

## DSU: Pressure transducer

### How energy efficiency is improved

Simplest conversion of pressures into proportional standard signal.

### Areas of application

For measuring pressures in liquids, gases and vapours. Non-wearing measurement procedure by means of contact-free inductive signal conversion.

### Features

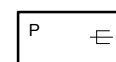
- Pressure range: 0 to 25 bar
- Standard signal 0(2) to 10 V or 0(4) to 20 mA.
- Up to 110 °C and up to 40 bar maximum sensor values
- 24 V $\pm$ %,  $\pm$  20% supply voltage

### Technical description

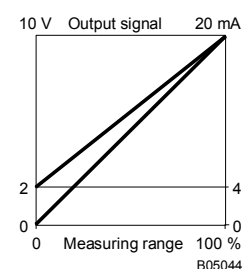
- Light-alloy housing with transparent cover made of impact-resistant thermoplastic
- Ambient temperature: -20 to +70 °C
- IP65
- Standard housing-mounted plug with cable connector for cables from 6 to 10 mm in diameter
- Pressure connection G $\frac{1}{2}$ "A
- Extensive range of accessories



T05300



Y05043



Type	Measuring range bar	Max. sensor values bar	°C	Weight kg
<b>Brass pressure sensor for non-aggressive media</b>				
DSU 101 F001	0...1,0	1.5	70	0,6
DSU 103 F001	0...2,5	4	70	0,6
DSU 106 F001	0...6,0	10	70	0,6
DSU 110 F001	0...10	16	70	0,6
DSU 116 F001	0...16	25	70	0,6
DSU 125 F001	0...25	40	70	0,6
<b>Stainless-steel pressure sensor for aggressive media</b>				
DSU 201 F001	0...1,0	1.5	110	0,6
DSU 203 F001	0...2,5	4	110	0,6
DSU 206 F001	0...6,0	10	110	0,6
DSU 210 F001	0...10	16	110	0,6
DSU 216 F001	0...16	25	110	0,6
DSU 225 F001	0...25	40	110	0,6
Power supply 24 V $\pm$ 20%	$\pm$ 20%, 50...60 Hz	Perm. ambient temp.	-20...70 °C	
Power consumption	approx. 1 VA	Degree of protection	IP 65 (EN 60529)	
Output signal <sup>1)</sup>	0...10 V, load > 500 $\Omega$	Protection class	III (EN 61140)	
switchable to	2...10 V, load > 500 $\Omega$	Wiring diagram	<a href="#">A05045</a>	
Linearity	approx. 1%	Dimension drawing	<a href="#">M05046</a>	
Hysteresis	approx. 1%	Fitting instructions	MV 505364	
Temperature coefficient	$\sim$ 0.03%/K			
Permissible vacuum loading	-1,0 bar			
Type 101; 103; 106	-0,7 bar			
Type 201; 203; 206	-0,7 bar			

### Accessories

- 0035465 000** Brass throttle screw for damping pressure surges
- 0214120 000** Stainless-steel throttle screw for damping pressure surges
- 0192700 000\*** 1 m of copper capillary tubing for damping pressure surges
- 0114467 000\*** 1 m of stainless-steel capillary tubing for damping pressure surges
- 0192222 000\*** Cap nut with solder connector
- 0311572 000\*** Brass screw fitting for copper tubing of  $\varnothing$  6 mm
- 0259239 000\*** Brass reduction piece G $\frac{1}{2}$  onto 7 $\frac{1}{2}$  " 20 UNF-2A for copper tubing of  $\varnothing$  6 mm
- 0259983 000\*** Fixing bracket for rail mounting: C-rail EN-50022-C20 and C30
- 0296936 000\*** Fixing bracket for rail: top-hat rail EN 60715, 35  $\times$  7,5 or 35  $\times$  15
- 0259984 000\*** Bracket for 3-point fixing
- 0292018 001\*** Damping screw for damping pressure surges in low-viscosity media

<sup>\*)</sup> Dimension drawing or wiring diagram are available under the same number

1) At a load of < 500  $\Omega$ , 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 $\pm$ .

**Operation**

The pressure in the sensor acts on a bourdon tube, thereby producing 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.

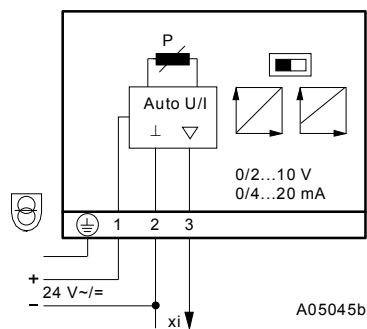
**Additional details**

Materials which come into contact with the medium are:  
 brass, stainless steel and the seal's nitrile rubber (on the brass pressure sensor);  
 stainless steel (on the stainless-steel sensor) material no. 1.4104 and 1.4541.  
 To protect the DSU with a fuse, a fuse of at least 250 mA/250 V should be used.

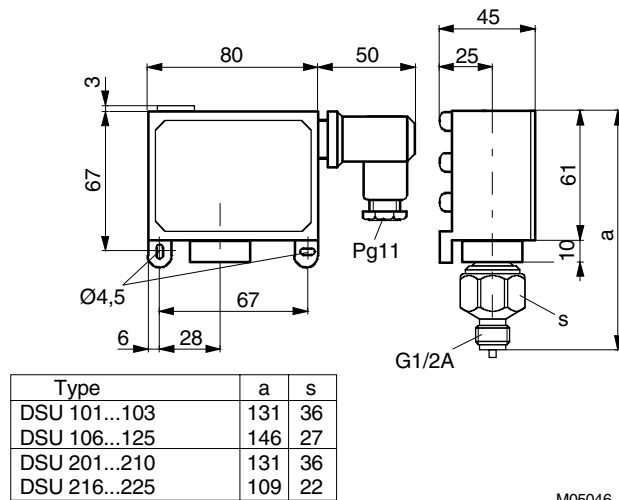
**Additional technical data**

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

**Wiring diagram**



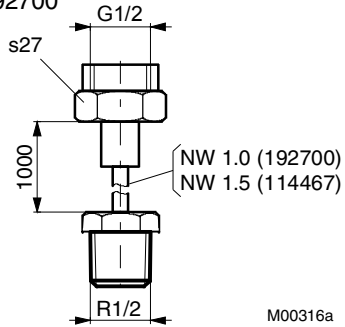
**Dimension drawing**



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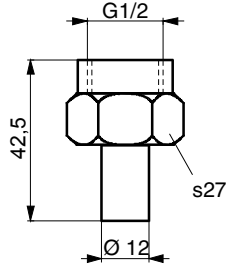
Accessories

114467  
192700



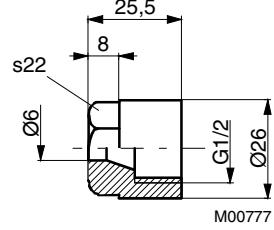
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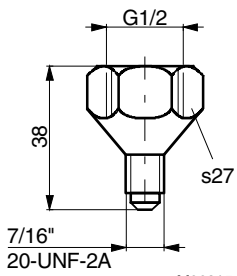
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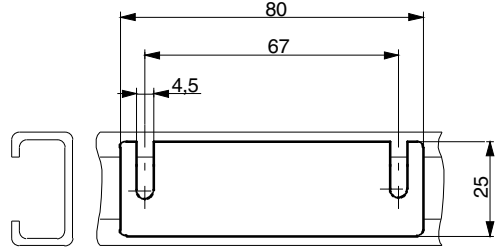
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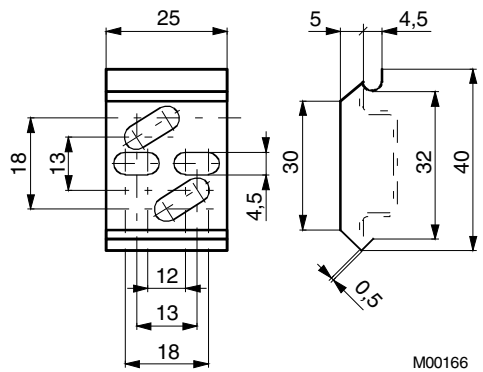
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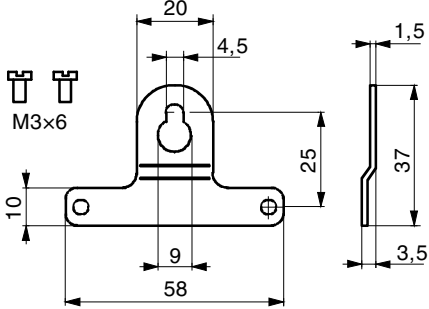
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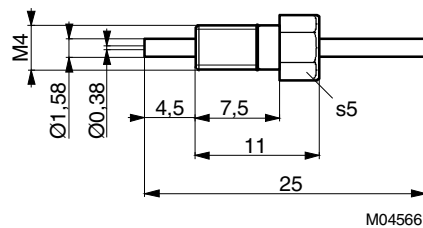
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