

## Digital Indicator for Panel Mounting Model A-RB-1

WIKAI Data Sheet AC 80.04

### Applications

- Process and plant engineering
- Machine tools
- Test benches
- Level measurement
- General industrial applications

### Special Features

- Indication range -1999 ... +1999
- Input signals 4 ... 20 mA, 0 ... 20 mA, 0 ... 10 V selectable
- Output signals 4 ... 20 mA, 0 ... 20 mA, 0 ... 10 V selectable
- Integrated power supply DC 24 V for transmitter
- Hold function, MIN and MAX memory



Digital Indicator Model A-RB-1

### Description

The digital indicator A-RB-1 has been specially designed to display values measured by electronic transmitters, such as pressure transmitters or temperature transmitters. The rear of the instrument features detachable screw terminals for the input signals 0 (4) ... 20 mA and 0 ... 10 Volt as well as for the analogue outputs 0 (4) ... 20 mA and 0 ... 10 Volt.

The indicator can be programmed via splash water protected keys at the front side of the instrument. Clear and simple messages on the LED display guide the user through all configurable parameters, step-by-step.

#### Alarm contacts

Optionally the indicator can be fitted with 2 alarm contacts. The switching hysteresis of each of these freely programmable alarm contacts can be individually adjusted. The

relay switching contacts are galvanically separated. Depending on the setting of the hysteresis above or below the switching value, the microprocessor recognises the selected switching function "MIN" or "MAX".

#### RS-232 interface

An optional RS-232 interface is available for digital processing of the display value. The interface protocol is included in the operating instructions.

#### Damping

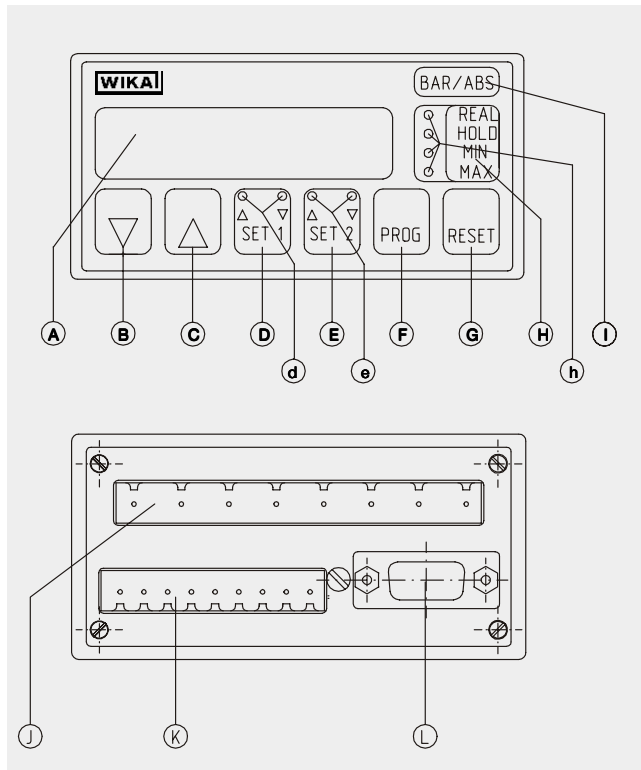
In the case of fast changing display values, which might, for example, be caused by pressure pulsations, the display, the alarm contacts, the MIN and MAX memory or the analogue output as well as any combination about this can be damped to reach a more steady display value.

**Specification**
**Model A-RB-1**

Display	
- Design	7-Segment-LED, red, 3 1/2 -digit
- Size of digits	14.56 mm
- Indication range	-1999 ... +1999
Accuracy	±0.05 % of span ±2 digit
Measuring rate	10 measurements/s, damping selectable in 100 ms steps up to max. 50.0 s
Error messages	E1: A/D converter overflow E2: Display overflow (measured value exceeds maximum possible display value) E3: Input signal is below the minimum signal value or exceeds the maximum signal value
Scaling adjustment	Menu driven, initial value and final value free adjustable between -1999 and +1999; Adjustable decimal point
Signal input	Selectable as: 0 ... 20 mA, 4 ... 20 mA 0 ... 10 V
Analogue output	Selectable as: 0 ... 20 mA, 4 ... 20 mA 0 ... 10 V
Response time (10 ... 90 %)	100 ms
{Serial interface}	RS-232
Transmitter supply	DC 24 V ± 5 %, max. 30 mA, galvanically isolated, short-circuit proof (for approx. 8 minutes)
{Alarm contacts}	
- Number	2, independently settable
- Function	MAX/MIN-alarm adjustable by setting of the switch-on and switch-off value
- Switching point	Adjustable over the complete indication range
- Hysteresis	Adjustable over the complete indication range
- Accuracy	True value by means of digital control
- Contacts	1 potential-free relay change over contact for each alarm contact
- Load	AC 250 V 8 A with resistive load; AC 250 V 1 A with $\cos \varphi = 0.1$
HOLD memory	Displayed value is fix, measurement and control of MIN and MAX values as well as alarm contacts goes on in the background.
MIN/MAX memory	Two separately working memories for MIN and MAX values; Individual or common reset enabled by pressing the RESET key; Unlimited data storage by digital memory
Power supply	AC 230 V, 50/60 Hz, ± 10 % or AC 115 V, 50/60 Hz, ± 10 %, changeable by means of internal jumper
Power consumption	Max. 6 VA
Electrical connection	Detachable screw terminals
- Max. wire cross section	2.5 mm <sup>2</sup>
Permissible ambient temperature	0 °C ... 50 °C
CE Conformity	Conformity in accordance with 89/336/EWG Interference emission per EN 60 000-6-4 Interference compatibility per EN 61 000-6-2 For cable lengths of > 30 m, shielded cables are to be used
Case	According to IEC 61 554
- Material	PC, ABS-Blend, black
- Ingress protection	Front: IP65; Back: IP00 (according to IEC 60 529 / EN 60 529)
- Mass	Approx. 530 g
- Mounting	Removable screw elements for a wall thickness up to 40 mm

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

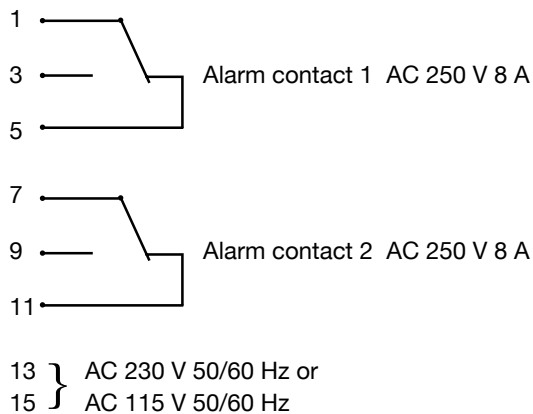
## Control and connection elements



- A LED-display
- B Decrease value button
- C Increase value button
- D Check/set alarm contact no. 1
- d  $\Delta$  - LED = MAX-alarm contact
- $\nabla$  - LED = MIN-alarm contact
- E Check/set alarm contact no. 2
- e  $\Delta$  - LED = MAX-alarm contact
- $\nabla$  - LED = MIN-alarm contact
- F Select programming mode, continue with programming
- G Reset of MIN-/MAX memory or abort programming
- H Select display mode
- h REAL-LED = actual value
- HOLD-LED = hold value
- MIN-LED = minimum value
- MAX-LED = maximum value
- I Pocket window for unit label
- J Screw-terminal for power supply and alarm contacts
- K Screw-terminal for input signal, analogue output and transmitter supply
- L Sub-D plug for RS-232 interface (optional)

### Designation of terminals

Screw terminal 'J' (power supply and alarm contacts)



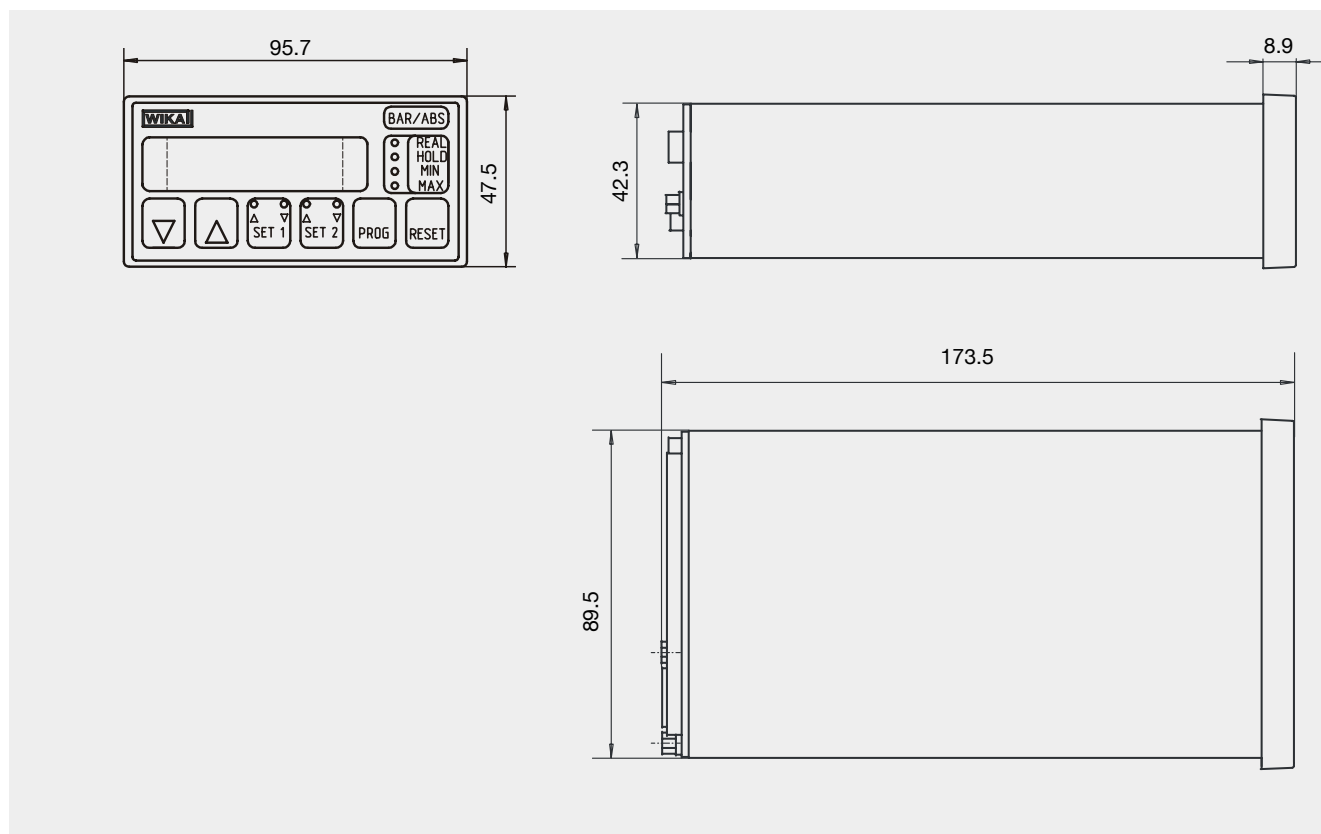
Sub-D plug 'L' (RS-232 interface, optional)

- 2 RX DATA
- 3 TX DATA
- 5 GROUND

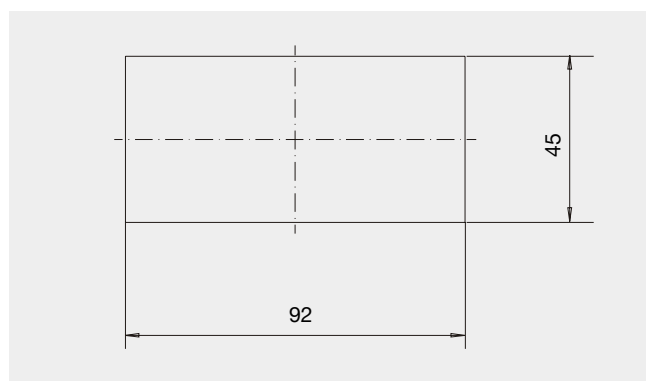
Screw terminal 'K' (input signal, analogue output, transmitter supply)

- 1 + U-in, measuring signal voltage
- 2 - U-in, measuring signal voltage
- 3 + I-in, measuring signal current
- 4 - I-in, measuring signal current
- 5 - analogue output (common ground for current and voltage output signal)
- 6 + 24 V, transmitter supply
- 7 - GND, transmitter supply
- 8 + analogue output voltage
- 9 + analogue output current

## Dimensions in mm



## Panel cutout in mm



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.

