

## Universal display UA964802 with OLED display



- Universal display in 96 x 48 mm format
- Monochrome yellow 2.7" OLED display
- Vertical or horizontal installation
- Universal input for process signals, thermocouples, resistance thermometers and potentiometers
- 2 alarm outputs and two analog outputs
- Serial communication via RS485 Modbus interface
- 2 programmable user inputs
- 5-fold language switching
- 16-step linearization

<https://www.wachendorff-prozesstechnik.de/en/UA964802>

### Description

The new UA964802 universal display with its brilliant OLED display is a small all-rounder. With a universal input for all commercially available temperature sensors, process signals, potentiometers, a 24 VDC sensor supply and a 16-step linearization function, this display can be used for almost all analogue sensors. With the integrated summing function, 2 relay outputs and the galvanically isolated analog output, almost all measuring tasks can be easily solved. In addition to the very shallow installation depth, the RS485 Modbus interface (based on the Modbus RTU protocol), the IP54 front, the removable terminal blocks and the text menu-guided programming interface, this display impresses with its monochrome yellow OLED display. This ensures optimum readability and an extremely large reading angle in difficult industrial environments, even in direct sunlight. The visualization by a programmable trend graph or a bar chart leaves nothing to be desired for the user.

### Product details

Display properties:	Monochrome yellow 2.7" OLED display, display diagonal: 61.46 mm Active display area: 55 mm x 27.5 mm, 128 x 64 pixels. Service life: 150,000 hours* *Note: The end of the service life is indicated when 50% of the initial brightness is reached. The average service life is stated at room temperature; the service life is reduced when used in higher temperature ranges.
Display:	Display range measured value: -32,767 to +32,767 Display range total horizontal installation: -2,000,000,000 to +2,000,000,000 (32 bit) Display range total vertical installation: -99,999,999 to +99,999,999 Horizontal and vertical display programmable, incl. bar graph and trend display. Positive or negative display possible.
Indicators:	Three indicators for alarm statuses and serial communication.
Selectable unit of measurement:	°C, °F, K, V, mV, A, mA, Bar, mBar, psi, Pa, mm, cm, dm, m, km, in, g, kg, q, t, oz, lb, m/s, m/m, m/h, l/s, l/m, l/h, m³/s, m³/m, m³/h, rpm, %rh, ph, N, kN, %, L, gal, mmHg, atm, mH20, Nm, kNm, kgf, kgp, kip, lbf, ozf, pcs., no unit

Keyboard:	4 buttons for programming and setting the setpoints.
Entrance area:	Input signal setting via keypad. Thermocouple type K, S, R, J, T, E, N, B Cold junction: internal (from 0 °C to 50 °; cold junction accuracy 0.1 °C/°C) Resistance thermometer: Pt100, Pt500, Pt1000, Ni100, PTC1K, NTC10K Linear inputs: 0 V to 10 V, 0/4 mA to 20 mA, 0 mV to 60 mV Potentiometer: 0 to 6 kOhm and 0 to 160 kOhm.
Impedance:	0 to 10 V: Ri > 110 kOhm 0 to 20 mA: Ri < 5 Ohm 4 to 20 mA: Ri < 5 Ohm 0 to 60 mV: Ri > 1 MOhm
Accuracy:	Tolerance at 25 °C +/-0.2 % ± 1 digit for thermocouple input, temperature sensor and analog signal.
Sampling frequency / measuring cycle:	Programmable up to 242 Hz (4.2 msec).
User inputs:	Switchable via PNP signal. Alternatively adjustable functions: Activate alarm output, tare, Reset alarm/maximum value/minimum value/total value, totalization.
Sensor supply:	+24 VDC @ 35 mA
Resolution:	Internal resolution with 65,535 steps (16 bit).
Relay outputs:	2 NO contacts with separate earth, 2 A at 250 VAC, resistive load. Programmable as normally open or normally closed contact.
Analog output:	2 programmable analog outputs 1x 0 VDC to 10 VDC 1x 0/4 mA to 20 mA with a resolution of 16 bits and an accuracy of +/-0.2 % of the maximum range. Programmable as transmission of the alarm value or the process signal. Not galvanically isolated from each other.
Serial interface:	RS485 with Modbus RTU in slave mode

Power supply:	24 VAC/DC to 230 VAC/DC +/-15 %, 50/60Hz, 6 VA.
Protection class:	Protected from the front against dust in damaging quantities and protection against splashing water on all sides to IP54 (with seal), rear protection class IP20.
Housing:	Plastic housing made of polycarbonate V0
Dimensions (WxHxD):	W 96 mm x H 48 mm x D 53 mm (without connection terminals). Panel cut-out according to DIN: 91 mm x 45 mm. Fastening via lockable plastic clamping bracket with screw.
Connection:	Via plug-in, lockable screw terminals.
Ambient conditions:	Operating temperature: 0 °C to +45 °C; relative humidity: 35 % rH to 95 % rH.
Programming:	Programming and operation is menu-driven via the front buttons, via text and can be switched between 5 languages (English, Italian, German, French, Spanish). All settings are protected by a 4-digit password (cannot be changed). Programming is also possible via the Wachendorff EMG APP (via NFC/RFiD*) for Android smartphones. For programming via APP, the universal display can also be in a de-energized state. The Wachendorff EMG app is currently only suitable for Android operating systems. A Wachendorff EMG app that supports iOS operating systems will follow soon. Another programming option is with the Wachendorff display and controller PC software via USB.
	*: When scanned by a reader that supports the NFC-V protocol, the device is to be considered a VICC (Vicinity Inductively Coupled Card) in accordance with the ISO/IEC 15693 standard. The universal display operates at a frequency of 13.56 MHz. The device itself does not emit any radio waves.
Note on programming:	The NFC sensor is located on the right-hand side of the display, behind the buttons. Protective covers for smartphones can interfere with the connection and should therefore be removed from the smartphone for the programming period.
Weight:	approx. 165 gram
Scope of delivery:	Device, mounting material, seal
Certificates & approvals:	CE

Data logging:	The UA964802 display includes a simple data logger function. You can read out the data via the Modbus protocol. The sampling rate corresponds to the activation time of the trend display. Up to a maximum of 2,500 measured values can be logged.
Customs tariff number:	8542 31 90
Manufacturer:	Wachendorff Prozesstechnik GmbH & Co. KG

#### Products Order no.

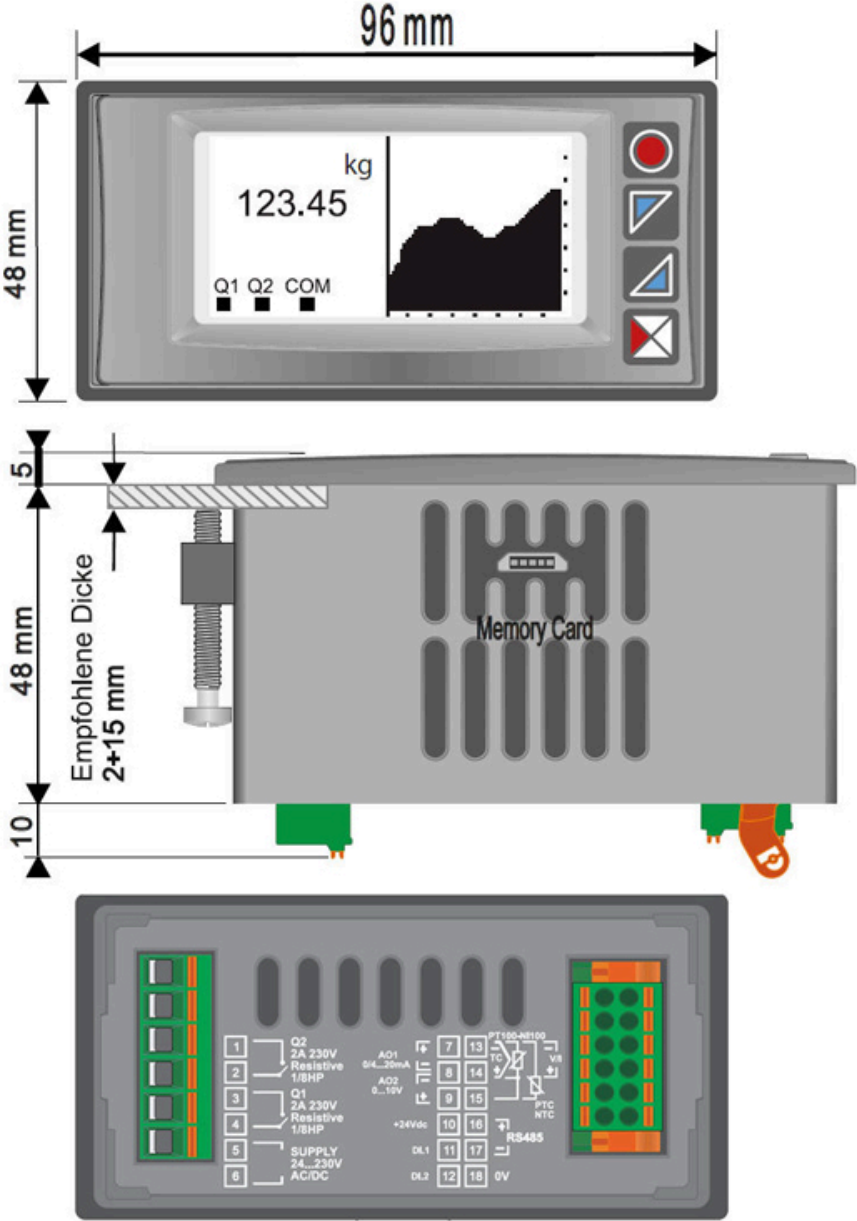
UA964802	Universal display with OLED display
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#### Accessories Order no.

SFUR0USB	USB programming module (optional for series commissioning)
KABUSBM2	USB programming cable, USB 2.0A to micro USB, 2 m cable
URDR9648	DIN rail adapter for UA96480X, DMS96480, MA964802, ZTA96480
GEH0IP65	All-round IP65 aluminum housing for one device, finished with black powder coating, (WxHxD) 168 mm x 83 mm x 220 mm
ENC5A000	All-round IP65 steel housing for one device (WxHxD) 140 mm x 83 mm x 120 mm
ENC5B000	All-round IP65 plastic housing for one device (WxHxD) 188 mm x 188 mm x 130 mm
ENC5C000	All-round IP65 plastic housing for two devices (WxHxD) 188 mm x 188 mm x 130 mm

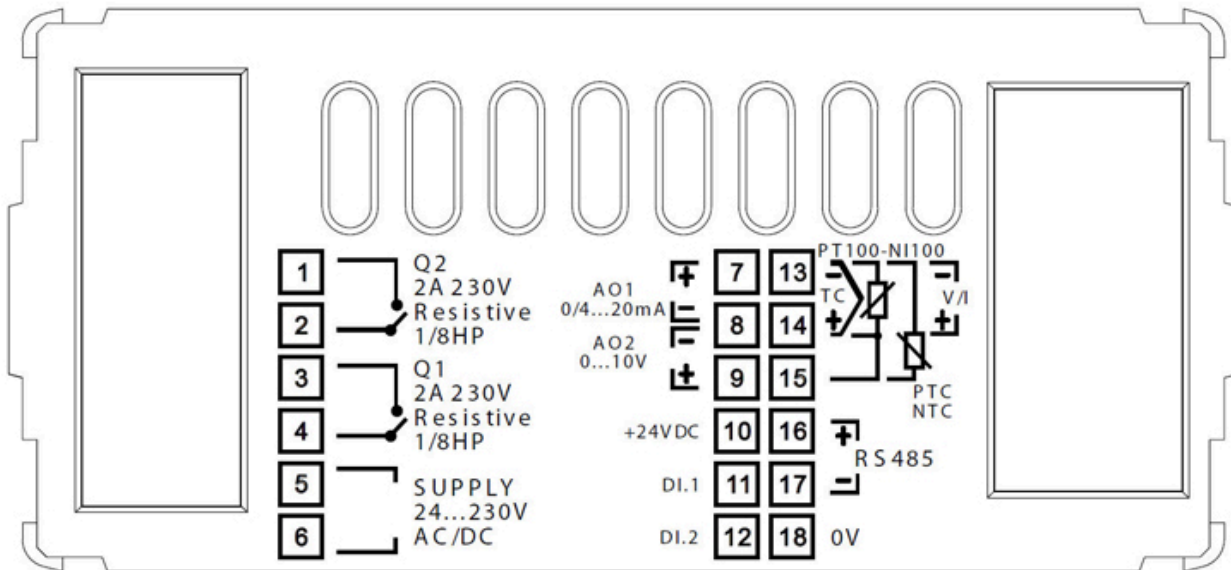
Drawings

Dimensions:



**Drawings**

**Wiring diagram:**





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