

Industrial mV/V measuring instruments With multi-function display Model E1930



WIKA data sheet FO 58.05



Applications

- Precision scales
- Industrial scales
- Machine building and plant construction, manufacturing automation

Special features

- 5-digit digital display, easy to read up to 50 m
- High accuracy: 0.02 % of reading $+3 \mu\text{V}$
- Extensive functions easy to set on the instrument or via PC
- Plug-in expansion cards, analogue output, 2 or 4 limit values, serial interface
- Ingress protection IP65



Industrial mV/V measuring instruments, large display or display model E1930

Description

mV/V measuring instruments as a display for the panel mounting or as a large display E1930 are well suited for numerous applications because of their accuracy and being easy to read. Measured values and the status of the relay outputs are shown on the 5-digit digital multi-function display. The measuring instruments also offer a totalizer as well as Min/Max memory.

The connection to the corresponding force transducer and the parameterisation are usually performed by the customer for this model. Programming the instrument is menu-driven. Any strain gauge force transducer (a maximum of 4 sensors of 350Ω in parallel) with an output signal of up to max. $\pm 4.8 \text{ mV/V}$ or $\pm 48 \text{ mV/V}$ can be connected. The internal sensor supply is either DC 5 or 10 V.

Requests and parameterisation of different values are possible by way of the optional serial interface. The optional 2 or 4 relays allow the monitoring of falling below or exceeding limit values. In addition, a 0/4 ... 20 mA output signal is available for analogue evaluation. Disruptive signals can be eliminated by filter setting options.

Option:

- Large display with 10 mm high LED, easy to read from 50 m
- Large display with a robust enclosing case made of aluminium
- DC voltage supply

Specifications

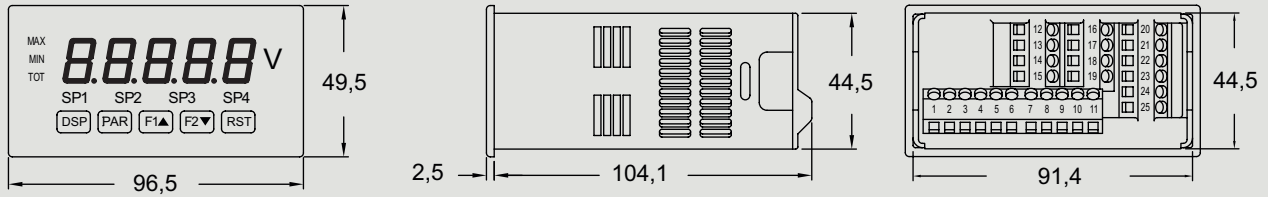
| Model E1930 | |
|--|--|
| Measuring range | Full-bridge strain gauge in 4-wire technology Option: 6-wire technology connection available Selectable by jumper: ■ ± 24 mV ■ ± 240 mV |
| Display | 5-digit, red, LED display readable in sunlight, 14 or 100 mm high Output max. -19,999 to +99,999 digits Refresh rate: 1 to 20 updates/s. Min./Max. display Relay status display |
| Sensor supply | Selectable by jumper: DC 5 V ± 2 %, max. 65 mA DC 10 V ± 2 %, max. 125 mA |
| Accuracy | ± 0.02 % of FS ± 1 digit |
| Linearisation | Number of linearisation steps: Selectable from 2 to 16 Scale range: -19,999 to 99,999 Decimal point: 0 to 0.0000 |
| Rated temperature range | 18 ... 28 °C |
| Service temperature $B_{T,G}$ | 0 ... 50 °C (with all 3 cards inserted 0 ... 45 °C) |
| Storage temperature range | -40 ... 60 °C |
| Output signal (option) | 2 or 4 relay outputs (transistor outputs available as an alternative) Analogue output 0 ... 20 mA and DC 0 ... 10 V RS-232 interface RS-485 interface Profi-DP interface |
| Digital input | 3 programmable user inputs Maximum voltage: DC 30 V Maximum step response time: 50 ms Selectable by jumper: ■ NPN: Active $V_{in} < DC 0.9$ V, inactive $V_{in} > DC 3.6$ V ■ PNP: Active $V_{in} > DC 3.6$ V, inactive $V_{in} < DC 0.9$ V |
| Resolution | 16-bit A/D converter |
| Sampling rate | 20 Hz |
| Supply voltage ■ Standard ■ Option | AC 85 ... 250 V, 50/60 Hz, 15 VA DC 11 ... 36 V, 11 W / AC 24 V, 15 VA |
| Response time | < 200 ms for displaying 99 % of the final reading value without zero adjustment < 700 ms for displaying 99 % of the final reading value with zero adjustment The response time changes with setting digital stage filtering |
| Ingress protection (per IEC/EN 60529) | IP65 (front only) IP20 (rear of unit) |
| Interference emission | CISPR 11 class A |
| Immunity | EN 61326-1 immunity for industrial areas |
| Common-mode rejection (CMR) | > 100 dB, DC to 120 Hz |
| Relative humidity | max. 85 % r. h., non-condensing |
| Approvals | UL approval (Underwriters Laboratories) for the USA and Canada |
| Weight | Display: approx. 300g (without plug-in options) Large display: approx. 2.25 kg (including measurement module) |

Operation

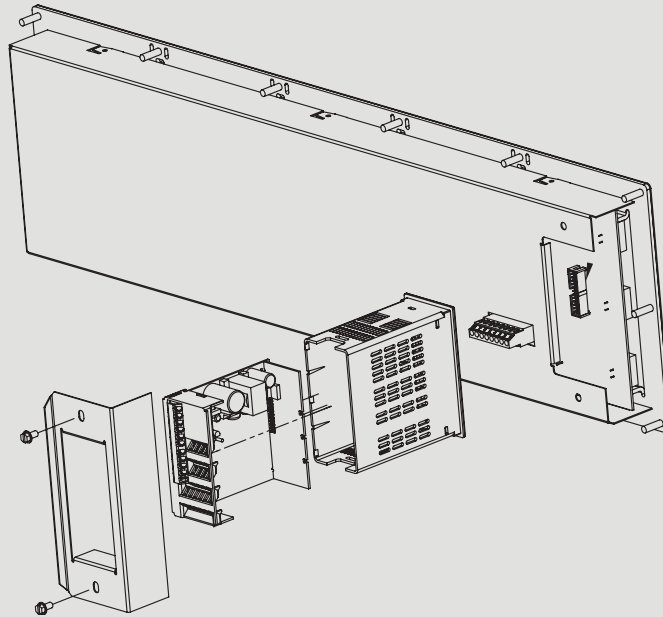
Setting and operating the display is menu-driven via the 5 front buttons. The large display can be set with a programming remote control (available as accessory). The 5 buttons of the remote control have the same functions as the 5 front buttons of the small display.

Dimensions in mm

Display version



Large display version



Pin assignment

| Pin | Connections | |
|-----|-------------|------------------------|
| 1 | AC | AC 85 - 250 V 50/60 Hz |
| 2 | AC | AC 85 - 250 V 50/60 Hz |
| 3 | +SIG | Signal input + |
| 4 | -SIG | Signal input - |
| 5 | COMM. | Ground signal input |
| 6 | +EXCITATION | Bridge supply |
| 7 | USERCOMM | Ground user input |
| 8 | USER1 | User input 1 |
| 9 | USER2 | User input 2 |
| 10 | USER3 | User input 3 |

Accessories

- Programming instruments for the large display
- Case
- Plug-in RS-485 interface card
- Plug-in DeviceNet interface card
- Plug-in PROFIBUS-DP interface card
- Plug-in relay output card, 2 x change-over contacts
- Plug-in relay output card, 4 x change-over contacts
- Plug-in transistor output card, 4 x NPN
- Plug-in transistor output card, 4 x PNP

© 2019 WIKA Alexander Wiegand SE & Co. KG, all rights reserved.
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.

