Code structure

**Housing**

fx  polymer housing, two conduit entries

**Contact blocks**

<table>
<thead>
<tr>
<th>Article</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>1NO+1NC, snap action</td>
</tr>
<tr>
<td>6</td>
<td>1NO+1NC, slow action</td>
</tr>
<tr>
<td>7</td>
<td>1NO+1NC, slow action overlapped</td>
</tr>
<tr>
<td>...</td>
<td>....................</td>
</tr>
</tbody>
</table>

**Actuators**

<table>
<thead>
<tr>
<th>Article</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>short plunger</td>
</tr>
<tr>
<td>02</td>
<td>roller lever</td>
</tr>
<tr>
<td>05</td>
<td>offset roller lever</td>
</tr>
<tr>
<td>...</td>
<td>....................</td>
</tr>
</tbody>
</table>

**Suffix**

no suffix (standard)

1  with stainless steel roller:
   - Ø 12 mm for actuator A4, 15
   - Ø 14 mm for actuators A2, 02, A5, 05
   - Ø 20 mm for actuators 30, 31, 51, 52, 54, 55, 56, 57

2  with Ø 35 mm polymer roller (see special loose actuators on page 2/52)

3  with Ø 50 mm rubber roller (see special loose actuators on page 2/52)

4  with Ø 50 mm overhanging rubber roller (see special loose actuators on page 2/52)

**Preinstalled cable gland or connectors**

- no cable gland or connector (standard)
- with right assembled cable gland suitable for Ø 6 to Ø 12 mm cables range
- with 4 poles M12 plastic connector

**Contacts type**

- silver contacts (standard)
- silver contacts gold plated 1 µm (contact block 2 excluded)

**External metallic parts**

- zinc plated steel (standard)
- stainless steel

**Reset hooking**

- without reset (standard)
- simultaneous reset hooking

---

**Preinstalled cable gland or connectors**

- no cable gland or connector (standard)
- with right assembled cable gland suitable for Ø 6 to Ø 12 mm cables range
- with 4 poles M12 plastic connector

**Contacts type**

- silver contacts (standard)
- silver contacts gold plated 1 µm (contact block 2 excluded)

**External metallic parts**

- zinc plated steel (standard)
- stainless steel

**Reset hooking**

- without reset (standard)
- simultaneous reset hooking
Technical data

Housing
Made of glass-reinforced polymer, self-extinguishing, shock-proof thermoplastic resin and with double insulation.
Two knock-out threaded conduit entries
Protection degree: IP67 according to EN 60529

General data
Ambient temperature: from -25°C to +80°C
Version for operation in ambient temperature from -40°C to +80°C on request
Max operating frequency: 3600 operations cycles/hour
Mechanical endurance: 20 million operations cycles¹
Assembling position: any
Driving torque for installation: see pages 6/1-6/10
¹ One operation cycle means two movements, one to close and one to open contacts, as foreseen by EN 60947-5-1 standard.

Cross section of the conductors (flexible copper wire)

- **Contact blocks 20, 21, 22, 33, 34:**
  - min. 1 x 0.34 mm² (1 x AWG 22)
  - max. 2 x 1.0 mm² (2 x AWG 16)

- **Contact blocks 5, 6, 7, 9, 10, 11, 12, 13, 14, 15, 16, 18:**
  - min. 1 x 0.5 mm² (1 x AWG 20)
  - max. 2 x 2.5 mm² (2 x AWG 14)

- **Contact block 2:**
  - min. 1 x 0.5 mm² (1 x AWG 20)
  - max. 2 x 1.5 mm² (2 x AWG 16)

In conformity with standards:
- IEC 60947-5-1, EN 60947-5-1, IEC 60204-1, EN 60204-1, EN 1088, EN ISO 12100-1, EN ISO 12100-2, IEC 60529, EN 60529, NFC 63-140, VDE 0660-200, VDE 0113, CENELEC EN 50013.

Approvals:
- IEC 60947-5-1, UL 508, GB14048.5-2001

Installation for safety applications:
Use only switches marked with the symbol . The safety circuit must always be connected with the NC contacts (normally closed contacts: 11-12, 21-22 or 31-32) as stated in the standard EN 60947-5-1, encl. K, par. 2. The switch must be actuated with at least up to the positive opening travel shown in the travels diagrams on page 6/6. The switch must be actuated at least with the positive opening force, shown in brackets, underneath each article, near the value of the min. force.

⚠️ If not expressly indicated in this chapter, for the right installation and the correct utilization of all articles see requirements indicated from page 6/1 to page 6/10.

### Electrical data

#### Utilization categories

<table>
<thead>
<tr>
<th>Voltage (Ue)</th>
<th>Current (Ie)</th>
</tr>
</thead>
<tbody>
<tr>
<td>AC15 (50...60 Hz)</td>
<td>6 4 1</td>
</tr>
<tr>
<td>DC13</td>
<td>24 125 250</td>
</tr>
<tr>
<td>Ie (A)</td>
<td>6 1,1 0,4</td>
</tr>
</tbody>
</table>

#### without connector
- **Thermal current (Ith):**
  - 10 A
  - 500 Vac 600 Vdc
  - 400 Vac 500 Vdc

- **Rated insulation voltage (Ui):**
  - 1000 A according to EN 60947-5-1

- **Protection against short circuits: Pollution degree:**
  - 3

#### with 8-poles M12 connector
- **Thermal current (Ith):**
  - 2 A
  - 30 Vac 36 Vdc

- **Rated insulation voltage (Ui):**
  - 2 A

- **Protection against short circuits: Pollution degree:**
  - 3

### In conformity with requirements requested by:
- Positive contact opening in conformity with standards:
  - IEC 60947-5-1, EN 60947-5-1, VDE 0660-206.
Data type approved by IMQ, CCC and EZU

- Rated insulation voltage (Ue): 500 Vac
- Thermal current (Ith): 10 A
- Protection against short circuits: fuse 10 A, 500 V type aM
- Protection degree: IP67
- MV terminals (screw clamps)
- Pollution degree 3
- Utilization category: AC15
- Operation voltage (Ue): 400 Vac (50 Hz)
- Operation current (Ie): 3 A
- Forms of the contact element: Za, Zb, Za+Za, Y+Y+X, Y+X
- Positive opening of contacts on contact block 5, 6, 7, 9, 11, 13, 14, 16, 18, 20, 21, 22, 33, 34

In conformity with standards: EN 60947-1, EN 60947-5-1 and subsequent modifications and completions, fundamental requirements of the Low Voltage Directive 2006/95/CE and subsequent modifications and completions.

Please contact our technical service for the list of approved products.

Data type approved by UL

- Utilization categories: Q300 (69 VA, 125-250 Vdc), A600 (720 VA, 120-600 Vac)
- Data of the housing type: 1, 4X "indoor use only", 12, 13
- For all contact blocks except 2 and 3 use 60 or 75 °C copper (Cu) conductor and wire size No. 14 AWG. Terminal tightening torque of 12 lb in (1.4 Nm).

In conformity with standard: UL 508

Please contact our technical service for the list of approved products.

Adjustable levers

In switches with revolving lever it is possible to adjust the lever with 10° steps for the whole 360° range. The positive movement transmission is always guaranteed thanks to the particular geometrical coupling between the lever and the revolving shaft as prescribed for safety applications by the German standard BG-GS-ET-15.

Overturning levers

It’s possible to fasten the lever on switches on straight or reverse side, maintaining the positive coupling. In this way it is possible to obtain two different work plans of the lever.

Rotating heads

In all switches, it is possible to rotate the head in 90° steps.

Working operation of contact block 16 with independent contacts

The contact block 16 has two NC contacts, both with positive opening activated independently according to the lever turning direction.
Position switches FX series

Contacts type:
- Snap action
- Slow action
- Slow action with extended stroke
- Slow action with extended stroke and switch
- Slow action with independent switch
- Slow action with smaller electrical height

With stainless steel roller on request

With external rubber gasket

Contact blocks

Contact blocks

Max speed

Min. force

Travel diagrams

With stainless steel roller on request

With external rubber gasket

With stainless steel roller on request

Max speed

Min. force

Travel diagrams

Accessories: See page 5/1

All measures in the drawings are in mm
### Contacts type:
- R: snap action
- S: slow action
- L: overlapped
- LS: slow action shifted
- LI: overlapped and shifted
- LA: slow action independent
- E: electronic
- P: electronic PFP

### Contact blocks

<table>
<thead>
<tr>
<th>Number</th>
<th>Type</th>
<th>Description</th>
<th>Diagram 1</th>
<th>Diagram 2</th>
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</thead>
<tbody>
<tr>
<td>5</td>
<td>E</td>
<td>FX 508</td>
<td><img src="image1" alt="Diagram" /></td>
<td><img src="image2" alt="Diagram" /></td>
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<tr>
<td>6</td>
<td>E</td>
<td>FX 608</td>
<td><img src="image3" alt="Diagram" /></td>
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<tr>
<td>7</td>
<td>E</td>
<td>FX 708</td>
<td><img src="image5" alt="Diagram" /></td>
<td><img src="image6" alt="Diagram" /></td>
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<tr>
<td>9</td>
<td>E</td>
<td>FX 908</td>
<td><img src="image7" alt="Diagram" /></td>
<td><img src="image8" alt="Diagram" /></td>
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<tr>
<td>10</td>
<td>E</td>
<td>FX 1008</td>
<td><img src="image9" alt="Diagram" /></td>
<td><img src="image10" alt="Diagram" /></td>
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<tr>
<td>11</td>
<td>E</td>
<td>FX 1108</td>
<td><img src="image11" alt="Diagram" /></td>
<td><img src="image12" alt="Diagram" /></td>
</tr>
<tr>
<td>12</td>
<td>E</td>
<td>FX 1208</td>
<td><img src="image13" alt="Diagram" /></td>
<td><img src="image14" alt="Diagram" /></td>
</tr>
<tr>
<td>13</td>
<td>E</td>
<td>FX 1308</td>
<td><img src="image15" alt="Diagram" /></td>
<td><img src="image16" alt="Diagram" /></td>
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<tr>
<td>14</td>
<td>E</td>
<td>FX 1408</td>
<td><img src="image17" alt="Diagram" /></td>
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<td>E</td>
<td>FX 1508</td>
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<td>18</td>
<td>EA</td>
<td>FX 1890</td>
<td><img src="image21" alt="Diagram" /></td>
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<tr>
<td>20</td>
<td>E</td>
<td>FX 2008</td>
<td><img src="image23" alt="Diagram" /></td>
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<tr>
<td>21</td>
<td>E</td>
<td>FX 2108</td>
<td><img src="image25" alt="Diagram" /></td>
<td><img src="image26" alt="Diagram" /></td>
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<tr>
<td>22</td>
<td>E</td>
<td>FX 2208</td>
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<td>2</td>
<td>E</td>
<td>FX 208</td>
<td><img src="image29" alt="Diagram" /></td>
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<tr>
<td>E1</td>
<td>A</td>
<td>FX E108</td>
<td><img src="image31" alt="Diagram" /></td>
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</tbody>
</table>

### Max speed
- page 6/5 - type 4
- page 6/5 - type 4
- page 6/5 - type 2
- page 6/5 - type 4

### Min. force
- 8 N (25 N)
- 8 N (25 N)
- 8 N (25 N)
- 8 N (25 N)

### Travel diagrams

<table>
<thead>
<tr>
<th>Diameter</th>
<th>Description</th>
<th>Diagram 1</th>
<th>Diagram 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ø 11 mm</td>
<td>polymer roller</td>
<td><img src="image33" alt="Diagram" /></td>
<td><img src="image34" alt="Diagram" /></td>
</tr>
<tr>
<td>Ø 12 mm</td>
<td>stainless steel roller</td>
<td><img src="image35" alt="Diagram" /></td>
<td><img src="image36" alt="Diagram" /></td>
</tr>
</tbody>
</table>

### With external rubber gasket

<table>
<thead>
<tr>
<th>Number</th>
<th>Type</th>
<th>Description</th>
<th>Diagram 1</th>
<th>Diagram 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>E</td>
<td>FX 515</td>
<td><img src="image37" alt="Diagram" /></td>
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<td>6</td>
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<td>FX 615</td>
<td><img src="image39" alt="Diagram" /></td>
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<tr>
<td>7</td>
<td>E</td>
<td>FX 715</td>
<td><img src="image41" alt="Diagram" /></td>
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<tr>
<td>9</td>
<td>E</td>
<td>FX 915</td>
<td><img src="image43" alt="Diagram" /></td>
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<tr>
<td>10</td>
<td>E</td>
<td>FX 1015</td>
<td><img src="image45" alt="Diagram" /></td>
<td><img src="image46" alt="Diagram" /></td>
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<tr>
<td>11</td>
<td>E</td>
<td>FX 1115</td>
<td><img src="image47" alt="Diagram" /></td>
<td><img src="image48" alt="Diagram" /></td>
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<tr>
<td>12</td>
<td>E</td>
<td>FX 1215</td>
<td><img src="image49" alt="Diagram" /></td>
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<tr>
<td>13</td>
<td>E</td>
<td>FX 1315</td>
<td><img src="image51" alt="Diagram" /></td>
<td><img src="image52" alt="Diagram" /></td>
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<tr>
<td>14</td>
<td>E</td>
<td>FX 1415</td>
<td><img src="image53" alt="Diagram" /></td>
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<td>15</td>
<td>E</td>
<td>FX 1515</td>
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<td>EA</td>
<td>FX 1815</td>
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<td><img src="image58" alt="Diagram" /></td>
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<tr>
<td>20</td>
<td>E</td>
<td>FX 2015</td>
<td><img src="image59" alt="Diagram" /></td>
<td><img src="image60" alt="Diagram" /></td>
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<tr>
<td>21</td>
<td>E</td>
<td>FX 2115</td>
<td><img src="image61" alt="Diagram" /></td>
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<td>22</td>
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<td>FX 2215</td>
<td><img src="image63" alt="Diagram" /></td>
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<td>E</td>
<td>FX 215</td>
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<td>A</td>
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<td><img src="image67" alt="Diagram" /></td>
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</tbody>
</table>

### Max speed
- page 6/5 - type 2
- page 6/5 - type 2
- page 6/5 - type 2
- page 6/5 - type 2

### Min. force
- 8 N (25 N)
- 8 N (25 N)
- 8 N (25 N)
- 8 N (25 N)

### Travel diagrams

Items with code on the **green** background are available in stock.
<table>
<thead>
<tr>
<th>Contacts type:</th>
<th>With external rubber gasket</th>
<th>With external rubber gasket</th>
<th>With Ø 20 mm stainless steel roller on request</th>
<th>Other rollers available. See page 2/76</th>
</tr>
</thead>
<tbody>
<tr>
<td>snap action</td>
<td>FX 521 1NO+1NC</td>
<td>FX 525 1NO+1NC</td>
<td>FX 530 1NO+1NC</td>
<td>FX 531 1NO+1NC</td>
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<tr>
<td>slow action</td>
<td>FX 1021 2NO</td>
<td>FX 1025 2NO</td>
<td>FX 1030 2NO</td>
<td>FX 1031 2NO</td>
</tr>
<tr>
<td>slow action</td>
<td>FX 1221 2NO</td>
<td>FX 1225 2NO</td>
<td>FX 1130 2NC</td>
<td>FX 1131 2NC</td>
</tr>
<tr>
<td>independent</td>
<td>FX 1821 1NO+1NC</td>
<td>FX 1825 1NO+1NC</td>
<td>FX 1830 1NO+1NC</td>
<td>FX 1831 1NO+1NC</td>
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<tr>
<td>shifted and</td>
<td>FX 2021 1NO+2NC</td>
<td>FX 2025 1NO+2NC</td>
<td>FX 2030 1NO+2NC</td>
<td>FX 2031 1NO+2NC</td>
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<td>shifted</td>
<td>FX 2121 3NC</td>
<td>FX 2125 3NC</td>
<td>FX 2130 3NC</td>
<td>FX 2131 3NC</td>
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<td>overlapped</td>
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<td>FX 2225 2NO+1NC</td>
<td>FX 2230 2NO+1NC</td>
<td>FX 2231 2NO+1NC</td>
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<td>slow action</td>
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<td>FX 225 2x1NO-1NC</td>
<td>FX 230 2x1NO-1NC</td>
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<td>independent</td>
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<td>FX E131 1NO-1NC</td>
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<tr>
<td>Max speed</td>
<td>1 m/s</td>
<td>1 m/s</td>
<td>page 6/6 - type 1</td>
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</tr>
<tr>
<td>Min. force</td>
<td>0,07 Nm</td>
<td>0,12 Nm</td>
<td>page 5/1</td>
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</tr>
<tr>
<td>Travel diagrams</td>
<td>page 6/6 - group 4</td>
<td>page 6/6 - group 4</td>
<td>page 6/6 - group 5</td>
<td>page 6/6 - group 5</td>
</tr>
<tr>
<td>3x3 mm square rod</td>
<td></td>
<td></td>
<td>Other rollers available. See page 2/76</td>
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</tr>
<tr>
<td>Contact blocks</td>
<td>FX 533 1NO+1NC</td>
<td>FX 534 1NO+1NC</td>
<td>FX 550 1NO+1NC</td>
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<td>FX 1850 1NO+1NC</td>
<td>FX 1851 1NO+1NC</td>
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<td></td>
<td>FX 2033 1NO+2NC</td>
<td>FX 2034 1NO+2NC</td>
<td>FX 2050 1NO+2NC</td>
<td>FX 2051 1NO+2NC</td>
</tr>
<tr>
<td></td>
<td>FX 2133 3NC</td>
<td>FX 2134 3NC</td>
<td>FX 2150 3NC</td>
<td>FX 2151 3NC</td>
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<tr>
<td></td>
<td>FX 2233 2NO+1NC</td>
<td>FX 2234 2NO+1NC</td>
<td>FX 2250 2NO+1NC</td>
<td>FX 2251 2NO+1NC</td>
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<td>FX 233 2x1NO-1NC(1)</td>
<td>FX 234 2x1NO-1NC(1)</td>
<td>FX 250 2x1NO-1NC(1)</td>
<td>FX 251 2x1NO-1NC(1)</td>
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<td></td>
<td>FX E133 1NO-1NC</td>
<td>FX E134 1NO-1NC</td>
<td>FX E150 1NO-1NC</td>
<td>FX E151 1NO-1NC</td>
</tr>
<tr>
<td>Max speed</td>
<td>1,5 m/s</td>
<td>1,5 m/s</td>
<td>page 6/6 - type 1</td>
<td>page 6/6 - type 1</td>
</tr>
<tr>
<td>Min. force</td>
<td>0,06 Nm</td>
<td>0,06 Nm</td>
<td>page 5/1</td>
<td>page 5/1</td>
</tr>
<tr>
<td>Travel diagrams</td>
<td>page 6/6 - group 5</td>
<td>page 6/6 - group 5</td>
<td>page 6/6 - group 5</td>
<td>page 6/6 - group 5</td>
</tr>
</tbody>
</table>

**Accessories**: See page 5/1
### Contacts type:
- **E1:** snap action
- **E2:** slow action
- **E3:** electronic

### Contact blocks
- **FX 556**
- **FX 566**
- **FX 575**
- **FX 586**
- **FX 596**
- **FX 606**
- **FX 615**
- **FX 625**
- **FX 636**
- **FX 645**
- **FX 655**
- **FX 665**
- **FX 675**
- **FX 686**

#### Max speed
- **FX 556:** 0.5 m/s
- **FX 566:** 0.5 m/s
- **FX 575:** 0.5 m/s
- **FX 586:** 0.5 m/s
- **FX 596:** 0.5 m/s
- **FX 606:** 0.5 m/s
- **FX 615:** 0.5 m/s
- **FX 625:** 0.5 m/s
- **FX 636:** 0.5 m/s
- **FX 645:** 0.5 m/s
- **FX 655:** 0.5 m/s
- **FX 665:** 0.5 m/s
- **FX 675:** 0.5 m/s
- **FX 686:** 0.5 m/s

### Min. force
- **FX 556:** 0.06 Nm (0.25 Nm)
- **FX 566:** 0.06 Nm (0.25 Nm)
- **FX 575:** 0.06 Nm (0.25 Nm)
- **FX 586:** 0.06 Nm (0.25 Nm)
- **FX 596:** 0.06 Nm (0.25 Nm)
- **FX 606:** 0.06 Nm (0.25 Nm)
- **FX 615:** 0.06 Nm (0.25 Nm)
- **FX 625:** 0.06 Nm (0.25 Nm)
- **FX 636:** 0.06 Nm (0.25 Nm)
- **FX 645:** 0.06 Nm (0.25 Nm)
- **FX 655:** 0.06 Nm (0.25 Nm)
- **FX 665:** 0.06 Nm (0.25 Nm)
- **FX 675:** 0.06 Nm (0.25 Nm)
- **FX 686:** 0.06 Nm (0.25 Nm)

### Travel diagrams
- **Porcelain roller**
- **Fiber glass rod**
- **Rope switches for signalling**

### Items with code on the green background are available in stock

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**Items with code on the green background are available in stock.**

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**page 2/72**
Pizzato Elettrica has developed an innovative reset device code W3 to make perfectly simultaneous the actuator and the contact block tripping. The new device is a block inserted between the switch body and the head, and could be rotated independently from this last one. This new device has following advantages:

- The reset device integrate in any standard actuation head
- Contact blocks with snap action are no more necessary because the tripping movement is made by the reset device itself
- Unlike some previous versions, the reset device can be rotated independently from the head for the maximum flexibility during the assembling.

Contact blocks:

<table>
<thead>
<tr>
<th>Model</th>
<th>Contacts Type</th>
<th>Max Speed</th>
<th>Min. Force</th>
<th>Travel Diagrams</th>
</tr>
</thead>
<tbody>
<tr>
<td>FX 601-W3</td>
<td>1NO+1NC</td>
<td>page 6/5 - type 4</td>
<td>8 N (25 N)</td>
<td>page 6/7 - group 1</td>
</tr>
<tr>
<td>FX 602-W3</td>
<td>1NO+1NC</td>
<td>page 6/5 - type 3</td>
<td>6 N (25 N)</td>
<td>page 6/7 - group 2</td>
</tr>
<tr>
<td>FX 605-W3</td>
<td>1NO+1NC</td>
<td>page 6/5 - type 3</td>
<td>6 N (25 N)</td>
<td>page 6/7 - group 2</td>
</tr>
<tr>
<td>FX 607-W3</td>
<td>1NO+1NC</td>
<td>page 6/5 - type 3</td>
<td>4 N (25 N)</td>
<td>page 6/7 - group 3</td>
</tr>
</tbody>
</table>

- With stainless steel roller on request
- With Ø 20 mm stainless steel roller on request

Other rollers available. See page 2/76

Position switches FX series with reset
Contacts type: 
R = snap action 
L = slow action

Contact blocks

<table>
<thead>
<tr>
<th></th>
<th>FX 652-W3</th>
<th>FX 654-W3</th>
<th>FX 656-W3</th>
<th>FX 657-W3</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>1NO+1NC</td>
<td>1NO+1NC</td>
<td>1NO+1NC</td>
<td>1NO+1NC</td>
</tr>
<tr>
<td>9</td>
<td>2NC</td>
<td>2NO</td>
<td>2NO</td>
<td>2NC</td>
</tr>
<tr>
<td>10</td>
<td>1NO+2NC</td>
<td>1NO+2NC</td>
<td>1NO+2NC</td>
<td>1NO+2NC</td>
</tr>
<tr>
<td>20</td>
<td>2NC</td>
<td>3NC</td>
<td>3NC</td>
<td>2NO</td>
</tr>
<tr>
<td>21</td>
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<td>2NO+2NC</td>
<td>2NO+2NC</td>
<td>2NO+2NC</td>
<td>2NO+2NC</td>
</tr>
</tbody>
</table>

Max speed
0,06 Nm (0,25 Nm)

Travel diagrams
page 6/7 - group 4

Other rollers available. See page 2/76

Items with code on the green background are available in stock
Position switches FX series

Position switches with revolving lever without actuator

<table>
<thead>
<tr>
<th>Contacts type: R</th>
<th>L</th>
<th>LO</th>
<th>LS</th>
<th>LV</th>
<th>LI</th>
<th>LA</th>
<th>A</th>
</tr>
</thead>
<tbody>
<tr>
<td>snap action</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>slow action</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>slow action overlapped</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>slow action shifted</td>
<td></td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>slow action shifted and spaced</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>slow action independent</td>
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<td></td>
</tr>
<tr>
<td>slow action closer</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>slow action electronic</td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

Contact blocks:

<table>
<thead>
<tr>
<th>FX 538</th>
<th>FX 638</th>
<th>FX 738</th>
<th>FX 938</th>
<th>FX 1038</th>
<th>FX 1138</th>
<th>FX 1238</th>
<th>FX 1338</th>
<th>FX 1438</th>
<th>FX 1538</th>
<th>FX 1638</th>
<th>FX 1838</th>
<th>FX 2038</th>
<th>FX 2138</th>
<th>FX 2238</th>
<th>FX 238</th>
<th>FX 28E138</th>
</tr>
</thead>
<tbody>
<tr>
<td>1NO+1NC</td>
<td>1NO+1NC</td>
<td>1NO+1NC</td>
<td>1NO+1NC</td>
<td>2NO</td>
<td>2NO</td>
<td>2NO</td>
<td>2NO</td>
<td>2NO</td>
<td>2NO</td>
<td>2NO</td>
<td>1NO+1NC</td>
<td>1NO+2NC</td>
<td>3NC</td>
<td>2NO+1NC</td>
<td>2NO+1NC</td>
<td>2NC</td>
</tr>
</tbody>
</table>

Min. force:
- 0,06 Nm (0,25 Nm)

Travel diagrams:
- page 6/6 - group 5
- page 6/7 - group 4

Loose actuators

<table>
<thead>
<tr>
<th>Ø 18 mm roller</th>
<th>Ø 18 mm roller</th>
<th>Adjustable square rod 3x3x125 mm</th>
<th>Flexible rod actuator</th>
<th>Adjustable round rod Ø 3x125 mm</th>
<th>Polymer roller Ø 20 mm</th>
</tr>
</thead>
</table>

VF LE30 | VF LE31 | VF LE33 | VF LE34 | VF LE50 | VF LE51 |

VF LE52 | VF LE53 | VF LE54 | VF LE55 | VF LE56 | VF LE57 | VF LE69 |

- Only orders for multiple quantities of the packs are accepted.
- 📌 Actuator VF LE55 suits to safety applications only if adjusted to its max length, as you can see in figure beside. If you need an adjustable lever for safety applications, use the adjustable safety lever VF LE56.
- 📌 The position switch obtained by assembling the switch FX •38 (e.g. FX 538, FX 638) with the actuator VF LE53 will not present the same travel diagrams and actuating forces as the position switch FX •53-E0V9 (e.g. FX 553-E0V9, FX 653-E0V9...).
- 📌 The actuator cannot be oriented to inside direction because it will mechanically interfere with the switch head.

IMPORTANT
For safety applications: join only switches and actuators marked with symbol 📌. For more information about safety applications see page 6/1.

Accessories

See page 5/1
Special loose actuators

**IMPORTANT:** These loose actuators can be used with items of series FR, FM, FX, FZ, FK only

Ø 20 mm stainless steel rollers

Ø 35 mm polymer rollers

Ø 40 mm rubber rollers

Ø 50 mm rubber rollers

Ø 50 mm overhanging rubber rollers

**IMPORTANT:** These loose actuators can be used with items of series FR, FM, FX, FZ, FK only

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