

### Ultra High Purity Attachable indicator with LED, „Non-Incendive“ Model NWUR-1

WIKA Data Sheet PE 87.21



#### 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 IP65
- 5 different units manually adjustable

#### Description

##### Explosion protection

The attachable indicator NWUR-1 is among increased safety requirements, an unique solution for a local display of the process pressure.

##### Dynamic

With this 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.



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

##### Comfortable

The power is directly supplied, 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 NWUR-1

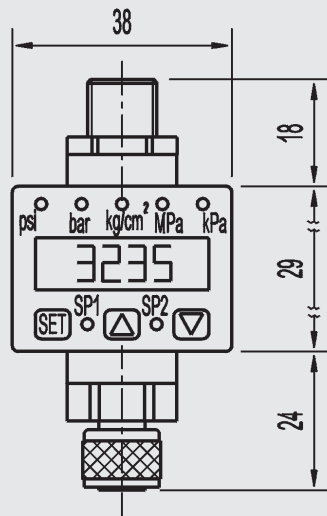
Display		
■ Design		7-Segment-red LED, height 7 mm, 4-digit
■ Range		-999 ... 6000
■ Accuracy	% of span	≤ 0.5 ± 1 digit
Materials case		ABS
Scaling adjustment		Menu-driven programming via external control keys
		Adjustable measuring range
		Adjustable decimal point
		Programmable pressure units: bar, psi, kg/cm <sup>2</sup> , MPa, kPa
		Zero point freely adjustable within a range of ± 10 % of the span
Signal input	mA	4 ... 20, 2-wire (supplied by the current loop, 6 V voltage load)
Signal output		Analogue signal is directly looped through
Max. permissible input	mA	± 40 (short-time)
Power supply UB	VDC	16 ... 30
Influence of power supply	%	< 0.1 / 10 V
Switch points		Individually adjustable via external control keys
■ Number		{bayonet 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	% of span	< 0.1 / 10 K
■ Accuracy	% of span	≤ 0.5 ± 1 digit
■ Max. switching current	mA	300 (None-inductive)
■ Display of switch status		LED
■ Response time (10 ... 90 %)	ms	< 15
■ Hysteresis	%	0.5 (fixed)
Permissible temperature range		
■ Ambient *)		-30 ... +85 °C / -22 ... +185 °F
■ Storage *)		-30 ... +85 °C / -22 ... +185 °F
■ Compensated		-20 ... +80 °C / -4 ... +176 °F
Temperature error	% of span	< 0.1 / 10 K
CE-conformity		Interference emission and Interference compatibility see EN 61 326
		For cable lengths of > 30 m (current) resp. > 3 m (voltage) shielded cables must be used
Shock resistance	g	100 according to IEC 60068-2-27 (mechanical shock)
Vibration resistance	g	5 at 10 ... 2000 Hz according to IEC 60068-2-6 (vibration under resonance)
Ex-protection	ATEX	Category 3G
Ignition protection type		EEx nA IIC T6 X
Conformity specifications		
■ Power supply	VDC	30
■ Short circuit rating	mA	40
■ Power limitation	W	0.4
■ Ambient temperature		-20 ... +60 °C / -4 ... 140°F
■ Storage temperature		-30 ... +80 °C / -22 ... 176°F
■ Internal capacity Ci	nF	22
■ Internal inductivity Li	μH	0
Wiring protection		
■ Short-circuit proofness		Sig+ towards UB-
■ Reverse polarity protection		UB+ towards UB-
Weight	g	50

\*) Limitations regarding Ex-protection, please refer to "Conformity specifications".  
 {} Items in curved brackets are optional extras for additional price.

## Dimensions in mm

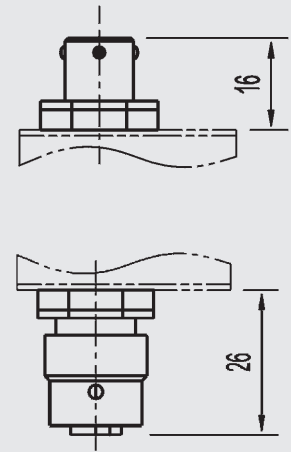
### Front View: connection to the transmitter at the bottom

Output  
Circular connector  
M 12x1, 5-pin



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

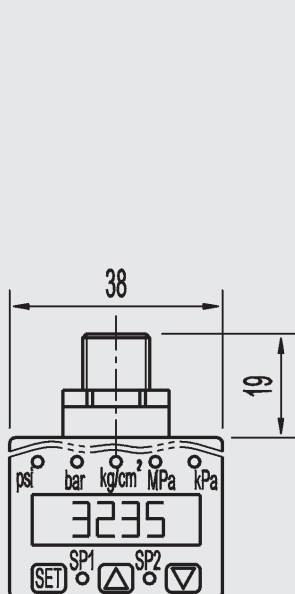
Output  
Bayonet connector,  
4-pin



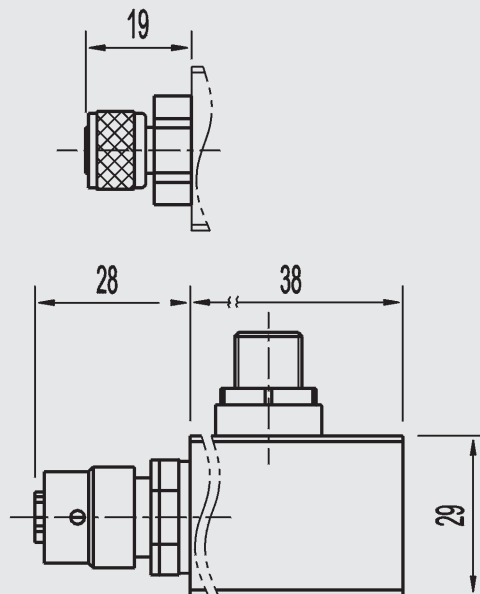
Input  
Bayonet connector (female)  
M 12x1, 4-pin

### Top View: connection of the transmitter at the back

Output  
Circular connector  
M 12x1, 5-pin

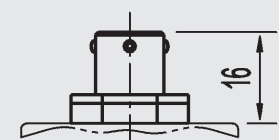


Input  
Circular connector (female)  
M 12x1, 4-pin


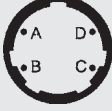


Input  
Bayonet connector (female),  
4-pin

Output  
Bayonet connector,  
4-pin



## Wiring details

Output	Plug-Pin	2-wire Execution current
<b>Circular connector M 12x1, 5-pin</b>		
	1	Power supply UB+, Sig+
	2	Switch out1
	3	Power supply 0V, Sig-
	4	Switch ground (potential-free)
	5	Switch out2
<b>Bayonet connector, 4-pin</b>		
	A	Power supply UB, Sig+
	B	Switch ground (potential-free)
	C	Switch out1
	D	Power supply 0V, Sig-

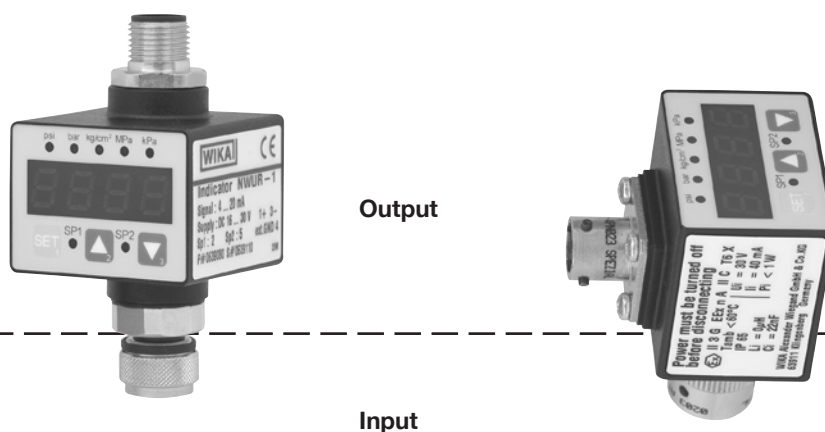

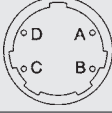


Fig. NWUR-1 Front View

Fig. NWUR-1 Top View

Input	Plug-Pin	2-wire Execution current
<b>Circular connector (female) M 12x1, 4-pin</b>		
	1	Power supply UB+, Sig+
	2	--
	3	Power supply 0V, Sig-
	4	--
<b>Bayonet connector (female), 4-pin</b>		
	A	Power supply UB+, Sig+
	B	--
	C	--
	D	Power supply 0V, Sig-

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.

