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Contact elements

for injection molds

Type 1712C..., 1714C...

These elements for installing Kistler single-wire sensors in molds with mold inserts or exchangeable modules offer the following advantages:

- Mold insert change without dismounting sensor
- Connector for 1 or 4 sensors
- Prevents cable damage during mold servicing
- Sealed contacts with O-ring
- Usable for temperature sensors

Set Type 1712C0

Set Type 1714C0

Description

Single-channel system Type 1712C0 consists of two elements allowing connection of any Kistler single-wire sensor between a mold insert and its frame or mold plate. A spring-loaded contact is used in positive element Type 1712C1 and negative element Type 1712C2 is not guided to allow an axial offset. Four-channel contact element Type 1714C0 allows connection of up to four sensors at the same time. The two contact elements are, however, guided to ensure reliable charge transfer. The single-wire cables have crimped contacts and can be removed.

Applications

The contact elements make an electrical connection between cables and sensors in different mold modules. They are therefore suitable for installation in molds with inserts. Contact is made automatically as soon as the insert is introduced into the mold plate. The contact elements of Type 1712C0 can be used for a single-channel and those of Type 1714C0 for a 4-channel sensor connection. During disassembly the sensors remain in the insert or module and prevent cable damage.

Depending on the number of sensors, the connection of the contact elements can be taken to either 4-channel connector Type 1722A4... or 8-channel connector Type 1722A8.... This allows the use of ComoNeo Type 5887A... for production monitoring.

The contact elements Type 1712C ... and 1714C ... can also be used to connect temperature sensors from Kistler. Since temperature sensors have 2 thermocouple wires, the 4-channel contact element Type 1714C is preferably used for this purpose. The connection requires the special crimp pins Type 2241A.

Technical data

Type	Type 1712C1/C2	Type 1714C1/C2
Number of channels	1	4
Installation dimensions	M8x5,2 mm (each element)	ø12x9,5 mm (each element)
Axial offset	max. 0,3 mm	(keyed connection)
Operating temperature	0 ... 200 °C	0 ... 200 °C

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Dimensional drawing

The following diagrams show key external dimensions of the contact elements.

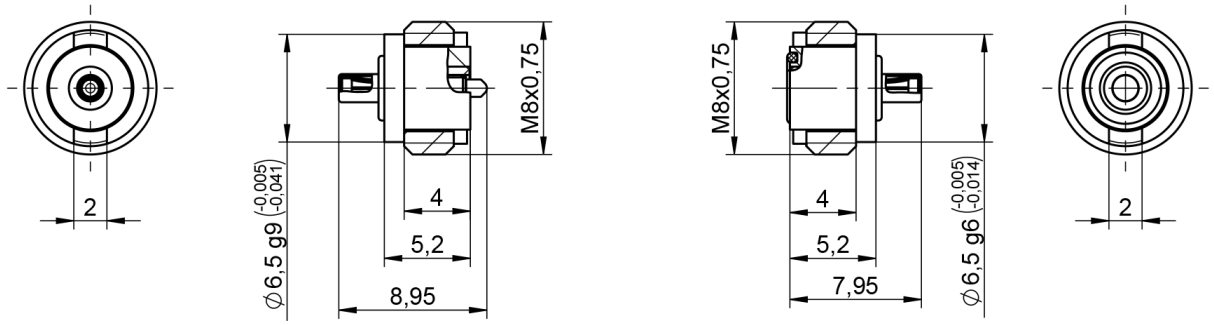

Fig. 1: Type 1712C0 with positive Type 1712C1 (left) and negative contact element Type 1712C2 (right)

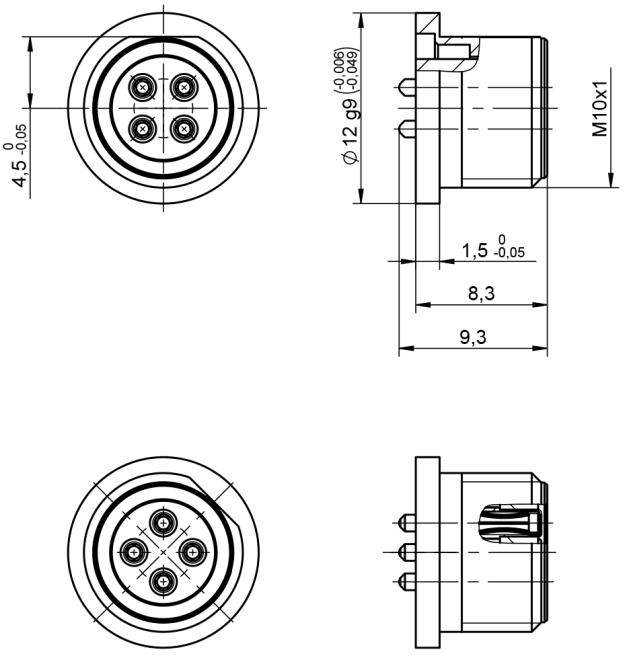

Fig. 2: Positive contact element Type 1714C1 of Type 1714C0 for installation in mold insert

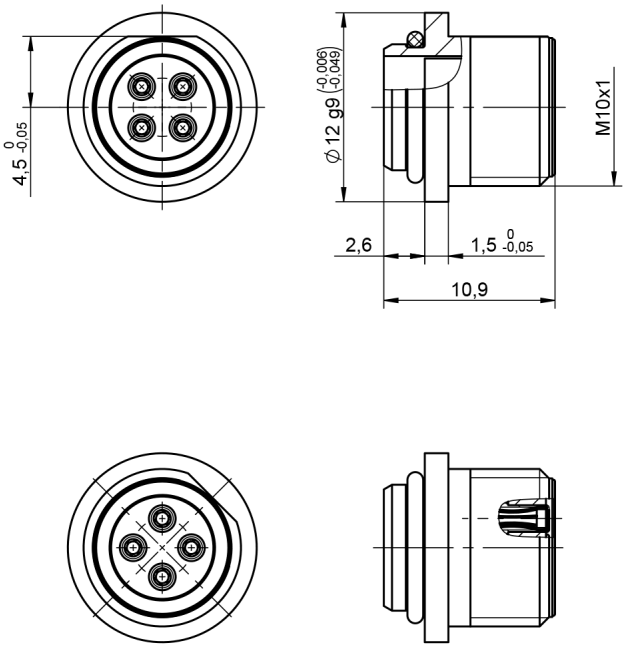

Fig. 3: Negative contact element Type 1714C2 of Type 1714C0 for installation in mold plate

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Installation examples

The negative contact elements are installed in the insert or in the exchangeable module. The required single-wire sensors are supplied by Kistler with a crimped contact. This is inserted into the negative contact element.
The sensor Types identified with the "Zsp" extension have to be ordered separately, specifying the required length.

Installation of single-channel Type 1712C0

The supplied mounting nut (Mat. No. 65001150) is used to hold the contact elements of the single-channel Type 1712C0 directly in a hole tapped with an M8x0,75 mm thread in the mold insert or mold plate. The face of both elements must be flush. The maximum distance between the two plates must not exceed 0.02 mm, otherwise the O-ring will not seal adequately when installed. A maximum axial offset of 0,3 mm is allowed, when installed. Each of the exposed crimp contacts is protected with a fluoropolymer tube and covered with a silicone sheath. The positive side of the contact element should be installed in the mold and the negative side in the form plate. Thus the form plate will stand securly on the work bench without wobbling.

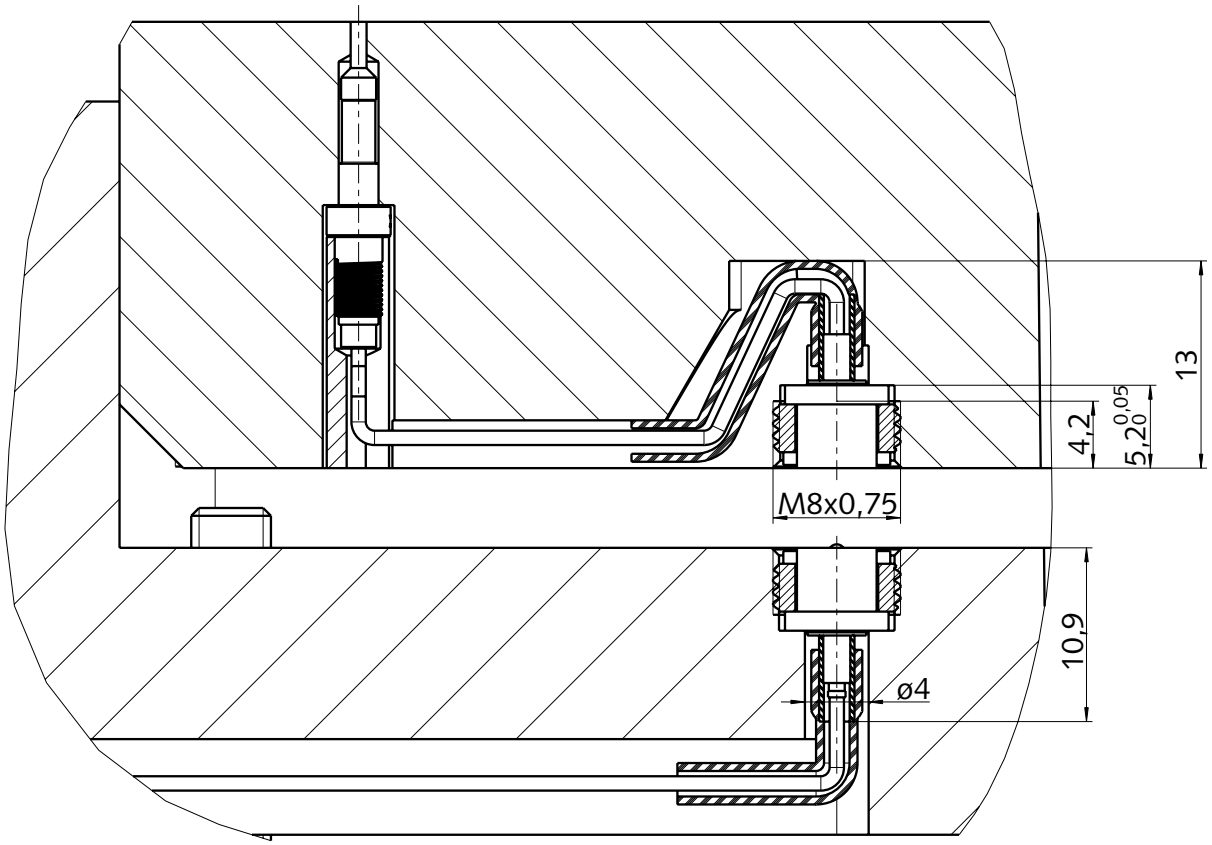

Fig. 4: Installation example showing contact element Type 1712C0. Sensor Type 6183D... is connected to negative contact element Type 1712C2 in mold insert

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Installation of 4-channel Type 1714C0

Type 1714C0 is mounted flush in the mold as shown in the diagrams. In order to ensure the sealing effect of the seal ring the two plates must not have more than 0.01 mm gap in assembled condition. Preferably, the negative contact element Type 1714C2 is installed in the exchangeable module. The positive contact element Type 1714C1 is mounted in the mold plate or in the base of the frame.

To ensure correct alignment, the keyed contact elements can each be held in a retaining plate Type 1419 with a M8 nut.

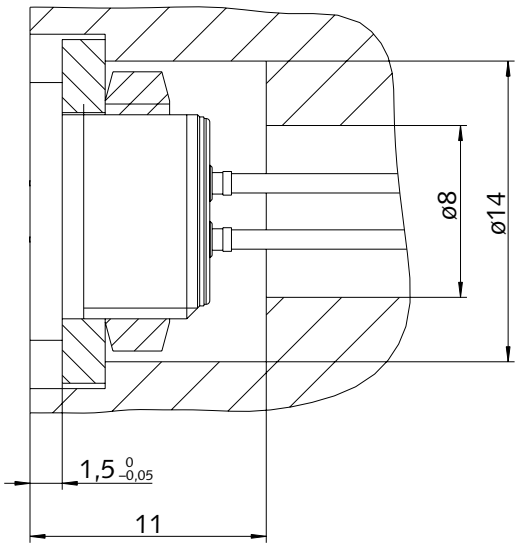

Fig. 5: Installation dimensions for positive contact element Type 1714C1 with retaining plate Type 1419 and M10 nut

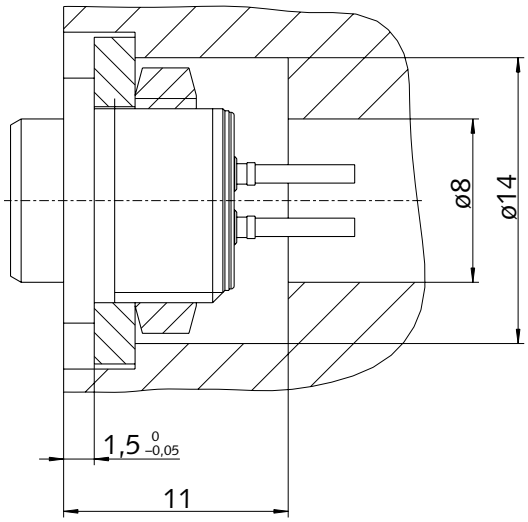

Fig. 6: Installation dimensions for negative contact element Type 1714C2 with retaining plate Type 1419 and M10 nut

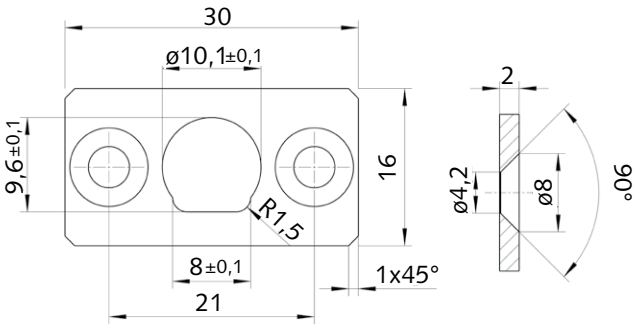

Fig. 7: Contact elements Types 1714C1 and 1714C2 can be secured with retaining plate Type 1419

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Included accessories	Type/Mat. No.
For single-channel contact element Type 1712C0	
• Positive element incl.	1712C1
M8 nipple,	65001150
Fluoropolymer tube	65001846
and silicone sheath	65001847
• Negative element incl.	1712C2
M8 nipple,	65001150
Fluoropolymer tube	65001846
and silicone sheath	65001847
• One single-wire cable, l = 1,5 m with crimped contact	1666AZ2
For 4-channel contact element Type 1714C0	
• Positive element incl.	1714C1
M10 nut	65004259
• Negative element incl.	1714C2
M10 nut	65004259
• Four single-wire cables, l = 1,5 m with crimped contact	1666AZ2
• Retaining plate with two M4 screws	1419

Optional accessories	Type
• Mounting socket	1300A131
For 1-channel contact element Type 1712C...	
• Crimpset for mounting the crimppin	1381A0
• Crimptool	1381A1
• Insert for Crimptool	1381A2
• Sheath stripper	1381A3
• Crimp pins for Single-Wire cables (Pressure), 10 pc	1700A41
• Crimp pins for temperature sensors, 10 pC	2241A
• Replacement seal ring for 1712C...	65007548
• Replacement seal ring for 1714C...	65007668

Ordering key

Type 1712C ☐

1-channel contact element as complete kit	**0**
Positive contact element (for installation in mold plate)	**1**
Negative contact element (for installation in insert)	**2**

Type 1714C ☐

4-channel contact element as complete kit	**0**
Positive contact element (for installation in insert)	**1**
Negative contact element (for installation in mold plate)	**2**

Note

When ordering the contact elements the required sensor Types must be ordered separately. A crimp on the single-wire cable is required to connect the sensor to the contact element. This can either be fitted with the Crimpset type 1381A0 or the sensor is already ordered with crimped pin at the cable end. For this purpose, sensors with the extension "Zsp" can be ordered. When ordering, the desired cable length must be specified.
For the connection with temperature sensors a measuring failure of >5 °C can arrise when having more than 5 °C temperature differences on positive element Type 1712C1 and negative element Type 1712C2.

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