective tube provides accurate measurement independently from the ambient temperature. The double pipe construction - including the inner and outer tube and well - meets the mechanical and vibrational protection requirements. Process connection and electrical connection are provided in detail below. The cable glands provide sealing for the cables.

The outer protective tube is a stainless steel thermo-well case with a drilled hole. The housing cover has a chain to prevent misplacing it. The Pt100 temperature sensor can be replaced without removing the instrument from the process.

2. TECHNICAL DATA

		TXP–□1□–□	TXP–□4□–□	TXP–□7□–□
Sensor	Accuracy class	Pt100A, class A (EN 60751), as per order code		
	Type	single, 2-wire	dual, 3-wire	single, 4-wire
	Material of internal protective tube	PTFE		
	Mounting	Spring loaded		
	Grounding	Ground-independent		
Housing	Housing material	Painted aluminum (EN AC-43100)		
	Cable gland	M20×1.5 or without cable glands, ½" NPT interior thread		
	Cable	For Ex ia protection type: nickel-plated brass cable gland, or closing bolt; For Ex d and Ex dia protection types: Ex d IIC certified cable gland for cable Ø6…Ø12 mm (Ø.236…Ø.472")		
	Electrical connection	Screw type terminal		
	Ingress protection	IP67		
External Protection	Process connection	M33×2, 1" NPT		
	Material	1.4571 (316Ti) stainless steel		
	Insertion length	max. 500 mm (19.7"), (as per order code)		
	Process pressure	Max. 80 bar (8 MPa / 1160 psi)		
Measuring range		–50…+150 °C (−58…+302 °F)		
Ambient temperature		–30…+80 °C (−22…+176 °F)		
Overvoltage category		I.		
Electrical protection		Class III		
Ex marking		Ex II 1 G Ex ia IIB T6…T4 Ga Ex II 2 G Ex d IIB T6…T4 Gb Ex II 1/2 G Ex d ia IIB T6…T4 Ga/Gb		
Ex Information		U_i: 30 V; I_i: 140 mA; P_i: 1,1 W; C_o = 0; L_o = 0		

2.1 Ex temperature classes

Temperature class	T6	T5	T4
Max. ambient temperature	+65 °C (+149 °F)	+70 °C (+158 °F)	+70 °C (+158 °F)
Max. medium temperature	+85 °C (+185 °F)	+100 °C (+212 °F)	+135 °C (+275 °F)
Min. ambient temperature	–30 °C (–22 °F)		

2.2 Accessories

– User's Manual
– Warranty Card
– EU Declaration of Conformity

2.3 Order codes

THERMOCONT T X P – □ □ □ – □*

Process connection (1)	Code
1" NPT	1
M33×2	V

Sensor type / Pt100 Class A	Code
Single, 2-wire	1
Dual, 3-wire	4
Single, 4-wire	7

Probe length (L)	Code
120 mm	0
160 mm	1
200 mm	2
250 mm	3
300 mm	4
350 mm	5
400 mm	6
450 mm	7
500 mm	8

Ex certificate	Code
None	0
Ex d ia IIB / ½" NPT (2)	6
Ex ia IIB	7
Ex d ia IIB	8
Ex d IIB	9

**** For explosion-proof devices, the article number is followed by "Ex" on the data plate!***

(1) On request: other process connections

(2) Without cable glands, use glands with protection designation "d" only

NIVELCO

THERMOCONT

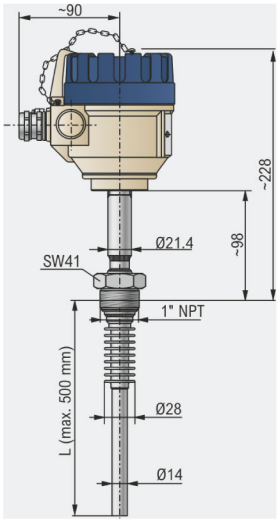
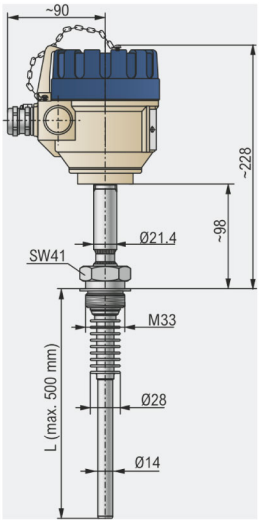
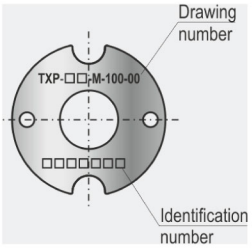
TXP
TEMPERATURE SENSORS
FOR GASES

USER'S MANUAL

АНКОРН

ООО «АНКОРН», www.ankorn.ru
Эксклюзивный дистрибьютор NIVELCO
Тел.: 8 800 333-43-14 (Звонок бесплатный)
E-mail: info@ankorn.ru

2.4 Dimensions

TXP–1□□–□	TXP–V□□–□	Label of the incorporated sensor
		 The sensor insert has a unique manufacturing identification number.

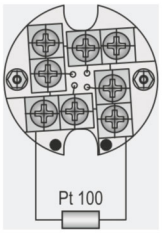
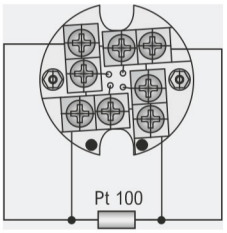
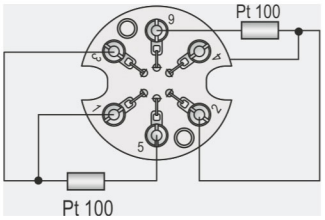
3. MOUNTING

The temperature sensor has a threaded process connection. The cable glands seal the cables. The cable glands can be regular or Ex approved type.

4. SPECIAL CONDITIONS FOR SAFE USE

- Do not remove the housing cover when energized!
- The device's housing must be connected to the equipotential network.
- The device must be operated only with properly sealed Ex d IIC or Ex d IIB certified protective cable gland.
- The unused cable gland must be closed with a certified closing bolt.
- When the wiring is finished and the housing cover is closed, the chain must be attached.
- Take note that the process connection of the device could be at the same temperature as the measured medium. Therefore, the temperature class of the instrument depends on the highest process temperature.
- Tightening torque for the NPT 1" process connection types is 45 Nm.
- Ex II 1/2 G Ex d ia IIB T… Gb approved temperature sensors must be operated from certified [Ex ia] IIC or [Ex ia] IIB intrinsically safe circuits of the following technical specifications:
- U_i: 30 V; I_i: 140 mA; P_i: 1,1 W

5. WIRING

		
Wiring of 2-wire single temperature sensor	Wiring of 4-wire single temperature sensor	Wiring of 3-wire dual temperature sensor

6. MAINTENANCE, REPAIR

The device does not require regular maintenance. Refer to the warranty card for warranty information. The device returned for repair must be cleaned by the user, all chemical deposits must be removed, and the device must be disinfected before sending it back. In addition, the return package must include a properly filled Return Merchandise Authorization form (RMA form), in which the sender declares that the device is free of all contamination and substances hazardous to health.

7. STORAGE CONDITIONS

Ambient temperature: –25…+60 °C (–13…+140 °F).

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