



Description

The FlexTop universal temperature transmitter type 2221 is suitable for input from RTD sensors, T/C sensors plus potentiometer or resistance signals.

The FlexTop 2221 features a 4 ... 20 mA / HART output signal.

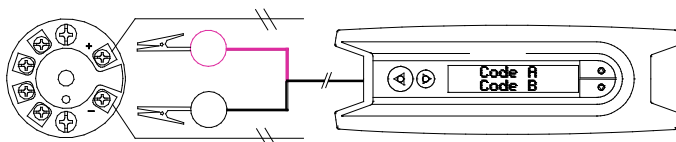
Environment

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 2221 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 2221 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 2221, where they are stored in the internal memory.



The indication for a correct configuration sequence is:

- 1) The LED on the FlexTop 2221 lights up constantly.

Error indications during configuration:

- 1) The LED on the FlexTop 2221 is not lighting.
- 2) An error message comes up on the PC.

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

Field of application

FlexTop universal temperature transmitter type 2221 is a compact temperature transmitter, designed to be built into the housing of a temperature sensor like the Baumer CombiTemp. The FlexTop 2221 features HART communication.

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.

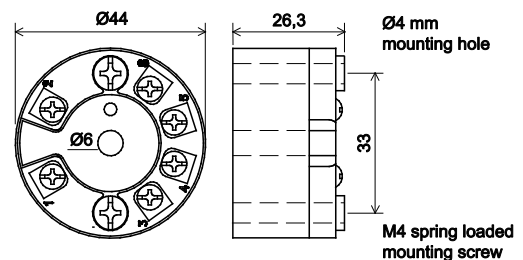
Before switching on the power supply take care that other equipment is not affected. Ensure that the supply voltage and the conditions in the environment comply with the specification of the device.

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 hazardous 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.

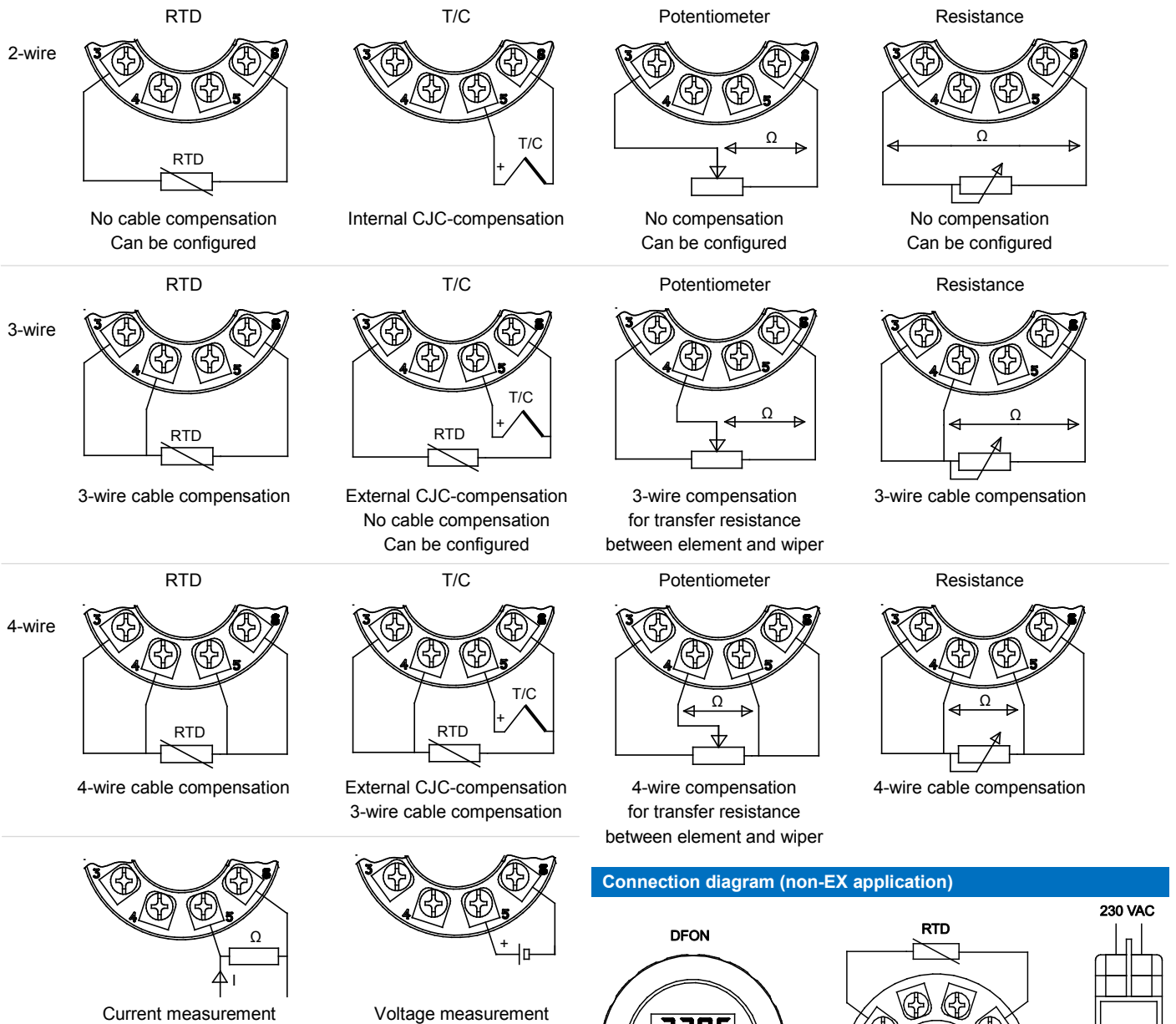
In case of malfunction the product must be shipped to Baumer for repair

FlexTop 2221 HART

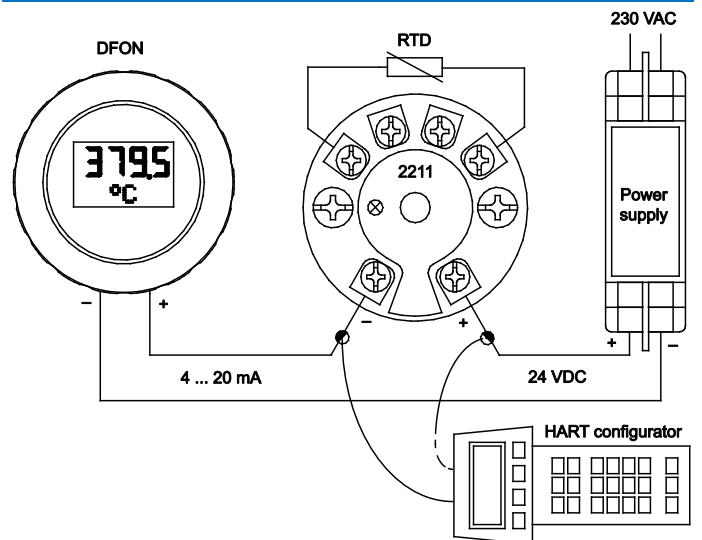
Operating instructions

English

Electrical installation



Connection diagram (non-EX application)



LED function

The LED of the FlexTop indicate the actual status of the measured value. The LED will be turned on continuously as long as the measured value result in an output current between 4 and 20 mA. If the output current is higher than 20 mA or lower than 4 mA the LED will flash with 1Hz. The same flashing behaviour will occur if a sensor break error is detected.

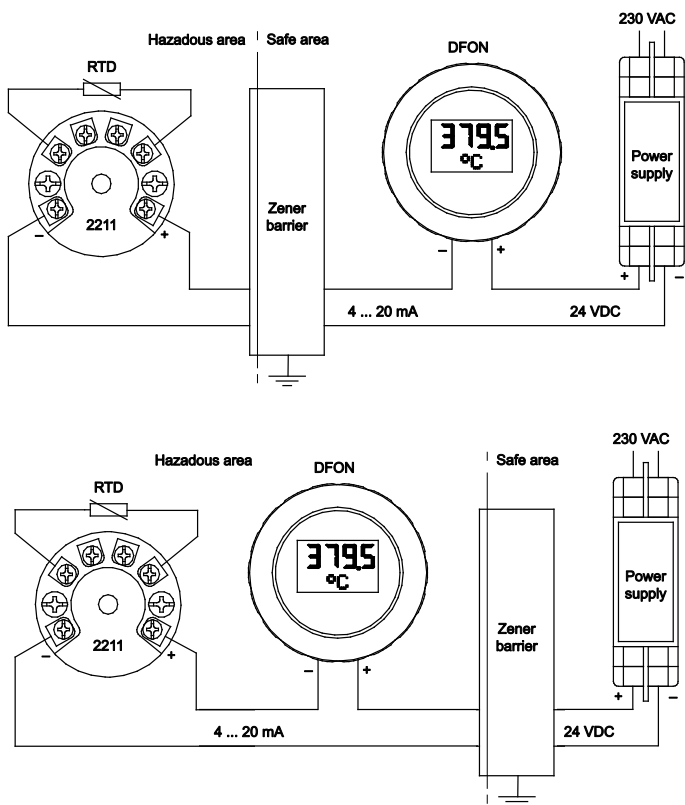
FlexTop 2221 HART

Operating instructions

English

Hazardous area - ATEX

Connection diagram ATEX



ATEX data for FlexTop™ 2221 Ex ia (2221-0002)

Approval	ATEX II 1G, Ex ia IIC T5/T6
Voltage supply range	8...30 V DC
Internal inductivity	$L_i \leq 15 \mu\text{H}$
Internal capacity	$C_i \leq 5 \text{nF}$
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 2221 must be done in accordance with prevailing guidelines for zones 0 or 1.

Sensor circuit parameters (terminals 3 to 6):

VDC < 6.6 V; IDC < 17 mA; Pout < 30m W; La < 99 mH; Ca < 3µF.

The FlexTop 2221 must be connected in the 4...20 mA loop circuit only.

FlexTop 2221 must be mounted in a housing, e.g. ø80mm stainless steel housing or DIN-B housing.

ATEX data for FlexTop™ 2221 Ex nA (2221-0003)

Approval	ATEX II 3G, Ex nA II T4/T5
Voltage supply range	$U_i: 8...30 \text{V DC},$ $I_i: < 100 \text{mA}$
Temperature class	T4: $-20 < T_{\text{amb}} < 70^\circ\text{C}$ T5: $-20 < T_{\text{amb}} < 60^\circ\text{C}$

A FlexTop 2221-0003 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 2221 or DFON outside the hazardous area.

Configuring procedure:

- Disconnect mains from the 4...20 mA loop circuit.
- Disconnect the FlexTop 2221 from the circuitry within the hazardous area.
- Bring the FlexTop 2221 to the safe area.
- Connect the FlexProgrammer 9701 and perform the configuring session.
- Reinstall the FlexTop 2221 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
Fabricant

Baumer A/S

Bezeichnung

 Description
Description

 Elektronische Temperaturmessung
Electronic temperature measurement
Electronique mesure de température

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

 FlexTop 2211-0002.x
FlexTop 2211-0003.x
FlexTop 2221-0002.x
FlexTop 2221-0003.x

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

Richtlinie(n)

 Directive(s)
Directive(s)

2014/30/EU, 2014/34/EU, 2011/65/EU

Norm(en)

 Standard(s)
Norme(s)

 EN 61326-1:2013, EN 60079-0:2012+A11:2013, EN 60079-11:2012, EN 60079-15:2010
EN 60079-26:2007

Konformitätsbewertungsstelle:

 Conformity assessment center
Centre d'évaluation et de mise en conformité

 TÜV Nord 0044
Am TÜV 1
30519 Hannover

EU- Baumusterprüfbescheinigung:

 EU type examination certificate
Attestation d'examen UE de type

TÜV 07 ATEX 347151 X

Ort und Datum

 Place and date
Lieu et date

Aarhus, 06.07.2016

Unterschrift/Name/Funktion

 Signature/name/function
Signature/nom/fonction



 Ib V. Pedersen
Managing Director

Baumer_FlexTop 2211+2221_DE-EN-FR_CoC_81081916.docx/BRAA

1/1

Baumer A/S
Runetoften 19
DK-8210 Aarhus V
CVR: DK25275071
VAT. No.: DK11841813

 DK Phone +45 8931 7611
SE Phone +46 (0) 36 13 9430
sales.dk@baumer.com
sales.se@baumer.com
www.baumer.com

 Danske Bank: SWIFT: DABADKKK
(DKK) Konto: 4387-3627293852
(EUR) IBAN: DK0230003617021021
(SEK) Bankgiro: 5220-9632