

+ Limit switch



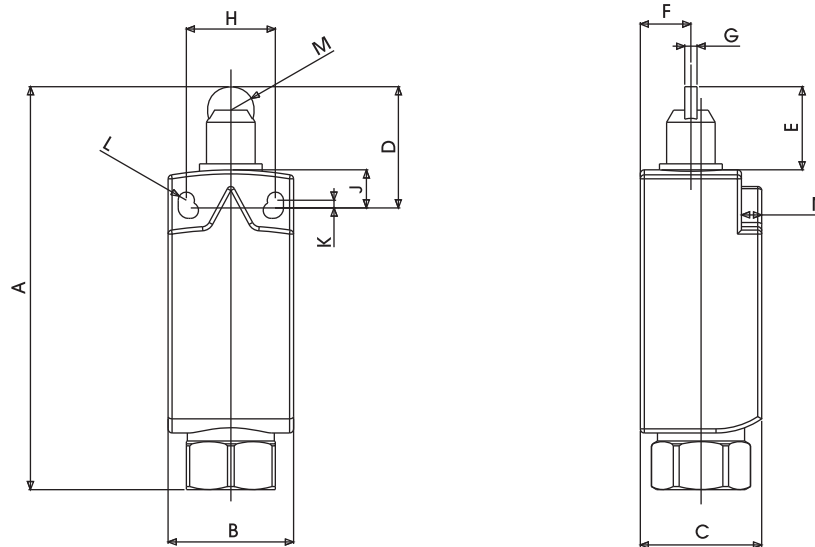
- Ambient air temperature:
 - operation: -25°C to +70°C
 - storage: -40°C to +70°C
- Vibration resistance: conforming to IEC 60068-2-6
- Shock resistance: conforming to IEC 60068-2-27
- Electric shock protection:
 - Class II conforming to IEC 61140 and NF C 20-030 for XCKP and XCKT
 - Class I conforming to IEC 61140 and NF C 20-030 for XCKD
- Degree of protection: IP66 and IP67 conforming to IEC 60529;
IK4 conforming to EN50102 for XCKP and XCKT,
IK06 conforming to EN50102 for XCKD
- Repeat accuracy: 0,1mm on the tripping points,
with 1 million operating cycles for head with end plunger
- Material: metal

Limit switch



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Specialist in Ball Valves



LIMIT SWITCH OSISWITCH METAL

| TYPE | VOLTAGE | A | B | C | D | E | F | G | H | J | K | L | M | N | WEIGHT Kg | ITEM CODE |
|----------------|-----------------------|-------|----|----|----|------|------|---|----|------|------|---|-----|---|-----------|----------------|
| FLSXCKDZCE02HH | AC 15 240V 3A ITH 10A | 99,55 | 31 | 30 | 30 | 20,6 | 12,5 | 3 | 22 | 9,41 | 1,91 | 2 | 5,8 | 5 | 0,164 | FLSXCKDZCE02HH |

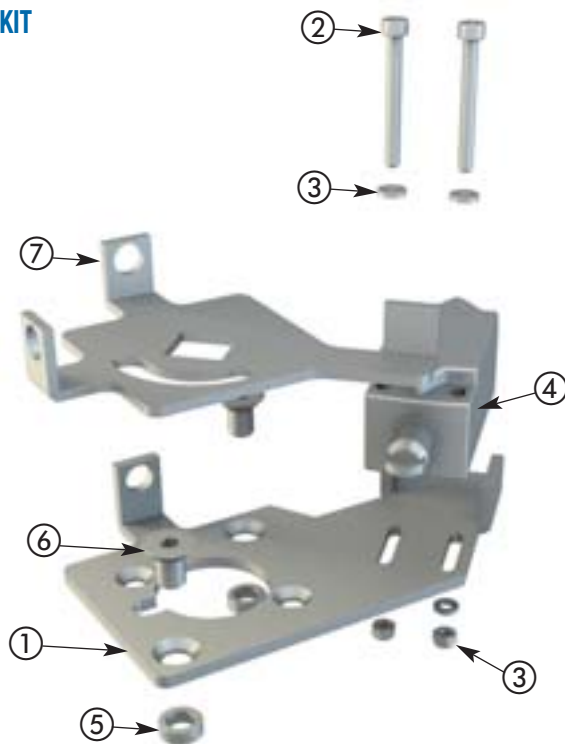
LIMIT SWITCH OSISWITCH METAL KITS

| CODE | BALL VALVES | DN |
|--------------|-------------|----------------|
| KOM00LS6EHH | GE - GV | DN6 DN10 DN13 |
| KOM00LS6NHH | GN | DN6 DN10 DN13 |
| KOM00LS20EHH | GE - GV | DN20 DN25 |
| KOM00LS20NHH | GN | DN20 DN25 |
| KOM00LS32BHH | GB - GV | DN32 DN40 DN50 |
| KOM00LS32NHH | GN | DN32 DN40 DN50 |

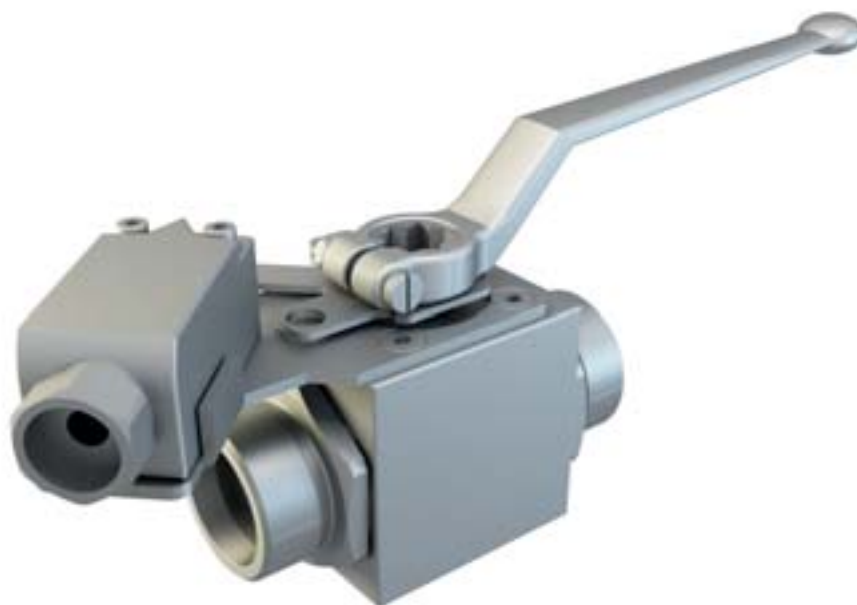
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STAINLESS STEEL KIT



| Pos | Description | Q.tà |
|-----|----------------------------|------|
| 1 | Lower bracket | 1 |
| 2 | T.C.E.I. screw | 2 |
| 3 | Washer | 4 |
| 4 | Limit Switch Compact Metal | 1 |
| 5 | Nut | 2 |
| 6 | Screw | 4 |
| 7 | Top bracket | 1 |



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Universal, XCKD Metal

■ XCKD
with 1 cable entry
Conforming to CENELEC EN 50047

□ With head for linear movement (plunger). Mounting by the head or by the body.
XCK D



| Environment characteristics | | |
|-----------------------------------|------------------------------|--|
| Conforming to standards | Products | IEC 60947-5-1, EN 60947-5-1, UL 508, CSA C22-2 n° 14 |
| | Machine assemblies | IEC 60204-1, EN 60204-1 |
| Product certifications | | UL, CSA, CCC |
| Protective treatment | Standard version | "TC" |
| Ambient air temperature | Operation | - 25...+70 °C (-13...+158 °F) |
| | Storage | - 40...+70 °C (-40...+158 °F) |
| Vibration resistance | Conforming to IEC 60068-2-6 | 25 gn (10...500 Hz) except switch with head ZCE 24: 20 gn |
| Shock resistance | Conforming to IEC 60068-2-27 | 50 gn (11 ms) except heads ZCE08: 15 gn (11 ms) and ZCE24: 30 gn (18 ms) |
| Electric shock protection | | Class I conforming to IEC 61140 and NF C 20-030 for XCKD |
| Degree of protection | | IP 66 and IP 67 conforming to IEC 60529; IK 06 conforming to EN 50102 for XCKD |
| Repeat accuracy | | 0.1 mm on the tripping points, with 1 million operating cycles for head with end plunger |
| Cable entry or integral connector | Depending on model | Either: tapped entry for PG 11 or PG 13 conduit thread, tapped ISO M16 x 1.5 or ISO M20 x 1.5, tapped 1/2" NPT, tapped PF 1/2 (G1/2) or integral M12 connector |
| Materials | | XCKD: Zamak® bodies and heads |

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Universal, XCKD-Complete Units with 1/2" NPT Cable Entry

Type of head **Plunger (mounting by the body)**

Form C (1)



| | | | | | | |
|------------------|--|--|----------------------|--|--|--|
| Type of operator | | | Steel roller plunger | | | |
|------------------|--|--|----------------------|--|--|--|

Catalog Numbers (2) (3)

| | | | | | | |
|--|---|--|--|--|--|--|
| | 2-pole N/C + N/O snap action (XE2S P2151) | | | XCKD2102N12 ⊖ 3,1(A) 7,8(P) | | |
| | 2-pole N/C + N/O break before make, slow break (XE2N P2151) | | | XCKD2502N12 ⊖ 3,1(A) 5,6(P) | | |
| | 2-pole N/C + N/C snap action (XE2S P2141) | | | ZCD29 + ZCDEN12 + ZCE02 ⊖ 3,1(A) 7,8(P) | | |
| | 2-pole N/C + N/C simultaneous, slow break (XE2N P2141) | | | ZCD27 + ZCDEN12 + ZCE02 ⊖ 3,1 5,6(P) | | |
| | 3-pole N/C + N/C + N/O snap action (XE3SP2141) | | | ZCD39 + ZCDEN12 + ZCE02 ⊖ 3,1(A) 7,8(P) | | |
| | 3-pole N/C + N/C + N/O break before make, slow break (XE3N P2141) | | | ZCD37 + ZCDEN12 + ZCE02 ⊖ 3,1(A) 5,6(P) | | |

Weight, kg (lb) 0.185 (0.408)

Contact operation contact closed
 ⊖ N/C contact with positive opening operation, when properly mounted and using a conforming operator
 (A)(B) = cam displacement
 (P) = positive opening point

Characteristics

Switch actuation On end By 30° cam

| | | | | | |
|-------------------|--|--|--|--|--|
| Type of actuation | | | | | |
|-------------------|--|--|--|--|--|

Maximum actuation speed 0.5 m/s (1.64 ft/s)

Minimum force or torque For tripping 15 N (3.37 lb) 12 N (2.70 lb)
 For positive opening 45 N (10.12 lb) 36 N (8.09 lb)

Cable entry (3) 1 entry tapped M16 x 1.5 mm for ISO cable entry, clamping capacity 4 to 8 mm (0.16 to 0.31 in.)

1. Form conforming to EN 50047, see page 20.
 2. Switches with gold contacts or ring type connections: please consult your local sales office.
 3. For an entry tapped for a PG 11 conduit thread, replace N12 in the catalog number with G11. Examples: XCKD2110N12 becomes XCKD2110G11, ZCDEN12 becomes ZCDEG11.

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Universal, XCKD-Complete Units with 1/2" NPT Cable Entry

Type of head Plunger (mounting by the head) Rotary (mounting by the body) Multi-directional



| | | | | | | |
|--------------------------------|---|--|----------------|--|--|--|
| Type of operator | | M18 with steel roller plunger | | | | |
| Catalog Numbers (2) (4) | | | | | | |
| | 2-pole N/C + N/O snap action (XE2S P2151) | XCKD21H2N12 | | | | |
| | 2-pole N/C + N/O break before make, slow break (XE2N P2151) | XCKD25H2N12 | | | | |
| | 2-pole N/C + N/C snap action (XE2S P2141) | ZCD29 + ZCDEN12 + ZCEH2 | | | | |
| | 2-pole N/C + N/C simultaneous, slow break (XE2N P2141) | ZCD27 + ZCDEN12 + ZCEH2 | | | | |
| | 3-pole N/C + N/C + N/O snap action (XE3S P2141) | ZCD39 + ZCDEN12 + ZCEH2 | | | | |
| | 3-pole N/C + N/C + N/O break before make, slow break (XE3N P2141) | ZCD37 + ZCDEN12 + ZCEH2 | | | | |
| Weight, kg (lb) | | 0.220 (0.485) | | | | |
| Contact operation | | (A) = cam displacement (P) = positive opening point | | | | |
| Characteristics | | | | | | |
| Switch actuation | On end | By 30° cam | | | | |
| Type of actuation | | | | | | |
| Maximum actuation speed | 0,5 m/s (1.64 ft/s) | | | | | |
| Minimum force or torque | For tripping | 15 N (3.37 lb) | 10 N (2.25 lb) | | | |
| | For positive opening | 45 N (10.12 lb) | 36 N (8.09 lb) | | | |
| Cable entry (4) | 1 entry tapped M16 x 1.5 mm for ISO cable entry, clamping capacity 4 to 8 mm (0.16 to 0.31 in.) | | | | | |

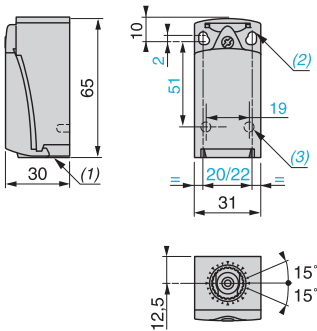
- Form conforming to EN 50047, see page 20.
 - Switches with gold contacts or ring type connections: please consult your local sales office.
 - Value taken with actuation by moving part at 100 mm (3.94 in.) from the mountings.
 - For an entry tapped for a PG 11 conduit thread, replace N12 in the catalog number with G11. Examples: XCKD21H0N12 becomes XCKD21H0G11, ZCDEN12 becomes ZCDEG11.
- Note: For more information, consult pages 63, 68–69.

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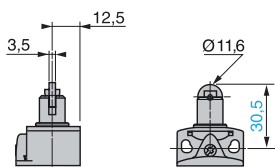
Universal, XCKD-Complete Units with 1/2" NPT Cable Entry

ZCD2• + ZCDEN12 / ZCD3• + ZCDEN12



1. Tapped entry for ISO M16 x 1.5 or PG 11 conduit thread.
2. 2 elongated holes $\text{O} 4.3 \times 6.3 \text{ mm}$ (0.17 x 0.25 in.) on 22 mm (0.87 in.) centers, 2 holes $\text{O} 4.3 \text{ mm}$ (0.17 in.) on 20 mm (0.79 in.) centers.
3. 2 x $\text{O} 3$ holes for support studs, depth 4 mm (0.16 in.).
4. Mounting nut thickness 3.5 mm (0.14 in.).



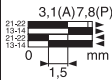

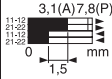
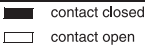
ZCE02




+ Limit switch

Specialist in Ball Valves

Universal, XCKD-Integral M12 Connector


| | | | | | |
|---|---|---|--|---|--|
| Type of head | | Plunger (mounting by the body) | | | |
| | | Form C (1) | | | |
| | |  | | | |
| Type of operator | | | | Steel roller plunger | |
| Catalog Numbers | | | | | |
| 2-pole N/C + N/O snap action (XE2S P2151) |  | | | XCKD2102M12 ⊖ 3.1(A)7.8(P)  | |
| 2-pole N/C + N/C snap action (XE2S P2141) |  | | | ZCD29M12 + ZCE02 ⊖ 3.1(A)7.8(P)  | |
| Weight, kg (lb) | | | | 0.195 (0.430) | |
| Contact operation |  | | | (A) (B) = cam displacement (P) = positive opening point | |

1. Form conforming to EN 50047, see page 20.

| | | | | | |
|-------------------------|---|-----------------|--|--|--|
| Characteristics | | | | | |
| Switch actuation | On end | | | | |
| Type of actuation |  | | | | |
| Maximum actuation speed | 0.5 m/s (1.64 ft/s) | | | | |
| Minimum force or torque | For tripping | 15 N (3.37 lb) | | | |
| | For positive opening | 45 N (10.12 lb) | | | |
| Connection | M12 5-pin connector, Ui = 60 V, Ie = 4 A maximum, Ith = 4 A | | | | |

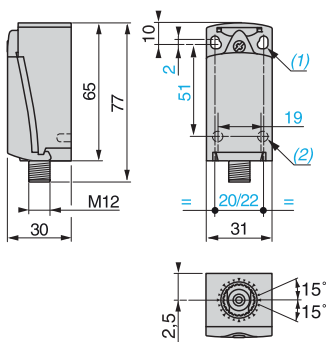
Connections

Integral M12 connector

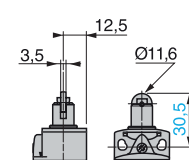
| | | |
|---|--|--|
|  | XE2SP2151 1-2: N/C 3-4: N/O 5: ↓ | XE2SP2141 1-2: N/C 3-4: N/C 5: ↓ |
|---|--|--|

Dimensions

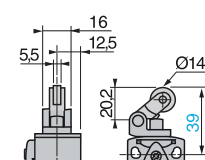
ZCD2•M12



ZCE02



ZCE21



- 2 elongated holes $\text{Ø} 4.3 \times 6.3 \text{ mm}$ (0.17 x 0.25 in.) on 22 mm (0.87 in.) centers, 2 holes $\text{Ø} 4.3 \text{ mm}$ (0.17 in.) on 20 mm (0.79 in.) centers.
- 2 x $\text{Ø} 3$ holes for support studs, depth 4 mm (0.16 in.).
- Mounting nut thickness 3.5 mm (0.14 in.).

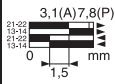
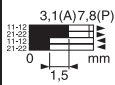
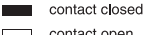

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Universal, XCKD-Integral M12 Connector

Type of head Plunger (mounting by the head) Rotary (mounting by the body)

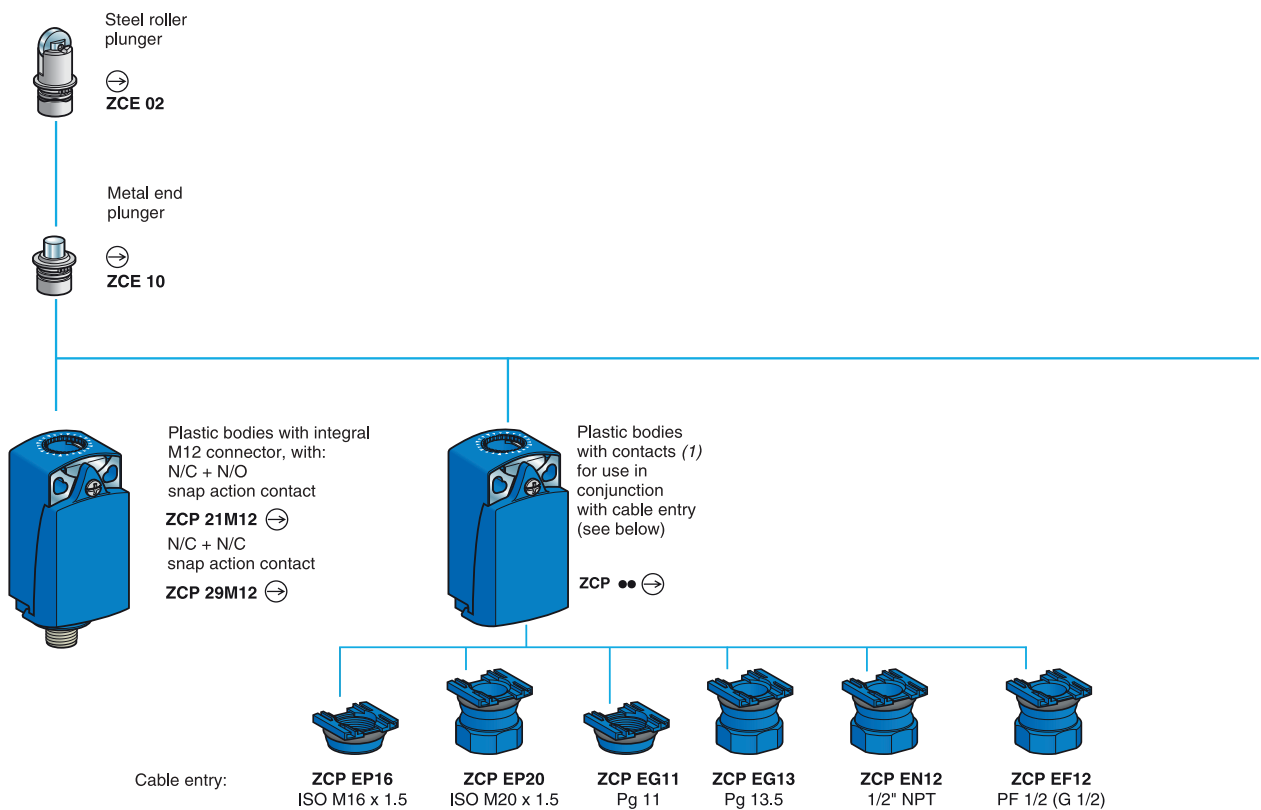


| | | | | | | |
|--|---|--|--|--|--|--|
| Type of operator | | M18 with steel roller plunger | | | | |
| Catalog Numbers | | | | | | |
| 2-pole N/C + N/O snap action (XE2S P2151) | | XCKD21H2M12 ⊖  | | | | |
| 2-pole N/C + N/C snap action (XE2S P2141) | | ZCD29M12 + ZCEH2 ⊖  | | | | |
| Weight, kg (lb) | | 0.235 (0.518) | | | | |
| Contact operation |  (A) = cam displacement (P) = positive opening point | | | | | |
| 1. Form conforming to EN 50047, see page 20. 2. Value taken with actuation by moving part at 100 mm (3.94 in.) from the mounting. | | | | | | |
| Characteristics | | | | | | |
| Switch actuation | On end | | | | | |
| Type of actuation |  | | | | | |
| Maximum actuation speed | 0,5 m/s (1.64 ft/s) | | | | | |
| Minimum force or torque | For tripping | 15 N (3.37 lb) | | | | |
| | For positive opening | 45 N (10.12 lb) | | | | |
| Connection | M12 5-pin connector, U _i = 60 V, I _e = 4 A maximum, I _{th} = 4 A | | | | | |

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Universal, XCKD

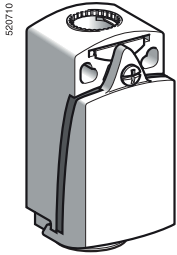


1. For further details, see page 70.
2. Cannot be used on bodies: ZCD21, ZCP21, ZCT21, ZCD29, ZCP29, ZCD31, ZCP31, ZCD39, ZCP39, ZCD2*M12, ZCP2*M12.

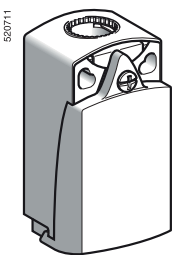
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Universal, XCKD



ZCD **



ZCP**

| Bodies with contacts, types XCK D | | | |
|--|------------------------|------------------|--|
| Type of contact | Positive operation (2) | Function diagram | |
| 2-pole | | | |
| N/C + N/O snap action (XE2SP2151) | ⊖ | | |
| N/C + N/C snap action (XE2SP2141) | ⊖ | | |
| N/C + N/O break before make, slow break (XE2NP2151) | ⊖ | | |
| N/O + N/C make before break, slow break (XE2NP2161) | ⊖ | | |
| N/C + N/C simultaneous, slow break (XE2NP2141) | ⊖ | | |
| N/O + N/O simultaneous, slow break (XE2NP2131) | — | | |
| 3-pole | | | |
| N/C + N/O + N/O snap action (XE3SP2151) | ⊖ | | |
| N/C + N/C + N/O snap action (XE3SP2141) | ⊖ | | |
| N/C + N/C + N/O break before make, slow break (XE3NP2141) | ⊖ | | |
| N/C + N/O + N/O break before make, slow break (XE3NP2151) | ⊖ | | |
| <p>1. Bodies with gold contacts or eyelet type connections: please consult your local sales office. 2. ⊖ : bodies with contacts assuring positive opening operation, when properly mounted and using a conforming operator.</p> | | | |

