

Characteristics

- Compact
- Rugged
- Reliable
- Easy operation
- Long-term stability
- Excellent interference resistance
- Metal housing
- High protection class
- Many variants
- Rotatable
- Analogue output
- Password
- MPa, bar, psi



The Pressure Controller combines the functions of a pressure switch, a pressure sensor and a display instrument:

- Pressure display (manometer)
- Switching outputs
- Analogue signal

Simple operation, compact design and high reliability are the most important features of the SCPD. The Pressure Controller offers excellent technical performance and optimum pressure management. It is ideal for permanent use in industrial applications.

Easy to operate

Parameter setting is carried out via the keys or with a programming module.

High functionality

Every switching output can be set individually:

- Normally closed/normally open contacts
- On and off switching pressures
- Delay times
- Hysteresis/window function
- Damping

Intelligent settings which are not possible with a mechanical switch can be achieved with these convenient switch functions. Several switches can be replaced by a single controller.

The analogue output is individually settable

- 0/4...20 mA switchable
- Settable initial pressure
- Settable final pressure

Reliable/safe

Pressure is captured by a measuring cell with long-term stability. Any functional error is monitored and can be processed in accordance with DESINA. Thanks to a password, unauthorized change of parameters is prevented.

Rugged

The housing is made of metal and is resistant to humidity, shock and vibrations. The electronics are protected from reverse polarity, overvoltage and short circuits.

Everything within view

The large illuminated display is readable even from a considerable distance. Pressures are shown in MPa, bar or psi.

Optimum installation possibilities

With its compact design and excellent interference resistance the SCPD is suitable for installation under critical conditions.

With its directionally settable housing, the display can always be read very easily.

Universal

Many versions are available to suit a wide variety of applications.

- Optical interface
- Switch status display

Everything in view

- Chamfered display
- Digital display
- Large
- Luminescent
- Display
- psi/bar/Mpa
- Actual pressure
- Minimum pressure
- Maximum pressure
- Switching points

Easy to operate

- 3 large keys
- Display of units

Pressure connection

- Stainless steel
- Measuring cell stable long-term
- Wide media tolerance

Rugged

- Metal housing
- Watertight
- High interference resistance
- Vibration resistant
- Shockproof



Flexible installation

- Compact
- Rotatable 290°



Thread

- Internal thread
- External thread

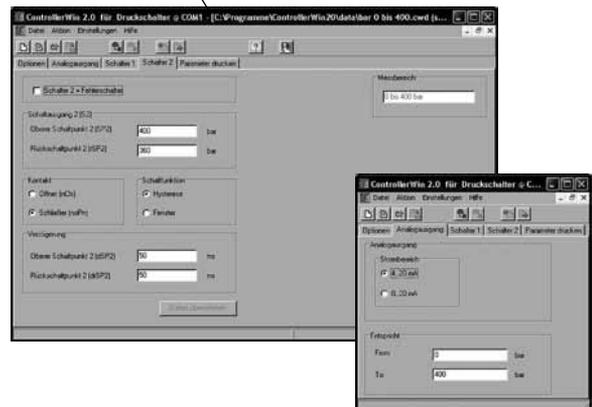


Tube clamp

- Safe mounting with a rugged SCSD-S27 clamp

Programming module

- Can be set with ControllerWIN software



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| SCPSD | 004 | 010 | 016 | 060 | 100 | 250 | 400 | 600 |
|--------------------------------------|-------------------------|---------|---------|--------------------------------|---------|---------|---------|---------|
| Pressure range P_n (bar) | -1...4 | -1...10 | -1...16 | 0...60 | 0...100 | 0...250 | 0...400 | 0...600 |
| Overload pressure P_{max} (bar) | 10 | 20 | 40 | 120 | 200 | 500 | 800 | 1200 |
| Burst pressure P_{burst} (bar) | 12 | 25 | 50 | 550 | 800 | 1200 | 1700 | 2200 |
| Measuring element | Ceramic low pressure | | | DMS thin film high pressure | | | | |

| Input quantities | |
|-----------------------------|---|
| Reversing cycles | ≥ 100 Mio. |
| Scanning rate | ≥ 5 ms |
| Connecting thread | G1/4 BSPP; ED soft seal NBR ¹⁾ (DIN 3852 T2, form X); ED (DIN3852 T11, form E) |
| Torque | 35 Nm |
| Parts in contact with media | Low pressure: 1.4404 stainless steel; AL2O3 ceramic; NBR high pressure: stainless steels 1.4404; 1.4542 |
| Temperature range of medium | -20 ...+85 °C |
| Weight | approx. 300 g |
| Output quantities | |
| Accuracy | ± 0.5 % FS typ.; ± 1 % FS max. |
| Temperature drift | ± 0.02 % FS/°K typ. (at -20...+85 °C) ± 0.03 % FS/°K max. |
| Long-term stability | ± 0.2 % FS/a |
| Repeat accuracy | ± 0.25 % FS |
| Switching point accuracy | ± 0.5 % FS typ.; ± 1 % FS max. |
| Display accuracy | ± 0.5 % FS typ. ± 1 Digit ± 1 % FS max. ± 1 Digit |
| Response speed | |
| Switching output | ≤ 10 ms |
| Analogue output | ≤ 10 ms |
| Electrical connection | |
| Power supply | 15...30 VDC nominal 24 VDC; protection class 3 |
| Electrical connection | M12x1; 4-pole; 5-pole with gold-plated contacts. appliance inlet connector DIN EN 175301-803 form A (formerly DIN43650) |
| Short circuit protection | yes |
| Reverse polarity protection | yes |
| Overload protection | yes |
| Current consumption | < 100 mA |

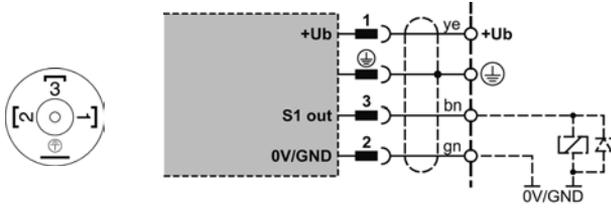
| Housing | |
|---------------------------------|---|
| | directionally adjustable up to 290° |
| Material | pressure die-casting Z 410; painted |
| Foil material | polyester |
| Display | 4-figure 7-segment LED; red; digit height 9 mm |
| Protection class | IP67 DIN EN 60529; IP65 with plug-in connector DIN EN 175301-803 form A (formerly DIN43650) |
| Environmental conditions | |
| Environmental temperature range | -20...+85 °C |
| Storage temperature range | -40...+100 °C |
| Vibration resistance | 20 g; 10...500 Hz IEC60068-2-6 ²⁾ |
| Shock resistance | 50 g; 11 ms IEC60068-2-29 ²⁾ |
| EM compatibility | |
| Interference emissions | EN 61000-6-3 |
| Interference resistance | EN 61000-6-2 |
| Outputs | |
| Switching outputs | 2 MOSFET high side switches (PNP) |
| Contact functions | normally open/normally closed; window/hysteresis; freely settable function |
| Switching voltage | Power supply - 1.5 VDC |
| Switching current max. | 0.5 A per switch |
| Short circuit current | 2.4 A per switch |
| Analogue output | 0/4...20 mA; programmable; freely scalable; $RL \leq (\text{power supply} - 8 \text{ V}) / 20 \text{ mA} (\leq 500 \Omega)$ |

¹⁾ Other sealing materials (FPM, EPDM etc.) on request.
²⁾ Does not apply to DIN EN 175301-803 form A (formerly DIN43650) version.

Connection Designations

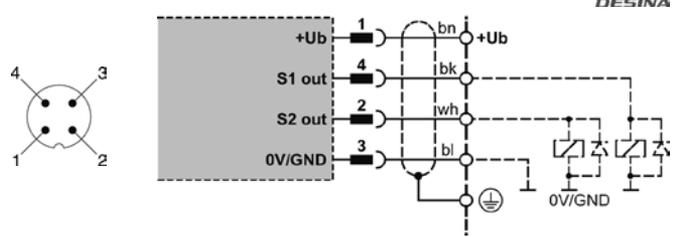
SCPSD-xxx-04-x6

1 switching output;
DIN EN 175301-803 form A (formerly DIN43650)



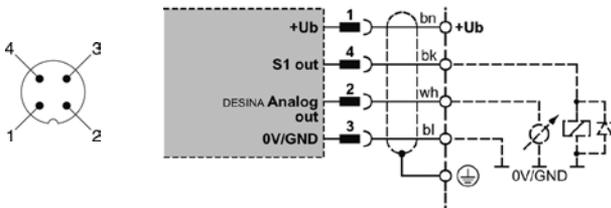
SCPSD-xxx-04-x7

2 switching outputs;
M12x1; 4-pole



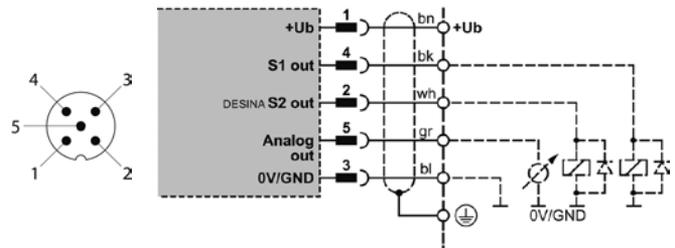
SCPSD-xxx-14-x7

1 switching output;
1 analogue output;
M12x1; 4-pole



SCPSD-xxx-14-x5

2 switching outputs;
1 analogue output;
M12x1; 5-pole



ye = yellow gn = green wh = white gr = grey
bn = brown bk = black bl = blue

| Measurement range (bar) | Display resolution increment (bar) | Smallest reverse switch value RSP | Greatest switch value SP | Smallest settable difference between SP and RSP (SP-RSP) |
|-------------------------|------------------------------------|-----------------------------------|--------------------------|--|
| -1...4 | 0.01 | -1 | 4 | 0.08 |
| -1...10 | 0.01 | -1 | 10 | 0.05 |
| -1...16 | 0.01 | -1 | 16 | 0.09 |
| 0...60 | 0.1 | 0 | 60 | 0.3 |
| 0...100 | 0.1 | 0 | 100 | 0.6 |
| 0...250 | 1 | 0 | 250 | 2 |
| 0...400 | 1 | 0 | 400 | 3 |
| 0...600 | 1 | 0 | 600 | 3 |

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Pressure range selection

With pressure switches the settable pressure is very relevant.

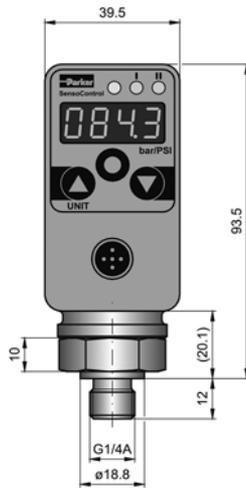
Because a 400 bar pressure switch shows the same resolution (1 bar) as a 600 bar pressure switch (also 1 bar), a 600 bar pressure switch can be deployed even at a smaller nominal pressure (eg. 315 bar).

The positive effects of this are the same accuracy with higher safety and fewer product variants.

Dimensions

External thread

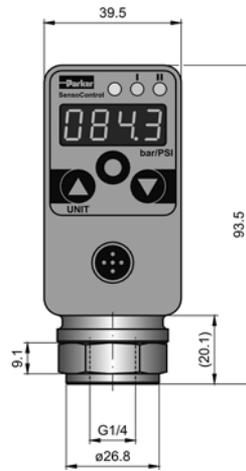
SCPSPD-xxx-x4-1x



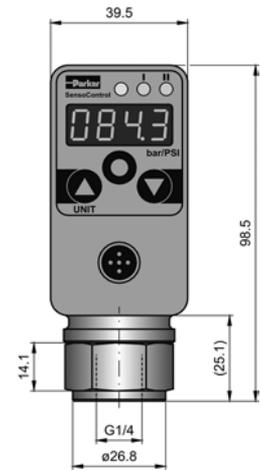
High and low pressure
DMS/ceramic

Internal thread

SCPSPD-xxx-x4-2x



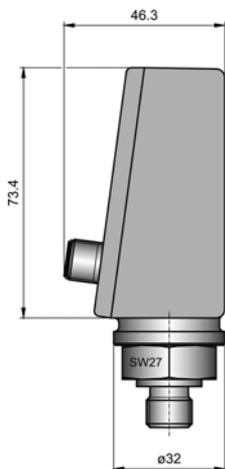
High pressure (from 60 bar)
DMS



Low pressure (up to 16 bar)
Ceramic

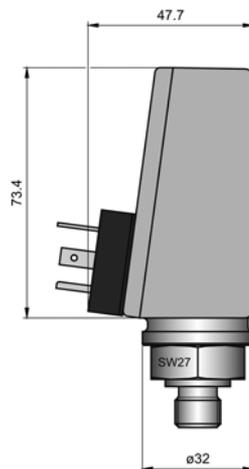
M12 plug-in connector

SCPSPD-xxx-x4-x5



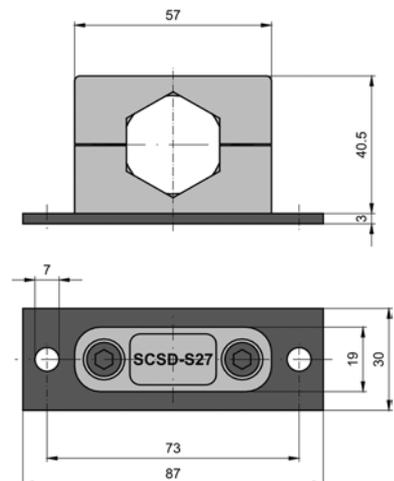
**DIN EN 175301-803 form A
(formerly DIN43650)**

SCPSPD-xxx-04-x6



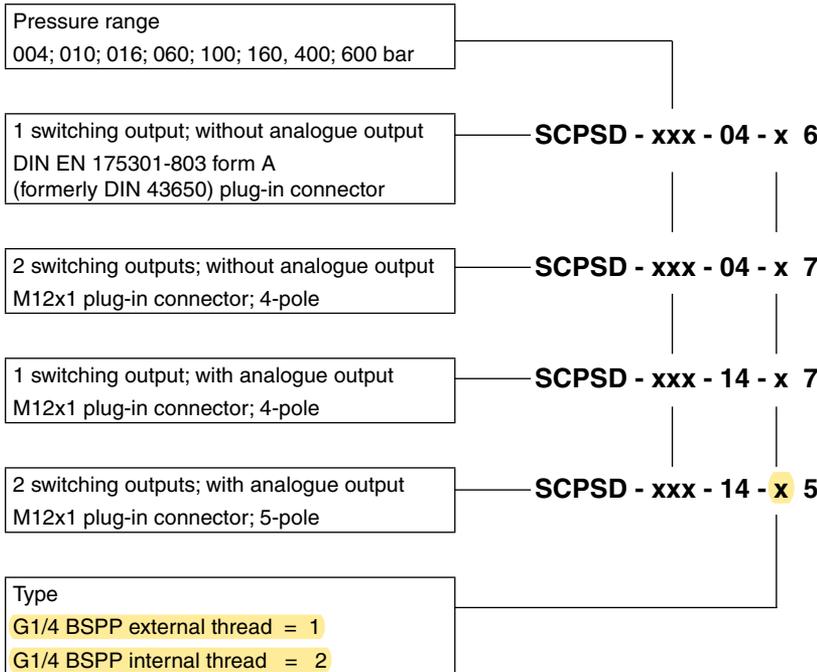
Accessories

Clamp



Ordering Codes / Accessories

SCPSD digital pressure switch



Ordering examples

SCPSD-100-04-27
Pressure range 100 bar
2 switching outputs
G 1/4 BSPP internal thread
M12 plug-in connector



SCPSD-60-14-27
Pressure range 60 bar
1 switching output
1 analogue output
G 1/4 BSPP internal thread
M12 plug-in connector



SCPSD-004-14-17
Pressure range 4 bar
2 switching outputs
1 analogue output
G 1/4 BSPP external thread
M12 plug-in connector

Accessories

PC programming kit

SCSD-PRG-KIT

Fixing clamp

SCSD-S27

Reducing adaptor M22x1.5

SCA-1/4-M22x1.5-ED

Reducing adaptor G 1/2 BSPP

SCA-1/4-ED-1/2-ED

Damping adaptor

SCA-1/X-EDX-1/X-D

Flange adaptor for mechanical pressure switch

SCAF-1/4-40

Connecting cable and separate plugs

Connecting cable, ready-made

SCK-400-xx-xx

(open cable end)

Cable length in m

02 2 m

05 5 m

10 10 m

Plug-in connector

45 M12 cable socket; straight

55 M12 cable socket; 90° angled

56 DIN EN 175301-803 form A plug connector
(formerly DIN 43650)

Separate plugs

M12 cable socket; straight

SCK-145

M12 cable socket; 90° angled

SCK-155

DIN EN 175301-803 Form A plug connector
(formerly DIN 43650)

SCK-006

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