

Type 6003B

PRIASED™ cavity pressure sensor

- sensor and sensitivity detection!
- double sensitivity compared to compatible sensors!
- miniature version
- suitable for all mold and melt temperatures in injection molding!
- sensor front can be machined to adapt the cavity surface
- basis for quality monitoring and control in injection molding
- can be connected to any charge amplifier respectively injection molding machine



Description

The PRIASED™ cavity pressure sensor type 6003B is compatible for installation to standard miniature sensors which are used for industrial monitoring and control in injection molding. For decades sensors of this kind and dimension have been used to determine (and to change if necessary) the physical properties of a molded part even during production. The piezoelectric measuring technology has become established for this application over the years, because the sensor itself is especially suitable for it. The excellent technical properties however have always been facing the complicated handling, because the individual sensitivity of each single sensor in [pC/bar] had to be documented and adjusted.

The PRIASED™-system simplifies this application significantly, because both the sensor type as well as its sensitivity is automatically detected and processed via a hardware code inside the sensor. This is a significant simplification for the user, because the calibration data of the sensor do not necessarily need to be documented, and they do not need to be adjusted. The PRIAMUS charge amplifiers automatically determine the highest resolution of the measuring signal which is possible, and provide a standardized output signal (e.g. 0 ... 2000 bar).

Technical data

Measuring range	bar	0 ... 2000
Overload	bar	2500
Sensitivity ¹⁾	pC/bar	approx. - 5
Maximum melt temperature (plastics) in the cavity ²⁾	°C	no limitation
Maximum mold temperature ³⁾	°C	200
Deviation of linearity	%	< ± 1
Natural frequency ⁴⁾	KHz	> 80
Insulation resistance	Ω	> 10 ¹³ (at 20 °C)
Remark		
The sensors including connecting cable can be cleaned in an ultrasonic bath together with the mold inserts if a sealed protecting cap is used (cleaning agent: aqueous tenside solution).		

¹⁾ The exact sensitivity is shown on a separate calibration sheet

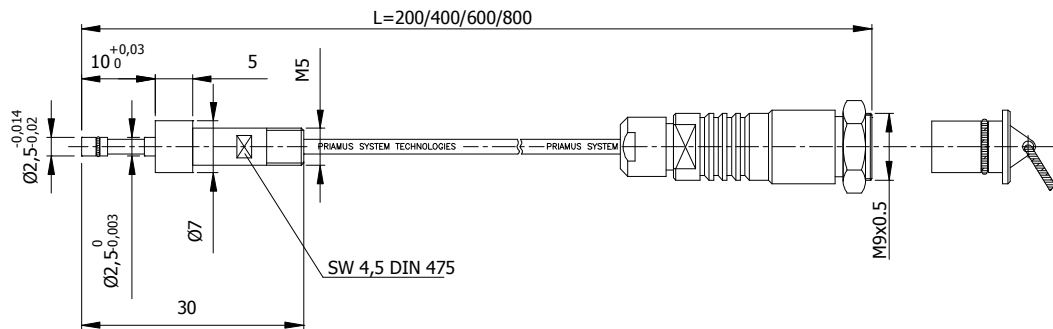
²⁾ The plastic melt cools immediately after contacting the cavity wall. The melt temperature is therefore without any practical meaning for the sensor (thermoplastics). For thermosets and elastomers the permanent melt temperatures are usually below 200 °C

³⁾ The permanent temperature of the sensor body can be higher than the specified value of the mold temperature. The temperature at the cable connector however is limited. In practice there are no mold temperatures higher than 200 °C expected.

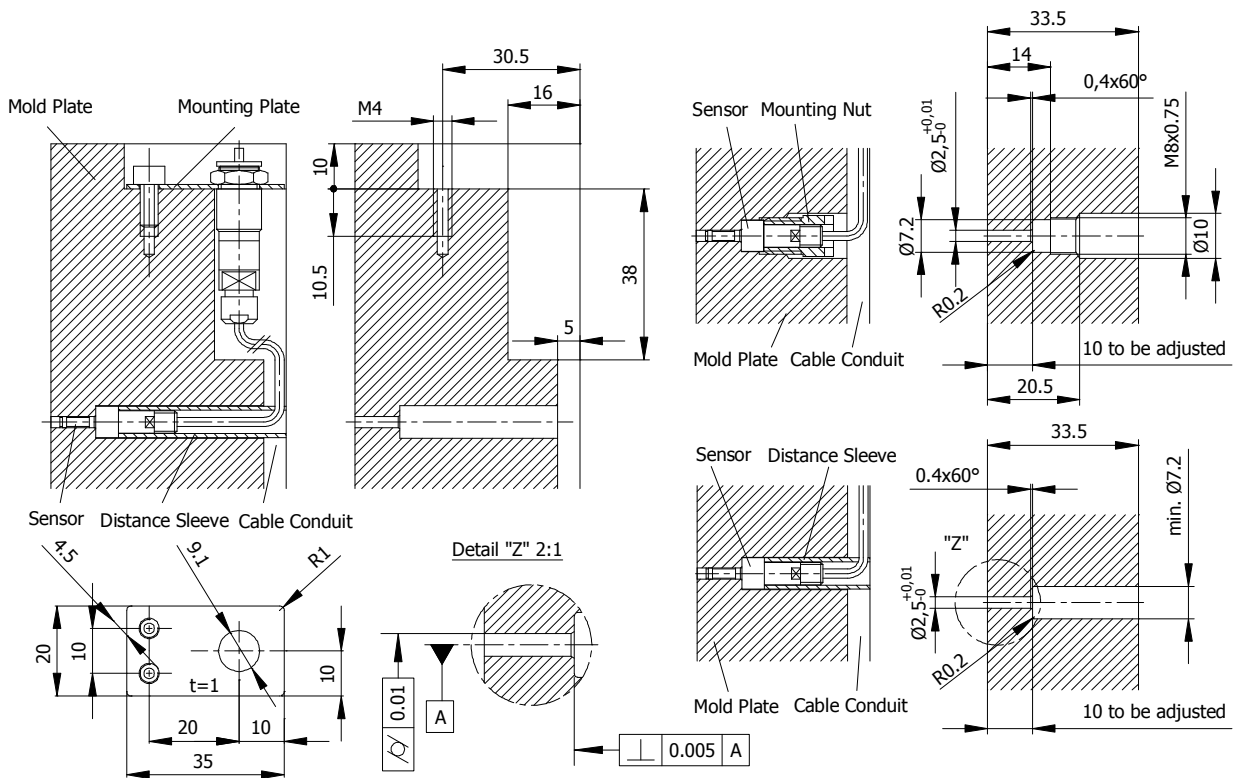
⁴⁾ The actual natural frequency of the sensor is far higher than the frequency spectrum of the effective signal

Dimensions

Type 6003B...



Mounting dimensions



subject to technical amendments

Scope of delivery

Article	Type	Article	Type
Mounting plate	6581A	Identification label	-
Mounting nut	6541A		

Accessories

Article	Type	Article	Type
Mounting / extraction tool for distance sleeve	6561A	Connecting cable	1051A... / 1065A...
Mounting / extraction tool for mounting nut	6562A	Extension cable	1061A...
Dummy	6503A	Distance sleeve	6522A

Order codes

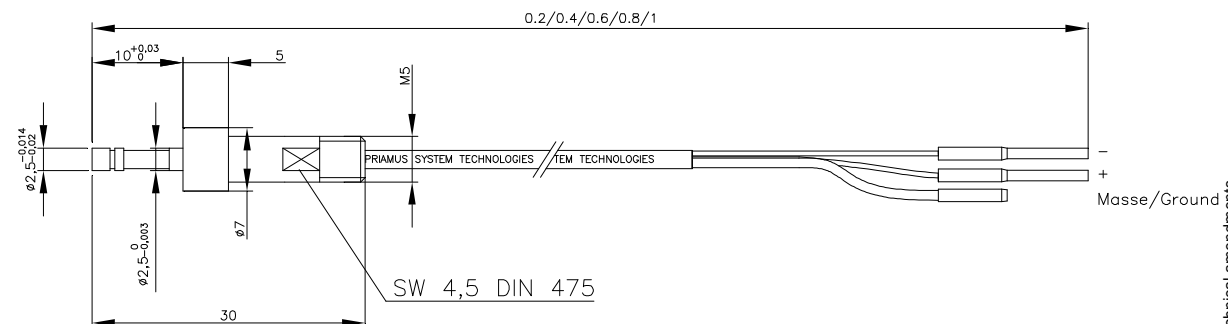
Sensor: Type 6003B
 Sensor including connecting cable type 1003A...: Type 6003B0,2 / 0,4 / 0,6 / 0,8

Type 6003B-M

Type 6003B-M has been developed especially to be connected to the multi pin connector type 1190B and has the following advantages:

- Easy handling
- Cost-effective (less cables are being needed)
- Can be assembled by the user
- Can be combined with sensors and quick disconnects
- Self-explanatory due to a clever color system
- Sensitivity detection

Dimensions

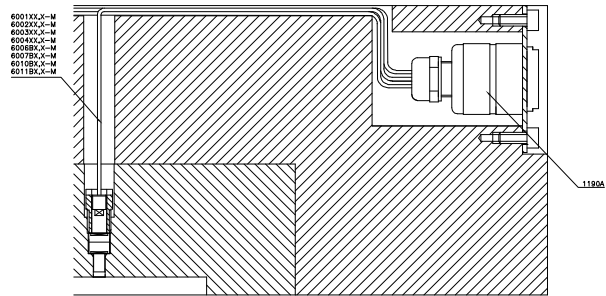
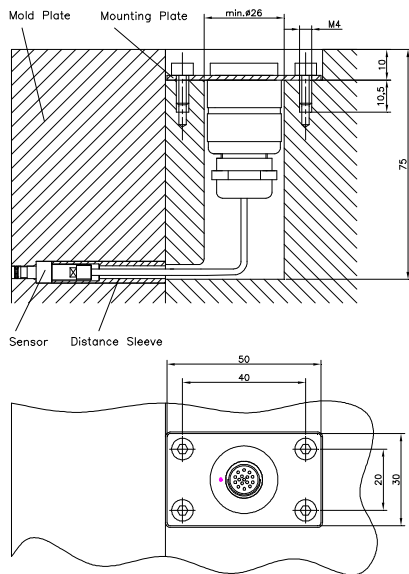


To mount the multi pin connector we recommend calculating 50 – 100 mm cable length.

subject to technical amendments

Mounting dimensions multi pin connector

Connection sample



Scope of delivery

Article	Type	Article	Type
Mounting plate	6581A	Identification label	-
Mounting nut	6541A		

Accessories

Article	Type	Article	Type
Distance sleeve	6522A	Fischer multi pin connector (16-pin)	1190B
Mounting / extraction tool for distance sleeve	6561A	Ejector tool for crimp contacts	1310A
Mounting / extraction tool for mounting nut	6562A	Crimping pliers	1311A
Connecting cable	1053A 1054A 1055A 1056A	Crimping contacts	1312A
Dummy	6503A		

Order codes

Sensor inclusive connecting cable
type 1003Ax,x-M / 1005Ax,x-M:

Type 6003B0,2-M / Type 6003B0,4-M
Type 6003B0,6-M / Type 6003B0,8-M

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