Contact Elements for Injection Molds

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

Description
Single-channel system Type 1712A0 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 1712A1 and negative element Type 1712A2 is not guided to allow an axial offset. Four-channel contact element Type 1714A0 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 1712A0 can be used for a single-channel and those of Type 1714A0 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 1708A0 or 8-channel connector Type 1710A0. This allows the use of CoMo Injection Type 28698... for production monitoring.

Technical Data

<table>
<thead>
<tr>
<th>Type</th>
<th>Type 1712A1/A2</th>
<th>Type 1714A1/A2</th>
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</thead>
<tbody>
<tr>
<td>Number of channels</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Installation dimensions</td>
<td>M8x5,2 mm (each element)</td>
<td>ø12x9,5 mm (each element)</td>
</tr>
<tr>
<td>Axial offset</td>
<td>max. 0,3 mm</td>
<td>(keyed connection)</td>
</tr>
<tr>
<td>Operating temperature</td>
<td>0 ... 120 °C</td>
<td>0 ... 120 °C</td>
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</tbody>
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Dimensional Drawing

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

Fig. 1: Type 1712A0 with positive Type 1712A1 (left) and negative contact element Type 1712A2 (right)

Fig. 2: Positive contact element Type 1714A1 of Type 1714A0 for installation in mold insert

Fig. 3: Negative contact element Type 1714A2 of Type 1714A0 for installation in mold platen
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 (for example Type 6183AZsp) have to be ordered separately, specifying the required length.

Installation of Single-Channel Type 1712A0
The supplied mounting nut (Art. No. 3.211.349) is used to hold the contact elements of the single-channel Type 1712A0 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. A maximum axial offset of 0.3 mm is allowed. Each of the exposed crimp contacts is protected with a fluoropolymer tube and covered with a silicone sheath.

Fig. 4: Installation example showing contact element Type 1712A0.
Sensor Type 6183AZsp is connected to negative contact element Type 1712A2 in mold insert.
Installation of 4-Channel Type 1714A0
Type 1714A0 is mounted flush in the mold as shown in the diagrams. Preferably, the negative contact element Type 1714A2 is installed in the exchangeable module. The positive contact element Type 1714A1 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. Type 1419 is an optional accessory and is supplied with two M10 nuts.

Fig. 5: Installation dimensions for positive contact element Type 1714A1 with retaining plate Type 1419 and M10 nut

Fig. 6: Installation dimensions for negative contact element Type 1714A2 with retaining plate Type 1419 and M10 nut
Included Accessories

For single-channel contact element Type 1712A0
- Positive element incl.
  - M8 nipple, 3.211.349
  - Fluoropolymer tube 3.221.510
  - and silicone sheath 3.221.511
- Negative element incl.
  - M8 nipple, 3.211.349
  - Fluoropolymer tube 3.221.510
  - and silicone sheath 3.221.511
- One single-wire cable, l = 1,5 m 1666AZ2 with crimped contact

For 4-channel contact element Type 1714A0
- Positive element incl.
  - M10 nut 3.414.539
- Negative element incl.
  - M10 nut 3.414.539
- Four single-wire cables, l = 1,5 m 1666AZ2 with crimped contact

Optional Accessories

For 1-channel contact element Type 1712A...
- Mounting socket 1300A131

For 4-channel contact element Type 1714A...
- Retaining plate with two M4 screws 1419

Ordering Key

| Type 1712A □ | 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 1714A □ | 4-channel contact element as complete kit | 0 |
| Positive contact element (for installation in mold plate) | 1 |
| Negative contact element (for installation in insert) | 2 |

Note
When ordering the contact elements the required sensor Types must be ordered separately. Please use the Type extension “Zsp” and specify the cable length.