

## Type 4003C / 4004C

### Cavity temperature sensor

- cost-effective solution for quality monitoring and control in injection molding
- automatic switchover at the end of the flow path
- sequential control over the position of the melt
- weld lines control
- automatic balancing of the volumetric filling of multi cavity hotrunner molds
- waterproof design



### Description

The cavity temperature sensor type 4003C.../ 4004C... has been especially designed to use in the mold cavity. The dimension of the sensor has been determined in this shape in order to be small enough for the use in multi cavity molds, and on the other hand to be large enough for easy handling during installation and removal.

The cavity temperature plays an important part in the qualitative assessment of the injection molding process. It is only possible to describe the quality of a molded part completely by measuring cavity pressure and the cavity temperature.

Depending on the application, however it is recommended to measure, monitor and control either cavity pressure, or the cavity temperature or both signals at the same time. In case of a multi cavity mold it is advisable solely because of the cost reasons to check first of all which problems can be solved by using cavity temperature sensors only.

The thermocouple type N has significant advantages compared to the common material combinations used in industry. While the thermocouple type J consists of corrosive materials, and the thermocouple type K shows inaccuracies up to 3 °C even in the lower temperature range (50 ... 200 °C), these shortcomings have been overcome by using the thermocouple type N.

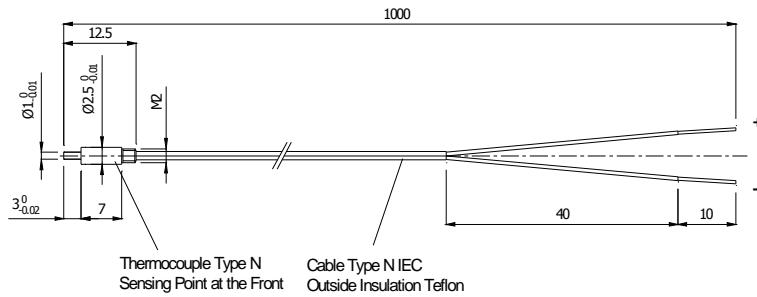
### Technical data

Thermocouple (not insulated)	Type	N
Colors / polarity according to IEC 60584	pink (NiCrSi) white (NiSi)	positive negative
Class		1
Maximum deviations according to IEC 60584	(-40 ... 1000 °C)	dT= ± 0.004 x T or ± 1.5 K
Standard operating temperature (sensor front)	°C	up to 600
Operating temperature range (cable)	°C	0 ... 200
Response time switchover to holding pressure and sequential control with PRIAMUS amplifier (envelope curve procedure resp. absolute measuring procedure)	ms	4 ... 10
<b>Remark</b>		
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).		

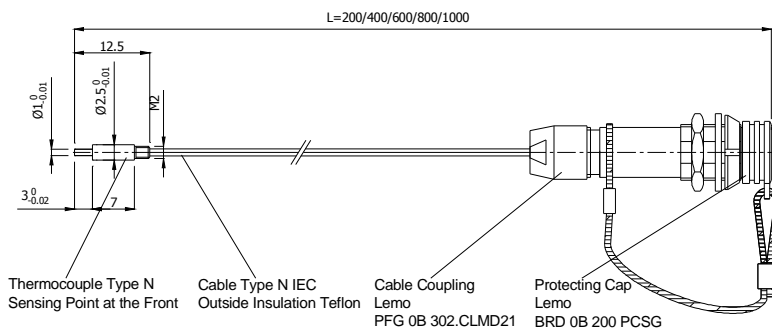
subject to technical amendments

## Dimensions

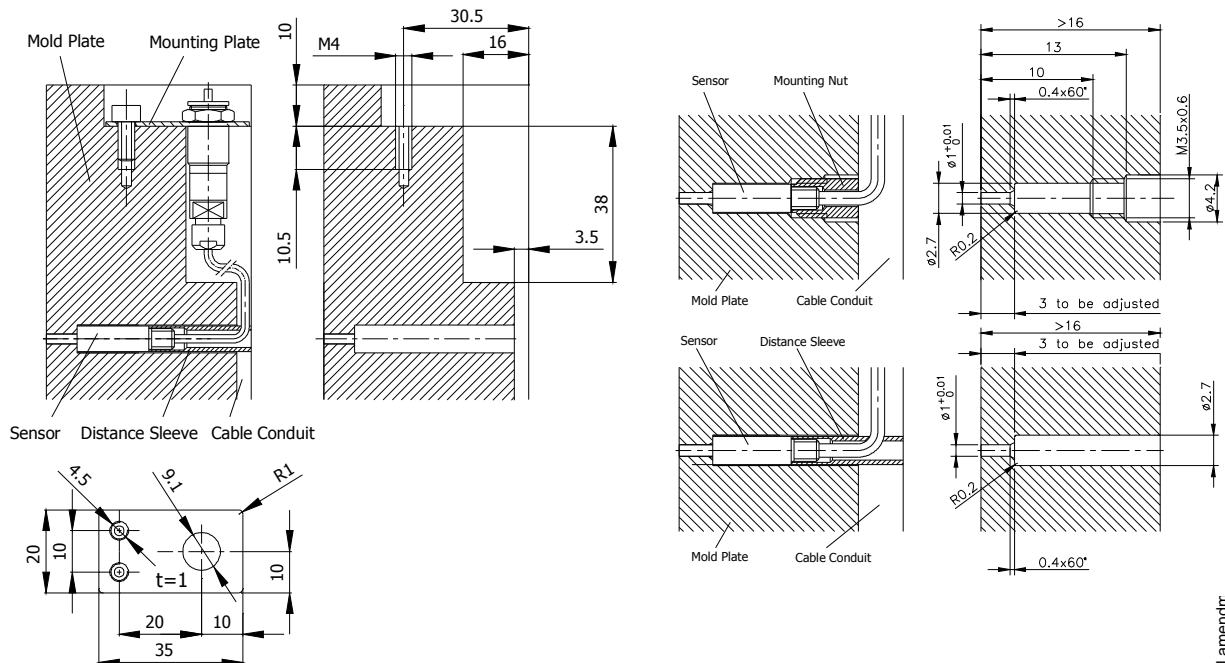
### Type 4003C (open wires, for multipin connectors)



### Type 4004C...



## Mounting dimensions





### Remarks

Cavity temperature sensors will be delivered with distance sleeves (recommended mounting).  
Mounting nut installation is recommended when the sensor can't be clamped between two plates (slides etc.)

### Compensation leads

For connecting the charge / temperature amplifiers type 5060B... and 8101A... the compensation leads type 1100A2 (connecting cable) and type 1101A2 (extension cable) can be used.

### Scope of delivery

Article	Type	Article	Type
Distance sleeve, l = 40 mm	4521A	Identification plate	-
Mounting plate (for type 4004C)	4581A	Mounting accessory	4592A

### Accessories

Article	Type	Article	Type
Distance sleeve, l = 80 mm	4521A0,08	Mounting tool for mounting nut	4562A
Mounting / extraction tool for distance sleeve	4561B	Dummy	4503A
Mounting nut	4541A		

### Order codes

4003C

4004C0,2 / 0,4 / 0,6 / 0,8 / 1,0

subject to technical amendments