



#### Main features

- Universal mounting on Transducers with 4-20 mA Output; Plug DIN43650
- No additional Power Supply required
- Easy to programming using Push Buttons
- Compact Sandwich construction
- Good Readability through LED-Display
- Alarm: Open-Collector-Output

The model TDP plug-in display is a universal local display suitable for use with various transmitters.

The transmitter must be fitted with an analogue output and a connector in accordance with DIN43650.

Type TDP2000 can be delivered for use in hazardous areas.

The plug-in display is simply plugged in between connector and socket; it is then ready for operation.

The plug-in display is user programmable. Scaling, the position of the decimal point, gate time and switch point may be set with two keys.

The menu steps are output to the LED display field.

The plug-in display is supplied by the current loop of the 4-20 mA signal transmitter.

No additional auxiliary power is required. The programmed parameters are stored in an EEPROM, they are therefore not lost after power failure.

Over or under range are displayed as a message on the LED display.

All device functions are continuously monitored by an integral diagnostic system.

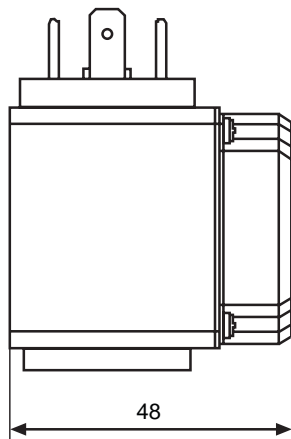
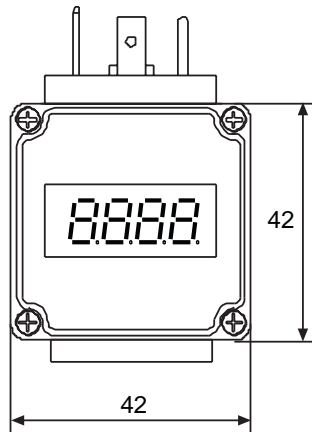
The indicating unit can be rotated in 90° steps, it can thus be adapted to different installation positions.

The integral open-collector output, allows a transmitters to be used easily with a limit contact.

#### TECHNICAL DATA

Display	4-digit red LED display; digit height: 7.62 mm
Indication range	Programmable decimal point setting -1999... to +9999
Accuracy	0,2% of span $\pm$ 1 digit
Electrical connection	To transmitters with 4-20 mA output and plug acc. DIN43650 (4-pin), polarized
Conversion rate	Three measurements/second until 25.5/second adjustable
Data back-up	Non-volatile EEPROM
Error message	HI: over range LO: under flow
Programming	With two keys, menu-assisted, scaling of indication, decimal point, gate time, error message switch point
Protection	IP65
Temperature influence on display	0,01%/°C
Storage temperature	-30...+80°C
<b>TDP-1001</b>	
Indicator supply	Not required, 4-20mA loop powered
Max current load	60 mA
Voltage drop	$\leq$ 5V
Case material	Plastic PA 6 GK30; orange window: PMMA
Ambient temperature	0...+60°C
Open collector	TDP-1001, PNP, max. current load 90mA
<b>TDP-2000</b>	
Conformance	BVS99.E.2037
Ex-protection	Ex II2GEx ib IIC T4
Voltage	Ui 28 Vcc
Current	Ii 100 mA
Power	Pi 0.9 W
Effective inner capacitance	C1 negligible
Effective inner inductance	L1 negligible
Housing material	Polyamide compound, window: PMMA
Ambient temperature	-20...+40°C

## DIMENSIONS



## APPLICATIONS

### Pressure

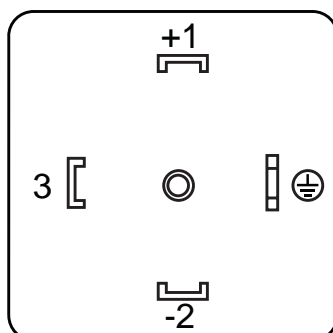


Pressure transmitters:  
TK-E, TSA-E, TPSA-E, TPFA-E, TPHA-E, XSA, XPSA

Magnetostrictive linear position sensors:  
MK4A, IK1-A

Temperature, humidity sensors, with 4...20mA output (2 wire)

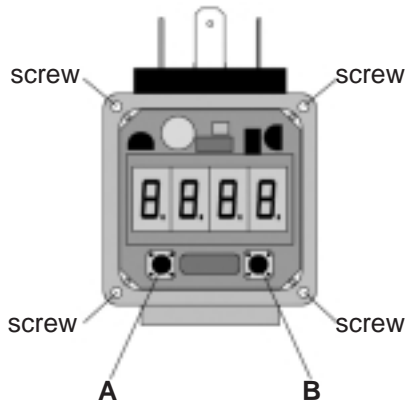
## ELECTRICAL CONNECTIONS



+ Power supply	PIN 1
- Signal	PIN 2
Switch out	PIN 3

For open collector output devices, O/P is between PIN nr. 2 and 3.

## ADJUSTMENT



For adjustment, the 4 screws of the display should be unscrewed and the cover removed.

- Simple programming through keys A and B
- Free scaling of display value
- Software oriented adjustment of the decimal point
- Adjustable gate time of the display
- Recognition of overranging
- Freely programmable set-point adjustment

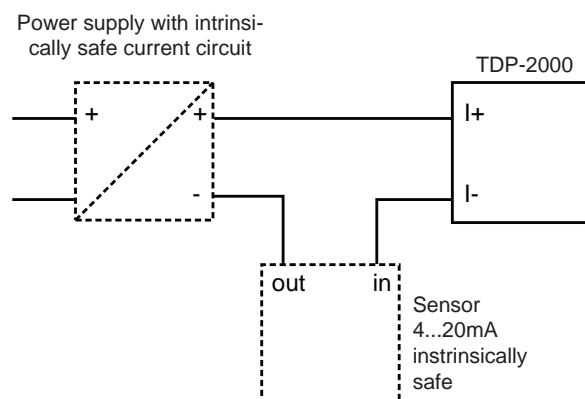
## FURTHER OPTIONS FOR OEM APPLICATIONS

### For OEM applications

(on request)

- Generic version
- Housing black or blue
- Company logo
- Client-specific adjustment
- Client-specific switching hysteresis

By usage of model TDP-2000 in hazardous areas, an intrinsically safe current power supply transmitter should be used and being rectified with the electrical data of the connected sensor.



## ACCESSORIES

For mounting of the plug-in display on devices with PG connection, different adapters are available. The adapter is simply screwed in the existing PG-cable gland and wired to the device. At the opposite side of the adapter, is a plug according to DIN43650A, on which the sandwich display can be simply plugged on.

### ordering code

For fitting in a PG-11 cable gland

**TDP-PG11**

For fitting in a PG-13,5 cable gland

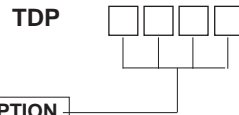
**TDP-PG13**

For fitting in a PG-16 cable gland

**TDP-PG16**



## ORDERING INFORMATION



DESCRIPTION	
Plug-in display with open collector	<b>1001</b>
Plug-in display Ex II 2GEEEx ib IIC T4	<b>2000</b>

**Note:** To achieve the correct sealing rate use mating connector DIN43650A to Gefran code "CON045" or be sure to install a mating connector with height 27mm.

Sensors are manufactured in compliance with:

- EMC 2004/108/CE compatibility directive
- RoHS 2002/95/CE directive

Electrical installation requirements and Conformity certificate are available on our web site: [www.gefran.com](http://www.gefran.com)

**GEFRAN spa** reserves the right to make any kind of design or functional modification at any moment without prior notice