# PI-housing
# Models PIH-L, PIH-H, PIH-W, PIR-L, PIR-H, PIR-W



## Applications

- Refineries
- Oil and gas industry
- Chemical industry
- Offshore exploration and drilling
- Pulp and paper industry

## Special features

- Explosion-protected versions
- High-quality surface coating
- Window for digital display
- 33 mm [1.3 in] pitch circle diameter for terminal block/ transmitter mounting
- Accessories for pipe mounting

**Fig. left:** **Model PIH-H with high screw-on lid**
**Fig. right:** **Model PIH-W with high screw-on lid and window**

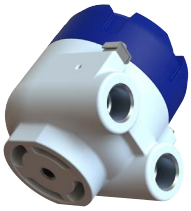


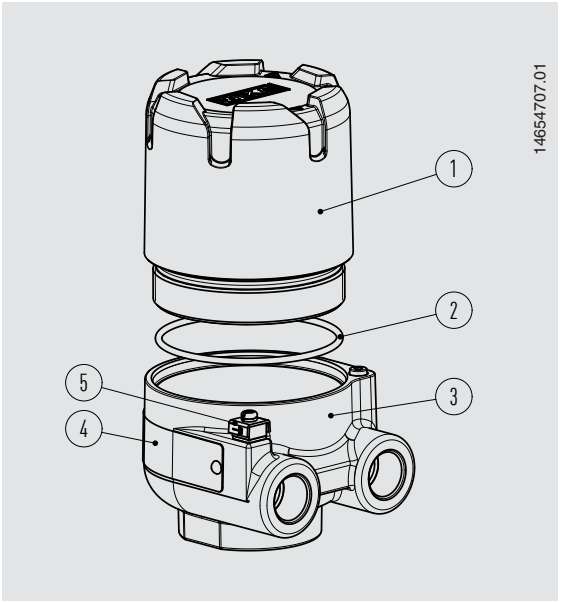
**Fig. left:** **Model PIH-L with flat screw-on lid**
**Fig. right:** **Model PIR-L with M10 thread at the underside of the case**

## Description

The connection head of the PIH or PIR series is available with various explosion protection certifications for different ignition protection types. The fitting of different terminal blocks or transmitters is possible. A window in the upper body of the case enables the fitting of a digital display for the on-site display of the measured value. With the optional wall or pipe-mounting brackets, vertical or horizontal mounting in the field is possible. High-quality surface coatings also enable operation in harsh environments.
Internal grounding and external equipotential bonding terminals make the field cabling simple and easily accessible.

# Specifications

### Representation of the components




① Screw-on lid
② Sealing
③ Case
④ Product label of end device
⑤ Equipotential bonding terminal

| Overview of versions | |
|---|---|
| **Model** | **Description** |
| **PIH-L** | Connection head with flat screw-on lid |
| **PIH-H** | Connection head with high screw-on lid |
| **PIH-W** | Connection head with high screw-on lid and window |
| **PIR-L** | Connection head with flat screw-on lid, pipe or wall mounting |
| **PIR-H** | Connection head with high screw-on lid, pipe or wall mounting |
| **PIR-W** | Connection head with high screw-on lid and window, pipe or wall mounting |

| Basic information | | |
|---|---|---|
| **Materials** | | |
| Lower part of the case | Aluminium die-casting EN AC-43500 AlSi10MnMg / AA 365.0; copper content ≤ 0,05% (low copper) | |
| Screw-on lid | Aluminium die-casting EN AC-43500 AlSi10MnMg / AA 365.0; copper content ≤ 0,05% (low copper) | |
| Window | Glass | |
| Sealing | ■ EPDM -60 ... +90 °C [-76 ... 194 °F]<br>■ MVQ -60 ... +110°C [-76 ... 230 °F], on request<br>■ FKM -20 ... +110°C [-4 ... 230 °F], on request | |
| **Case surface** | | |
| Colour | Lower body | WIKA product grey RAL 7035 |
| | Screw-on lid | WIKA product blue RAL 5022 |
| Coating | ■ PE/PU (polyester/polyurethane) powder coating<br>■ 90 ±40 µm thickness<br>■ Electrically conductive per IEC 60243-1:2013<br>■ The painted test objects / surfaces were subjected to a salt mist and condensation test per C5-M, per ISO 12944-6. The evaluation per ISO 4624, ISO 4628-2/-3/-4/-5/-6, as well as the scored areas per ISO 12994 A.2 showed no significant abnormalities.<br>■ Cross-cut: GT 0 (...1) per ISO 2409:2013 - 1c or 2a<br>■ Chemical resistance: no residues detectable | |

| Basic information | |
|---|---|
| Features | ■ Impact resistance of the window per IEC 60079-0:2017 point 26.4.2<br>■ Pressure containment of case per IEC 60079-1:2014 point 15.2.3.2<br>■ UV resistance per ISO 4892-3:2016 procedure A, cycle 3 |
| **Weight** | |
| Case with flat screw-on lid | ≤ 0.85 kg [≤ 1,9 lbs] |
| Case with high screw-on lid | ≤ 1.0 kg [≤ 2,2 lbs] |
| Case head with high screw-on lid and window | ≤ 1.1 kg [≤ 2,4 lbs] |

| Overview of connection threads | | | |
|---|---|---|---|
| **Head version for direct mounting on an electrical thermometer** | **Left<br>Input A** | **Right<br>Input B** | **Bottom, to neck tube<br>Input C** |
| **PIH-L, PIH-H, PIH-W** | M20 x 1.5 | Closed | M20 x 1.5, ½ NPT, ¾ NPT |
| | M20 x 1.5 | M20 x 1.5 | M20 x 1.5, ½ NPT, ¾ NPT |
| | ½ NPT | Closed | M20 x 1.5, ½ NPT, ¾ NPT |
| | ½ NPT | ½ NPT | M20 x 1.5, ½ NPT, ¾ NPT |
| | ¾ NPT | Closed | ½ NPT, ¾ NPT |

| Overview of connection threads | | | |
|---|---|---|---|
| **Head version for pipe/wall mounting** | **Left<br>Input A** | **Right<br>Input B** | **Blind bore, no through-hole threads<br>Input C** |
| **PIR-L, PIR-H, PIR-W** | M20 x 1.5 | M20 x 1.5 | M10 |
| | ½ NPT | ½ NPT | M10 |

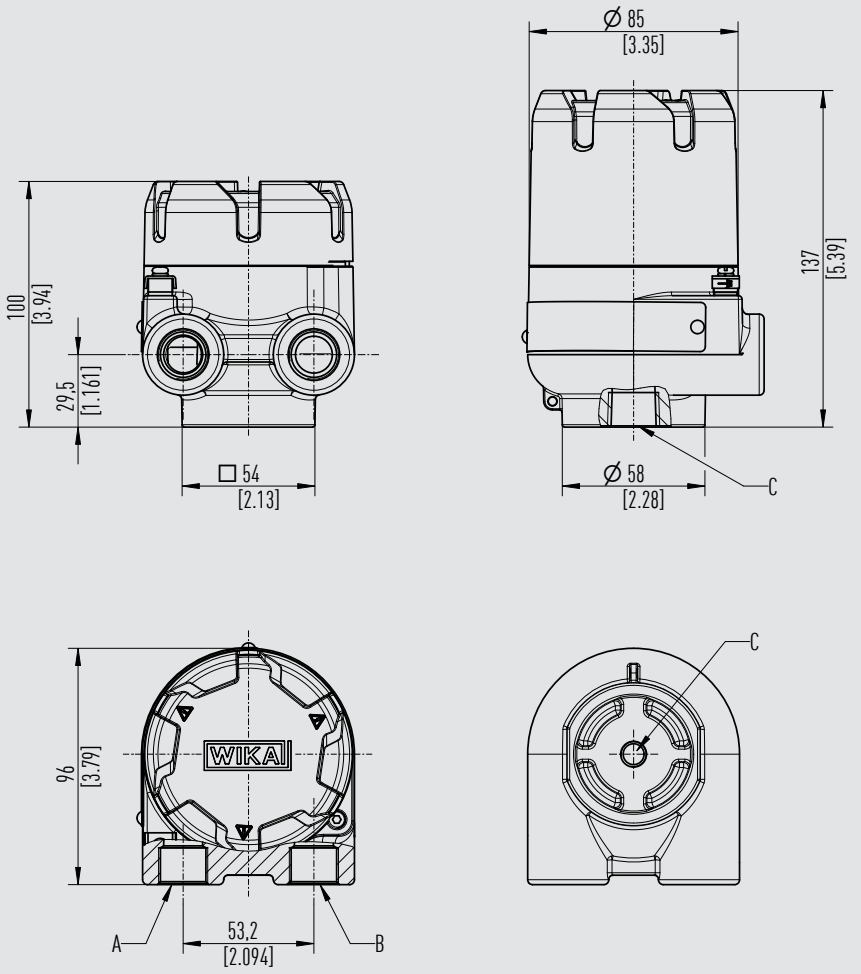
| Operating conditions | | |
|---|---|---|
| **Service temperature range** | | |
| Continuous operation | EPDM | -60 °C ... +90 °C [-76 ... +194 °F] |
| | EPDM, Ex | -60 °C ... +85 °C [-76 ... +185 °F] |
| Short time | EPDM | -70 °C ... +135 °C [-94 ... +275 °F] |
| **Storage temperature range** | -60 °C ... +110 °C [-76 ... +230 °F] | |
| **Ingress protection of the connection head** | IP66/IP68 | |

The specified IP degree of protection applies under the following conditions:
- Use of a suitable cable gland
- Use of a cable cross-section appropriate for the gland or select the appropriate cable gland for the available cable
- Adhere to the tightening torques for all threaded connections

## Approvals

| Logo | Description | | | Region |
|---|---|---|---|---|
| | **EU-type examination certificate** | | | European Union |
| | ATEX directive<br>Hazardous areas<br>PI*-* housing SAFEX<br>- Ex d, Ex t | Zone 1 gas<br>Zone 21 dust | II 2G Ex db IIC Gb<br>II 2D Ex tb IIIC Db | |
| | PI*-* housing SAEEX<br>- Ex e, Ex t | Zone 1 gas<br>Zone 21 dust | II 2G Ex eb IIC Gb<br>II 2D Ex tb IIIC Db | |
| | **IECEx**<br>Hazardous areas<br>PI*-* housing SAFEX<br>- Ex d, Ex t | Zone 1 gas<br>Zone 21 dust | Ex db IIC Gb<br>Ex tb IIIC Db | International |
| | PI*-* housing SAEEX<br>- Ex e, Ex t | Zone 1 gas<br>Zone 21 dust | Ex eb IIC Gb<br>Ex tb IIIC Db | |

## Dimensions in mm [in]




| Input | Thread | Tightening torques in Nm [1] |
|---|---|---|
| **A** | M20 x 1.5 | 20 |
| | ½ NPT | 20 |
| | ¾ NPT | 25 |
| **B** | M20 x 1.5 | 20 |
| | ½ NPT | 20 |
| **C** | ½ NPT | 30 |
| | ¾ NPT | 40 |
| | M20 x 1.5 with lock nut | 25 |

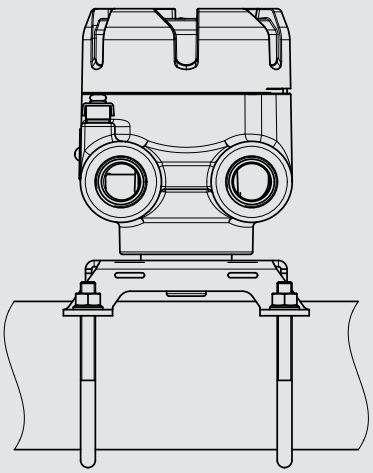
1) Observe the data sheet of the cable gland manufacturer

## Accessories

| Figure | | Description | Order number |
|---|---|---|---|
|  | **Pipe/ Wall-mounting kit** | Stainless steel pipe-/wall-mounting kit for pipe diameters of 38 ... 63 mm [1.5 ... 2.5 in], consisting of two V-shaped pipe mounting brackets and mounting plate | 14658397 |
|  | **TND – Temperature Numerical Display** | Indication module TND, 5-digit LC display<br><br>A T38 transmitter is required for operating the TND clip-on display. | 33025404 |

Pipe mounting (front view)

14636563.01



Pipe mounting (side view)

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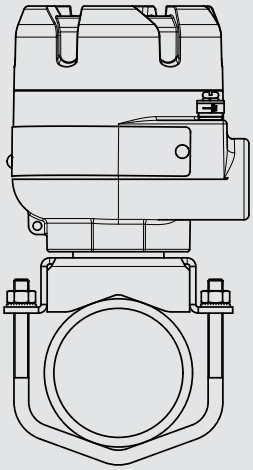

Wall mounting

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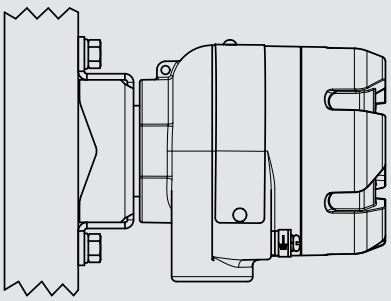

**Ordering information**
Model / Head-mounted design / Thread sizes





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