

# Miniature Quartz Measuring Tongue

## for mold cavity pressure

Type 9223A0,2/-A0,4/-A0,6/  
-A0,8/-Asp0,1-2

Miniature Quartz Measuring Tongue Type 9223 for measuring cavity pressure in injection molding of plastics and die casting of metals. The pressure is measured indirectly via a measuring or an ejector pin. The large measuring range of the sensor allows to use pins of any diameter common in small molds without danger of overload. The sensor can be used with several tools by simply changing it.

- Force range 0 ... 2,5 kN
- Easy repositioning in different molds
- Exchangeable coaxial cable
- Corrosion-resistant

### Description

The cavity pressure is transmitted by a measuring or ejector pin to the convex force-sensitive face of the sensor. The quartz element yields an electric charge proportional to the force, hence proportional to the pressure.

All parts of the measuring tongue are corrosion-resistant. The exchangeable cable is screwed tight on the sensor. The Fischer connector is selflocking and splashwater-proof.

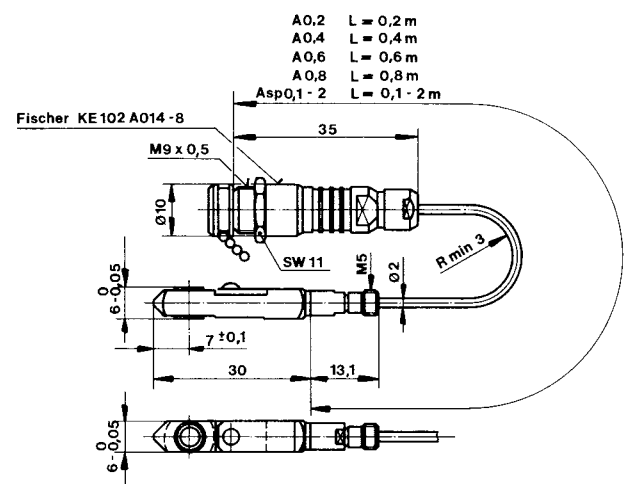
### Application

- in tools which already have been hardened or which do not offer enough space for a directly measuring sensor.
- temporary equipping of a tool for measuring cavity pressure, e. g. for optimizing the gate profile or the machine settings.

### Installation

The measuring tongue is inserted with the extracting tool Type 1315A into the prepared and thoroughly cleaned slot. The tongue must be positioned precisely to assure that the force is acting in the center of the sensor.

The cable connector of the tongue can be fixed with the mounting plate Mat. No. 65005208 (Fig. 1).



### Technical data

Measuring range	N	0 ... 2 500
Calibrated partial range	N	0 ... 250
Overload	N	0/3 000
Threshold	N	0.01
Sensitivity	pC/N	-4.5
Linearity, also for partial ranges	%/FSO	≤±1
Hysteresis	%/FSO	≤1
Rigidity, mean value	N/μm	≈460
Natural frequency	kHz	≈200
Operating temperature range	°C	-50 ... 150
Temperature coefficient of sensitivity	%/°C	-0.02
Temperature error	N/°C	<±0.9
Capacitance (with cable Type 1645C0,4)	pF	13
Insulation resistance		
at 20°C	TΩ	≥10
at 120°C	TΩ	≥1
Weight (without cable)	g	7

1 N (Newton) = 1 kg · m · s<sup>-2</sup> = 0.1019... kp = 0.2248... lbf; 1 kgf = 9.80665 N; 1 inch = 25.4 mm; 1 kg = 2.2046... lb; 1 Nm = 0.73756... lbft

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This information corresponds to the current state of knowledge. Kistler reserves the right to make technical changes. Liability for consequential damage resulting from the use of Kistler products is excluded.

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**Mounting example**

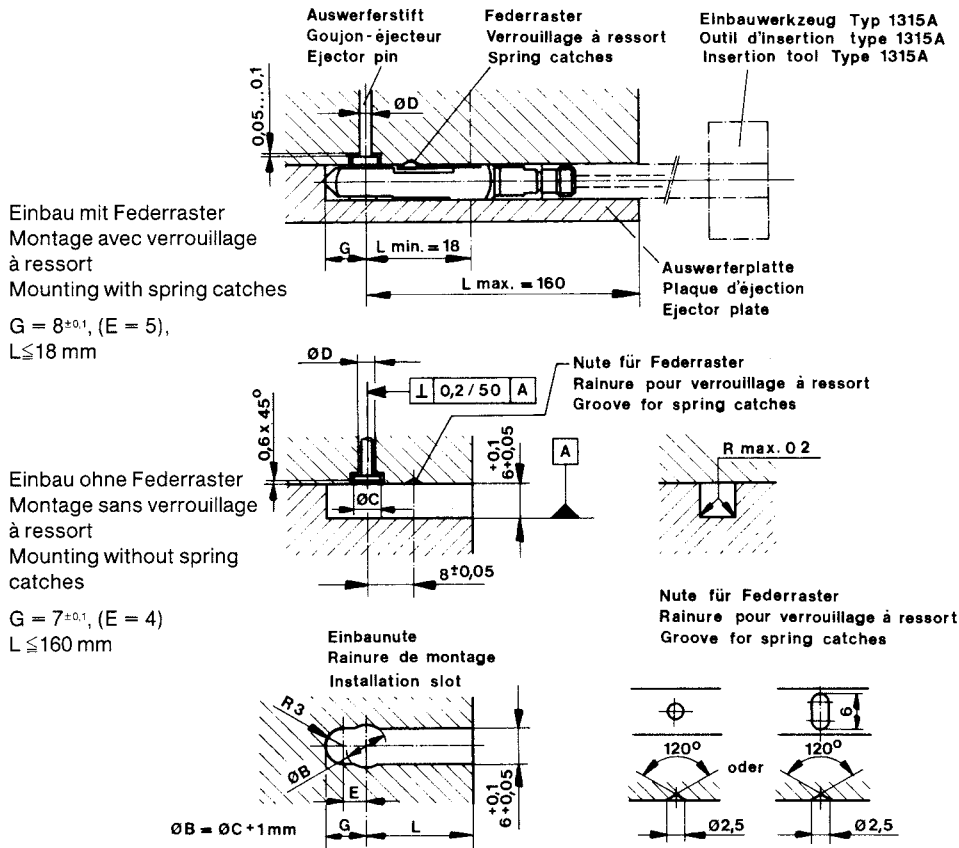


Fig. 1: Mounting example

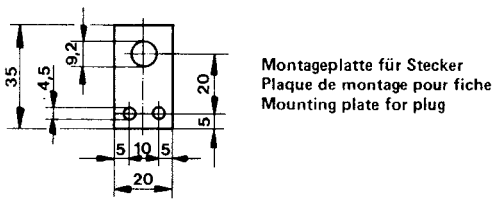


Fig. 2: Mounting plate Mat. No. 65005208

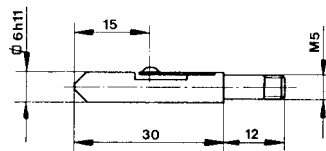


Fig. 4: Dummy sensor Type 9419

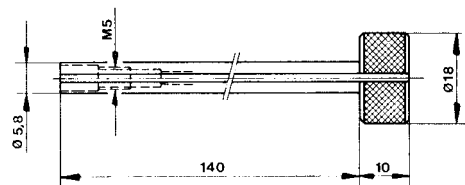


Fig. 3: Insertion tool Type 1315A

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**Included accessories**

- Mounting plate (Fig. 2)

**Optional accessories**

- Insertion tool (Fig. 3)
- High temperature extension cable, Fischer SE1024A014 pos. – BNC pos., length 5
- Dummy sensor (Fig. 4)

**Typ/Mat. No.**

65005208

**Typ/Mat. No.**

1315A

1661A5

9419

**Ordering key**

with PFA cable, L = 0.2 m	<b>A0,2</b>
with PFA cable, L = 0.4 m	<b>A0,4</b>
with PFA cable, L = 0.6 m	<b>A0,6</b>
with PFA cable, L = 0.8 m	<b>A0,8</b>
with PFA cable, L = ... m	<b>Asp</b>

Type 9223A



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