

## Ex relevant specifications

### Flameproof (enclosure), ATEX 'Ex d'

<b>Marking</b>	II 2G Ex d IIC T4/T5/T6 Gb
Type Examination Test Certificate	DMT 02 ATEX E 121 X
Type	DOC. 900771
Device class	II 2G
Standards	EN 60079-0: 2012 (General requirements) EN 60079-1: 2007 (Flameproof enclosure 'd')

### System bus, computer interfaces

Current	≤ 50 mA
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### Pneumatic data

Supply pressure	1.4 bar (20 psi) / 2.5 bar (37 psi)*
Output signal	0.2 to 1 bar (3 to 15 psi) / 0.4 to 2 bar (6 to 30 psi)*

\* Valid for Option 509 only – increased input signal.

### Thermal data

T4: -40 °C < Tamb < 85 °C
T5: -40 °C < Tamb < 70 °C
T6: -40 °C < Tamb < 55 °C

### Special conditions

The I/P signal converter is suited for use in an ambient temperature range of -40 °C to maximum 85 °C.

If the I/P signal converter is used at an ambient temperature above 60 °C or below -20 °C, use cable entries and cables suited to an operating temperature that corresponds to the maximum ambient temperature plus 10 K or that corresponds to the minimum ambient temperature.

Versions with an intrinsically safe control head may no longer be operated as intrinsically safe if they have been previously operated with the 'flameproof (enclosure)' type of protection with a non-intrinsically safe power supply.

### Operation as intrinsically safe equipment

<b>Marking</b>	II 2G Ex ia IIC T6 resp. T4 Gb
Type Examination Test Certificate	TÜV 99 ATEX 1487 X
Type	TEIP11, Doc. 901068-SMDxxxx TEIP11-PS, Doc. 901068-SMDxxxx TEIP11-PS, Doc. 901069-SMDxxxx
Device class	II 2G
Standards	EN 60079-0:2009 EN 60079-11:2012

### Temperature classes for the following versions:

TEIP11 Doc. 901068-SMD and TEIP11-PS Doc. 901068-SMD and TEIP11-PS Doc. 901069-SMD

Temperature class	Input current	Ambient temperature range
T4	120 mA	-55 to 60 °C
T4	100 mA	-55 to 85 °C
T6	60 mA	-55 to 40 °C

TEIP11 Doc. 901068 and TEIP11-PS Doc. 901068 and TEIP11-PS Doc. 901069

Temperature class	Input current	Ambient temperature range
T6	50 mA	-55 to 60 °C
T6	60 mA	-55 to 55 °C
T5	60 mA	-55 to 70 °C
T4	60 mA	-55 to 85 °C
T5	100 mA	-55 to 55 °C
T4	100 mA	-55 to 85 °C
T5	120 mA	-55 to 45 °C
T4	120 mA	-55 to 80 °C
T4	150 mA	-55 to 70 °C

**Ex limit values**

$I_i$	$U_i$	$P_i$
50 mA	42.5 V	2.125 W
60 mA	38.8 V	2.328 W
100 mA	30 V	3.0 W
120 mA	28 V	3.36 W
150 mA	25.5 V	3.825 W

**Special conditions**

The I/P signal converter TEIP11-PS Doc. 901068 or TEIP11-PS Doc. 901069 must be set up outdoors as a pneumatic power supply when used with combustible gases.

The supplied gas must be kept sufficiently free of air and oxygen to prevent a potentially explosive atmosphere from forming.

The gas must always be routed to the outside.

**FM / CSA****Intrinsically safe FM**

FM 'intrinsically safe' (not for metal field housing units)  
I.S.: CL I/Div 1/Grp A B C D

FM 'intrinsically safe' (only for metal field housing units)  
I.S.: CL I-II-II/Div 1/Grp A B C D E F G  
S.: CL II/Div 2/Grp G  
S.: CL III/Div 2

**Non-incendive FM**

N.I.: CL I/Div 2/Grp A B C D (not for metal field housing units)  
N.I.: CL I/Div 2/Grp A B C (only for metal field housing units)

**Intrinsically safe CSA**

CSA 'intrinsically safe' (not for metal field housing units)  
I.S.: CL I/Div 1/Grp A B C D  
CL I / Div 2 / Grp A B C D

CSA 'intrinsically safe' (only for metal field housing units)  
I.S.: CL I/Div 1/Grp A B C D  
CL II / Div 1 / Grp E F G  
CL III  
CL I / Div 2 / Grp A B C D  
CL II / Div 2 / Grp E F G

**Non-incendive CSA**

FM 'explosion proof' (only for metal field housing units)  
X.P.: CL I/Div 1/Grp B C D  
D.I.P.: CL II III/Div 2/Grp E F G

CSA 'explosion proof' (only for metal field housing units)  
X.P.: CL I/Div 1/Grp B C D

## Dimensions

### Design for control room housing unit for rail mounting

Dimensions in mm (in)

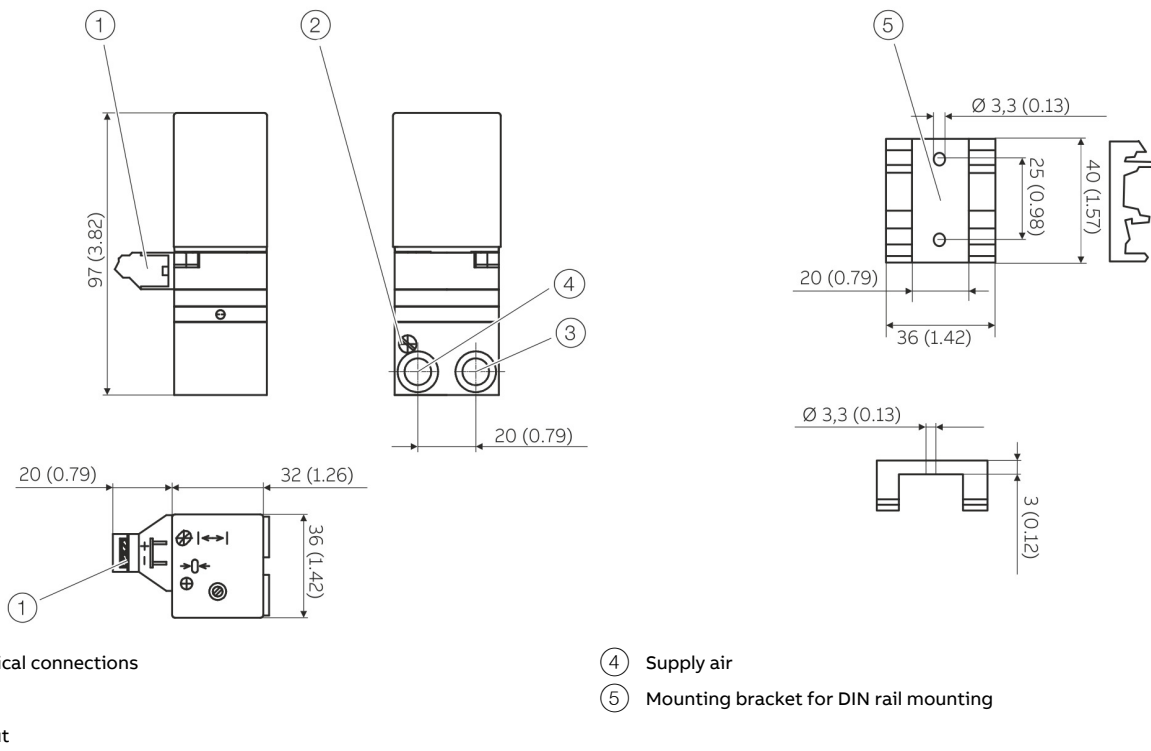


Figure 2: Dimensions of control room housing design for rail mounting

### Design for control room housing unit for block mounting

Dimensions in mm (in)

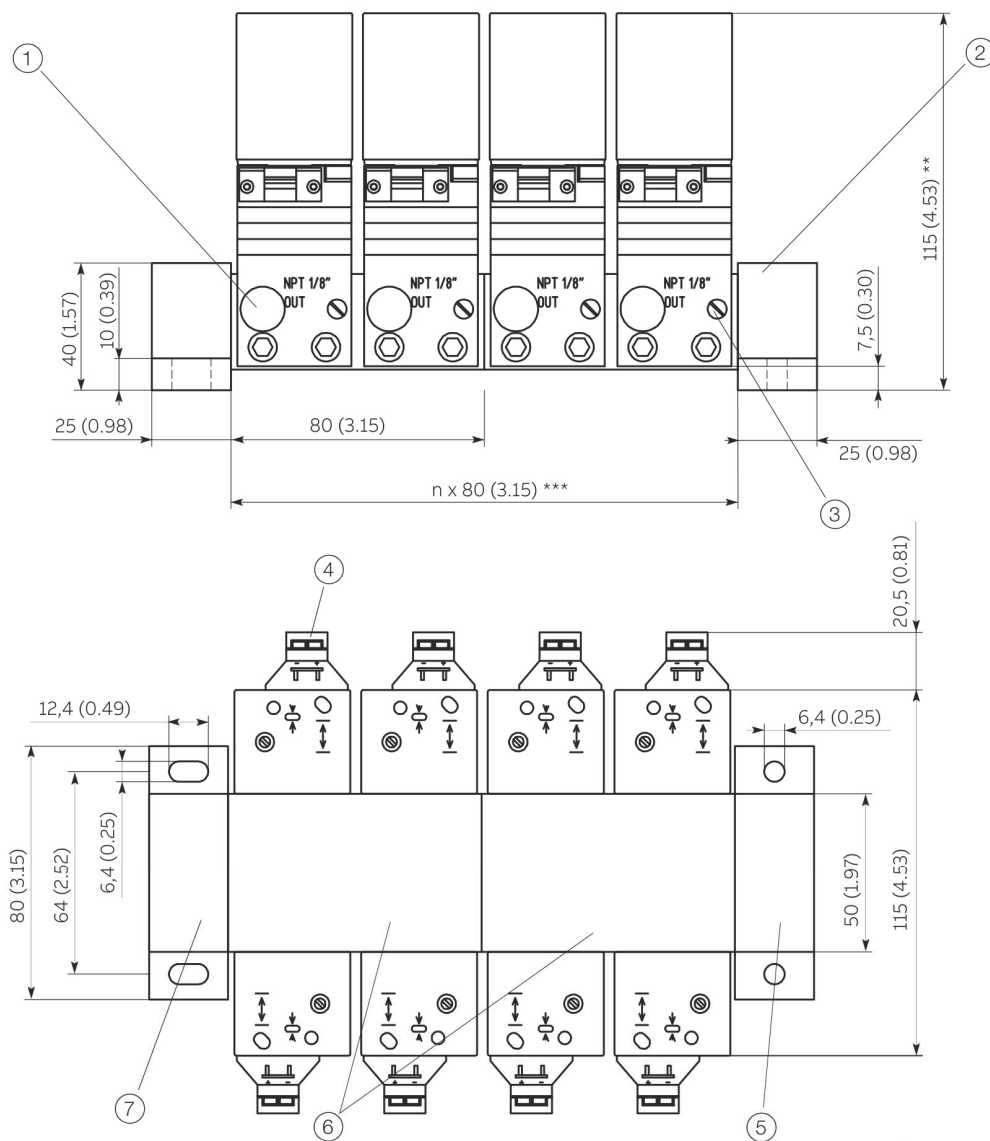


Figure 3: Dimensions of control room housing design for block mounting

\* Version 0.2 to 1 bar (2.90 to 14.50 psi)

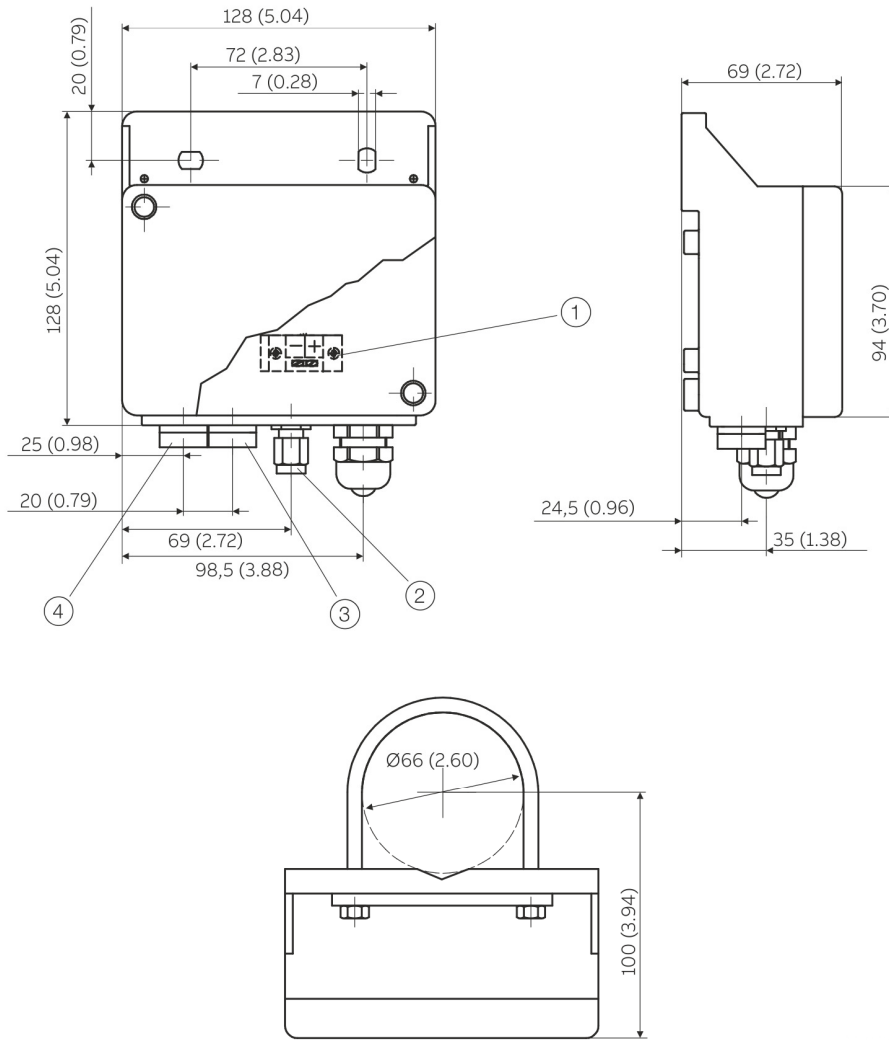
\*\* Version 0.4 to 1 bar (5.80 to 14.50 psi)

\*\*\* Length 80 mm (3.15 in) per connection block

... Dimensions

Design for plastic field housing unit

Dimensions in mm (in)

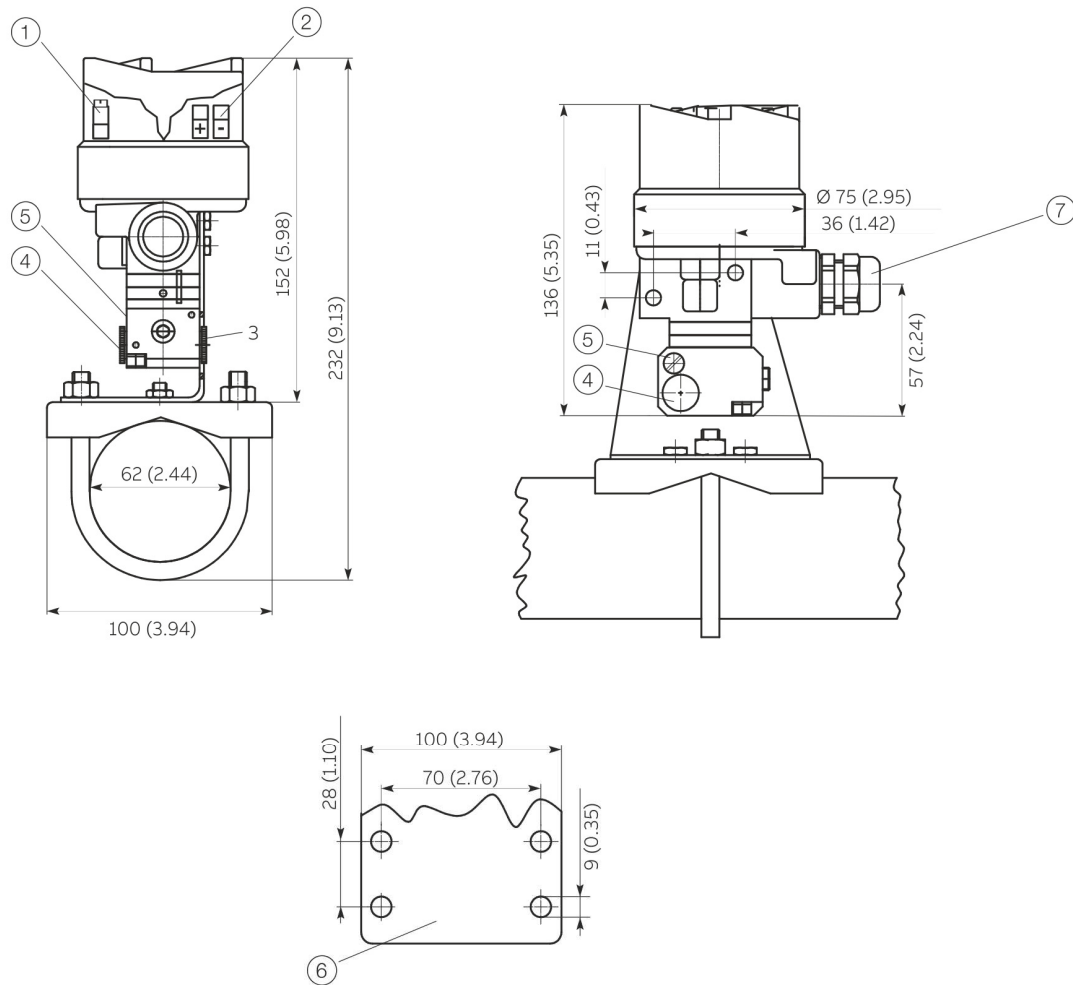


- ① Electrical connections
- ② Connection only with version for operation with flammable gas for diverting the escaping gas / 6 mm (0.24 in) screw terminal connection
- ③ Supply air
- ④ Output
- ⑤ Cable gland

Figure 4: Dimensions of plastic field mount housing design

### Design for aluminum or stainless steel field mount housing

Dimensions in mm (in)



- |                          |                                 |
|--------------------------|---------------------------------|
| ① Ground terminal        | ⑤ Filter                        |
| ② Electrical connections | ⑥ Clamp sheet for wall mounting |
| ③ Output                 | ⑦ Cable gland                   |
| ④ Supply air             |                                 |

Figure 5: Dimensions of aluminum or stainless steel field mount housing design

## Ordering Information

### Main ordering information TEIP11-PS

TEIP11-PS I/P Converter, signal converter for standard signals, with power stage	V18311H	X	X	X	X	XX	X	0	0
Explosion Protection									
Without explosion protection		1							
ATEX II 2 G Ex ia IIC T6 resp. T4 Gb		3							
ATEX II 2 G Ex d IIC T4/T5/T6 Gb		4*							
FM / CSA Intrinsically Safe		6**							
FM / CSA Intrinsically Safe and Explosion-proof		7*							
GOST Russia - Ex ia		A*							
GOST Russia - Ex d		D*							
Design									
Control room housing IP 20, for rail mounting			1						
Control room housing IP 20, for block mounting			A						
Field housing polyester, IP 54			6						
Field housing aluminium, IP 65			8						
Field housing stainless steel, IP 65			9						
Input Signal									
Input signal 0 to 20 mA					1				
Input signal 4 to 20 mA					2				
Airtight closed function 4 to 20 mA					8				
Other input signal					0				
Output Signal									
Output signal 0.2 to 1 bar						1			
Output signal 3 to 15 psi						2			
Other output signal						0			
Characteristic									
Direct action							10		
Reverse action							20		
Ambient Temperature									
-40 to 85 °C								1	
-55 to 85 °C								2***	0 0

\* Only with aluminium or stainless steel field housing

\*\* Not with field housing

\*\*\* Not with explosion protection Ex d or FM / CSA explosion proof

## Additional ordering information TEIP11-PS

TEIP11-PS I/P Converter, signal converter for standard signals, with power stage	XXX	XXX	XXX	XXX	XXX	XXX
<b>Certificate of Compliance</b>						
Certificate of compliance with the order acc. EN 10204-2.1 (DIN 50049-2.1) with item description	CF2					
Test report 2.2 acc. EN 10204 (DIN 50049-2.2)	CF3					
<b>Inspection Certificate</b>						
Inspection certificate 3.1 acc. EN 10204		CBA				
<b>Device Identification Label</b>						
Stainless steel 18.5 × 65 mm (0.73 × 2.56 in)						MK1
Sticker 11 × 25 mm (0.43 × 0.98 in)						MK3
<b>Operation with Inflammable Gas</b>						
Increased climate stability					300	
Operation with inflammable gas					480*	
No special approval					999	
<b>Special Input Signal</b>						
0 to 10 mA						501
10 to 20 mA						502
4 to 12 mA						503
12 to 20 mA						504
Specify split-range						505
Special input range						506
No special input range						999
<b>Special Output Signal</b>						
1 to 18 psi						511
20 to 100 kPa						513
0.2 to 1 kg/cm <sup>2</sup>						514
0.2 to 1.8 bar						515**
3 to 27 psi						512***
0.4 to 2 bar						508**
6 to 30 psi						509***
Special output signal						999

\* Only for signal converter EEx ia IIC with polyester field housing

\*\* Supply pressure 2.5 bar

\*\*\* Supply pressure 37 psi



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## ... Ordering Information

Accessories	Order Code
TEIP11-PS Cable gland EEx d, brass, M 20 × 1.5 thread	319343
TEIP11-PS Mounting bracket, stainless steel, for wall mounting	319344
TEIP11-PS Mounting bracket, stainless steel, for wall or 2 in pipe mounting	319345
TEIP11-PS Connection block for 4 converters	7958243
TEIP11-PS Termination block with central supply air connection 3/8 NPT	7958251
TEIP11-PS Termination block without connection	7958245