



TEMPERATURE

STT-Family (Standard temperature transmitters Family) Intrinsically safe temperature transmitters

PMT-S111-Exi, PMT-S112-Exi

Datasheet

There are stainless steel, intrinsically safe temperature transmitters for the usage in hazardous areas.

In addition to its rugged construction and a good price- to- performance ratio this series will be the solution for temperature measurement for a very wide variety of applications.

MAIN FEATURE

- Hi- strength stainless steel construction
- Wide operating measuring range:
-40 °C ... 200 °C (-40 °F ... 392 °F)
- Low static and thermal errors
- Compatible with a wide range of liquids and gases
- High grade of EMI/RFI protection grade
- Several electrical connection available



SUITABLE HAZARDOUS AREAS AND CONDITIONS:



- **metallic connectors**

US: Class I, Zone 0 AEx ia IIC T4 Ga, Class I, Division 1, Groups A, B, C, D T4
CAN: Ex ia IIC T4 Ga IS Class I, Division 1, Groups A, B, C, D T4



II 2G Ex ia IIC T3 Gb
-40°C <= Ta <= 85°C

- **for other plugs and cables:**

US: Class I, Zone 1 AEx ia IIC T4 Gb, Class I, Division 1, Groups A, B, C, D T4
CAN: Ex ia IIC T4 Gb, IS Class I, Division 1, Groups A, B, C, D T4

Rated for:

Class 2258 04 PROCESS CONTROL EQUIPMENT (for hazardous Canadian locations)
Class 2258 84 PROCESS CONTROL EQUIPMENT (for hazardous locations- certified to US standards)

APPLICATION



OIL PLATFORMS



OIL & GAS EQUIPMENT



EXPLOSION HAZARD STORAGE ROOMS



REMOTE PROCESS CONTROL



POWER STATIONS



CHEMICAL INDUSTRY

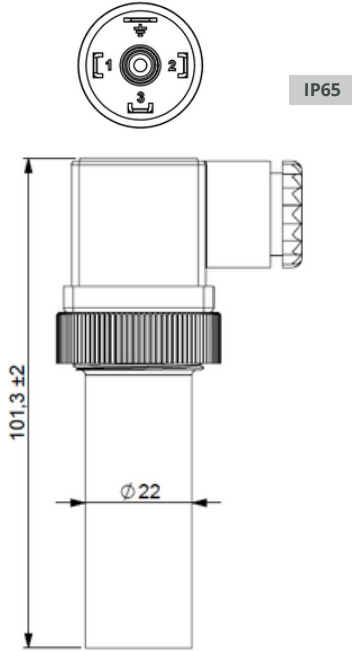
TECHNICAL SPECIFICATIONS

PERFORMANCE CHARACTERISTICS			
Accuracy (25°C)	+/- 1 % FS		
Overall accuracy	+/- 2 % Fs		
Stability (1 year)	+/- 0,25 % full scale (typical)		
Max.operating pressure	static 160 bar		
Media temperature range	- 40 °C ... 200 °C (-40 °F ... 392 °F)		
Measuring element	1 x PT100, class B		
ENVIRONMENTAL DATA			
Ambient temperatur range	- 40 °C ... 85 °C (-40 °F ... 185 °F)		
Storage temperature range	- 40 °C ... 85 °C (- 40 °F ... 185 °F)		
Humidity	0 ... 100 % r. h., non condensing		
Shock protection	EN/IEC 60068-2-32 (1 m free fall)		
Vibration	20 g / 3 axes to EN/IEC 60068-2-6		
EMI/RFI emission	EN 61326-1:2013-section 7		
	EN 61326-2-3:2013		
EMI/RFI susceptibility	EN 61326-1:2013 - section 6		
	EN 61326-2-3:2013		
Protection grade	depending on electrical connection		
Material of wetted parts	stainless steel		
ELECTRICAL DATA			
Available in certification:	CSA/ATEX	CSA	CSA
Output signal	4 ... 20 mA	0/1 ... 5 V DC; 0/1 ... 6 V DC; 0/1 ... 10 V DC	0,5 ... 4,5 V DC ratiometric
Supply voltage (DC)	CSA : 12 ... 27 V ATEX : 20 ... 27 V	10 ... 27 V (Vout x ... 5 V) 10 ... 27 V (Vout x ... 6 V) 15 ... 27 V (Vout x ... 10 V)	5 V DC +/- 5 %
Load resistance	< (Vcc-10 V)/20 mA	> 5 kOhm	> 2,5 kOhm
Current consumption	3,6 ... 21,4 mA	7 mA typ.	7 mA typ.
Response time	< 2 ms	< 2 ms	< 2 ms
Reverse and overvoltage protection	yes		
CONNECTION VERSIONS			
Electrical connection*	EN 175 301-803-A ; M12 x 1 (Binder S763); MIL-C-26482; cable outlet;		
Process connections (standard)*	G1/4 Form E, 1/4"-18NPT, 7/16"-20 UNF, 9/16"-18 UNF		
Temperature tip*	stainless steel tip with diameter 6 mm (0.24") 10 mm ... 500 mm (0.4" ... 1.64 ft)		

*other on request

ELECTRICAL CONNECTION

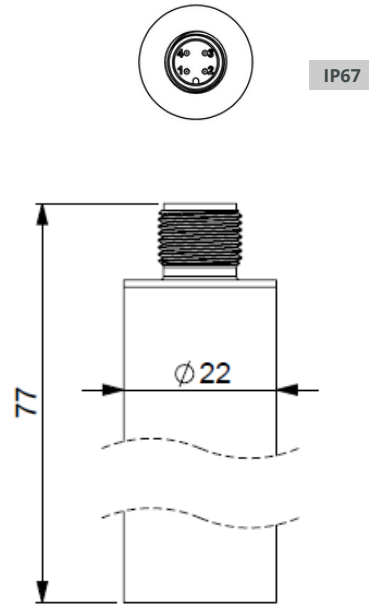
EN 175 301-803-A



IP65

Output	Pin1	Pin2	Pin3
Volt	+	-	Vout
mA	+	-	nc

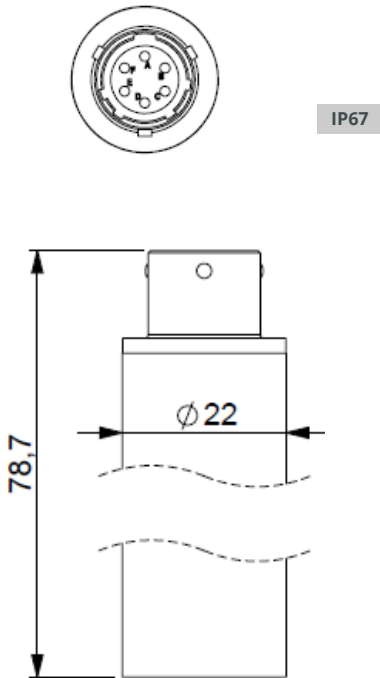
M12x1 (S763)



IP67

Output	Pin1	Pin3	Pin4
Volt	+	-	Vout
mA	+	-	nc

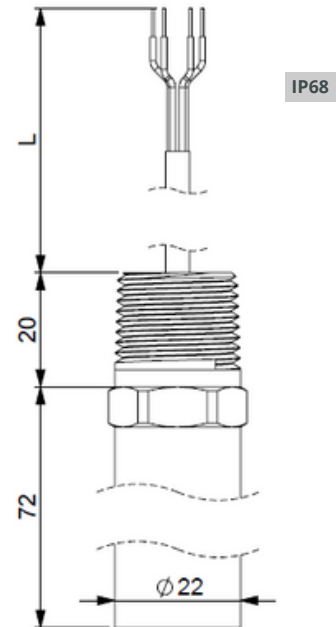
MIL-C-26482



IP67

Output	A	B	C
Volt	+	-	Vout
mA	+	-	nc

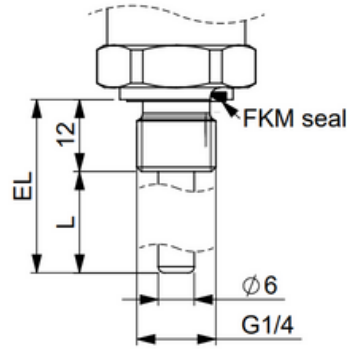
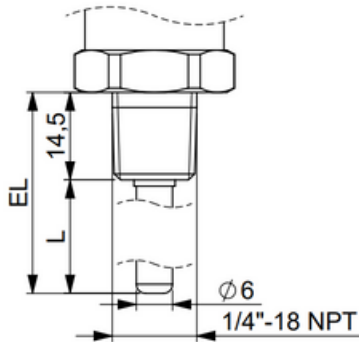
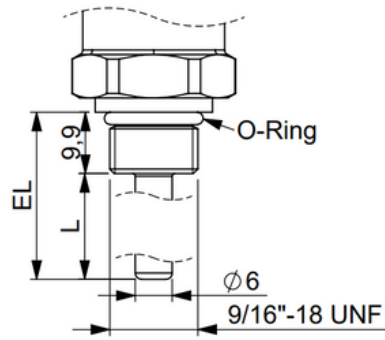
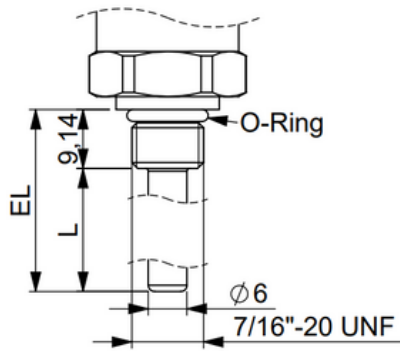
Cable



IP68

Output	Red	Black	White
Volt	+	-	Vout
mA	+	-	nc

PROCESS CONNECTION



EL: installation length
L: tip length



Before installation and operation, ensure that the appropriate pressure sensor has been selected in terms of pressure range, design and specific measuring conditions. Non compliance can result in serious injury and/or damage to the equipment.

WARNING: Prignitz Mikrosystemtechnik reserve the right to modify their products without notice to customers. It is imperative that we should be consulted over any particular use or application of our products and it is the responsibility of the buyer to establish, particularly through all the appropriate testes, that the product is suitable for the use or application. Under no circumstances will our warranty apply, nor shall we be held responsible for any application (such as any modification, addition, deletion, use in conjunction with other electrical or electronic components, circuits or assemblies, or any other unsuitable material or substance) which has not been expressly agreed by us prior to the sale of our products.

CUSTOMIZED SOLUTIONS

An indisputable advantage of the products from Prignitz Mikrosystemtechnik is that in addition to the specified parameters, a variety of specific customer requests can be implemented:

- other process and electrical connections available in a wide range of options
- analog output signals can be customized upon request.

Feel free to ask us. We are ready to implement individual solutions for you.

HOW TO ORDER

PMT-S11X-Exi.XX-XX-(XX..XX)-XX-XXX-XX-XX

FAMILIES

S = STT Family

MEASURING ELEMENT

1 = PT100, class B

MATERIAL

1 = 1.4301 (304);
2 = 1.4404 (316L) (suitable for Hydrogen Applications)
other on request

TYPE

Exi = Intrinsically safe temperature transducer

CERTIFICATION

10 = CSA
20 = ATEX
1H = CSA + suitable for Hydrogen Applications
2H = ATEX + suitable for Hydrogen Applications

ELECTRICAL OUTPUT

I2 = 4 ... 20 mA 2L
UR = ratiometric
OU5 = 0 ... 5 V
1U5 = 1 ... 5 V
OU10 = 0 ... 10 V

TEMPERATURE RANGES

e.g.
-20 ... 150
-40 ... 85
0 ... 100

UNIT

19 = Celsius
20 = Fahrenheit
23 = Kelvin

ELECTRICAL CONNECTION

00 = customized
02 = EN 175 301-803-A
05 = M12x1 (S763-4)
16 = MIL-C-26482
C2 = Cable 4P

PROCESS CONNECTIONS

00 = customized
01 = G1/4"A form E
08 = 1/4"-18 NPT
33 = 7/16-20 UNF
10 = 9/16-18 UNF

TIP LENGTH

e.g.
5mm
0,2in
0,1ft
Please note that :
In mm:
min = 5mm
max=500 mm

In Inch
min = 0,2in
max= 20in

In Feet
min = 0,1ft
max= 1,6ft

NOTE: Max Tip length for Hydrogen Application is 30 mm
Other upon request.

APPROVALS CERTIFICATE

CE Compliance: EMC directive 2014 / 30 / EU according in EN 61326-2-3

RoHS guideline: 2011/65/EU

Approved according to the European Directive EC79/2009

PRIGNITZ-Mikrosystemtechnik GmbH is certified acc. to ISO 9001. We offer a multitude of products compliant with ATEX, IECEx, CSA, and other worldwide relevant qualifications.

CSA master contract:MC 267726

CSA certificate #:7008 0999



DISMOUNTING, RETURN AND DISPOSAL

Dismounting

Physical injuries and damage to property and the environment caused by hazardous media Upon contact with hazardous media (e.g. oxygen, acetylene, flammable or toxic substances), harmful media (e.g. corrosive, toxic, carcinogenic, radioactive), and also with refrigeration plants and compressors, there is a danger of physical injuries and damage to property and the environment.

- Should a failure occur, aggressive media with extremely high temperature and under high pressure or vacuum may be present at the instrument.
- Wear the requisite protective equipment.

Dismounting the instrument

- Depressurise and de-energise the pressure transmitter.
- Disconnect the electrical connection.
- Unscrew the pressure transmitter with a spanner using the spanner flats.

Return

Strictly observe the following when shipping the instrument:

All instruments delivered to Prignitz Mikrosystemtechnik must be free from any kind of hazardous substances (acids, bases, solutions, etc.) and must therefore be cleaned before being returned.

TRANSPORT, PACKAGING AND STORAGE

Transport

Check the pressure transmitter for any damage that may have been caused during transportation. Obvious damage must be reported immediately.

Packaging and storage

Do not remove packaging until just before mounting.

Keep the packaging as it will provide optimum protection during transport (e.g. change in installation site, sending for repair).

Recommended conditions at the place of storage:

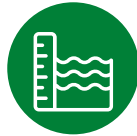
- 40 °C to 85 °C (- 40 °F ... 185 °F)

PRIGNITZ

MIKROSYSTEMTECHNIK



PRESSURE



LEVEL



TEMPERATURE



CALIBRATION &
SERVICE

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