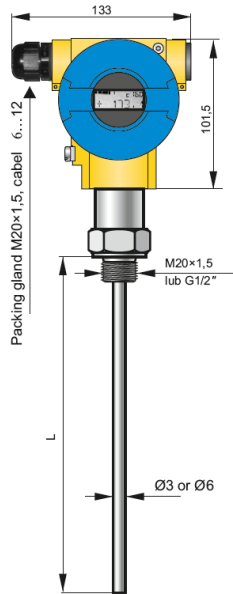


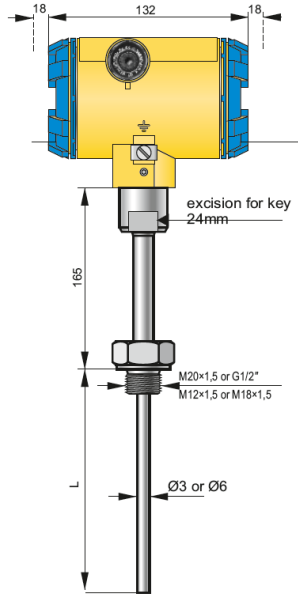
## Smart temperature transmitter type BTT3298ALW



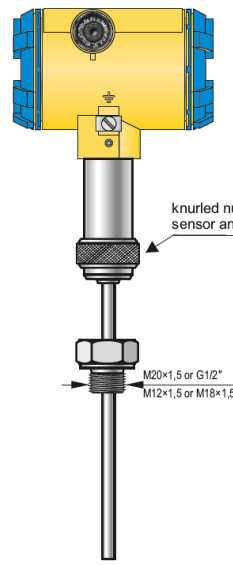
- 4...20 mA output signal + HART protocol
- Programmable range, zero shift, characteristic and damping ratio with local panel keys
- ATEX Intrinsic safety, ATEX Explosion proof
- Resistant or thermo couple measuring element
- Accuracy 0.075%
- MID (Measuring Instruments Directive) – certificate acc. to 2004/22/WE directive and OIML R140:2007 recommendations.



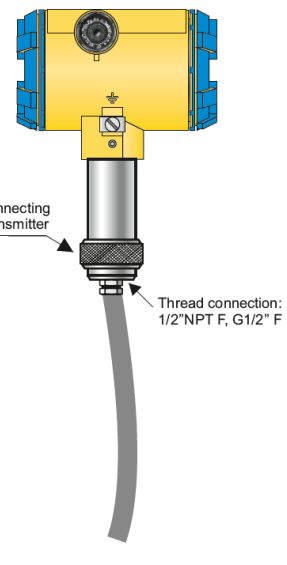
**BTT3298ALW/GB**



**BTT3298ALW/GN**



**BTT3298ALW/WW**



**BTT3298ALW/NC**

### Version

#### BTT3298ALW/GB

version with spring loaded sensor to screwing in thermowell.

- standard version
- Exia version
- Exd version
- MID version

#### BTT3298ALW/GN

version with spring loaded sensor to screwing in thermowell.

- standard version
- Exia version
- Exd version

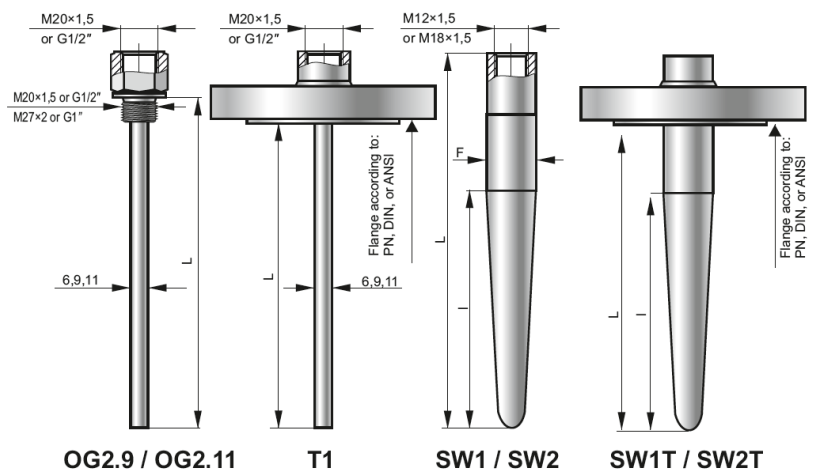
#### BTT3298ALW/WW

- version with replaceable measuring sensor.

#### BTT3298ALW/WW

- version suitable for mounting cable sensor.

### Thermowell



## Technical data

### Metrological parameters

#### Error (digital value)

± (0,05 + 0,05% z + 0,001|t|)°C for sensor Pt100  
 ± (0,5 + 0,05% z)°C for sensor K it @ 375°C  
 ± (0,5 + 0,05% z + 0,002|t-375|)°C for sensor K i  
 t > 375°C

**Additional error for analog output** ±0,04% z  
 where:

|t| – absolute value of the measured temperature °C  
 t – value of the measured temperature °C  
 z – transmitter setting range °C

### Measuring range

| Sensor type | Min set range | Nominal range |
|-------------|---------------|---------------|
| Pt100       | 10°C          | -20...550°C   |
| K           | 10°C          | -40...550°C   |

### Electrical parameters

**Power supply** 12...55 V DC (Ex 13,5...28 V)

**Additional voltage drop when display illumination switched on** 3 V

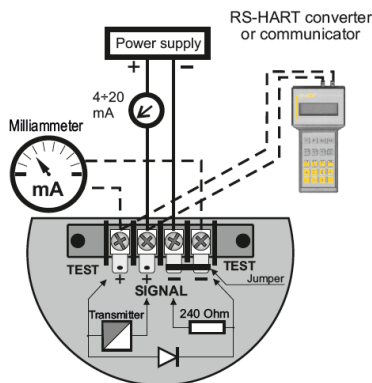
**Output signal** 4...20 mA + Hart protocol

#### ATEX certificate

**Ex ia** II 1/2G Ex ia IIC T4-T6 Ga/Gb  
 I M1 Ex ia I ( version with 316ss housing)  
 II D Ex ia D 20 T105C

**Exd** II 1/2G Ex d/ia IIC T\*  
 II 1/2D Ex iaD 20/ID A21 T\*  
 -40°C ≤ Ta ≤ +45°C / +75°C

### Electrical diagram



**Resistance required for communication (HART) min.** 240Ω.

#### Load resistance

$$R[\Omega] = \frac{U_{ZAS}[V] - 12V^*}{0,0225A}$$

\* – 15 V when display illumination switched on

### Operating conditions

**Ambient temperature**  
 for version with Ex ia -40...85°C  
 for version with Ex d -40...80°C  
 for version with Ex d -40...75°C

**Min. immersion length**

**L=100 mm**

#### Casing

### Materials

Aluminium,  
 316Lss- special version  
 321ss  
 according to table page.

#### Sensor material

#### Thermowell

### Communication and configuration

The communication standard for data interchange with the transmitter is the Hart protocol.

Communication with the transmitter is carried out with:

- a KAP-03, KAP-03Ex communicator,
- some other Hart type communicators,
- a PC using an Hart/RS/Bluetooth converter and Raport 2 configuration software.

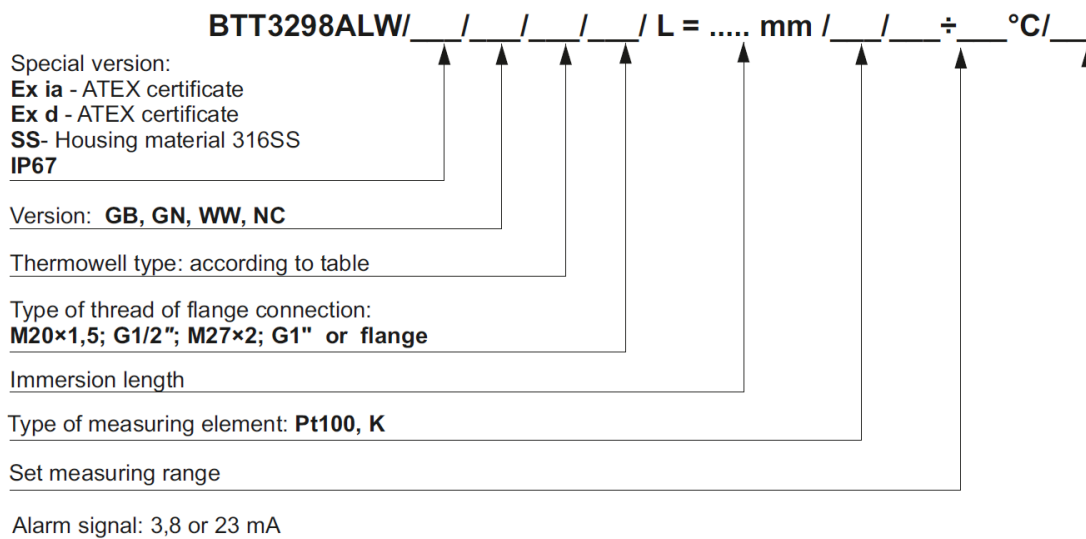
The data interchange with the transmitter enables the users to:

- identify the transmitter;
- configure the output parameters;
- read the currently measured temperature value of the output current and the percentage output control level;
- force an output current with a set value;
- calibrate the transmitter in relation to a model temperature.

### Standard thermowell data

| Thermowell type | Standard dimensions of thermowell |                    |            | Thermowell material | Available process connection     |
|-----------------|-----------------------------------|--------------------|------------|---------------------|----------------------------------|
|                 | Ø[mm]                             | L[mm]              | l[mm]      |                     |                                  |
| OG2.9           | 9x1                               | 100, 160, 250, 400 | -          | 316Lss              | M20x1,5, M27x1 G½", G¾", ½"NPT   |
| OG2.11          | 11x2                              | 100, 160, 250, 400 | -          | 316Lss              | M20x1,5, M27x1 G½", G¾", ½"NPT   |
| T1              | 11x2                              | 100, 160, 250, 400 | -          | 316Lss              | Flange according to DIN and ANSI |
| SW1/SW2         | 18h7/24h7                         | 140, 200           | 65, 65     | 15HM, 10H2M 316Lss  | -                                |
| SW1T/SW2T       | 18h7/24h7                         | 100, 140, 200      | 35, 65, 65 | 15HM, 10H2M 316Lss  | Flange according to DIN and ANSI |

## Ordering procedure



**ample:** Temperature transmitter BTT3298ALW thermowell type T1, ATEX version Ex ia, immersion length 250mm, flange DN50 PN40, type sensor, set range 0 - 300°C, alarm signal 23 mA

**BTT3298ALW/ Ex ia/GN/T1/DN50/L=250 mm / DN50 PN40 / K / 0 ÷ 300°C / 23 mA**

## SMART TEMPERATURE TRANSMITTER BTT3298ALW MID

### Application

Smart temperature transmitters BTT3298ALW MID is applicable to the measurement of the temperature in application designed according to directive 2004/22/WE (MID), harmonized norm PN-EN 12405-1:2005/pr A2:2009 and recommendation OIML R140:2007. Device subcomponent suitable for custody transfer measurement of gas with MID approval.

### Application

Mechanical construction and installation of the transmitter enclosure shall comply with the transmitter BTT3298ALW are described on page IX/ 2, IX/ 3 of catalogue. Temperature transmitters BTT3298ALW MID. Transmitter due to factory blockade of transmitter configuration can not be configurable by user. Electrical connection of the transmitter is according to a drawing on page IX/ 3. Available are only terminals SIGNAL + and SIGNAL -. Temperature transmitter BTT3298ALW MID are produce with GB type of sensor and with resistant sensor Pt100. Note! For custody transfer applications, the cover clamp screws have to be locked with seal wire.

### Metrological parameters

**Max. permissible error** according to EN12no5-1 (calculated in relation to the measured value)

|                                    |                  |
|------------------------------------|------------------|
| - in reference conditions          |                  |
| 20±3°C(±1 during the measurement)  | ≤ 0,1%           |
| - nominal operating conditions     | ≤ 0,2%           |
| special version                    | ≤ 0,1%           |
| <b>Long-term stability</b>         | < 0,2% / 5 years |
| <b>Operating temperature range</b> | -25...55°C       |

### Measuring range

**Measuring range:** -20...60°C

## Ordering procedure

