



Description

The FlexTop temperature transmitter type 2204 is suitable for input from Pt500 RTD sensors, potentiometer and resistance input.

The FlexTop 2204 features a 4 ... 20 mA output signal.

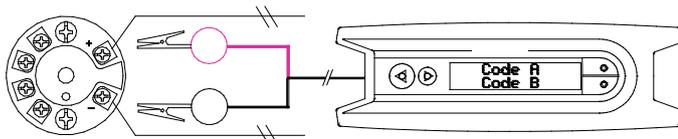
Environment

Humidity	<98 % RH, condensing
Ambient temperature	-40 ... 85°C
Storage temperature	-55 ... 90 °C
Protection class	IP00
Vibrations	GL, test 2

Configuring with FlexProgrammer 9701

The FlexTop 2204 can be configured using the 4...20 mA cable. The maximum distance depends on the cable type, resistance and capacity. We recommend to use shielded cables.

To be able to configure the FlexTop 2204 with the FlexProgrammer 9701 the dedicated software, Flex-program, must be loaded on the PC. During the configuration the new data are, by means of the FlexProgrammer 9701, transferred from the PC to the FlexTop 2204, where they are stored in the internal memory.



Note: During the first power-up after a configuration the power-on time increases to approx. 10 sec.

Field of application

FlexTop temperature transmitter type 2204 is a compact temperature transmitter, designed to be built into the housing of a temperature sensor, like the Baumer CombiTemp.

Safety instruction

This instrument is built and tested according to the current EU-directives and packed in technically safe condition. In order to maintain this condition and to ensure safe operation, the user must follow the hints and warnings given in this instruction.

During the installation the valid national rules have to be observed. Ignoring the warnings may lead to severe personal injury or substantial damage to property.

The product must be operated by trained staff. Correct and safe operation of this equipment is dependent on proper transport, storage, installation and operation.

All electrical wiring must conform to local standards. In order to prevent stray electrical radiation, we recommend twisted and shielded input cables, as also to keep power supply cables separated from the input cables. The connection must be made according to the connecting diagrams.

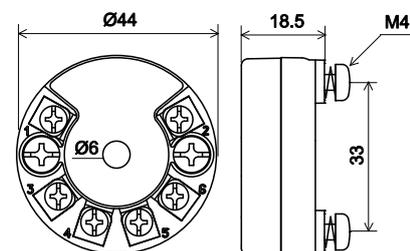
Before switching on the power supply take care that other equipment is not affected. Ensure that the supply voltage and the conditions in the environment comply with the specification of the device.

Before switching off the supply voltage check the possible effects on other equipment and the processing system.

WARNING

For electrical installation and commissioning of explosion protected devices, the data given in the conformity certificate as also the local regulations for installation of electrical apparatus within explosion protected areas must be considered. The intrinsically safe versions can be mounted in the explosion hazarded area according to its specification only connected to a certified intrinsically safe supply loop with the corresponding electrical values.

Dimensions



WARNING

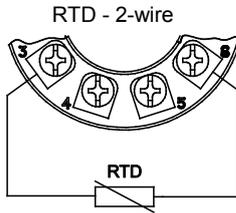
This product contains no replaceable parts.

In case of malfunction the product must be shipped to Baumer for repair

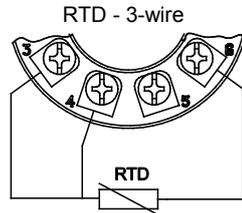
FlexTop 2204

Operating instructions

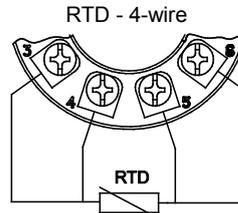
Electrical installation



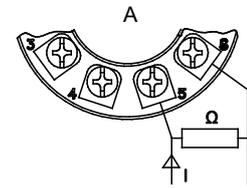
No cable compensation
Can be configured



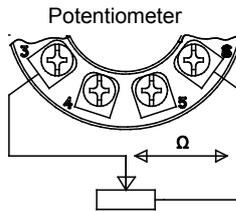
3-wire cable compensation



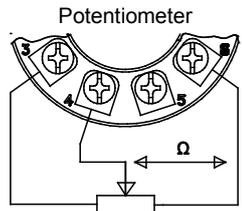
4-wire cable compensation



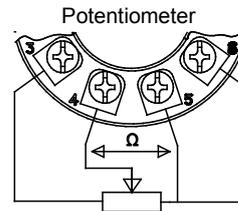
Current measurement



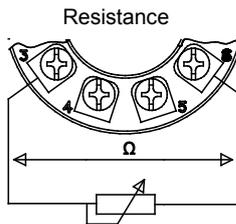
No compensation
Can be configured



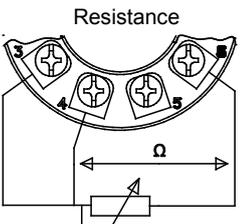
3-wire compensation
for transfer resistance
between element and wiper



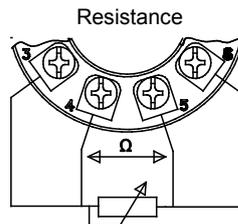
4-wire compensation
for transfer resistance
between element and wiper



No compensation
Can be configured

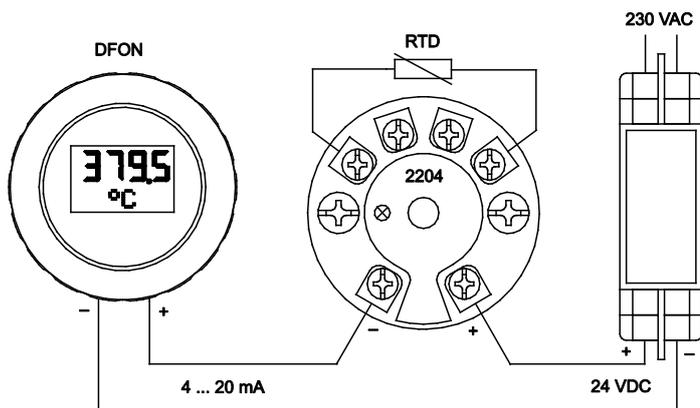


3-wire cable compensation



4-wire cable compensation

Connection diagram (non-EX application)

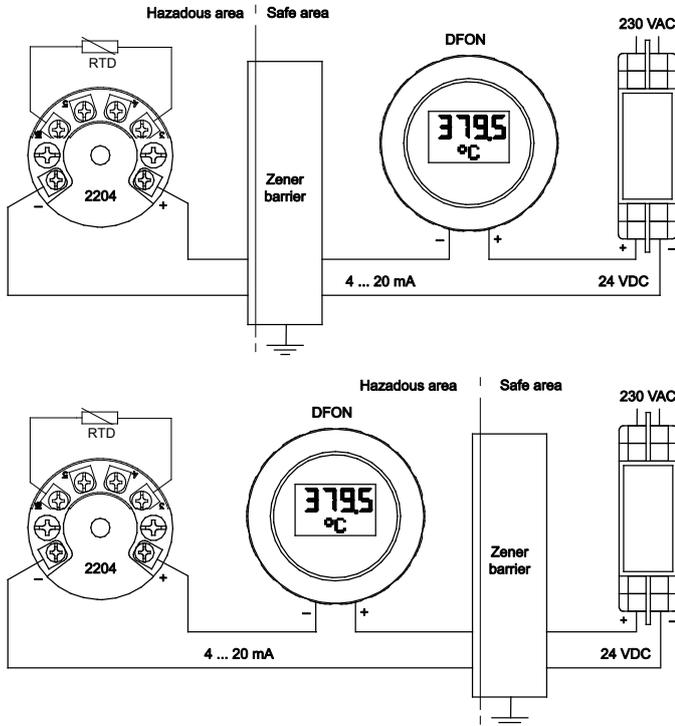


FlexTop 2204

Operating instructions

Hazardous area - ATEX

Connection diagram ATEX



ATEX data for FlexTop™ 2204 Ex ia (2204-0002)

Approval	ATEX II 1G, Ex ia IIC T5/T6	
Voltage supply range	8...28 V DC	
Internal inductivity	L_i	$\leq 10 \mu\text{H}$
Internal capacity	C_i	$\leq 10 \text{nF}$
Temperature class	T1...T5:	$-40 < T_{\text{amb}} < 85^\circ\text{C}$
	T6:	$-40 < T_{\text{amb}} < 50^\circ\text{C}$
Barrier data	U_i :	$\leq 28 \text{VDC}$
	I_i :	$\leq 0,1 \text{A}$
	P_i :	$\leq 0,7 \text{W}$

The installation of FlexTop 2204 must be done in accordance with prevailing guidelines for zones 0 or 1.

The FlexTop 2204 must be connected in the 4...20 mA loop circuit only.

FlexTop 2204 must be mounted in a housing, e.g. $\varnothing 80\text{mm}$ stainless steel housing or DIN-B housing.

ATEX data for FlexTop™ 2204 Ex nA (2204-0003)

Approval	ATEX II 3G, Ex nA II T5 X	
Voltage supply range	U_i :	8...28 V DC,
	I_i :	$< 100 \text{mA}$
Temperature class	T5:	$-40 < T_{\text{amb}} < 85^\circ\text{C}$

A FlexTop 2204-0003 may be mounted in hazardous areas in accordance with the current EU-directives.

The product must be mounted in a suitable enclosure fulfilling relevant requirement in EN 60 079-0 among these minimum IP54 ingress protection.

ATEX configuration with FlexProgrammer 9701

The FlexProgrammer 9701 configuring unit must be connected to the FlexTop 2204 or DFON outside the hazardous area.

Configuring procedure:

- Disconnect mains from the 4...20 mA loop circuit.
- Disconnect the FlexTop 2204 from the circuitry within the hazardous area.
- Bring the FlexTop 2204 to the safe area.
- Connect the FlexProgrammer 9701 and perform the configuring session.
- Reinstall the FlexTop 2204 in the hazardous area.
- Connect the power supply to the circuit.

EU-Konformitätserklärung

EU Declaration of Conformity

Déclaration UE de Conformité

Wir erklären in alleiniger Verantwortung, dass die Produkte, auf die sich diese Erklärung bezieht, die grundlegenden Anforderungen der angegebenen Richtlinie(n) erfüllen und basierend auf den aufgeführten Norm(en) bewertet wurden.

We declare under our sole responsibility that the products to which the present declaration relates comply with the essential requirements of the given directive(s) and have been evaluated on the basis of the listed standard(s).

Nous déclarons sous notre seule responsabilité que les produits auxquels se réfère la présente déclaration sont conformes aux exigences essentielles de la directive/ des directives mentionnée(s) et ont été évalués sur la base de la norme/ des normes listée(s).

Hersteller
 Manufacturer Baumer A/S
 Fabricant

Bezeichnung Elektronische Temperaturmessung
 Description Electronic temperature measurement
 Description Electronique mesure de température

Typ(en) / Type(s) / Type(s)

FlexTop 2202-0002.x, FlexTop 2203-0002.x, FlexTop 2204-0002.x
 FlexTop 2202-0003.x, FlexTop 2203-0003.x, FlexTop 2204-0003.x

x = beliebige Zahl oder Buchstabe / any figure or letter / n'importe quel nombre ou lettre

Richtlinie(n) 2014/30/EU, 2014/34/EU, 2011/65/EU
 Directive(s)
 Directive(s)

Norm(en) EN 61326-1:2013, EN 60079-0:2012+A11:2013, EN 60079-11:2012, EN 60079-15:2010
 Standard(s) EN 60079-26:2007
 Norme(s)

Konformitätsbewertungsstelle: TÜV Nord 0044
 Conformity assessment center Am TÜV 1
 Centre d'évaluation et de mise en conformité 30519 Hannover

EU- Baumusterprüfbescheinigung: TÜV 08 ATEX 364662 X
 EU type examination certificate
 Attestation d'examen UE de type

Ort und Datum Aarhus, 06.07.2016
 Place and date
 Lieu et date

Unterschrift/Name/Funktion
 Signature/name/function
 Signature/nom/fonction



Ib V. Pedersen
 Managing Director

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