

Type 4013A / 4014A

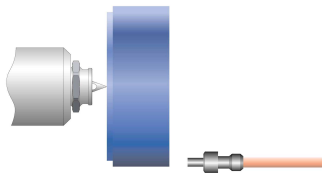
PRISOLARIS cavity temperature sensor – contactless measuring

- The sensor for contactless measuring
- Small but robust!
- No sensor mark
- No flashing
- No abrasion
- No front machining
- cost-effective solution for quality monitoring and control in injection molding



Description

The cavity temperature sensor type 4013A... / 4014A... has been designed especially for contactless measuring.



The positioning of the sensor under the surface allows a contactless measuring which has a number of advantages. Because there is no sensor mark on the molded part, the sensor can be used for applications where a sensor mark is not acceptable (for example on optical, cosmetic parts and on reflectors). In addition, there is no flushing, a front machining is not necessary and there is no abrasion of the sensor.

The sensor type 4013A... / 4014A... is ideally suited to control and monitor the injection molding process.

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

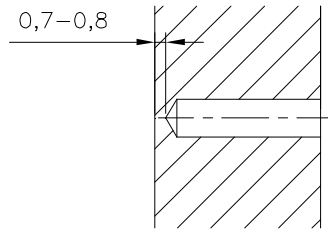
Thermocouple (not insulated)	Type	N
Colors / polarity according to IEC 60584	pink (NiCrSi) white (NiSi)	positive negative
Class		1
Maximum deviations according to IEC 60584	(-40 ... 1000 °C)	dT= ± 0.004 x T or ± 1.5 K
Operating temperature range (cable)	°C	0 ... 200
Response time switchover to holding pressure and sequential control with PRIAMUS amplifier (envelope curve procedure resp. absolute measuring procedure)	ms	20
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).		

subject to technical amendments

Manufacturing of the mounting bore in soft metal

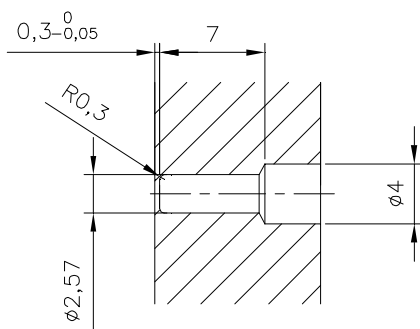
Mounting with mounting nut

Step 1

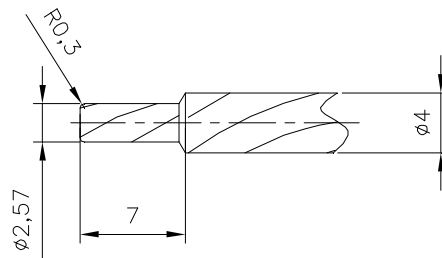


Drill $\varnothing 2.55$ with a spiral drill

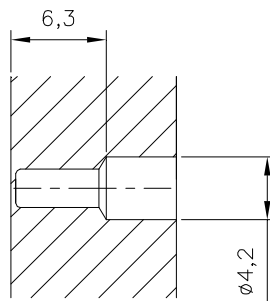
Step 2



Drill out the bore, respectively finish the bore with the special drill type 4569A.

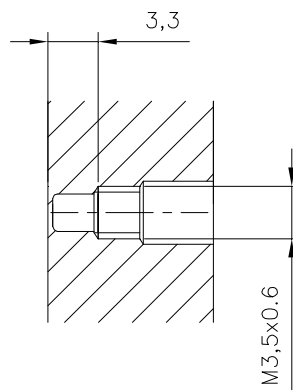


Step 3



Bore to $\varnothing 4.2$ finished dimension

Step 4

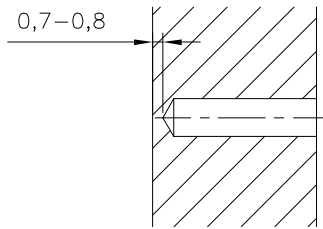


Cut the thread M3,5x0.6

subject to technical amendments

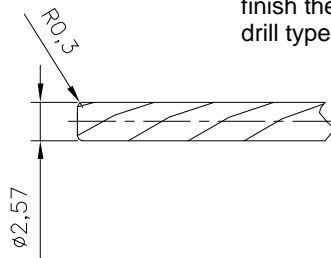
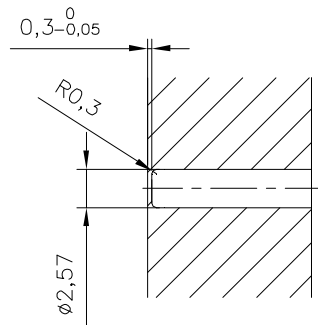
Mounting with distance sleeve

Step 1



Drill $\varnothing 2.55$ with spiral drill

Step 2

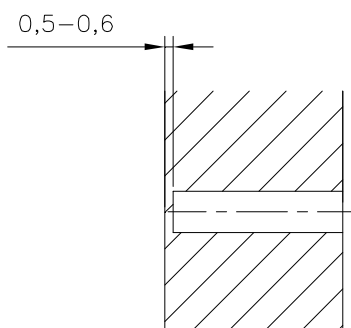


Drill out the bore, respectively finish the bore with the special drill type 4568A.

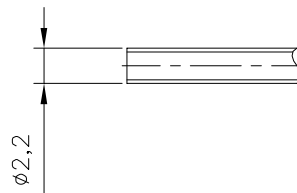
Manufacturing of the mounting bore in carbid metal

Proposal for mounting with distance sleeve, eroded

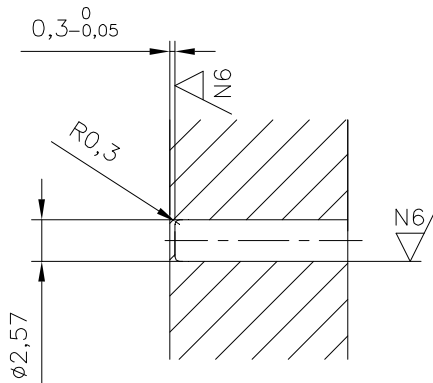
Step 1



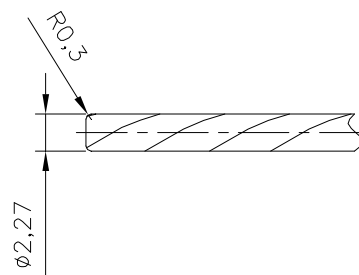
Rough pipe electrode



Step 2



Smoothing to $\varnothing 2.57$



subject to technical amendments

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 5060... and 8102... 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 4014A)	4581A	Mounting accessory	4592A

Accessories

Article	Type	Article	Type
Distance sleeve, l = 80 mm	4521A0,08	Mounting / extraction tool for distance sleeve	4561B
Mounting / extraction tool for distance sleeve	4561B	Mounting tool for mounting nut	4562A
Mounting nut	4541A	Dummy	4513A
Special drill for bores in soft metal, distance sleeve mounting	4568A	Special drill for bores in soft metal, mounting nut mounting	4569A

Order codes

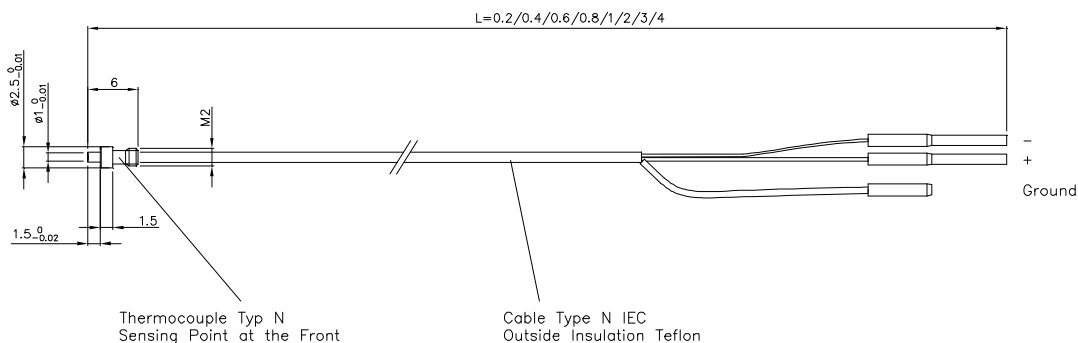
4013A with open wires, l = 1 m 4014A0,2 / 0,4 / 0,6 / 0,8 / 1,0 with Lemo connector

Type 4013A-M

Type 4013A-M has been developed especially to be connected to the multi pin connector type 1189B 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

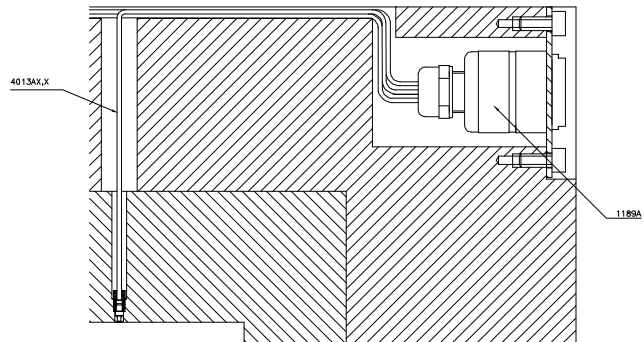
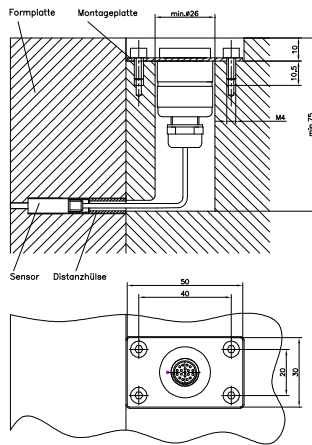
Dimensions



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

Mounting dimensions multi pin connector

Connection sample



Compensation leads

For connecting the charge / temperature amplifiers type 5060... and 8101... the compensation leads type 1152Ax (connecting cable) can be used.

Scope of delivery

Article	Type	Article	Type
Distance sleeve, l = 40 mm	4521A	Identification plate	-

Accessories

Article	Type	Article	Type
Distance sleeve, l = 80 mm	4521A0,08	Fischer multi pin connector	1189B
Mounting / extraction tool for distance sleeve	4561B	Ejector tool for crimp contacts	1310A
Mounting nut	4541A	Mounting tool for mounting nut	4562A
Special drill for bores in soft metal, distance sleeve mounting	4568A	Special drill for bores in soft metal, mounting nut mounting	4569A
Crimping contacts	1312A	Dummy	4513A
Crimping pliers	1311A		

Order codes

4013A-M