

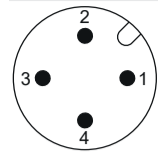
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Änderungen vorbehalten
Modifications réservées

Pin assignment
Anschlusssbelegung
Affectation des bornes

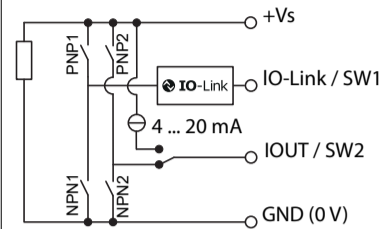
M12x 4 pins



1	+Vs
2	IO-Link / SW2
3	GND
4	IO-Link / SW1

Used pins in different operating modes:

Operating mode	Used pins
IO-Link	Pin 1, 3, 4
Analog 4 ... 20 mA	Pin 1, 2
Dual-channel	Pin 1, 2, 3, 4



Quickstart

Kurzanleitung
Guide rapide

PT55/PT55H

**Industrial temperature transmitter/
Hygienic temperature transmitter**
Industrieller Temperaturtransmitter/
Hygienetauglicher Temperaturtransmitter
Transmetteur de température industriel/
Transmetteur de température hygiénique



11269854, V2, 11/05/2024

EN | DE | FR



The requirements of the respective "3-A Sanitary Standards" will only be fulfilled in combination with appropriate mounting accessories. Those are marked with the 3-A logo.

Die Anforderungen gemäss "3-A Sanitary Standard" werden nur mit den entsprechenden Einbauteilen erfüllt. Diese sind mit dem 3-A-Logo gekennzeichnet.

Les exigences de la norme "3-A Sanitary Standard" sont remplies uniquement avec les composants correspondants. Ceux-ci sont repérés avec le logo 3-A.



The EHEDG certificate is only valid in connection with the appropriate installation parts, see [EHEDG position paper](#).

Das EHEDG-Zertifikat ist nur gültig in Verbindung mit den entsprechenden Einbauteilen, siehe [EHEDG position paper](#).

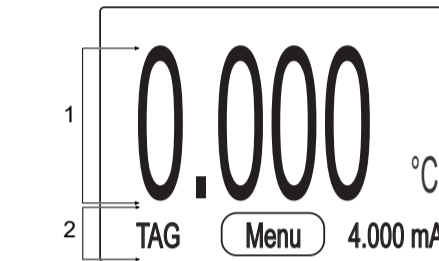
Le certificat EHEDG est valable uniquement en combinaison avec les composants correspondants, voir [EHEDG position paper](#).

Sensor display

- Main area:** Display of the measured values, illustrations or graphs, depending on the selected display layout.
- Additional bar:** Display analog output 4 ... 20 mA or TAG. Click on additional bar to open the display menu.

Anzeige am Sensor

- Hauptbereich:** Anzeige der Messwerte, Illustrationen oder Graphen, abhängig vom gewählten Anzeige-Layout.
- Zusatzleiste:** Anzeige von Analogausgang 4 ... 20 mA oder TAG. Ein Druck auf die Zusatzleiste öffnet das Anzeige-Menü.



Affichage du capteur

- Domaine principal:** Affichage des valeurs mesurées, des illustrations ou des graphiques, selon l'agencement d'affichage choisi.
- Additional bar:** Affichage de la sortie analogique 4 ... 20 mA ou TAG. Cliquer sur la barre supplémentaire pour ouvrir le menu d'affichage.

Operating voltage range:
15 ... 35 VDC without IO-Link
18 ... 30 VDC with IO-Link
Disconnect the system from power before connecting the device.
Note on electromagnetic compatibility: Shielded supply cable is recommended. Ground the cable shield on both sides over a large surface and ensure potential equalization.

Betriebsspannungsbereich:
15 ... 35 VDC ohne IO-Link
18 ... 30 VDC mit IO-Link
Vor dem Anschliessen des Geräts die Anlage spannungsfrei schalten.
Hinweis zur elektromagnetischen Verträglichkeit: Geschirmtes Anschlusskabel empfohlen. Kabelschirm beidseitig, grossflächig erden und Potentialausgleich sicherstellen.

Plage d'alimentation:
15 ... 35 VDC sans IO-Link
18 ... 30 VDC avec IO-Link
Mettre l'installation hors tension avant de raccorder l'appareil.
Remarque concernant la compatibilité électromagnétique : Recommander utiliser un câble de connexion blindé. Effectuer une mise à la terre sur une grande surface aux deux extrémités du blindage du câble et assurer la liaison équipotentielle.

EN

Applicable documents

- Available for download at [www.baumer.com](#):
 - Data sheet
 - EU Declaration of Conformity
- Attached to product:
 - General information sheet (11042373)

Safety instructions

⚠ DANGER

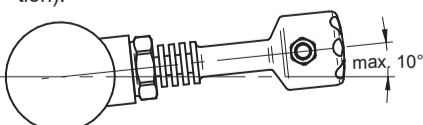
Risk of injury from dangerous media

- Wear protective gear when working with hazardous media (e.g. acids, lye).
- Empty pipes prior to the installation.

- This sensor has been assembled, tested and packed under technically safe conditions according to currently applicable EU directives. To maintain and ensure safe operation, observe the information and warnings in this manual.
- Sensor operation only by instructed and qualified personnel. Correct and safe deployment depends on proper transportation, storage, installation and operation of the product.
- Wiring work and terminal assignment must comply with the electrical connection diagram.
- Prior to power off ensure that no other parts of the installation will be implicated.
- Make sure supply voltage and the ambient conditions comply with the product specifications.
- Prior to power off, check potential effects on other system components or installations.

Installation instructions

- Sensor installation must be flush. Where dead space is required, length must be inferior to the diameter: $L < D$
- Do not damage the seal during installation/exchange.
- Variants with cooling neck ($T_{medium} = 250\text{ °C}$) must be installed at a maximum angle of 10° to the horizontal line to ensure proper cooling (see following illustration).

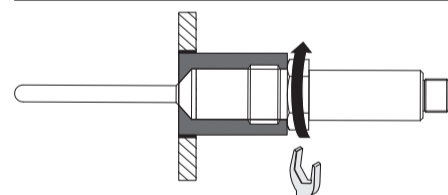


Installing the hygienic sensor PT55H

⚠ WARNING

Health hazard from contaminated media

- Only use welding sleeves and adapters from Baumer.
- Do not seal the process connection with Teflon tape (PTFE).
- The welding should only be carried out by persons who are trained in the hygiene sector.
- Refer to Baumer welding accessories installation instructions on [www.baumer.com](#).



This applies to sensors with the following process connection:

- G 1/2 A hygienic (BCID A03) not EHEDG & 3A
- G 12x1.5 hygienic (BCID A02) not EHEDG & 3A
- BHC 3A DN 38 (BCID B01)
- ISO 2852 Tri-Clamp Ø 50.5 (BCID C04)
- Varivent type N Ø 68 (BCID V02)

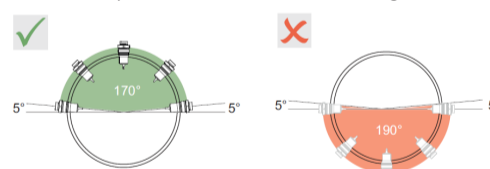
Instruction:

- Screw the sensor in place applying the following torque:
 - G 1/2 A hygienic: 15 ... 20 Nm
 - M12x1.5 hygienic: 12 ... 16 Nm
 - Clamp connection: hand-tight

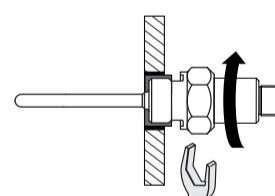
Hygienic applications

- To comply with the sensor-specific hygiene certificates, operate the sensor using the seal specified in the data sheet. Connecting part must provide the same certifications ([EHEDG position paper](#)).
- We recommend checking the seals for damage each time they are removed and replacing them after three months. The replacement interval can be changed after test or based on experience, provided the operating conditions allow for hygienic sensor operation.
- When installed in a tank, the cleaning device must be positioned in away allowing for sensor and process connection access required for cleaning.
- Align the inner pipe surface to the welding adapter.
- Welds shall be free from cracks, crevices and groves. Grind welds to $Ra \leq 0.8\ \mu m$.
- The 3-A mark respectively the arrow must point upwards.
- Tighten the connection to the torque specified in section "Installation".

- The sensor is appropriate for cleaning in place (CIP) and sterilization in place (SIP) in pipes or tanks:
 - Without cooling neck: $T_{max} = 150\text{ °C} / 30\text{ min}$.
 - With cooling neck: $T_{max} = 250\text{ °C}$ continuous
- Attach the weld-in sleeves at the correct angle (see illustration) to ensure entire self-draining.



Installing the non-hygienic sensor PT55



Use Teflon tape (PTFE) for sealing the threads of sensors with the following process connections:

- 1/2-14 NPT (BCID N02)
- G 1/2 A ISO 228-1 (BCID G06)
- Do not use Teflon tape (PTFE) for sealing the threads of sensors with the following process connections:
 - G 1/2 A DIN 3852-E (BCID G51)
 - G 1/4 A DIN 3852-E (BCID G50)

Instruction:

- Screw sensor in place applying the following tightening torque:
 - 1/2 NPT: 20 Nm max.
 - G 1/2 A: 30 Nm max.
 - G 1/4 A: 30 Nm max.

Installation according to UL approval

The appliance is only certified for indoor use. UL does not evaluate IP protection classes. Device power supply must be provided by external circuits in accordance with Class III as well as low voltage in accordance with CI requirements 9.4 of UL/CSA 61010-1 3rd ed. or Class 2 of UL1310. Mandatory to use UL-approved CYJV/7 or PVVA/7 cables with voltage, current and temperature ratings suitable for the application, but minimum 90 °C . If the device is used otherwise than specified by the manufacturer, the device-specific protection ratings may be impaired.

Parameterization

Sensor parameterization is either via display, connected PC with software *FlexProgram* installed or via the *IO-Link* master.

Parameterization via IO-Link master

NOTICE
The sensor must not be directly connected to a class B Master.

Instruction:

- Connect IO-Link master to sensor.
- Connect IO-Link master to PC via USB cable.
- Enter the parameters. A detailed description of IODD parameters and process data is accessible at [www.baumer.com](#).

Parameterization using FlexProgrammer 9701

Condition:

⇒ Cable and PC with *FlexProgram* and *FlexProgrammer 9701*

Instruction:

- Connect the *FlexProgrammer 9701* to the sensor.
- Connect *FlexProgrammer 9701* to PC. PC must have the latest version of *FlexProgram* installed.
- Proceed with sensor parameterization. For more information, see the **HELP menu** of the *FlexProgram*.

Maintenance

The sensor is maintenance-free. No special preventive maintenance is required. Regular cleaning and inspection of connection and seal are recommended.

