



PRESSURE

TFT Technology

PMI Technology

P2P Technology

# PMP-SW400

DATASHEET

## ELECTRONIC PRESSURE SWITCHES AND TRANSMITTER SERIES (BASED ON THE C100 SERIES)

- OPTIMISED FOR MIDDLE AND HIGH PRESSURE MEASUREMENT
- APPLICABLE FOR GASEOUS AND LIQUID MEDIA
- MICROPROCESSOR SIGNAL CONDITIONING
- PRESSURE OFFSET CORRECTION IS AVAILABLE
- SWITCHING POINT CONFIGURABLE BY INTEGRATED PUSHBUTTONS

### MAIN FEATURE

- **Pressure ranges:** from -1...3 bar to -1...2000 bar
- **Mechanical connections\*:** G 1/4" Form E; 1/4"-18 NPT
- **Housing :** 100x66x45 mm ALU Housing with PC transparent cover
- **Electrical connection:** PCB Mount Terminal Block, 3-pole
- **OUTPUT 1 :** analog 4..20 mA 3 Wires or 0 .. 10 V
- **OUTPUT 2 :** switching outputs: 2 Relay with 1 x Form C
- **Accuracy (25°C):** typ ≤ 0.5% FS



Example of products

\*others on request

### DESCRIPTION

Series of electronic pressure switches and transmitters for industrial applications with high accuracy requirements over a wide temperature range, designed to measure pressure in gases and liquids. These devices are used in pneumatics, hydraulics and process engineering. The PMP-SW400 allows zero point correction via a push button on the printed circuit board. Also allows Switching point from 1 % to 99% from measurement range to configure

### APPLICATION



ENERGY TECHNOLOGY



INDUSTRIAL PROCESS CONTROL  
Chemical, Pharma, Food



BUILDING AUTOMATION SYSTEMS



GAS INDUSTRY



HVAC  
Heating, Ventilation,  
Air conditioning



CHEMICAL INDUSTRY

## TECHNICAL SPECIFICATIONS

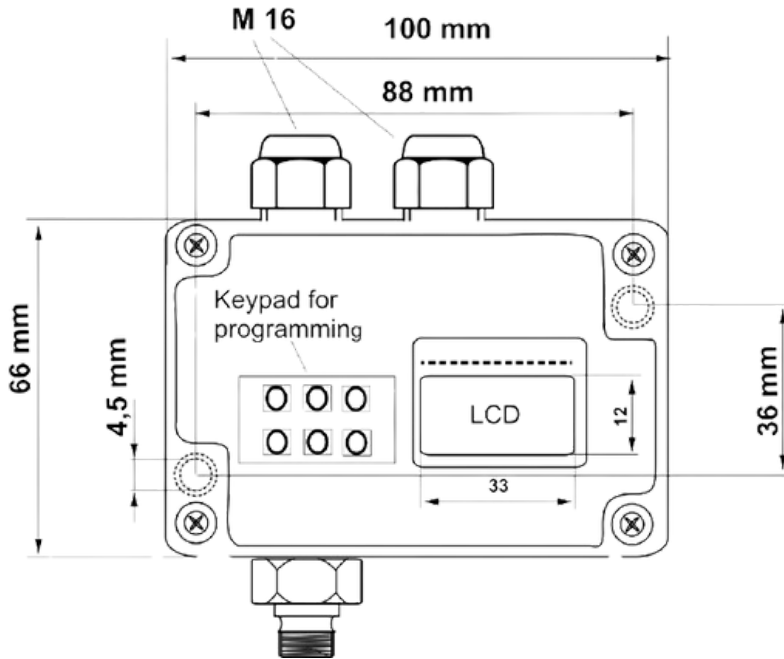
INPUT PARAMETERS			
Pressure type	gauge		
Mechanical connections *	G 1/4" Form E; 1/4"-18 NPT		
Wetted parts	stainless steel 316L or 17-4 PH		
Tightening torque	typ 25 Nm		
Housing	100x66x45 mm ALU Housing, with PC transparent cover		
CHARACTERISTICS FOR SWITCHING OUTPUTS			
Electrical connections	PCB Mount Terminal Block, 3-pole over PG M16 wire gauge max. 1,5 mm <sup>2</sup> / AWG16		
Output1	4...20 mA 3 wires	0/1...5 V	0...10 V
Supply voltage	18 ... 28 V DC; 10 ... 16 V DC on request		
Load resistance		≥ 2 kOhm	≥ 2 kOhm
Output2	2 x relay with 1 x form C each		
Switching Points	1 ... 99 % of measuring range; independent for each relay		
Hysteresis Points	1 ... 99 % of measuring range; independent for each relay		
Max switching current*	30 VDC/ 1 A or 30 VAC/ 0,5 A		
Response time	100 ms		
CHARACTERISTICS FOR ANALOG OUTPUT			
Accuracy (25°C)	typ ≤ 0.5% FS		
Overall accuracy (- 10°C...80°C)	typ ≤ 2 % FS		
Long-term stability	≤ 0.2 % FS per year in referential conditions		
Ambient temperature	- 20...+ 80°C		
Medium temperature	- 25...+ 120°C		
Storage temperature	- 20...+ 80°C		
Protection class	IP65		
Zero point setting	manually via a push button on display (see Page4)		
ELECTRICAL PROTECTION			
REVERSE POLARITY	YES		
CE CONFORMITY	89/336/EWG Electromagnetic compatibility		
	OTHER		
WEIGHT**	~ 250 g		

\*other on request

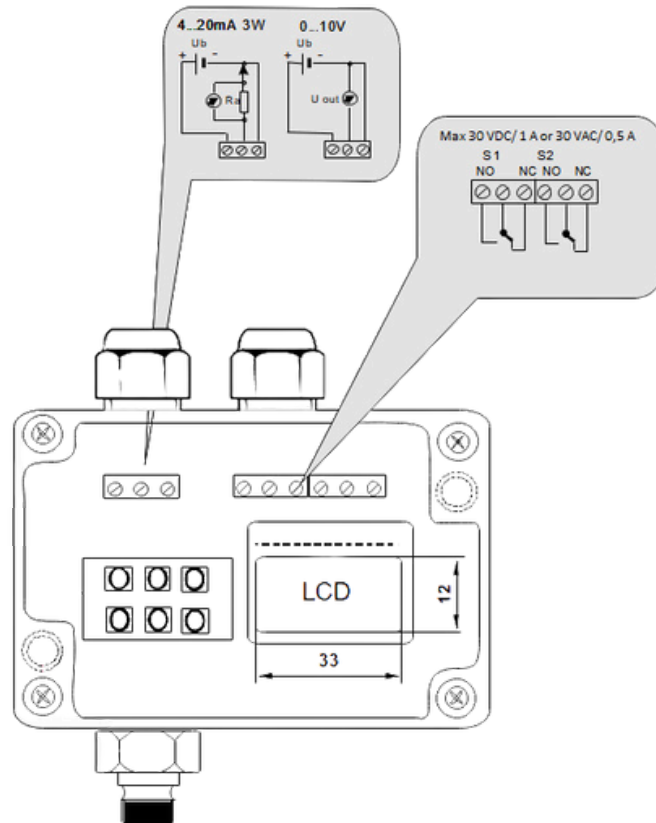
\*\*depend of product version

# PRODUCT CONSTRUCTION

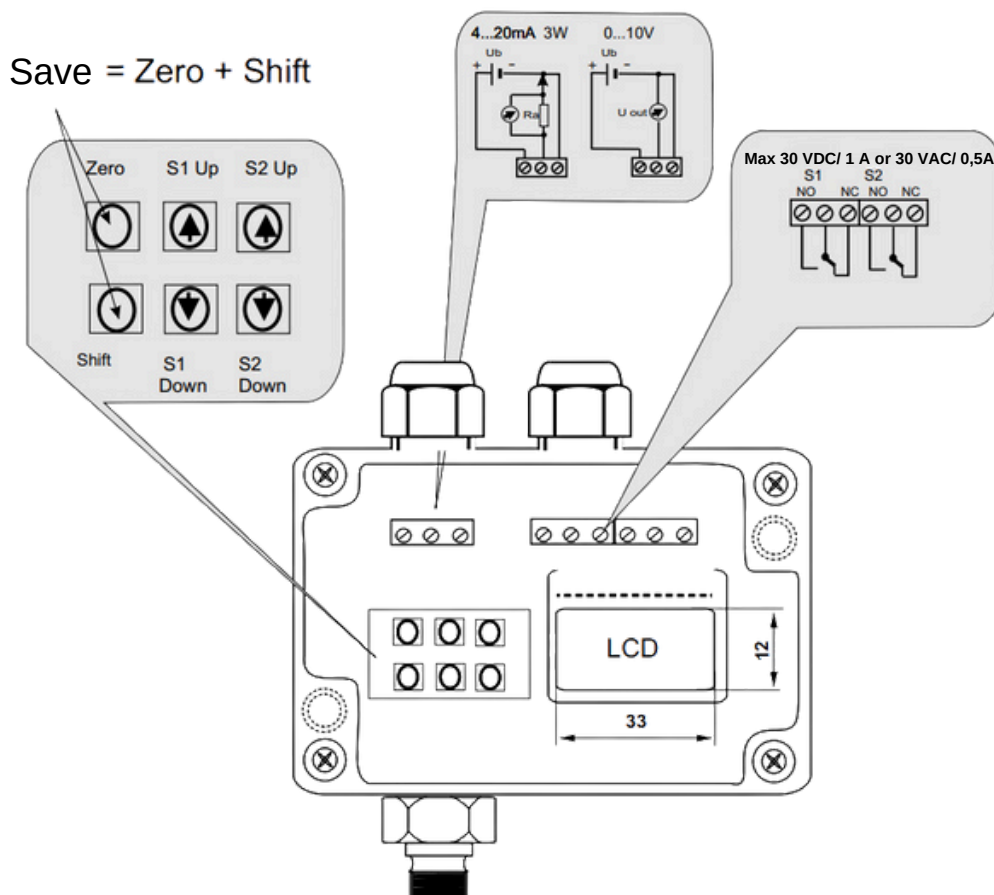
All dimensions are in mm



# ELECTRICAL CONNECTION



# HOW TO SET UP



## Programming switching point 1:

- 1) Press **S1 Up** to increase the switching point 1 value. Display shows the switching point 1 value and unit.
- 2) Press **S1 Down** to decrease the switching point 1 value. Display shows the switching point 1 value and unit.
- 3) To save the point 1: **Press Zero + Shift.**

## Programming switching point 2:

- 1) Press **S2 Up** to increase the switching point 2 value: Display shows the switching point 2 value and unit.
- 2) Press **S2 Down** to decrease the switching point 2 value: Display shows the switching point 2 value and unit.
- 3) To save the point 2: **Press Zero + Shift.**

## Programming hysteresis point 1:

- 1) Press **Shift** (permanent) + **S1 Up** or **S1 Down**. Display shows the first hysteresis value and unit.
- 2) Keep pressing **Shift** with **S1 Up** to increase the value or **S1 Down** to decrease the value.
- 3) To save the hysteresis point: **Press Zero + Shift.**

## Programming hysteresis point 2:

- 1) Press **Shift** (permanent) + **S2 Up** or **S2 Down**. Display shows the second hysteresis value and unit.
- 2) Keep pressing **Shift** with **S2 Up** to increase the value or **S2 Down** to decrease the value.
- 3) To save the hysteresis point: **Press Zero + Shift.**

## Setting pressure offset point:

To correct the value of pressure offset in the device, please make sure that the pressure in the pressure canal 0 bar and then press **Zero**.



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. 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 tests, 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.

## 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.



## 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:

- EX versions are available for use in hazardous areas (ATEX, IECEx, CSA)
- 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.

## 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).

Permissible conditions at the place of storage:

- Storage temperature: -20 ... +80 °C

## 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.

# HOW TO ORDER \*

## PMP-SW4XX-XXX-(XX..XX)-XS1-XS2-XX-XX-XXX-XX-XXX

### FAMILIES

**SW4**= pressure switch and transmitter series

### TECHNOLOGY & MATERIAL

**11** = TFT Technology with stainless steel 17/4  
**22** = P2P Technology with stainless steel 1.4404 (316L)  
**31** = PMI Technology with steel 316 L, membrane inside

### ELECTRICAL OUTPUT<sub>1</sub>

**I3** = 4-20mA 3L  
**OU5** = 0-5V  
**1U5** = 1-5V  
**OU10** = 0-10V

### PRESSURE RANGES

e.g.  
**(-1...1)**  
**(0...60)**  
**(0...400)**

### SWITCHING POINT ONE

e.g. **150** "delivery status"  
**can be changed from customer**

### SWITCHING POINT TWO

e.g. **300** "delivery status"  
**can be changed from customer**

### UNIT

**01** = bar  
**16** = psi

### TYPE OF PRESSURE

**g** = relative pressure

**Customised Article number**

### ELECTRICAL CONNECTION

**00** = Customized  
**17** = cable clamp connection (PCB Mount Terminal Block, 3-pole)

### SNUBBER

**S** = snubber  
**N** = no snubber

### PROCESS CONNECTIONS

**00** = Customized  
**01** = G1/4"A Form E DIN 1179-2  
**08** = 1/4"-18NPT

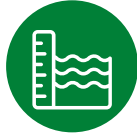
\* customisation available on request

# PRIGNITZ

## MIKROSYSTEMTECHNIK



PRESSURE



LEVEL



TEMPERATURE



CALIBRATION &  
SERVICE

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