

# Ultra High Purity Attachable indicator with LED Model WUR-1

WIKA Data sheet PE 87.20

## Applications

- Semiconductor and flat panel industry
- Microelectronic Technology
- Gas distribution systems  
(Gas sticks, gas panels, bulk-gas supply)

## Special features

- Top View or Front View
- Up to 2 Switch points freely programmable
- Ingress Protection IP 65
- 5 different units manually adjustable

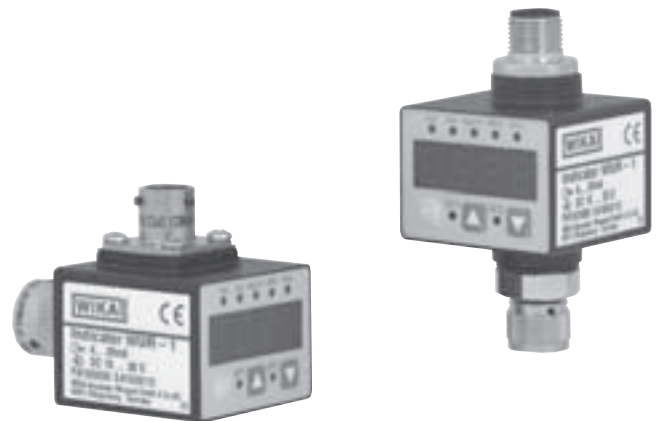


Fig. left WUR-1, Top View  
Fig. right WUR-1, Front View

## Description

### Dynamic

An unique solution for a local display of the process pressure offers the attachable indicator model WUR-1. With this especially for the UHP-Market designed indicator a signal and freely adjustable switch points can be transmitted simultaneously.

Due to its universal programmability and simple mounting the attachable indicator can also be easily installed on pressure transmitters which are already in use. Its scale can be fully adjusted directly on site without master instrument.

Unit (psi, bar, kPa, MPa and kg/cm<sup>2</sup>), decimal point, display range, zero point and switch points can be adjusted via the control keys.

### Comfortable

Power is directly supplied by the 4 ... 20 mA-loop, i.e. no extra power supply is required.

### Practical

The seven millimetre high, red LED display is easy to read. In order to be able to adapt the indicator to the application, it is available in two different versions; Front View (connection to the transmitter at the bottom) or Top View (connection to the transmitter at the back).

## Specifications

## Model WUR-1

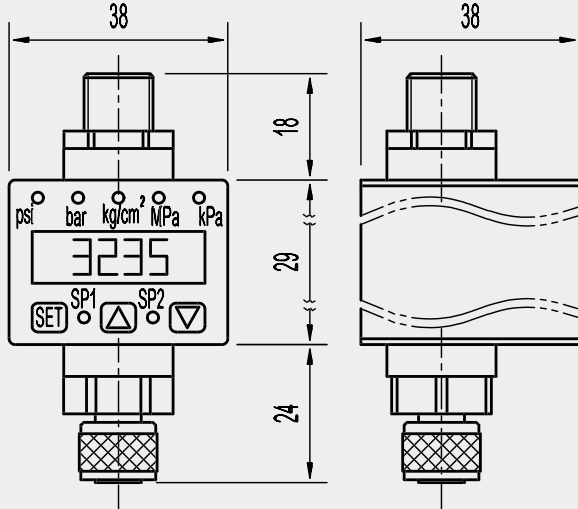
|   |           |  |
|---|-----------|--|
| Display                                     |           |  |
| ■ Design                                    |           | 7-Segment-red LED, height 7 mm, 4-digit  |
| ■ Range                                     |           | -999 ... 6000  |
| ■ Accuracy                                  | % of span | $\leq \pm 0.5 \pm 1$ digit   |
| Scaling adjustment                          |           | Menu-driven programming via external control keys<br>Adjustable measuring range<br>Adjustable decimal point<br>Programmable pressure units: bar, psi, kg/cm <sup>2</sup> , MPa, kPa<br>Zero point freely adjustable within a range of $\pm 10$ % of the span |
| Signal input                                | mA        | 4 ... 20, 2-wire (supplied by the current loop, 6 V voltage load)  |
|   | V         | 0.1 ... 5.1, 3-wire / 0.1 ... 10.1, 3-wire   |
| Signal output                               |           | Analogue signal is directly looped through<br>(4 ... 20 mA or 0.1 ... 10.1 V or 0.1 ... 5.1 V)   |
| Max. permissible input                      | mA / VDC  | $\pm 40$ (short-time)  |
| CE -conformity                              |           | Interference emission and Interference compatibility see EN 61 326<br>For cable lengths of > 30 m (current) resp. >3 m (voltage) shielded cables must be used  |
| Switch points                               |           | Individually adjustable via external control keys  |
| ■ Number                                    |           | 2 x NPN Open-Collector (potential-free)<br>{MIL-connector: 1 x NPN Open-Collector}   |
|   |           | galvanically isolated switch points at 4 ... 20 mA   |
| ■ Function                                  |           | Normally open / Normally closed  |
| ■ Adjustment                                |           | Freely adjustable within a range of 1 ... 99 % of the span   |
| ■ Temperature error                         |           | < 0.1% / 10 K  |
| ■ Accuracy                                  | % of span | $\leq \pm 0.5 \pm 1$ digit   |
| ■ Max. switching current                    | mA        | 300 (None-inductive)   |
| ■ Display of switch status                  |           | LED  |
| ■ Response time (10 ... 90 %)               | ms        | < 15   |
| ■ Hysteresis                                | %         | 0.5 (fixed)  |
| Power supply                                | VDC       | 16 ... 30 at 4 ... 20 mA; 15 ... 30 at 0.1 ... 10.1 V<br>10 ... 30 at 0.1 ... 5.1 V  |
| Influence of power supply                   |           | < 0.1% / 10 V  |
| Permissible temperature range               |           |  |
| ■ Ambient                                   | °C        | - 30 ... +85   |
| ■ Storage                                   | °C        | - 30 ... +85   |
| ■ Compensated                               | °C        | - 20 ... +80   |
| Temperature error                           | % of span | < 0.1/10K  |
| Vibration resistance                        | g         | 5 at 10 ... 2000 Hz  |
| Shock resistance                            | g         | 100  |
| Electrical connection                       |           |  |
| ■ Input                                     |           | Circular connector (female) M 12x1, 4-pin {MIL connector (female), 4-pin}  |
| ■ Output                                    |           | Circular connector M 12x1, 5 pin {MIL connector, 4-pin or flying lead}   |
| Ingress protection per IEC 60529 / EN 60529 |           | IP 65  |
| Wiring protection                           |           | Protected against polarity crossing +U <sub>B</sub> /0V  |
| Materials case                              |           |  |
| ■ Case                                      |           | ABS  |
| Position of the electrical connection       |           | Front View (connection to the transmitter at the bottom) or<br>Top View (connection to the transmitter at the back)  |
| Weight                                      | g         | 50   |

{ } Items in curved brackets are optional extras for additional price.

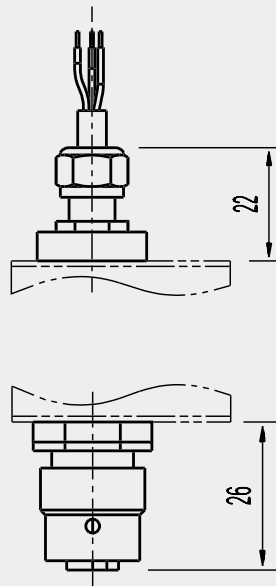
## Dimensions in inch [mm]

### Front View (connection to the transducer at the bottom)

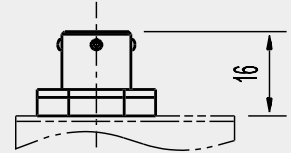
Circular connector  
M 12x1, 5-pin



Flying leads



MIL-connector,  
4-pin

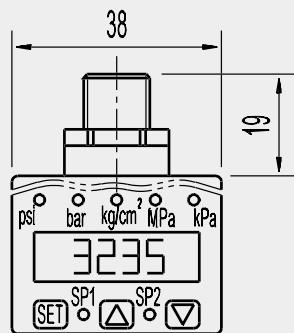


Circular connector  
(female)  
M 12x1, 4-pin

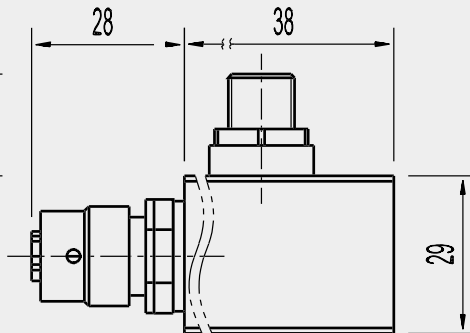
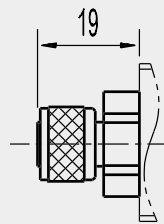
MIL-connector (female),  
4-pin

### Top View (connection of the transducer at the back)

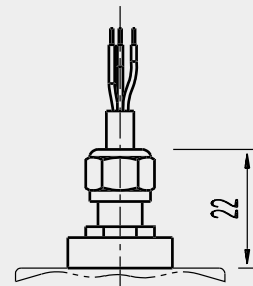
Circular connector  
M 12x1, 5-pin



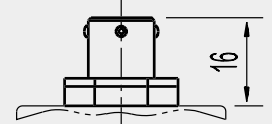
Circular connector (female) M 12x1,  
4-pin



Flying leads



MIL-connector,  
4-pin



MIL-connector (female),  
4-pin

## Wiring details


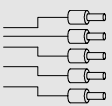
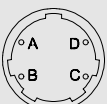
| Connector- Pin  | 2-wire<br>Execution current              | 3-wire<br>Execution voltage        |
|---|--|------------------------------------|
| <b>Circular connector M 12x1, 5-pin</b>   |  |                                    |
|  | 1<br>Power supply +UB, S+                | Power supply +UB                   |
|   | 2<br>Switch out1                         | Switch out1                        |
|   | 3<br>Power supply 0V, S-                 | Power supply 0V, Switch ground, S- |
|   | 4<br>Switch ground (potential-free)      | Signal S+                          |
|   | 5<br>Switch out2                         | Switch out2                        |
| <b>Flying leads</b>   |  |                                    |
|  | red<br>Power supply +UB, S+              | Power supply +UB                   |
|   | black<br>Power supply 0V, S-             | Power supply 0V, Switch ground, S- |
|   | yellow<br>Switch ground (potential-free) | Signal S+                          |
|   | brown<br>Switch out1                     | Switch out1                        |
|   | orange<br>Switch out2                    | Switch out2                        |
| <b>MIL-connector, 4-pin</b>   |  |                                    |
|  | A<br>Power supply +UB, S+                | Power supply +UB                   |
|   | B<br>Switch ground (potential-free)      | Signal S+                          |
|   | C<br>Switch out1                         | Switch out1                        |
|   | D<br>Power supply 0V, S-                 | Power supply 0V, Switch ground, S- |



Fig. : WUR-1 Front View

Output

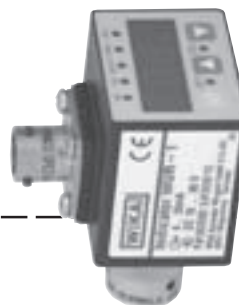
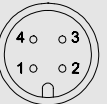
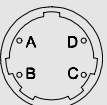


Fig. : WUR-1 Top View

Input

| Connector- Pin  | 2-wire<br>Execution current | 3-wire<br>Execution voltage |
|---|-----------------------------|-----------------------------|
| <b>Circular connector (female) M 12x1, 4-pin</b>                                    |                             |                             |
|  | 1<br>Power supply +UB, S+   | Power supply +UB            |
|   | 2<br>--                     | --                          |
|   | 3<br>Power supply 0V, S-    | Power supply 0V, S-         |
|   | 4<br>--                     | Signal S+                   |
| <b>MIL-connector (female), 4-pin</b>  |                             |                             |
|  | A<br>Power supply +UB, S+   | Power supply +UB            |
|   | B<br>--                     | Signal S+                   |
|   | C<br>--                     | --                          |
|   | D<br>Power supply 0V, S-    | Power supply 0V, S-         |

Modifications may take place and materials specified may be replaced by others without prior notice.  
Specifications and dimensions given in this leaflet represent the state of engineering at the time of printing.