

Electronic temperature switch

Typ TSD-30



Art. No. 148328

Type No. TSD30.2.P.420.5.12.50



Exemplary illustration

The successful design and the excellent functionality of the WIKA switch family were already confirmed by winning the "iF product design award" for the model PSD-30 pressure switch.

The robust LED display has been designed using 9 mm high characters (the largest possible) and with a slight incline in order to make reading the temperature as easy as possible from a long way off. The use of a 14-segment display ensures a clear display and readability of letters.

The 3-key operation makes simple, intuitive menu navigation possible, with no need for additional assistance. The menu navigation is designed in accordance with the latest VDMA standard. The control keys have been designed as large as possible and are arranged ergonomically to ensure fast and easy adjustments. Operation without any additional assistance is made easier through the tactile feedback.

The installation of the model TSD-30 temperature switch can be flexibly adapted to the individual mounting situation. Due to the almost unlimited rotation of the display and case by more than 300°, the display can be adjusted independently of the electrical connection. The display can thus always be aligned to face the operator, and the M12x1 connection positioned to suit the desired cable routing.

During development of the WIKA switch family a high value was placed on a robust design and the selection of appropriate materials suited to machine building applications. For this reason the case and the threaded connection of the electrical connector are made from stainless steel. Overwinding or tearing off the connector is therefore virtually impossible.

Technical data

| | |
|-----------------------|--|
| WIKA type | TSD-30 |
| Housing | CrNi steel 1.4301 |
| Indicating range | -20 to 80 °C |
| Ambient temperature | -20 to 80 °C |
| Protection IP | IP 65 and IP 67 |
| Accuracy | ≤ 0.5 % FS |
| Output signal | 2 switching outputs (PNP) |
| Thread | G 1/2 AG |
| Wetted parts | CrNi steel 1.4571 |
| Electrical connection | circular plug-in connector M12x1, 5-wire |
| Display head material | PC + ABS blend |
| Probe length | 50 mm |

Technical data

| | |
|--------------|--------------|
| Power supply | DC 15 - 35 V |
|--------------|--------------|

Other special versions with different output signals, process connections, sensors and probe lengths can be individually selected for the respective application and are available on request.

Commercial data

| | |
|-------------------------|---------------------------------|
| Customs tariff number | 90251900 |
| Country of origin | DE |
| eCl@ss 5.1.4 | 27140101 |
| eCl@ss 9.0 | 27140101 |
| UNSPSC_Code_v190501 | 41112209 |
| UNSPSC_CodeDesc_v190501 | Electronic temperature switches |

Electronic temperature switch with display Model TSD-30

WIKA data sheet TE 67.03


for further approvals
see page 6


Applications

- Machine tools
- Hydraulic power packs
- Cooling and lubrication systems
- Machine building

Special features

- Easily readable, robust display
- Intuitive and fast setup
- Easy and flexible mounting configurations



Electronic temperature switch with display Model TSD-30

Description

Award-winning in design and functionality

The successful design and the excellent functionality of the WIKA switch family were already confirmed by winning the "iF product design award" for the model PSD-30 pressure switch.

The robust LED display has been designed using 9 mm high characters (the largest possible) and with a slight incline in order to make reading the temperature as easy as possible from a long way off. The use of a 14-segment display ensures a clear display and readability of letters.

The 3-key operation makes simple, intuitive menu navigation possible, with no need for additional assistance. The menu navigation is designed in accordance with the latest VDMA standard. The VDMA standard for fluid sensors (24574-2, part 2 temperature switches) has the aim of considerably simplifying the use of temperature switches by standardising menu navigation and display.

The control keys have been designed as large as possible and are arranged ergonomically to ensure fast and easy adjustments. Operation without any additional assistance is made easier through the tactile feedback.

Customised installation

The installation of the model TSD-30 temperature switch can be flexibly adapted to the individual mounting situation. Due to the almost unlimited rotation of the display and case by more than 300°, the display can be adjusted independently of the electrical connection. The display can thus always be aligned to face the operator, and the M12 x 1 connection positioned to suit the desired cable routing.

IO-Link

With the optional output signal in accordance with the IO-Link communication standard, the TSD-30 allows a fast integration into modern automation systems. IO-Link offers an even faster installation, parameterisation and higher functionality of the TSD-30.

WIKA data sheet TE 67.03 · 10/2019

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Data sheets showing similar products:
Electronic pressure switch with display; model PSD-4; data sheet PE 81.86
Electronic level switch with display; model LSD-30; data sheet LM 40.01
Electronic flow switch with display; model FSD-30; data sheet FL 80.01



Measuring ranges

| Selectable versions | | |
|---------------------------|--------------|--------------|
| Temperature | °C | °F |
| Standard | -20 ... +80 | -4 ... +176 |
| Option 1 ^{1) 2)} | -20 ... +120 | -4 ... +248 |
| Option 2 ^{1) 2)} | 0 ... +150 | +32 ... +302 |

1) Only for process connections with compression fitting.

2) Installation instructions under "Operating conditions" must be observed.

Display

14-segment LED, red, 4-digit, 9 mm [0.35 in] character size
 Display can be rotated electronically through 180°
 Update: 200 ms

Output signal

| Selectable versions | | | |
|---------------------|------------------|-----|------------------------|
| | Switching output | | Analogue signal |
| | SP1 | SP2 | |
| Option 1 | PNP | - | 4 ... 20 mA (3-wire) |
| Option 2 | PNP | - | DC 0 ... 10 V (3-wire) |
| Option 3 | PNP | PNP | - |
| Option 4 | PNP | PNP | 4 ... 20 mA (3-wire) |
| Option 5 | PNP | PNP | DC 0 ... 10 V (3-wire) |

Optionally also available with an NPN instead of a PNP switching output.

IO-Link, revision 1.1 (option)

IO-Link is optionally available for all output signals.
 With the IO-Link option, switching output SP1 is always PNP

Switching thresholds

Switch point 1 and switch point 2 are individually adjustable

Switching functions

Normally open, normally closed, window, hysteresis (freely adjustable)

Switching voltage

Supply voltage - 1 V

Switching current

- without IO-Link: max. 250 mA
- with IO-Link: SP1 max. 100 mA
SP2 max. 250 mA

Adjustment accuracy

≤ 0.5 % of span

Adjustment of zero point offset

±3 % of span

Scaling

Zero point: 0 ... 25 % of span
 Full scale: 75 ... 100 % of span

Load

Analogue signal 4 ... 20 mA: ≤ 0.5 kΩ
 Analogue signal DC 0 ... 10 V: > 10 kΩ

Service life

100 million switching cycles

Voltage supply

Supply voltage U_s

DC 15 ... 35 V

Current consumption

Switching outputs with

- Analogue signal 4 ... 20 mA: 70 mA
- Analogue signal DC 0 ... 10 V: 45 mA
- without analogue signal: 45 mA

IO-Link option causes a deviating current consumption

Total current consumption

- without IO-Link: max. 600 mA including switching current
- with IO-Link: max. 450 mA including switching current

Accuracy specifications

Analogue signal

≤ ±0.5 % of span + temperature sensor error

Switching output

≤ ±0.8 % of span + temperature sensor error

Display

≤ ±(0.8 % of span + temperature sensor error) ±1 digit

Temperature sensor error

For °C: ±(0.15 K + 0.002 | t |)

For °F: ±[1.8*(0.15 + 0.002 (t - 32) / 1.8)]

| t | is the numerical value of the temperature without consideration of the sign.

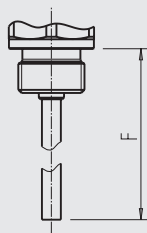
The actually achievable accuracy is significantly determined by the mounting situation (immersion depth, probe length, operating conditions). This is especially the case for large temperature gradients between the environment and the medium.

Probe

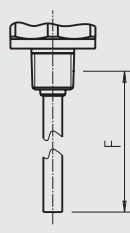
Probe length (F)

Mounting thread

Parallel thread



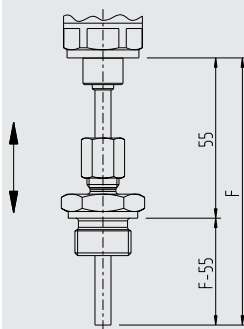
Tapered thread



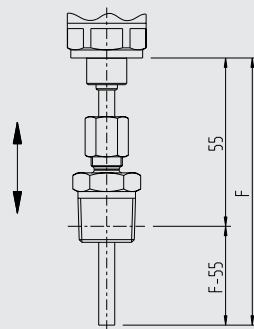
| F | | | | | | | | |
|----|------|------|------|------|------|------|-------|------|
| mm | 25 | 50 | 100 | 150 | 200 | 250 | 300 | 350 |
| in | 0.98 | 1.97 | 3.94 | 5.91 | 7.87 | 9.84 | 11.81 | 13.8 |

Compression fitting

Parallel thread



Tapered thread



| F | | | | | | |
|----|------|------|------|------|-------|------|
| mm | 100 | 150 | 200 | 250 | 300 | 350 |
| in | 3.94 | 5.91 | 7.87 | 9.84 | 11.81 | 13.8 |

Response time

T05 < 5 s (per DIN EN 60751)

T09 < 10 s (per DIN EN 60751)

Static operating pressure

max. 150 bar [2,175 psi]

When using a compression fitting:

max. 50 bar [max. 725 psi]

Operating conditions

Permissible temperature ranges

Medium: see measuring ranges

Ambient: -20 ... +80 °C [-4 ... +176 °F] ¹⁾

Storage: -20 ... +80 °C [-4 ... +176 °F]

1) At medium temperatures above 80 °C [176 °F] the permissible ambient temperature is limited to -20 ... +40 °C [-4 ... +104 °F]. In this case, the process connection has to be designed with a compression fitting.

At high medium or ambient temperatures, ensure by suitable measures that the instrument case temperature does not exceed 80 °C [176 °F] in continuous operation (the temperature is measured at the hexagon of the process connection).

Air humidity

45 ... 75 % r. h.

Vibration resistance

Probe length F ≤ 150 mm [5.91 in]:

6 g (IEC 60068-2-6, under resonance)

Probe length F ≥ 250 mm [9.84 in]:

2 g (IEC 60068-2-6, under resonance)

Shock resistance

50 g (IEC 60068-2-27, mechanical)

Ingress protection per IEC/EN 60529

IP65 and IP67

The stated ingress protection only applies when plugged in using mating connectors that have the appropriate ingress protection.

Mounting position

as required

Reference conditions

| | |
|-----------------------|--|
| Temperature: | 15 ... 25 °C [59 ... 77 °F] |
| Atmospheric pressure: | 950 ... 1,050 mbar [13.78 ... 15.23 psi] |
| Air humidity: | 45 ... 75 % r. h. |
| Nominal position: | Process connection lower mount |
| Supply voltage: | DC 24 V |
| Load: | see "Output signal" |

Materials

Wetted parts

| | |
|--------|------------------------|
| Probe: | Stainless steel 1.4571 |
|--------|------------------------|

Non-wetted parts

| | |
|-----------------|-----------------|
| Case: | Stainless steel |
| Keyboard: | TPE-E |
| Display window: | PC |
| Display head: | PC + ABS blend |

Process connections

| Selectable versions | |
|---|--------------------------------|
| Standard | Thread |
| DIN EN ISO 1179-2 (parallel thread) | G ¼ A |
| | G ½ A |
| DIN 3852-A (parallel thread) | G ¼ A with compression fitting |
| | G ½ A with compression fitting |
| ANSI / ASME B1.20.1 (tapered thread) | ¼ NPT |
| | ¼ NPT with compression fitting |
| | ½ NPT |
| | ½ NPT with compression fitting |

Sealings

| Selectable versions | | |
|--|------------------|---------|
| Connection per | Sealing material | |
| DIN EN ISO 1179-2 (parallel thread) | Standard | NBR |
| | Option | FPM/FKM |
| DIN 3852-A (parallel thread) | Standard | Copper |

Electrical connections

Connections


- Circular connector M12 x 1 (4-pin)
- Circular connector M12 x 1 (5-pin) ¹⁾


¹⁾ Only for version with two switching outputs and additional analogue signal

Electrical safety

| | |
|------------------------------|---|
| Short-circuit resistance: | S ₊ / SP1 / SP2 vs. U ₋ |
| Reverse polarity protection: | U ₊ vs. U ₋ |
| Insulation voltage: | DC 500 V |
| Overvoltage protection: | DC 40 V |

Connection diagrams

| Circular connector M12 x 1 (4-pin) | | |
|---|----------------|---|
|  | U ₊ | 1 |
| | U ₋ | 3 |
| | S ₊ | 2 |
| | SP1 / C | 4 |
| | SP2 | 2 |
| | | |

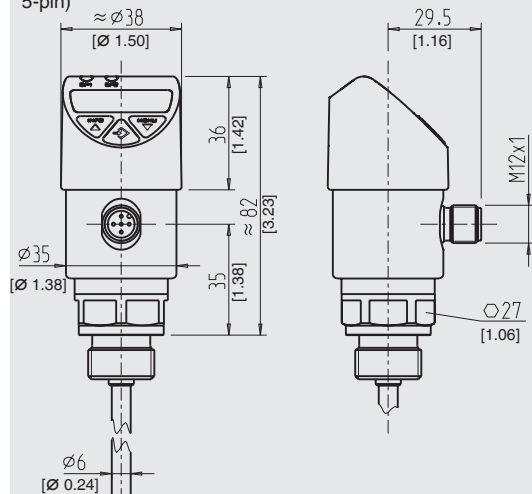
| Circular connector M12 x 1 (5-pin) | | |
|---|----------------|---|
|  | U ₊ | 1 |
| | U ₋ | 3 |
| | S ₊ | 5 |
| | SP1 / C | 4 |
| | SP2 | 2 |
| | | |

Legend:

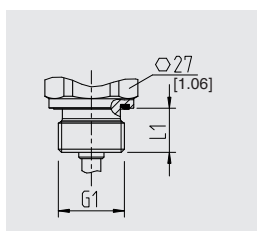
| | |
|----------------|----------------------------|
| U ₊ | Positive supply voltage |
| U ₋ | Reference potential |
| SP1 | Switching output 1 |
| SP2 | Switching output 2 |
| C | Communication with IO-Link |
| S ₊ | Analogue output |

Dimensions in mm [in]

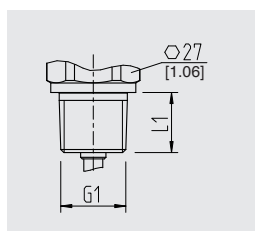
Temperature switch with circular connector M12 x 1 (4- and 5-pin)



Weight: approx. 0.3 kg [10.58 oz]

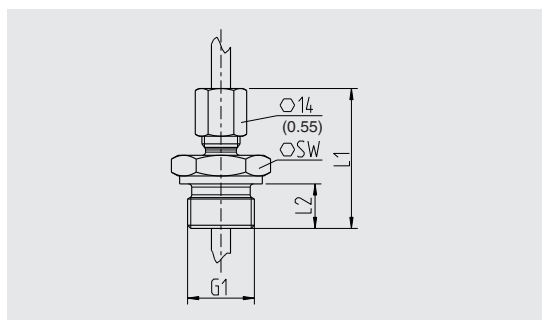


| G1 | L1 |
|-------|-----------|
| G ¼ A | 12 [0.47] |
| G ½ A | 14 [0.55] |

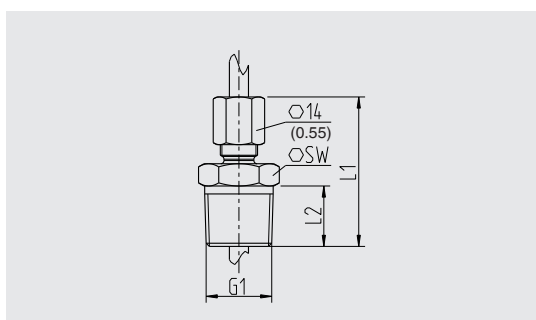


| G1 | L1 |
|-------|-----------|
| ¼ NPT | 13 [0.51] |
| ½ NPT | 19 [0.75] |

Compression fittings









| G1 | L1 | L2 | SW |
|-------|-----------|-----------|-----------|
| G ¼ A | 40 [1.57] | 12 [0.47] | 19 [0.75] |
| G ½ A | 44 [1.73] | 14 [0.55] | 27 [1.06] |




| G1 | L1 | L2 | SW |
|-------|-----------|-------------|-----------|
| ¼ NPT | 41 [1.61] | 15.1 [0.59] | 17 [0.67] |
| ½ NPT | 41 [1.61] | 19.7 [0.78] | 22 [0.87] |

For probe lengths, see page 3.

Approvals



| Logo | Description | Country |
|---|--|-----------------------------|
|  | EU declaration of conformity ■ EMC directive, EN 61326 emission (group 1, class B) and immunity (industrial application) ■ RoHS directive | European Union |
|  | UL Safety (e.g. electr. safety, overpressure, ...) | USA |
|  | EAC EMC directive | Eurasian Economic Community |
|  | GOST Metrology, measurement technology | Russia |
|  | KazInMetr Metrology, measurement technology | Kazakhstan |
| - | MTSCHS Permission for commissioning | Kazakhstan |
|  | UkrSEPRO Metrology, measurement technology | Ukraine |
| - | CRN Safety (e.g. electr. safety, overpressure ...) | Canada |

Accessories and spare parts

| Compression fittings | | |
|---|---------------------------------------|--------------|
| | Description | Order number |
|  | G ¼ A per DIN 3852-A, stainless steel | 11160136 |
| | G ½ A per DIN 3852-A, stainless steel | 3221555 |
| | ¼ NPT, stainless steel | 3232905 |
| | ½ NPT, stainless steel | 14043934 |

When using compression fittings, a limited static operating pressure of max. 50 bar (max. 725 psi) applies.

| Sealings | | |
|---|---|--------------|
| | Description | Order number |
|  | NBR profile sealing G ¼ A DIN EN ISO 1179-2 | 1537857 |
| | FPM/FKM profile sealing G ¼ A DIN EN ISO 1179-2 | 1576534 |
| | NBR profile sealing G ½ A DIN EN ISO 1179-2 | 1039067 |
| | FPM/FKM profile sealing G ½ A DIN EN ISO 1179-2 | 1039075 |

| Connectors with moulded cable | | | | |
|---|--|------------------------------------|---------------------|--------------|
| | Description | Temperature range | Cable diameter | Order number |
|  | Straight version, cut to length, 4-pin, 2 m [6.6 ft] PUR cable, UL listed, IP67 | -20 ... +80 °C [-4 ... +176 °F] | 4.5 mm [0.18 in] | 14086880 |
| | Straight version, cut to length, 4-pin, 5 m [16.4 ft] PUR cable, UL listed, IP67 | -20 ... +80 °C [-4 ... +176 °F] | 4.5 mm [0.18 in] | 14086883 |
| | Straight version, cut to length, 4-pin, 10 m [32.8 ft] PUR cable, UL listed, IP67 | -20 ... +80 °C [-4 ... +176 °F] | 4.5 mm [0.18 in] | 14086884 |
| | Straight version, cut to length, 5-pin, 2 m [6.6 ft] PUR cable, UL listed, IP67 | -20 ... +80 °C [-4 ... +176 °F] | 5.5 mm [0.22 in] | 14086886 |
| | Straight version, cut to length, 5-pin, 5 m [16.4 ft] PUR cable, UL listed, IP67 | -20 ... +80 °C [-4 ... +176 °F] | 5.5 mm [0.22 in] | 14086887 |
| | Straight version, cut to length, 5-pin, 10 m [32.8 ft] PUR cable, UL listed, IP67 | -20 ... +80 °C [-4 ... +176 °F] | 5.5 mm [0.22 in] | 14086888 |
|  | Angled version, cut to length, 4-pin, 2 m [6.6 ft] PUR cable, UL listed, IP67 | -20 ... +80 °C [-4 ... +176 °F] | 4.5 mm [0.18 in] | 14086889 |
| | Angled version, cut to length, 4-pin, 5 m [16.4 ft] PUR cable, UL listed, IP67 | -20 ... +80 °C [-4 ... +176 °F] | 4.5 mm [0.18 in] | 14086891 |
| | Angled version, cut to length, 4-pin, 10 m [32.8 ft] PUR cable, UL listed, IP67 | -20 ... +80 °C [-4 ... +176 °F] | 4.5 mm [0.18 in] | 14086892 |
| | Angled version, cut to length, 5-pin, 2 m [6.6 ft] PUR cable, UL listed, IP67 | -20 ... +80 °C [-4 ... +176 °F] | 5.5 mm [0.22 in] | 14086893 |
| | Angled version, cut to length, 5-pin, 5 m [16.4 ft] PUR cable, UL listed, IP67 | -20 ... +80 °C [-4 ... +176 °F] | 5.5 mm [0.22 in] | 14086894 |
| | Angled version, cut to length, 5-pin, 10 m [32.8 ft] PUR cable, UL listed, IP67 | -20 ... +80 °C [-4 ... +176 °F] | 5.5 mm [0.22 in] | 14086896 |

Ordering information

Model / Measuring range / Output signal / Probe length / Process connection / Sealing / Accessories and spare parts

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The specifications given in this document represent the state of engineering at the time of publishing.
We reserve the right to make modifications to the specifications and materials.

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Mechanical mounting

For WIKA pressure sensors and WIKA pressure switches

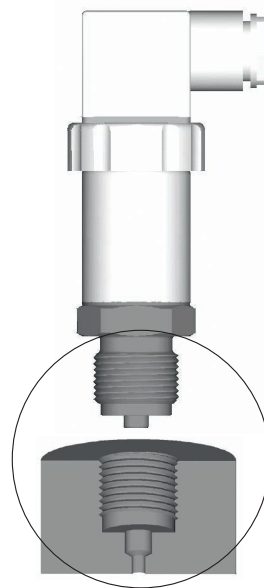
WIKA data sheet IN 00.14

Applications

- For fastening and sealing of a WIKA pressure sensor
- For fastening and sealing of a WIKA pressure switch

Versions

- Standard process connections
- Flush process connections
- UHP process connections
- Hygienic process connections



Description

WIKA offers measuring instruments with a variety of process connections in order to meet diverse customer-specific application requirements.

The customer must provide an appropriate tapped hole when installing the pressure sensor or pressure switch. This receives the WIKA pressure measuring sensor or the WIKA pressure switch.

When selecting the appropriate tapped hole, the process connection is just as critical as the thread type of the process connection and the use of the sealing. Process connections are basically divided into standard and flush process connections.

Thread types

WIKA offers process connections with various thread types which are used in numerous applications worldwide.

Types of sealing

Depending on the process connection and the medium, different sealings and sealing materials can be used. Depending on the pressure connection, the location of the sealing varies (→ For notes on sealings, see WIKA data sheet AC 09.08).

You can find further information below. Some tapped holes are available from WIKA as welding sockets. They can be ordered with the specified WIKA order number.

Making the mechanical connection

Requirements for the mounting point

The mounting point must meet the following conditions:

- The sealing faces at the pressure sensor and the measuring locations always have to be clean.
- Remove any protective cap and/or Mylar or protective foil not until shortly before installation.
- Permissible ambient temperatures remain within the performance limits of the measuring instrument. Consider possible restrictions on the ambient temperature range caused by mating connectors used.

Mechanical mounting:

1. Prior to commissioning, the pressure sensor must be subjected to a visual inspection.
Leaking liquid is indicative of damage.
2. Seal the sealing face (→ see "Sealing variants").
3. At the mounting point, screw the pressure sensor in hand-tight.
4. When screwing in, do not cross the threads.
5. Only ever screw in, or unscrew, the instrument via the spanner flats. Never use the case as a working surface (→ see "Spanner flats").
6. Tighten the pressure sensor with a torque spanner using the spanner flats.
The correct torque depends on the mounting point (e.g. material and shape).

Only use the pressure sensor if it is in perfect condition with respect to safety.

Only use original accessories. For accessories, see data sheet for the respective pressure sensor or pressure switch.

Additional notes for cooling element

For heat dissipation, the cooling element must not be insulated.

Additional notes for flush process connections

- Check the diaphragm for damage.
- During installation, ensure that the diaphragm is not damaged.

Additional notes for UHP process connections (models WUC-10 and WUC-15)

- For VCR®-compatible connections, the union nut/pressure screw or fitting must be tightened beyond the hand-tight position (depending on the sealings used) using a 1/8 or 1/4 turn.
- For weld-in connections, the flow of argon during the welding process is recommended for cooling.

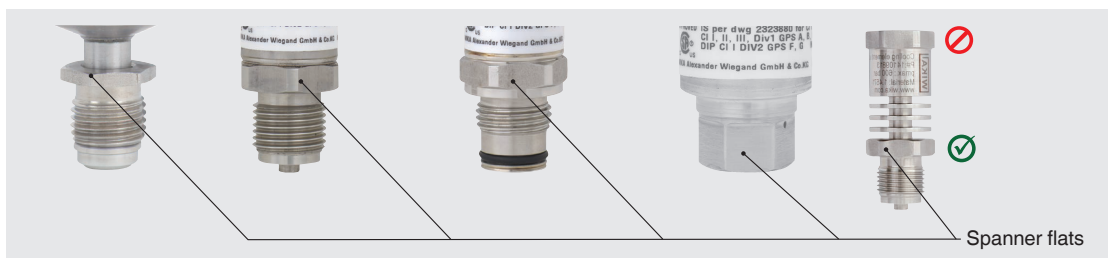
Rework

1. The zero point must be adjusted, if necessary (→ see operating instructions).
2. Check all mechanical connections (threaded connections, welds) for leak tightness using a suitable test (e.g. helium leak test).
3. Switch the gas flow on and off at least 10 times to remove any particles that may have entered during installation. The flow rate of the gas should correspond to the subsequent process flow.

Additional information on the mounting of G1 hygienic and TRI-CLAMP® process connections

- Never loosen sealed filling screws on the measuring instrument.
- For installation, in accordance with the fitting and flange standards the appropriate fastenings, such as screws, nuts or clamp rings, must be used.
- For flange mounting, only use sealings with a sufficiently large inner diameter and centre them. Contact with the diaphragm leads to measuring deviations.
- When using a welding socket, position this so that the hole for leakage detection points downwards. Weld the welding socket flush with the inner wall of the vessel and grind down. The surface roughness of the ground surfaces must be $Ra \leq 0.8 \mu m$.
- When using soft or PTFE sealings, observe the instructions of the sealing manufacturer, particularly with regard to tightening torque and load cycles.

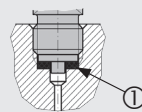
Spanner flats



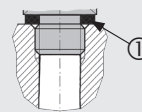
Sealing variants

Parallel threads

For sealing, use flat gaskets, lens-type sealing rings or WIKA profile sealings at the sealing face ①.



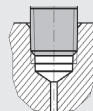
per EN 837



per DIN EN ISO 1179-2
(formerly DIN 3852-E)

Tapered threads

For sealing, the thread is wound with additional sealing material, e.g. PTFE tape.



NPT, R and PT

→ For information on sealings, see WIKA data sheet AC 09.08 at www.wika.com.

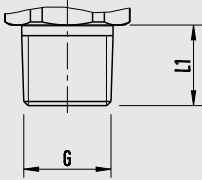
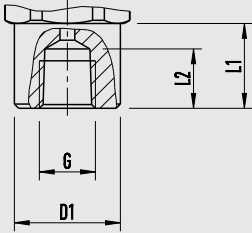
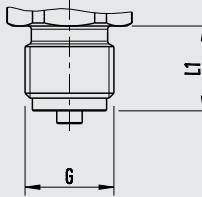
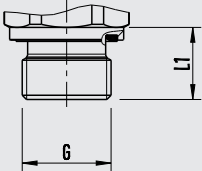
Versions

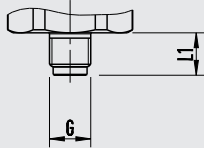
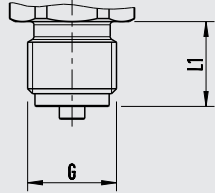
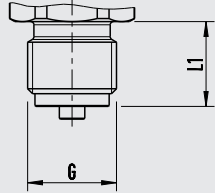
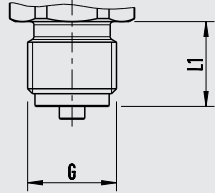
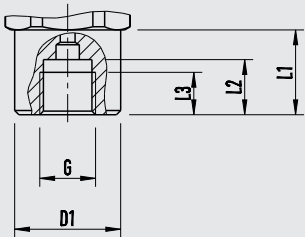
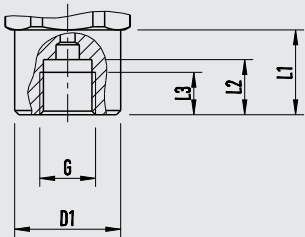
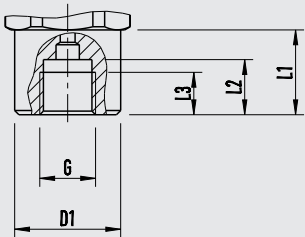
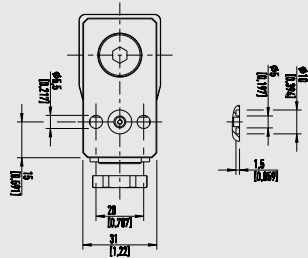
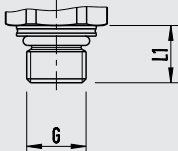
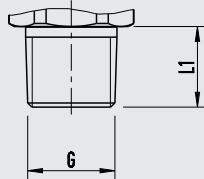
Dimensions of the process connections in mm [in]

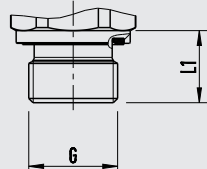
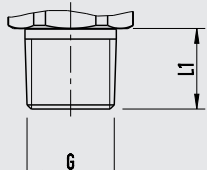
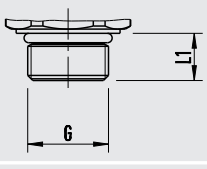
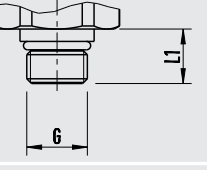
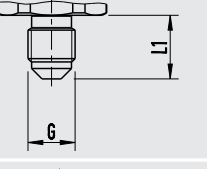
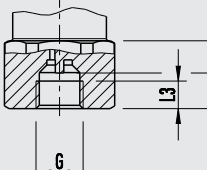
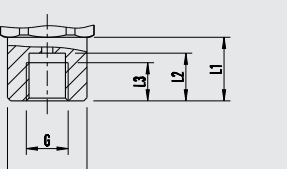
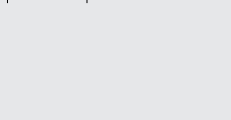


For flush process connections, see table on page 7.
The tapped holes are only shown for WIKA-specific threads. For all other tapped holes, observe the applicable standards.

Non-flush process connections

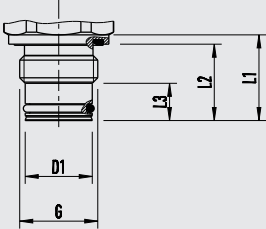
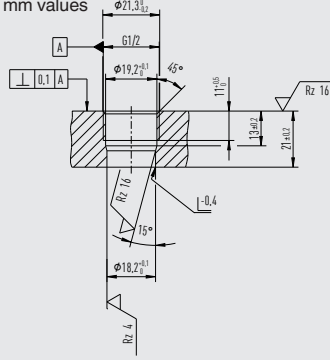
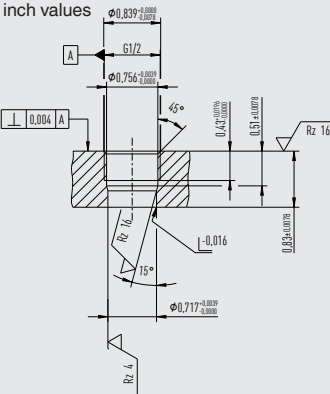
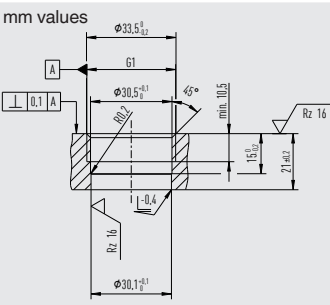
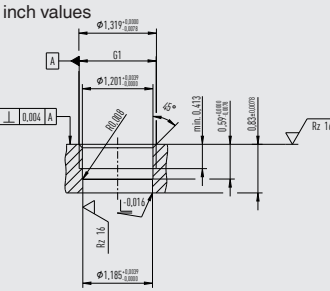
| Standard | Thread | Dimensions (process connection at instrument) in mm [in] | Sketch (process connection at instrument) |
|--|--|---|---|
| ANSI/ASME B1.20.1 | 1/8 NPT | G: 1/8 NPT L1: 10 [0.39] |  |
| | 1/4 NPT | G: 1/4 NPT L1: 13 [0.51] | |
| | 1/2 NPT | G: 1/2 NPT L1: 19 [0.75] | |
| | 1/4 NPT, female thread (for models A-10 and S-20) | G: 1/4 NPT-I D1: 25 [0.98] L1: 14 [0.55] L2: 20 [0.79] |  |
| | 1/4 NPT, female thread (for model O-10) | G: 1/4 NPT-I D1: 19 [0.75] L1: 17 [0.67] L2: 14 [0.55] | |
| | 1/4 NPT, female thread (for models C-10, E-10, F-20, N-10, P-30 and S-10) | G: 1/4 NPT-I D1: 25 [0.98] L1: 10 [0.39] L2: 14 [0.55] | |
| | | | |
| | | | |
| | | | |
| DIN 16288 | M12 x 1.5 | G: M12 x 1.5 L1: 13 [0.51] |  |
| | M20 x 1.5 | G: M20 x 1.5 L1: 20 [0.79] | |
| DIN EN ISO 1179-2 (formerly DIN 3852-E) | G 1/4 A | G: G 1/4 A L1: 14 [0.55] |  |
| | G 1/2 A | G: G 1/2 A L1: 17 [0.67] | |
| | M14 x 1.5 | G: M14 x 1.5 | |
| | | L1: 14 [0.55] | |

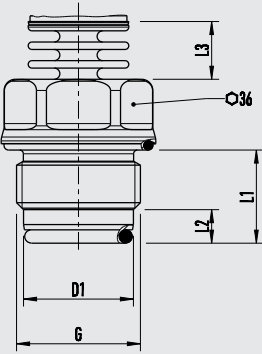
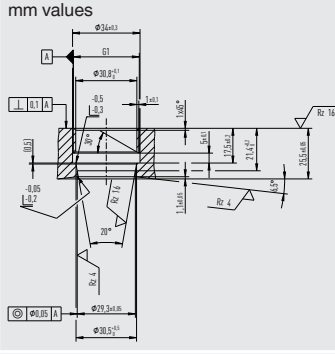
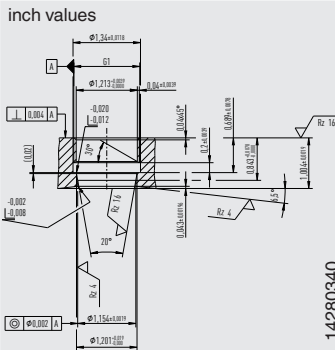
| Standard | Thread | Dimensions (process connection at instrument) in mm [in] | Sketch (process connection at instrument) |
|------------|---|--|---|
| EN 837 | G 1/8 B | G: G 1/8 B |  |
| | | L1: 10 [0.39] | |
| | G 1/4 B | G: G 1/4 B |  |
| | | L1: 13 [0.51] | |
| | G 3/8 B | G: G 3/8 B |  |
| | | L1: 16 [0.63] | |
| | G 1/2 B | G: G 1/2 B |  |
| | | L1: 20 [0.79] | |
| | G 1/4, female thread (for models A-10, PSD-30, PSD-4 and S-20) | G: G 1/4-I |  |
| | | D1: Ø 25 [0.98] | |
| | | L1: 20 [0.79] | |
| | | L2: 13 [0.51] | |
| | G 1/4, female thread (for model S-10) | G: G 1/4-I |  |
| | | D1: Ø 17.5 [0.69] | |
| | | L1: 19.5 [0.77] | |
| | | L2: 13 [0.51] | |
| | G 1/4, female thread (for model O-10) | G: G 1/4-I |  |
| | | D1: Ø 19 [0.75] | |
| | | L1: 17 [0.67] | |
| | | L2: 13 [0.51] | |
| - | Flange connection | Diameter 5 mm |  |
| | | | |
| ISO 6149-2 | M14 x 1.5 | G: M14 x 1.5 |  |
| | | L1: 13.5 [0.53] | |
| ISO 7 | R 1/4 | G: R 1/4 |  |
| | R 3/8 | G: R 3/8 | |
| | | L1: 15 [0.59] | |
| | R 1/2 | G: R 1/2 | |
| | | L1: 19 [0.75] | |

| Standard | Thread | Dimensions (process connection at instrument) in mm [in] | Sketch (process connection at instrument) |
|----------------------------|---------------------------------------|---|--|
| JIS B2351-1 | G ¼ x 10, form O with collar | G: G ¼ x 10 L1: 10 [0.39] |  |
| | G ¾, form O with collar | G: G ¾ L1: 12 [0.47] | |
| KS B 0222 | PT ¼ | G: PT ¼ L1: 13 [0.52] |  |
| | PT ¾ | G: PT ¾ L1: 15 [0.59] | |
| | PT ½ | G: PT ½ L1: 19 [0.75] | |
| SAE J514 | ¾-16 UNF-2A O-ring BOSS | G: ¾-16 UNF-2A L1: 11.13 [0.44] |    |
| | 7/16-20 UNF-2A O-ring BOSS | G: 7/16-20 UNF-2A L1: 12.06 [0.48] | |
| | 9/16-18 UNF-2A O-ring BOSS | G: 9/16-20 UNF-2A L1: 12.85 [0.51] | |
| | 7/16-20 UNF-2A 74° | G: 7/16-20 UNF-2A cone 74° L1: 15 [0.59] | |
| SAE J513 compatible | 7/16-20 UNF-2A 90° | G: 7/16-20 UNF-2A cone 90° L1: 15 [0.59] |  |
| SAE J515 compatible | 7/16-20 UNF-2B, Schrader connection | G: 7/16-20 UNF-2B L1: 16 [0.63] L2: 8.4 [0.33] L3: 6.5 [0.26] |  |
| | | | |
| | | | |
| Ermeto compatible | G ¼, female thread (for model PSD-4) | G: G ¼-I L1: 20 [0.79] L2: 15 [0.59] L3: 12 [0.47] D1: 25 [0.98] |  |
| | | | |
| | | | |
| | | | |
| | G ¼, female thread (for model TIS-20) | G: G ¼-I L1: 20 [0.79] L2: 17.5 [0.689] L3: 14 [0.55] D1: 26.5 [1.04] | |
| | | | |
| | | | |
| | | | |

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Flush process connections

| Stand- ard | Thread | Dimensions (process connection at instru- ment) in mm [in] | Sketch (process connection at instrument) | Sketch (tapped hole with dimensions) |
|---------------|--------|---|---|---|
| EN 837 | G ½ B | G: G ½ B D1: 18 [0.71] L1: 23 [0.91] L2: 20.5 [0.807] L3: 10 [0.39] |  | <p>mm values</p>  <p>inch values</p>  |
| | G 1 B | G: G 1 B D1: 30 [1.18] L1: 23 [0.91] L2: 20.5 [0.807] L3: 10 [0.39] | | <p>mm values</p>  <p>inch values</p>  |

| Stand- ard | Thread | Dimensions (process connection at instru- ment) in mm [in] | Sketch (process connection at instrument) | Sketch (tapped hole with dimensions) |
|---------------|-------------------|--|---|---|
| EN 837 | G 1 B hygienic | G: G 1 B (hygienic) |  | mm values |
| | | D1: 29.5 [1.61] | |  |
| | | L1: 25 [0.98] | | inch values |
| | | L2: 9 [0.35] | |  |
| | | L3: 15.5 [0.61] | | 14280340 |

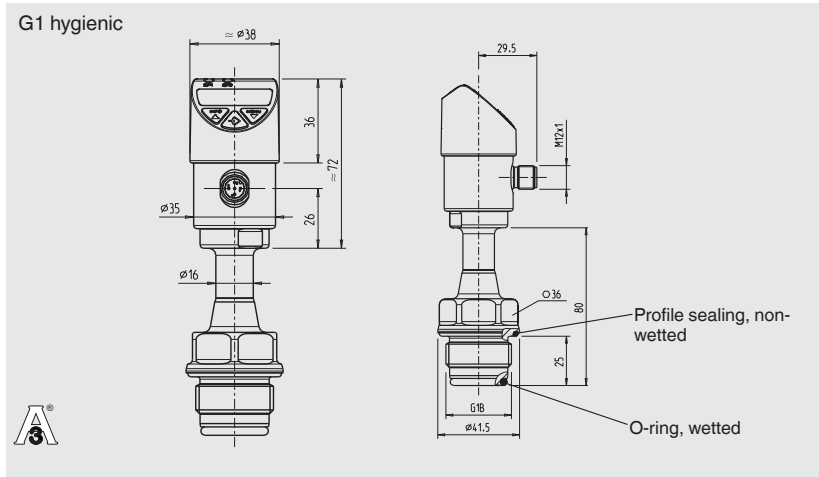
UHP process connections

| Thread | Sketch (process connection at instrument) |
|--|---|
| 1/4" weld stub (Max. available pressure: 300 psi) | |
| 1/4" pressure screw, rotatable VCR compatible | |
| 1/4" T-connector, weld stub | |

Notes

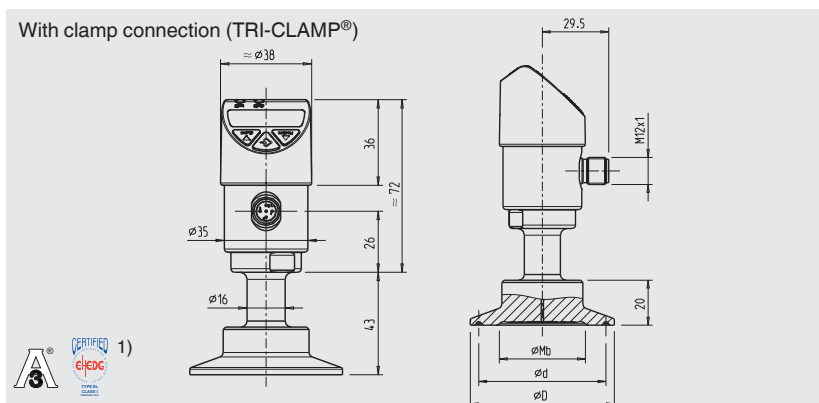
- The sketches of the process connections shown are not to scale.
- For customer-specific versions of the pressure sensors or pressure switches, other process connections can also be used, depending on agreement. The dimensions are then part of the respective agreement and correspond to the requirements of the customer's specification.

Process connections G 1 hygienic and TRI-CLAMP®



Suitable for WIKA adapter system model 910.61

For dimensions of the appropriate process adapters and welding sockets see data sheet AC 09.20



| Version | | Dimensions in mm | | |
|---|---|------------------|------|------|
| | | Ø Mb | Ø d | Ø D |
| Clamp connection (TRI-CLAMP®) 2) | 1 ½" suitable for clamp connections per ASME BPE 1 ½", DIN 32676 row A DN 40, row C DN 1 ½", BS 4825 part 3 DN 38.1 | 32 | 43.5 | 50.5 |
| | 2" suitable for clamp connections per ASME BPE 2", DIN 32676 row A DN 50, row B DN 42.4 and 48.3, row C DN 2", BS 4825 part 3 DN 50.8 | 40 | 56.6 | 64 |

1) EHEDG conformity only in combination with the clamp connection with a T-ring seal from Combifit Metaalbewerking B.V.

2) For maximum pressure range consider pressure rating of clamp.

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We reserve the right to make modifications to the specifications and materials.

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www.wika.de

Accessories

| | Art. No. | Type No. |
|---|----------|------------|
| Straight connector, 5-pole, with PUR cable 2 m | 148335 | EDS-KG2.5 |
| Straight connector, 5-pole, with PUR cable 5 m | 148336 | EDS-KG5.5 |
| Straight connector, 5-pole, with PUR cable 10 m | 148337 | EDS-KG10.5 |
| Angled connection plug, 5-pole, with PUR cable 2 m | 148339 | EDS-KW2.5 |
| Angled connection plug, 5-pole, with PUR cable 5 m | 148340 | EDS-KW5.5 |
| Angled connection plug, 5-pole, with PUR cable 10 m | 148341 | EDS-KW10.5 |
| Straight connector, 5-pole, without cable | 148342 | EDS-SG.5 |
| Angled connection plug, 5-pole, without cable | 148343 | EDS-SW.5 |