



TEMPERATURE

## STT-Family (Standard temperature transmitters Family)

# PMT-S111-H

## FOR HYDROGEN Applications

**Datasheet**

There are stainless steel, safe temperature transmitters.

In addition to its rugged construction and a good price- to- performance ratio this series will be the solution for temperature measurement for Hydrogen applications



### MAIN FEATURE

- Hi- strength stainless steel construction
- Wide operating measuring range: -40 °C ... 200 °C (-40 °F ... 392 °F)
- Material: Stainless Steel 316L
- Low static and thermal errors
- Compatible for Hydrogen applications
- High grade of EMI/RFI protection grade
- Several electrical connection available

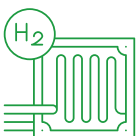
### APPLICATION



**GAS TECHNOLOGY**



**REMOTE PROCESS CONTROL**



**FUEL CELLS**



**Hydrogen applications**

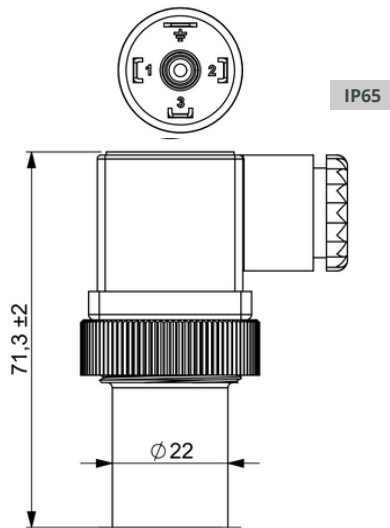
# TECHNICAL SPECIFICATIONS

INPUT PARAMETERS			
Mechanical connections *	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)		
Wetted parts	stainless steel 316L		
Body material	stainless steel		
Max.operating pressure	static 160 bar		
Media temperature range	- 40 °C ... 200 °C (-40 °F ... 392 °F)		
Measuring element	1 x PT100, class B		
OUTPUT SIZES			
Electrical connections *	EN 175 301-803-A /-C; M12x1 (Binder S763); Deutsch DT04-3P; Packard Metri-Pack; cable outlet;		
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)	10 ... 32 V	8 ... 32 V (Vout x ... 5 V) 10 ... 32 V (Vout x ... 6 V) 14 ... 32 V (Vout x ... 10 V)	5 V DC +/- 5 %
Load resistance	< (Vcc-10 V)/20 mA	> 5 kOhm	> 2,5 kOhm
Current consumption	< 22 mA	typ. 10 mA	typ. 10 mA
Performance Characteristics			
Accuracy (25°C)	+/- 1 % FS		
Overall accuracy	+/- 2 % Fs		
Long-term stability	+/- 0,25 % full scale (typical)		
Ambient temperature	- 40 °C ... 125 °C (- 40 °F ... 257 °F)		
Storage temperature	- 40 °C ... 125 °C (- 40 °F ... 257 °F)		
Shock resistance	EN/IEC 60068-2-32 (1 m free fall)		
Vibration resistance	20 g / 3 axes to EN/IEC 60068-2-6		
Protection class	depending on electrical connection, see drawing of electrical connectors		
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		
Overvoltage Protection	yes		
Reverse Protection	yes		

\*others on request

# ELECTRICAL CONNECTION

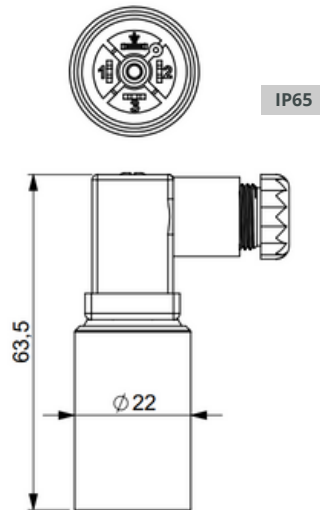
## EN 175 301-803-A



IP65

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

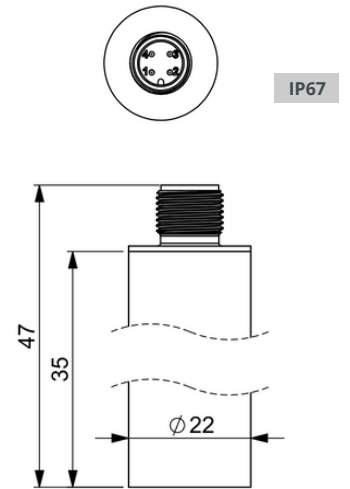
## EN 175 301-803-C



IP65

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

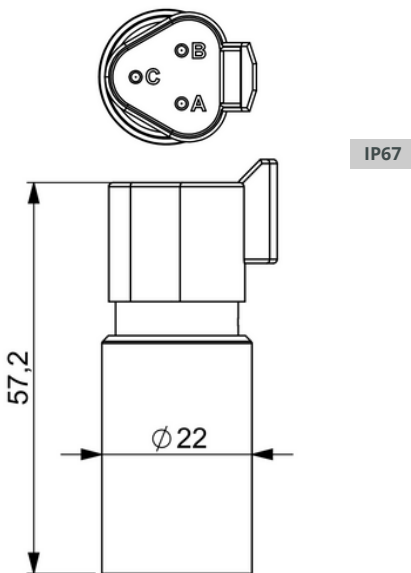
## M12x1 (S763)



IP67

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

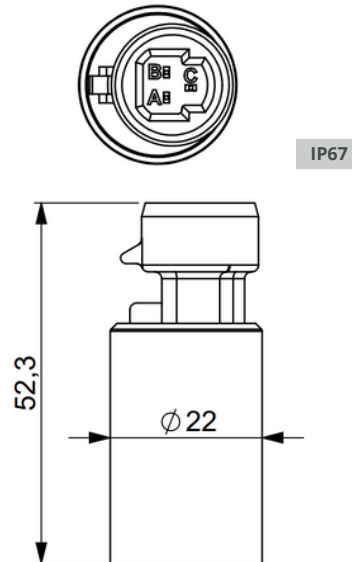
## Deutsch DT04-3P



IP67

Output	PinA	PinB	PinC
Volt	-	+	Vout
mA	-	+	nc

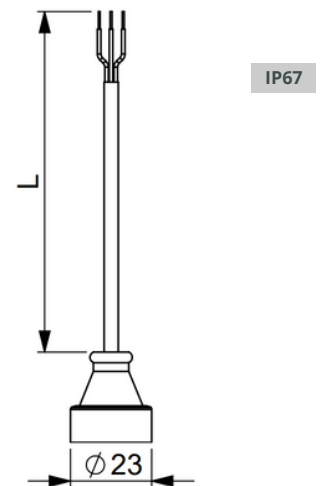
## Packard Metri-Pack



IP67

Output	PinA	PinB	PinC
Volt	-	+	Vout
mA	-	+	nc

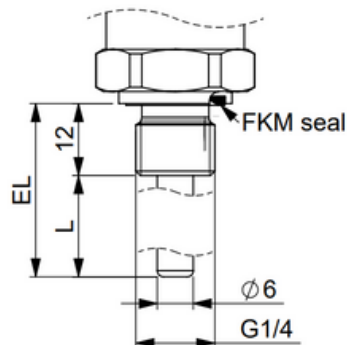
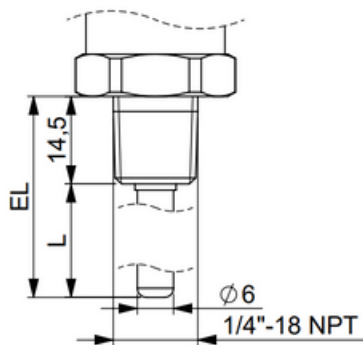
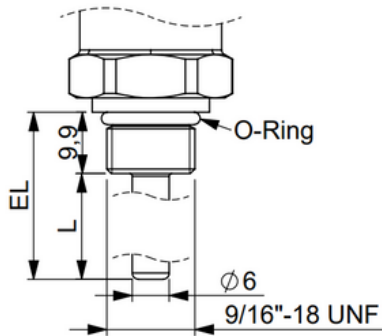
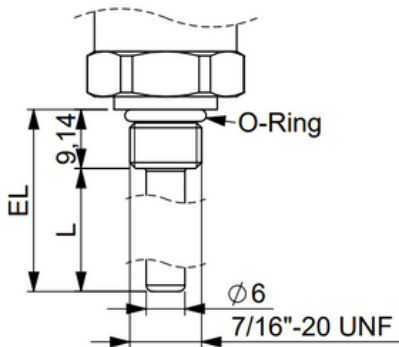
## Cable



IP67

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.

## 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 125 °C (- 40 °F ... 257 °F)

Edition version: [D/PMT-S111-H/Rev.4/June.2024/ENG](#)

# HOW TO ORDER

## PMT-S111-H-XX-(XX..XX)-XX-XXX-XX-XX

### FAMILIES

**S** = STT Family

### MEASURING ELEMENT

**1** = PT100, class B

### MATERIAL

**1** = Stainless Steel

### HYDROGEN

Suitable for Hydrogen applications

### ELECTRICAL OUTPUT

**I2** = 4 ... 20 mA 2L

**UR** = ratiometric

**0U5** = 0 ... 5 V

**1U5** = 1 ... 5 V

**0U10** = 0 ... 10 V

### TEMPERATURE RANGES

e.g.

**-20 ... 150**

**-40 ... 85**

**0 ... 100**

### UNIT

**19** = Celsius

**20** = Fahrenheit

**23** = Kelvin

### ELECTRICAL CONNECTION

**00** = customized

**01** = Packard Metri-Pack

**02** = MVS/A

**03** = MVS/C

**05** = M12x1 (S763-4)

**09** = DT04-3P

**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**=30 mm

**In Inch**

**min** = 0,2in

**max**= 1,18in

**In Feet**

**min** = 0,1ft

**max**= 0,098ft

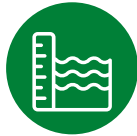
**Other upon request.**

# PRIGNITZ

## MIKROSYSTEMTECHNIK



PRESSURE



LEVEL



TEMPERATURE



CALIBRATION &  
SERVICE

© 2024 PRIGNITZ Mikrosystemtechnik GmbH  
All rights reserved. / Alle Rechte vorbehalten.

### CONTACTS:

Tel.: **+49 (0) 38 77 / 5 67 46-0**  
Fax: **+49 (0) 38 77 / 5 67 46-18**

Margarethenstraße 61  
19322 Wittenberge / Elbe  
Germany

**[info@prignitz-mst.de](mailto:info@prignitz-mst.de)**