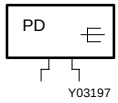
# DSDU: Transducer for differential pressure


### How energy efficiency is improved
Simplest conversion of pressure differences into proportional standard signal.

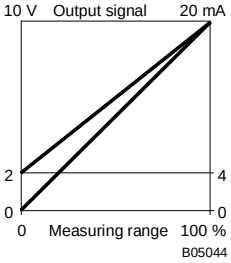
### Areas of application
For measuring pressure differentials in liquids, gases and vapours. Non-wearing measurement procedure by means of contact-free inductive signal conversion.

### Features
- Pressure differential measuring range: 0 to 6 bar
- Standard signal 0(2) to 10 V or 0(4) to 20 mA
- Up to 110 °C and up to 10 bar maximum sensor values
- 24 V~/=, ± 20% supply voltage

### Technical description
- Light-alloy housing with transparent cover made of impact-resistant thermoplastic
- Ambient temperature: -20 to +70 °C
- IP65
- Standard housing-mounted plug with cable connector for cables from 6 to 10 mm in diameter
- Extensive range of accessories




| Type | Measuring range Δp bar | Max. sensor values bar | °C | Weight kg |
|---|---|---|---|---|
| **DSDU 100 F020** | 0...0,5 | 6 | 110 | 0,6 |
| **DSDU 101 F020** | 0...1 | 6 | 110 | 0,6 |
| **DSDU 103 F020** | 0...2,5 | 6 | 110 | 0,6 |
| **DSDU 106 F020** | 0...6 | 10 | 110 | 0,6 |




| | | | |
|---|---|---|---|
| Power supply 24 V ~/= | ± 20%, 50...60 Hz | Perm. ambient temp. | –20...70 °C |
| Power consumption | approx. 1 VA | Degree of protection | IP 65 (EN 60529) |
| Output signal [1] | 0...10 V, load > 500 Ω | Protection class | III (EN 61140) |
| switchable to | 2...10 V, load > 500 Ω | | |
| Linearity | approx. 1% | Wiring diagram | A05045 |
| Hysteresis | approx. 1% | Dimension drawing | M06967 |
| Temperature coefficient | ~0,03%/K | Fitting instructions | MV 505407 |
| Permissible vacuum loading | –0,7 bar | | |

### Accessories
**0190403 005*** Brass connector with cap nut (Serto system), 2 pieces required
**0292110 001*** Two Rp $^1/_8$ throttle screws for arresting pressure surges; stainless steel.
**0296936 000*** Bracket for rail: top-hat rail EN 60715, 35 × 7.5 or 35 × 15
**0259984 000*** Bracket for 3-point fixing

*) Dimension drawing or wiring diagram are available under the same number

1) At a load of < 500 Ω, the transducer switches automatically to 0...20 mA (or 4...20 mA). Factory setting is 0...10 V. Output is protected against short circuits and over-voltage up to 24 V~.

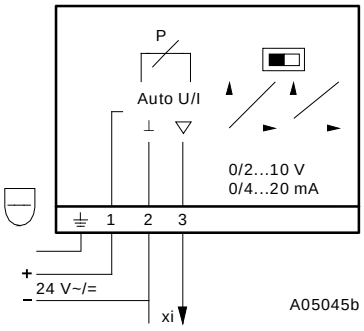
### Operation
The pressure difference in the sensor acts on a bourdon tube, thereby creating a force on the conversion spring. The resultant movement is converted into a standard electrical signal by an inductive distance sensor. The output signal rises in proportion to the pressure.

### Additional details
Materials which come into contact with the medium are of stainless steel (material nos. 1.4104 and 1.4541)
To protect the DSDU with a fuse, a fuse of at least 250 mA/250V should be used.

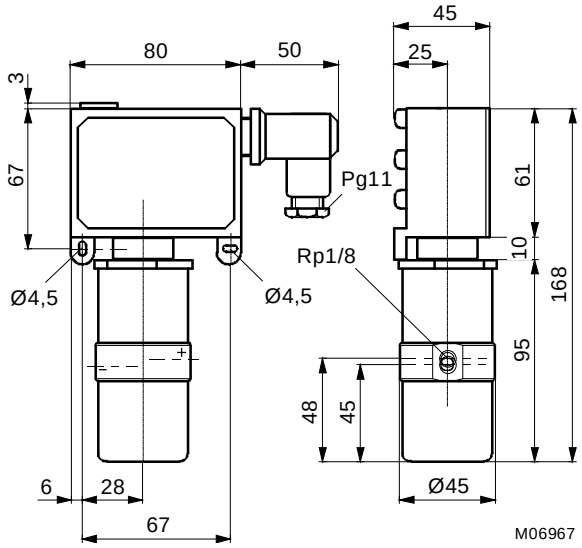
### Additional technical data

| | |
|---|---|
| Complies with:- | |
| EMC directive 2004/108/CE | EN 61000-6-1/ EN 61000-6-2<br>EN 61000-6-3/ EN 61000-6-4 |
| Covered by Art. 3.3. of the PED without safety function | |

### Wiring diagram




### Dimension drawing




### Accessories

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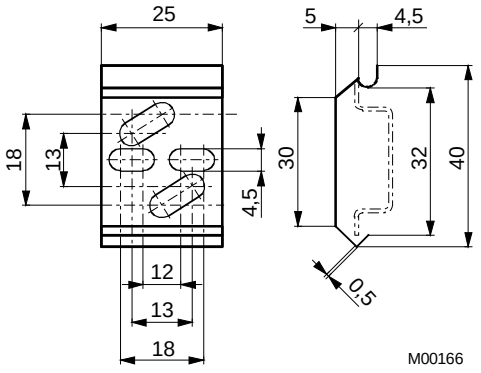


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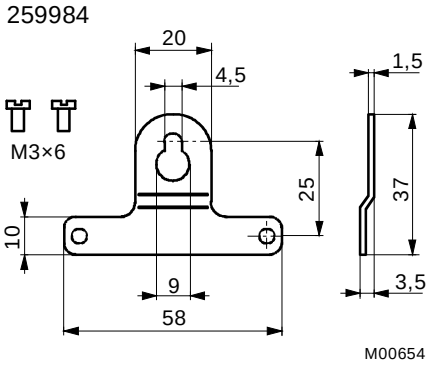


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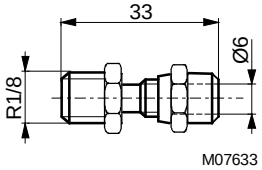


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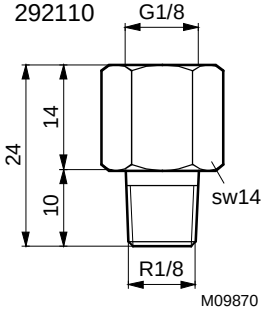


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N.B.: A comma between cardinal numbers denotes a decimal point

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