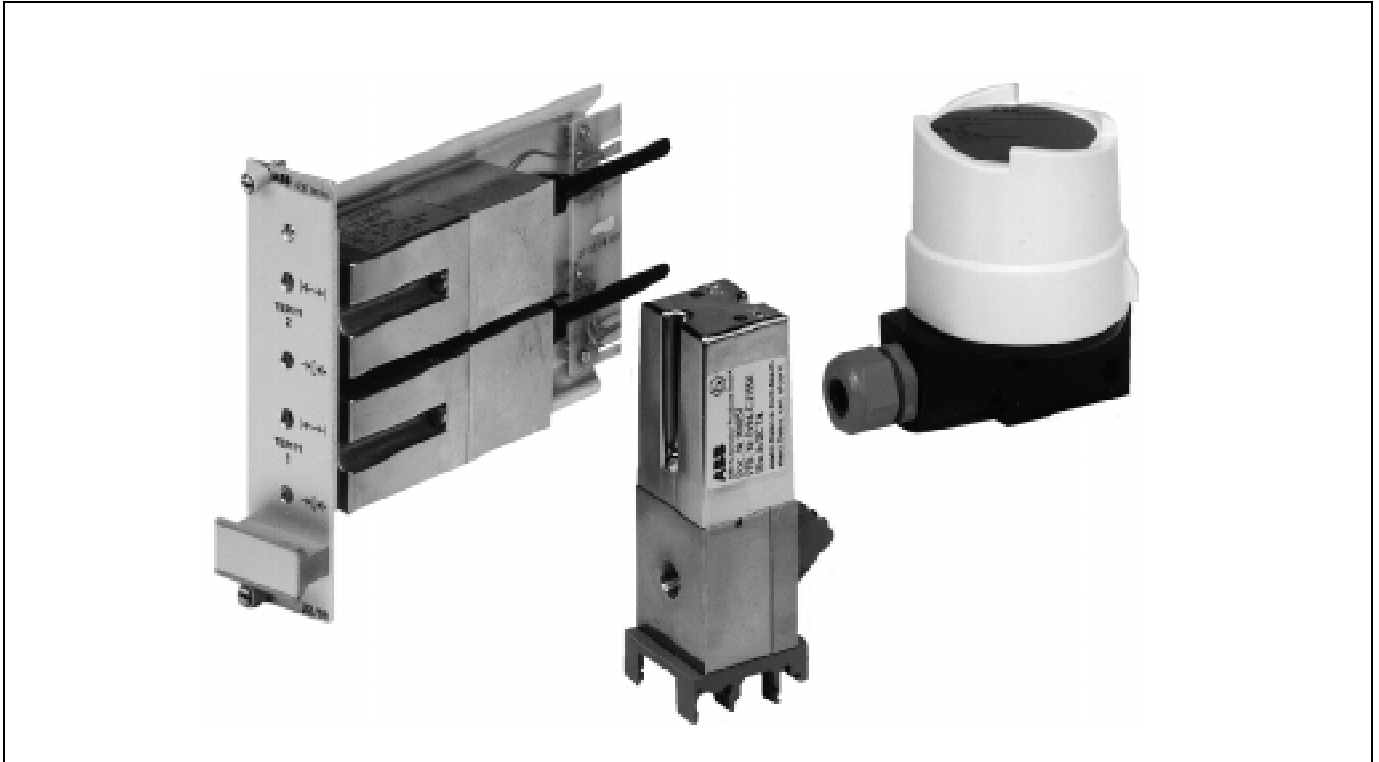


10/18-0.15 EN



- Strain gauge sensor for overpressure
- For input signal 0.2...1 bar or 3...15 psi
- Linear characteristic, max. deviation 0.5 %
- Output signal 4...20 mA, two-wire
- Supply voltage 12...30 V DC
- Intrinsically safe, EEx ib IIC T6
- Complies with the directives for EMC and CE conformity
- Compact design, low weight
- Any mounting orientation
- Robust construction, immunity to shock and vibration
- Different designs,
  - for rail mounting
  - as 19" slide-in unit, 3 units high, 7 units deep
  - for field mounting IP 65

### Construction and working principle

The signal converter transforms the 0.2...1 bar or 3...15 psi input signal into the 4...20 mA output signal.

The input pressure measured by the strain gauge sensor is fed into the subsequent electronic circuit which then converts it into the output signal in proportion to the measured value.

The electronic circuit is designed as a two-wire circuitry, i.e. the same pair of wires is used for the power supply current and the output signal. Secondary units such as display units, recorders or controllers have to be looped into the circuit.

A direct voltage between 12...30 V is required for power supply.

The TEPI 11 signal converter is also available as an intrinsically safe unit. In this case a power supply or supply isolator approved for intrinsically safe operation is required.

<b>Technical Data</b>
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**Input**

## Meter mechanism

Strain gauge sensor with silicon diaphragm  
(on rail-mounting and 19" slide-in units)  
or ceramics diaphragm (on field housing unit)

## Input

0.2...1 bar or 3...15 psi (other ranges on request)

## Overload limit

2 bar or 30 psi

**Output**

## Signal range

4...20 mA, two-wire

## Load voltage

$U_L = U_S - 12 \text{ V}$  ( $U_S$  = supply voltage V)

## Capacitance/Inductance

15 nF and 90  $\mu$ H

**Power supply**

## Supply voltage

12...30 V DC, ripple  $U_{pp} \leq 0.2 \text{ V}$

## Current consumption

20 mA (at 100% input signal)

**Transmission data and influences**

## Characteristic curve

Linear, rising or falling

## Characteristic deviation

$\leq 0.5 \%$

## Hysteresis

$\leq 0.15 \%$

## Sensitivity

$\leq 0.1 \%$

## Ambient temperature (zero and span)

$\leq 1.4 \%$  / 10 K for rail-mounting unit and 19" slide-in unit  
 $\leq 0.4 \%$  / 10 K for field housing unit

## Power supply

$\leq 0.015 \%$  / V supply voltage change

## Influence of mechanical vibrations

$\leq 0.5 \%$  up to 1 g and 80 Hz

## Mounting orientation

$\leq 0.1 \%$  at change of 90 °

## EMC

Meets EMC directive 89/336/EEC as of May 1989

## CE conformity mark

Meets requirements of the EC standard  
for the CE conformity certification

**Environmental capabilities**

## Climate class

ZUF acc. to DIN 40040

Temperature -20...+60 ° C for operation  
-20...+80 ° C for transport and storage

Relative humidity  $\leq 75 \%$ , 95 % for a short time  
non-condensing

## Explosion protection

Intrinsically safe, EEx ib IIC T6  
BVS 96.D.2032 X for rail-mounting unit and 19" slide-in unit  
BVS 96.D.2076 for field housing unit  
(other approvals on request, e.g. FM/CSA)

**Control room housing unit**

## Material

Aluminium housing with plastic cap

## Degree of protection

IP 20

## Mounting

Mounting rail EN 50022 - 35 x 7.5 or EN 50035 - G 32  
or EN 50045 - 15 x 5

## Electrical connection

Screw terminal for 2.5 mm<sup>2</sup>

## Pneumatic connection

1/8 NPT thread

## Mounting orientation

As required

## Weight

0.2 kg

## Dimensions

See dimensional drawings

**19" slide-in unit**

## Material

Aluminium housing with plastic cap  
Slide-in board with aluminium front panel

## Degree of protection

IP 20 at front, IP 00 at rear

## Slide-in unit

With 1 or 2 signal converters  
Dimensions: 3 units high, 7 units deep  
Mounting: with M 2.5 screws at front panel and plug-in connectors for current and air at the rear.

## Terminal board

Plug-in connectors for current and air for 19" slide-in unit  
2-pole electrical screw terminal, 2.5 mm<sup>2</sup>  
1/8 NPT thread for air pipe

## Mounting orientation

As required

## Weight

0.6 kg (0.9 kg with 2 signal converters)

## Dimensions

See dimensional drawings

**Field housing unit**

## Material

Aluminium housing  
Bottom part of housing varnished black, RAL 9005  
Cover varnished light gray, RAL 9002  
Stainless steel mounting bracket

## Degree of protection

IP 65

## Mounting

Mounting bracket for wall mounting or 2" pipe mounting

## Electrical connection

PG 13.5 cable gland and 2-pole screw terminal for 2.5 mm<sup>2</sup>

## Pneumatic connection

¼ NPT thread

## Mounting orientation: As required

Weight: Signal converter: 0.6 kg, Mounting bracket: 0.5 kg

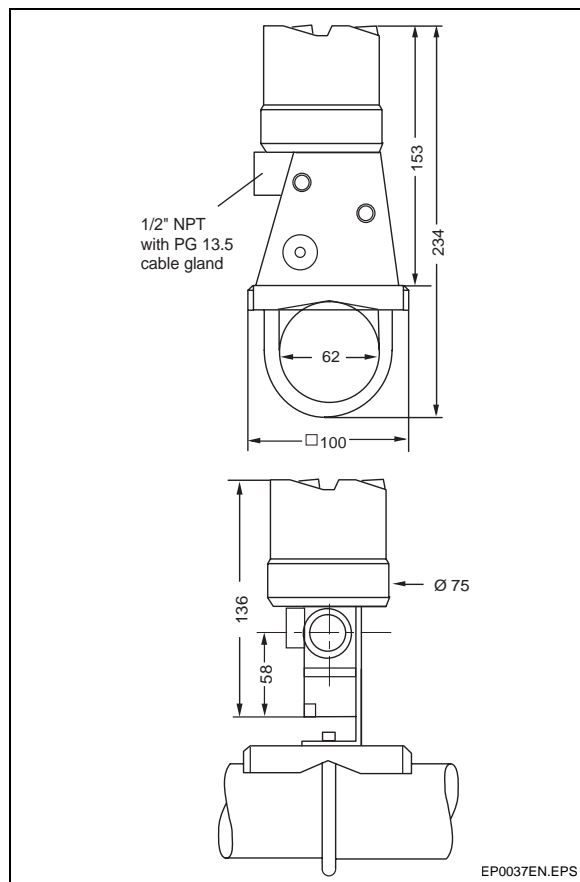
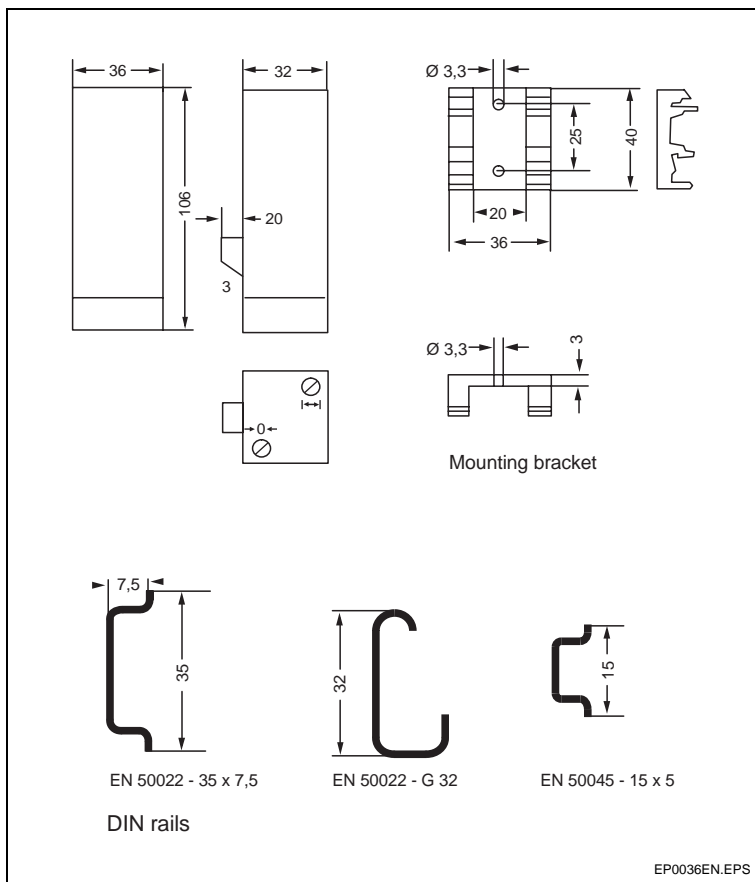
Dimensions: See dimensional drawing

Ordering information						
				Catalog No.		
<b>P/I Signal converter TEPI 11</b>				<b>V18321-</b>		
<b>Design/Explosion protection</b>						
With control room housing for rail mounting						
standard				1	0	0
intrinsically safe EEx ib IIC				5	0	0
As 19" slide-in unit with 1 signal converter						
standard				0	1	0
intrinsically safe EEx ib IIC				0	5	0
As 19" with 2 signal converters						
standard				0	2	0
intrinsically safe EEx ib IIC				0	6	0
With aluminium field housing, IP 65						
standard				0	0	1
intrinsically safe EEx ib IIC				0	0	5
<b>Characteristic curve</b>						
rising					1	
falling					2	
<b>Input signal range</b>						
0.2 ... 1 bar					1	
3 ... 15 psi					2	
(as specified in clear text)						

Accessories						
				Catalog No.		
<b>Terminal board for 19" slide-in unit, standard</b>						
With screw terminal						
for 1 signal converter				18381-0319360		
for 2 signal converters				18381-0319364		
<b>Terminal board for 19" slide-in unit, EEx ib IIC</b>						
With screw terminal						
for 1 signal converter				18381-7959009		
for 2 signal converters				18381-7959010		
<b>Mounting bracket for field housing</b>						
Stainless steel mounting bracket						
for wall mounting				18381-0319344		
for wall or 2" pipe mounting				18381-0319345		

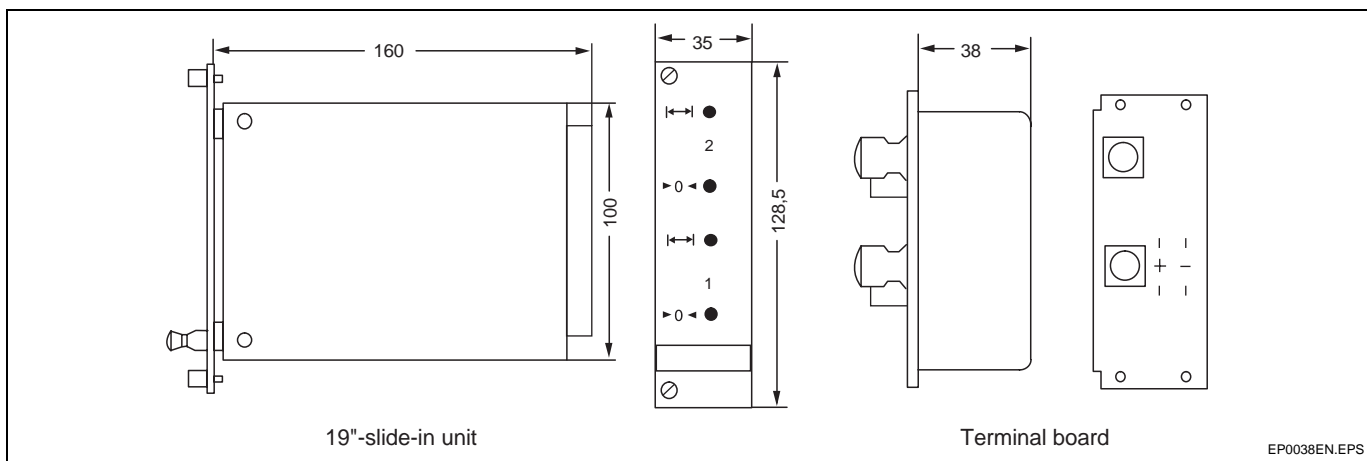
Stock versions						
				Catalog No.		
<b>P/I Signal converter TEPI 11</b>						
Design	Explosion protection	Input signal range				
Control room case, for rail mounting	none	0.2 ... 1 bar	18321-10011			
		3 ... 15 psi	18321-10012			
Field case, aluminium	none	0.2 ... 1 bar	18321-00111			
		3 ... 15 psi	18321-00112			

Dimensional drawings



Control room unit

Field unit



19" slide-in unit



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