Informator with microprocessor

4-digit LED-display

with and without limit contacts

Type: **attachable indicator**

   panel mount case

Description

Indicators are electronic devices designed for digital display of sensor signals.

The indicators can be set to the desired measuring range on site by program-control. The programming is done via flush mounted keys below the front cover.

A programmable damper ensures a precise readability of the indicating value in case of pulsation or if pressure peaks occur.

Attachable indicator

The attachable indicator provides an ideal solution for local indication with simultaneous signal transmission. Due to its universal programmability and simple mounting the attachable indicator can be retrofitted even to pressure or temperature sensors which are already in use. The LED-type enables process monitoring by a built in limit contact.

Panel mount case

The multitude of feasible input signals and the compact design make this indicator suitable for various applications.
Limit contacts provide information on the status of the process being monitored.

Features

O   Freely programmable by microprocessor
O   Range setting on site, no external calibration equipment needed

Attachable indicator

O   for sensors with 4...20 mA - output and rectangle plug acc. to EN 175 301-803, type A

O   one limit contact: contact function and hysteresis freely programmable

O   protection type IP65

O   simple handling

Panel mount case

O   input freely selectable:
   0/4...20 mA, 0...10 V, 0...1 V

O   input PT 1000, PT 100
   or thermocouple type K

O   two limit contacts: contact function and hysteresis freely programmable

O   compact design

Applications

chemical and petrochemical industry,

pharmaceutical industry,

food and beverage

machine tool and injection moulding presses,

development and testing fields

Model: E1999

Technical data

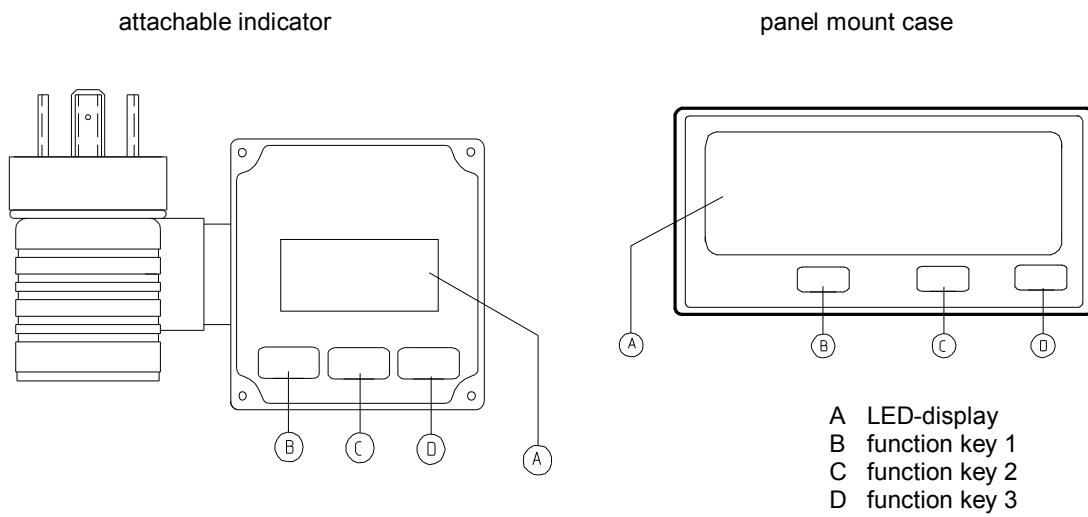| Model	E1999X100	E1999X200	E1999X500
Type	**attachable indicator**	**attachable indicator**	**panel mount case**
Display	7-segment-LCD-display	7-segment LED-display	7-segment-LED-display
– height	10 mm	7 mm	10 mm
– range	-1999...9999 (4 digits)	-1999...9999 (4 digits)	-1999...9999 (4 digits)
– accuracy	0,2% of F.S. ± 1 digit	0,2% of F.S. ± 1 digit	0,2% of F.S. ± 1 digit
– conversion rate	5 /sec.	50 / sec.	100/sec. (4/sec for temperature measurements)
Measuring ranges	program controlled adjustable	program controlled adjustable	program controlled adjustable

Input	4...20 mA, 2-wire	4...20 mA, 2-wire
		
		0 ... 10 VDC on request
			selectable:
			    4...20 mA
			    0...20 mA
			    0...10 VDC
			    0...1 VDC
			    0...2 VDC
			    PT1000 /2-wire
			    PT100 /3-wire
			    thermo couple type K

– input resistance			for current input $\quad$ 50 Ω
			for voltage input
			  0...1 V $\quad$ 30 kΩ
			for voltage input
			  0...10 V: $\quad$ 300 kΩ

– temperature influence	$\leq$ 0,1% of F.S./10K	$\leq$ 0,1% of F.S./10K	$\leq$ 0,25% of F.S./10K
Filter function	selectable in 3 steps	selectable in 3 steps	2/3 sec. selectable
Limit contacts		1 transistor switching output n-switching	2 transistor switching outputs - n-switching
– function		limit contacts as Hi or Low programmable by selecting the hysteresis	limit contacts as Hi or Low programmable by selecting the hysteresis
– switching point		program controlled adjustable within the adjusted display range	program controlled adjustable within the adjusted display range
– hysteresis		program controlled adjustable within the whole display range	program controlled adjustable within the whole display range
– load		-	Low-side 28 VDC / 1A High-side Ub / 200 mA
– response time		-	adjustable from 0...99 sec.
Power supply	sensor is supplied by the 4...20 mA current loop	sensor is supplied by the 4...20 mA current loop	9...28 VDC
– power consumption	max. 40 mA	-	max. 30 mA
– voltage drop	3 V	<5,5V	
Electrical connection	plug acc. to EN 175 301 803 type A	plug acc. to EN 175 301 803 type A	screw terminals, max. 1,5 mm²
Temperature ranges	0...50 °C	-20....+50°C	-20...50 °C
Protection type	IP 65	IP 65	front panel IP54; clamps IP20
Case	Dimensions 50x50x35	Dimensions 50x50x35	see drawings for dimensions
– panel cut out			21,7$^{+0,5}$ x 45$^{+0,5}$ (HxW)
– material	ABS	ABS	glass fibre strengthened Noryl
– window	Polycarbonate	Polycarbonate	Polycarbonate
– mounting			spring clamp
Weight	approx. 0,08 kg	approx. 0,08 kg	approx. 0,05 kg

Options

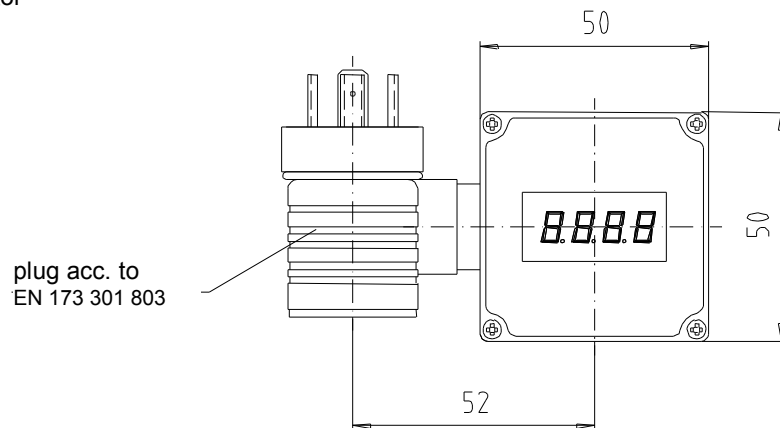| Model	E1999X100	E1999X200	E1999X500
Protection type	-----	1 transistor switching output n-switching	front panel IP 65

of F.S. = of full scale value

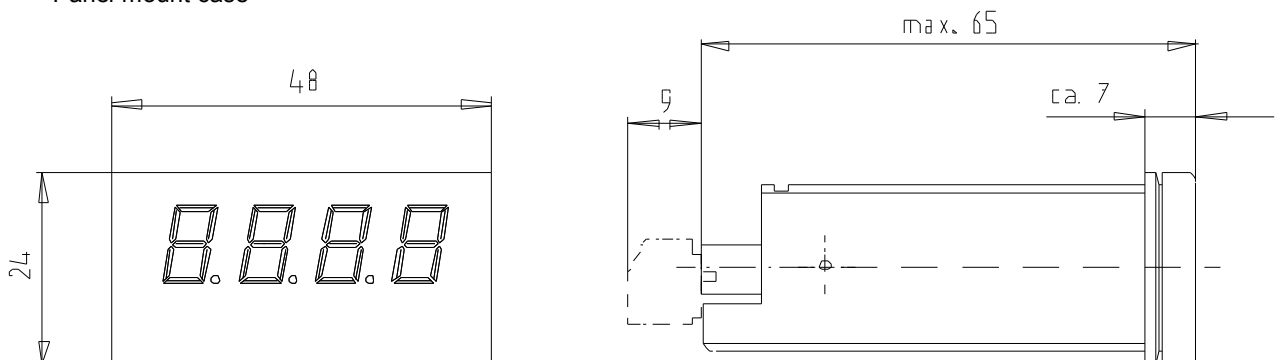## Operating and connection elements

Front view below cover

attachable indicator

panel mount case

A LED-display
B function key 1
C function key 2
D function key 3

Dimensions (mm)

attachable indicator

plug acc. to
EN 173 301 803

50

50

52

Panel mount case

48

24

max. 65

9

ca. 7

Configuration of connection terminals model E1999X500 (panel mount case)

Connection terminal

switching output 1
switching output 2
switching output GND
mains supply+Uv
mains supply GND

input: 0-10 V
input: GND, Pt100, Pt1000
input: 0-50 mV
thermo couple, Pt100
input: 0-1 V, 0-2 V, mA
frequency, Pt100, Pt1000

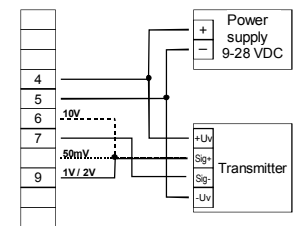## Connection examples (panel mount case)
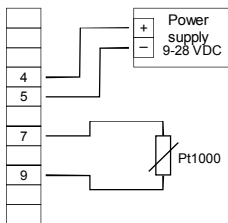
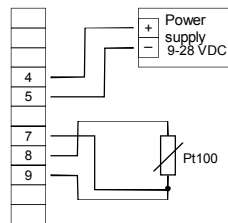**Signal input**

4...20 mA - 2-wire
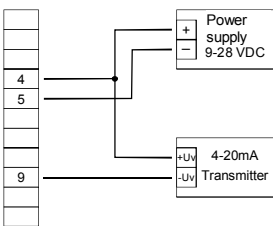
0/4...20 mA - 3-wire
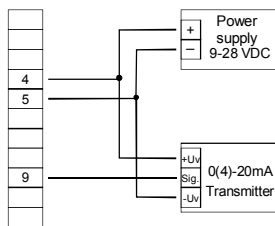
0...1/10 V - 3-wire
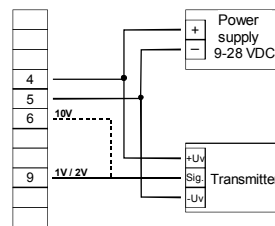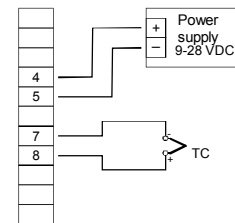
0...1/10 V - 4-wire

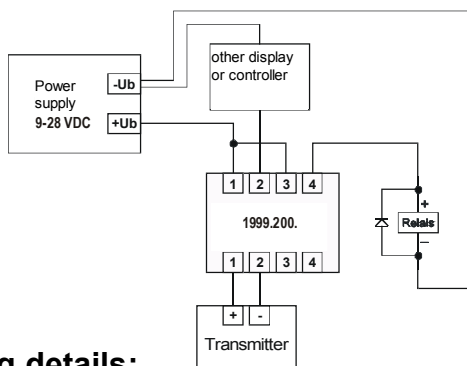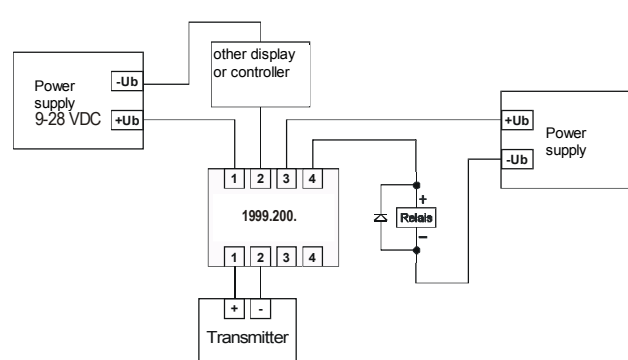PT 1000 /2-wire

PT 100 /3-wire

Thermocouple Type K

Assignment right-angle plug LED- attachable indicator with switching output E1999X200

combined power supply measuring / switching

separate power supply measuring / switching

Ordering details:

1. Model
2. Options

Subject to technical alternations