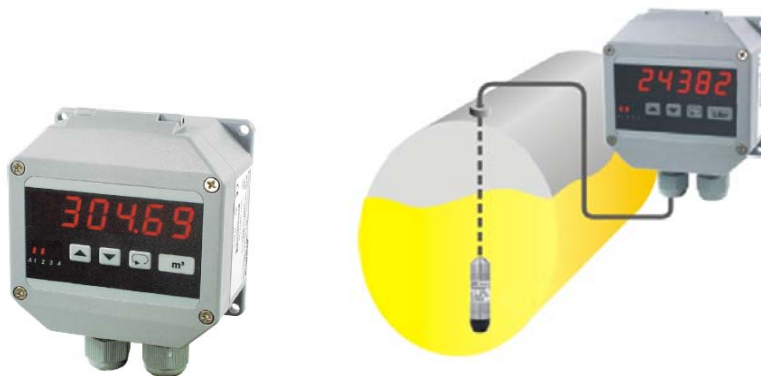


Digital tank level display - Type DTA 1010 -



FEATURES

- 1 INPUT FOR STANDARD SIGNALS 0/4-20 MA OR 0/2-10 V DC
- 1 INPUT FOR AUTOMATIC FILLING LEVEL CORRECTION, OPTIONAL: 2. INPUT FOR PRESSURE MEASURING TRANSMITTER
- VOLUME OR MASS DISPLAY (WEIGHT)
- 6 STANDARD AS WELL AS ANY SPECIAL TANK SHAPES SELECTABLE
- MAX. 2 ALARM OUTPUTS, CHANGE-OVER RELAY, MIN/MAX FUNCTION
- ANALOG OUTPUT 0/4...20 MA, 0/2...10 V DC, DEPENDING ON THE WORKING RESISTANCE
- PROTECTION TYPE IP 65
- DISPLAY SCOPE DIGITS 0...999999
- ADJUSTMENT IN PRESSURE-FREE STATE POSSIBLE

DESCRIPTION

The **DTA 1010** digital tank content indicator can determine the content of tanks of various shapes, even when there is no linear relationship between filling height and content, i.e. the system compensates for non-standardised tank shapes. The measurement is based on the hydrostatic pressure or differential pressure (with 2 pressure sensors) or on distance sensors (e.g. ultrasound, radar, potentiometer).

The device provides the option of connecting an additional level sensor. When a specific level is reached, the display is corrected to the value that corresponds to the filling height in the tank in which the level sensor has been installed.

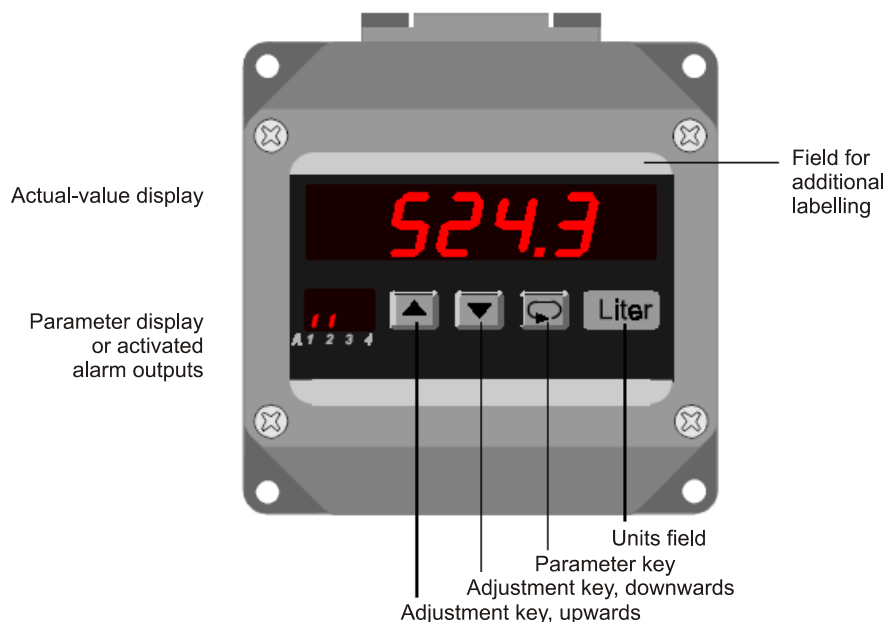
Programming is performed at the membrane keyboard in front. The alarm outputs can be programmed as min. or max. functions. The switching states are indicated by LEDs. When the digital filter is activated, the mean of 16 measuring values is continuously calculated and displayed. An analogue signal in the range 0...20 mA / 0...10 V DC or 4...20 mA / 2...10 V DC that is proportional to the tank content is provided. Switching from a current to a voltage signal is load dependent ($> 500 \Omega$ to voltage).

Digital tank level display - Type DTA 1010 -

TECHNICAL DATA

Design data	
Housing	Field housing with hinged lid, Material housing: Glassfibre-reinforced polyamide PA6-GF 15/15 Material of front foil: Polyester
Dimensions	see dimension drawings
Connection	Spring-loaded clamps, 2 mm ² single wire, 1 mm ² fine wire, AWG 14
Type of protection	Front IP 65, clamps IP 20, contact protected according to BGV A2
Weight	max. 450 g
Display	
Display	LED red; 14.2 mm
Display scope	Digits 999999 with suppression of leading zeroes
Additional display	LED 2 digits, red, 7 mm (display for parameter and switching state)
Electrical connection	
Auxiliary voltage	230 V AC +/- 10 %; 115 V AC +/- 10 %; 24 V AC +/- 10 %; 24 V DC +/- 15 %
Power input	max. 3.5 VA, with analog output 5 VA
Operation temperature	-20...+ 55 °C
Rated voltage	250 V AC according to VDE 0110 between input/output/auxiliary voltage, Degree of Pollution 2, Overvoltage Category III
Test voltage	4 kV between input/output/auxiliary voltage
CE conformity	Complies with the standards EN 55022, EN 60555, IEC 10004-3/4/5/11/13
Inputs	
Current inputs	0/4...20 mA; Ri = 10 Ω For overload 2 times; 4 times for max. 5 s
Voltage inputs	0/2...10 V DC; Ri = 100 kΩ For overload max. 100 V
Basic accuracy	< 0.1 % +/- 2 digits
Temperature coefficient	0.004 % / K
Transmitter supply	U ₀ approx. 24 V, Ri approx. 150 Ω, max. 50 mA
Outputs	
Relay	Change-over contact < 250 V AC < 250 VA < 2A, < 300 V DC < 50 W < 2 A
Analog output	0/4...20 mA working resistance <= 500 Ω; 0/2...10 V working resistance > 500 Ω, No galvanic separation of the measuring input, output switches automatically (load-dependent)
Accuracy	0.1%; TK 0.01 %/K

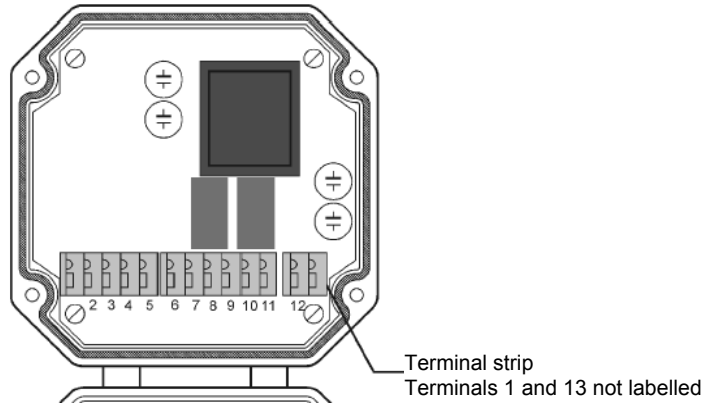
OPERATING / DISPLAY ELEMENTS



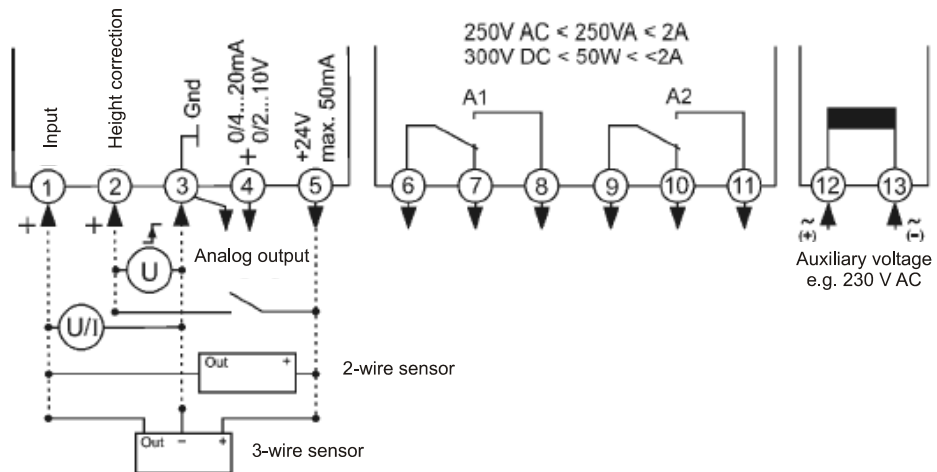
Digital tank level display - Type DTA 1010 -

CONNECTION DIAGRAMS

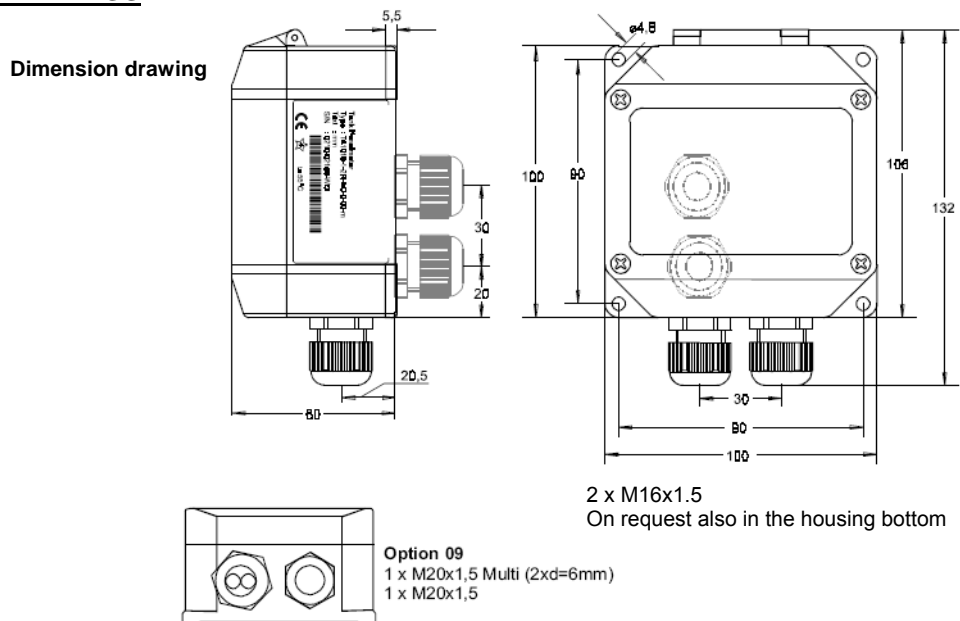
a) Position of the terminal strip (open lid)



b) Terminal strip for connections



DIMENSION DRAWINGS



Digital tank level display - Type DTA 1010 -

ORDER INFORMATION

Input

01	1 input 0/4...20 mA, 1 digital input for height correction, integrated transmitter supply 24 V DC, max. 50 mA
11	2 inputs 0/4...20 mA, integrated transmitter supply 24 V DC, max. 50 mA (without height-correction input)
02	1 input 0/2...10 V DC, 1 digital input for height correction, integrated transmitter supply 24 V DC, max. 50 mA
22	2 inputs 0/2...10 V DC, Integrated transmitter supply 24 V DC, max. 50 mA (no height correction - input)

Alarm output

00	Not equipped
2R	2 alarm outputs relay

Analog output

00	Not equipped
A0	Analog output 0/4...20 mA, 0/2...10 V DC

Auxiliary voltage

0	230 V	50/60 Hz	+/- 10 %
1	115 V	50/60 Hz	+/- 10 %
4	24 V	50/60 Hz	+/- 10 %
5	24 V	DC	+/- 15 %

Options

00	without option
09	1 x M20 x 1.5 Multi (2 x d = 6 mm); 1 x M20 x 1.5

Unit

XXX	Appears as imprint in the units field
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Additional text

XXX	Appears as imprint in the field for additional labelling, max. writing height H x W = 3 x 70 mm
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DTA1010

Accessory from the supply range for pressure transmitters

Example: Transmitter PZM / PZM 100 / PZM 101



Our equipment is currently being developed, therefore we reserve the right to make amendments.