

Introduction



Microswitches of MK series have been developed in order to add new features to traditional and tested microswitches of Pizzato Elettrica (cross-reference at page 7/51). These products have been designed with shapes and fixing perfectly interchangeable with the previous ones and with various additional functions useful to extend the application field.

The main innovation of this series is the tripping device modern and evolved, with qualitative features higher than solutions present on the market.

The electrical contact on new microswitch has been realized with higher reliability technology, thanks to the double and redundant shape, and has the possibility to carry out operations with positive opening.

The housing of the new microswitch provides the possibility to seat gaskets in order to seal the device against fine dusts or liquids up to IP65 degree.

Fastening terminals of conductors are more practical and allow the fixing of different diameter cables or the possibility to choose different bends of faston contacts. For high quantity it's possible to supply the microswitch only with the contact NO or NC, in order to minimize purchase costs.

Contact block reliability

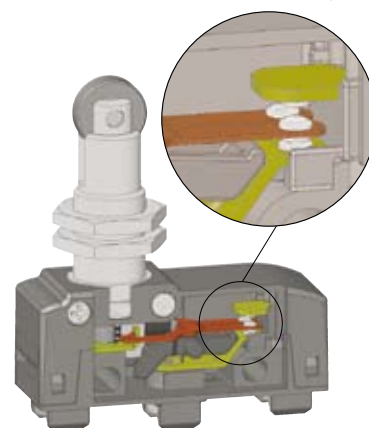
In the following table we refer to the typical microswitch contact structure (type A) normally used in the industry, compared with the innovative solution that Pizzato Elettrica uses in new MK series microswitches: movable contact with single interruption and double contacts (type B).

As you can see from the table below, this last structure (type B) offers half of the contact resistance (R) than the simple mobile contact (type A) and a lower probability of failure (fe).

In fact, defined x the probability of a commutation failure of a single interruption, it results that in the type A the failure probability $fe=x$, in the type B the probability $fe= x^2$. This means that if in a certain situation the failure probability x is equal, for instance, to 1×10^{-4} (1 failed interruption every 10.000), we will have:

- in type A one failed commutation every 10.000
- in type B one failed commutation every 100.000.000

| Type | Figure | Description | Contact resistance R | Probability of failure fe |
|------------------------------------|--------|---|----------------------|---------------------------|
| A Common microswitch | | Contacts with single interruption | $R=R_c$ | $fe=x$ |
| B Pizzato microswitch MK series | | Contacts with single interruption and double contacts | $R=R_c/2$ | $fe \cong x^2$ |



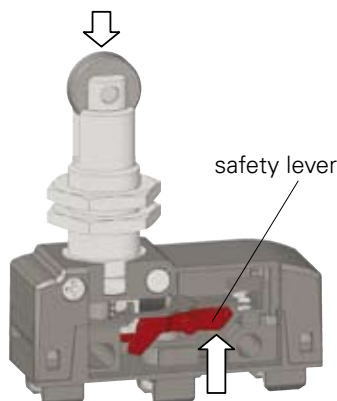
Extended temperature range

-40°C

On request, on new MK series are available the versions with extended temperature range. Differently from standard MK microswitches with temperature range from +85 C° to -25 C°, these special versions can be used in places where the ambient temperature changes from +85 C° to -40 °C.

They can be installed inside cold stores, sterilizers or other equipment with very low ambient temperature. Special materials that have been used to realize these versions, maintain unchanged their features also in these conditions, widening the installation possibilities.

Microswitches for safety applications



All microswitches that have the symbol \ominus beside the code are with positive opening, therefore suitable for safety applications.

These microswitches are provided with a rigid connection between push button and NC contacts, which are opened by force through a strong/sturdy internal safety lever.

The positive opening has been realised in conformity with the standard IEC 60947-5-1, enclosure K, therefore these microswitches are suitable for the installation for people's protection.

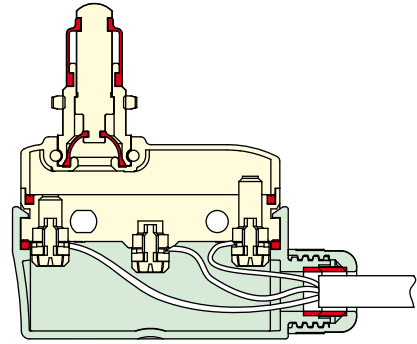
Protection degree IP65

By installing microswitches MK ●●2●● with terminal covers VF MKC●22 or terminal covers VF MKC●23, it's possible to obtain a microswitch fully dust proof and waterproof.

Thanks to special rubber gaskets anti-oil, we achieve the protection degree IP65.

For application with high presence of dirtiness, are available also versions with double gasket in the push button (internal + external). ex. MK ●●2●12 or MK ●●2●13.

- Gaskets
- Microswitch: MKV12D12
- Terminal cover: VF MKCV22



Clamping screw plates for different diameter cables (MK V●)

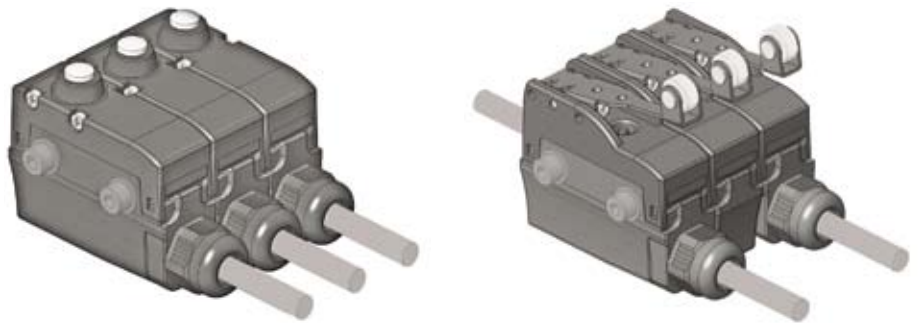


These clamping screw plates have a particular "roofing tile" structure and are connected loosely to the clamping screw. In this way, during the wires fixing, the clamping screw plate is able to suit to cables of different diameter (see picture) and tends to tighten the wires toward the screw instead of permitting them to escape towards the outside.

Terminal covers with wire trap cable gland side by side

New terminal covers supplied with wire trap cable gland are provided for the protection degree up to IP65.

These terminal covers are snap-in assembled and they have small dimensions in the microswitch profile, it's possible to install them also on microswitches fixed side by side. See page 2/136.

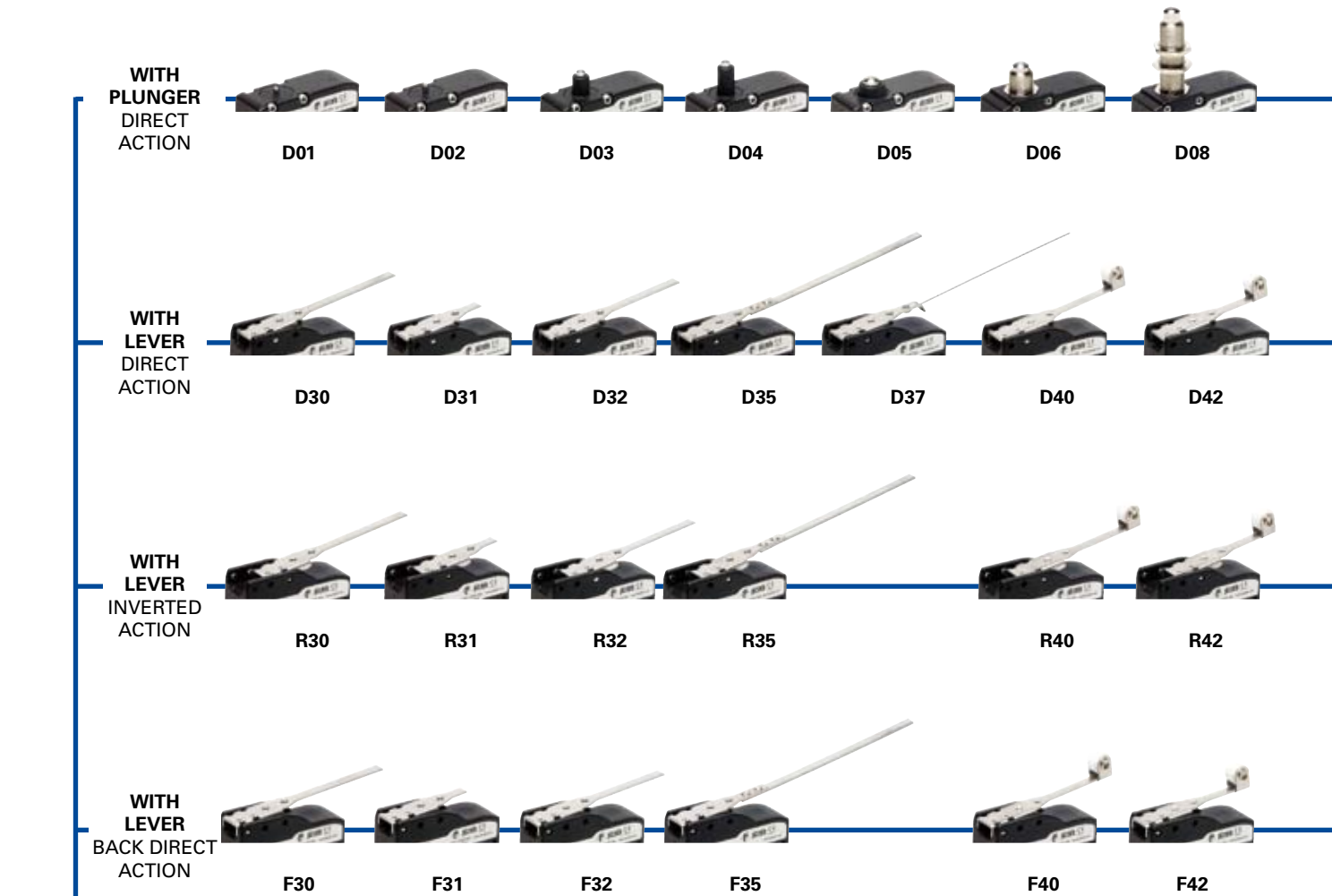


Rotating actuators



Thanks to the new lateral fixing system patented, it's possible to rotate the roller of microswitches MK ●●●15 and MK ●●●17 in 90° steps.

The lateral fixing allows to disconnect the actuator from the body also when the actuator is already fixed to the racket. The flexibility of the product allows also to unify items on stock for applications that require roller both longitudinal or transversal.

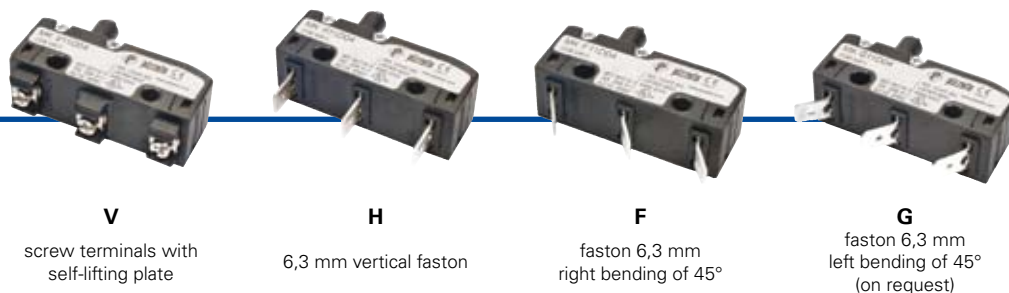


ACTUATORS

—●— product option
 —▶— accessory sold separately



TERMINALS





D09

D10

D12
external rubber gasket

D13
external rubber gasket

D15

D17

D18

D19



D45

D46

D47

D53

D59

D49



R45

R46

R47

R53

R59

R60



F45

F46

F47

F53

F59

F49

Code structure

Attention! The feasibility of a code number does not mean the effective availability of a product. Please contact our sales office.

article options
MK V12D40-GR16T6

| Terminals type | |
|----------------|---|
| V | screw terminals with self-lifting late |
| H | vertical faston terminals |
| F | with faston, right bending of 45° |
| G | with faston, left bending of 45° (on request) |

| Contact block | |
|---------------|-------------------------------|
| 1 | 1NO+1NC, snap action |
| 2 | 1NO, snap action (on request) |
| 3 | 1NC, snap action (on request) |

| Max protection degree | |
|-----------------------|------------------------|
| 1 | IP40 (with protection) |
| 2 | IP65 (with protection) |

| Actuation type | |
|----------------|--------------------|
| D | direct action |
| R | inverted action |
| F | back direct action |

| Ambient temperature | |
|---------------------|----------------------------|
| | -25°C ... +85°C (standard) |
| T6 | -40°C ... +85°C |

| Suffix | |
|------------|---|
| | no suffix (standard) |
| R16 | Ø 9,5x4 mm metal roller (for actuator 40, 42, 45, 47, 53, 59) |
| R10 | Ø 9,8x8,4 mm polymer roller (for actuator 40, 42, 45, 53) |

| Contacts type | |
|---------------|----------------------------------|
| | silver contacts (standard) |
| G | silver contacts gold plated 1 µm |

| Actuator | |
|-----------|------------------------|
| 01 | with pin |
| 02 | with pin |
| 03 | with small push button |
| .. | |



Main data

- Polymer housing
- High reliability contacts
- Protection degree IP20, IP40 or IP65
- 4 terminal types available
- 47 actuators available
- Versions with positive opening ⊕
- Silver contacts gold plated versions
- Terminal covers with wire trap cable gland
- Mechanically interchangeable with previous products (see cross reference on page 7/50)

Markings and quality marks:



Approval UL: E131787
 Approval CCC: 2013010305604291
 Approval GOST: POCC IT.AB24.B04512

Technical data

Housing

Made of glass-reinforced polymer, self-extinguishing, shock-proof thermoplastic resin.

Protection degree: IP20 (with protection VF C01 - VF C03)
 IP40 (with protection VF MKC•1• - VF C02)
 IP65 (with protection VF MKC•22 - VF MKC•23)
 according to EN 60529

General data

Ambient temperature: from -25°C to +85°C
 Max actuation frequency: 3600 operations cycles¹/hour
 Mechanical endurance: 10 million operations cycles¹
 Driving torque for installation: see pages 7/1-7/12
 (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)

| | | | |
|------------|------|--------------------------|--------------|
| MK series: | min. | 1 x 0,34 mm ² | (1 x AWG 22) |
| | max. | 2 x 1,5 mm ² | (2 x AWG 16) |

In conformity with standards:

IEC 60947-5-1, EN 60947-5-1, IEC 60529, EN 60529.

Approvals:

UL 508

In conformity with requirements requested by:

Low Voltage Directive 2006/95/EC, Machinery Directive 2006/42/EC and Electromagnetic Compatibility 2004/108/EC.

Positive contact opening in conformity with standards:

IEC 60947-5-1, EN 60947-5-1, EN 60947-5-1, VDE 0660-206.

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) 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 (FAP)** near the code article. The switch must be actuated **at least with the positive opening force (CAP)**, near the code article.

⚠ **If not expressly indicated in this chapter, for the right installation and the correct utilization of all articles see requirements indicated from page 7/1 to page 7/12.**

Electrical data

| | |
|--|----------------------------------|
| Thermal current (I _{th}): | 16 A |
| Rated insulation voltage (U _i): | 250 Vac 300 Vdc |
| Rated impulse withstand voltage (U _{imp}): | 4 kV |
| Conditional short circuit current: | 1000 A according to EN 60947-5-1 |
| Protection against short circuits: | fuse 10 A 500 V type gG |
| Pollution degree: | 3 |
| Dielectric strength | 2000 Vac/min. |

Utilization categories

| | | | |
|--|-----|-----|-----|
| Alternate current: AC15 (50 ... 60 Hz) | | | |
| U _e (V) | 250 | 120 | |
| I _e (A) | 6 | 6 | |
| Direct current: DC13 | | | |
| U _e (V) | 24 | 125 | 250 |
| I _e (A) | 5 | 0,6 | 0,3 |

Data type approved by UL

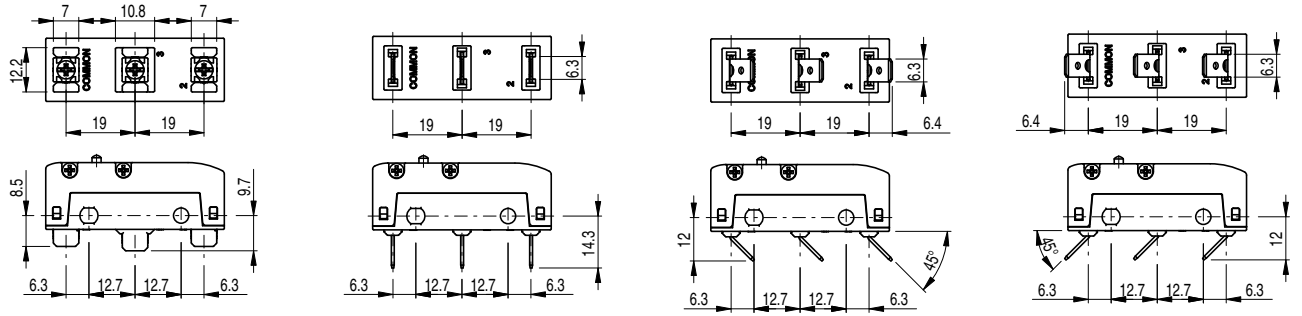
| | |
|------------------------|----------------------------|
| Utilization categories | Q300 (69 VA, 125-250 Vdc) |
| | A300 (720 VA, 120-300 Vac) |

In conformity with standard: UL 508

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



Terminals outline dimension



Screw terminals **V** with plate

Vertical faston **H** terminals

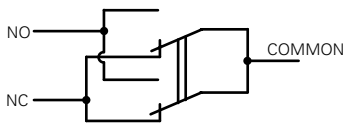
faston terminals **F**, right bending

faston terminals **G**, left bending (on request)

Note: H vertical faston terminals can be bent according to one's installation requirements.

We recommend to bend the faston with an angle not higher than 45° and to carry out this operation no more than 5 times.

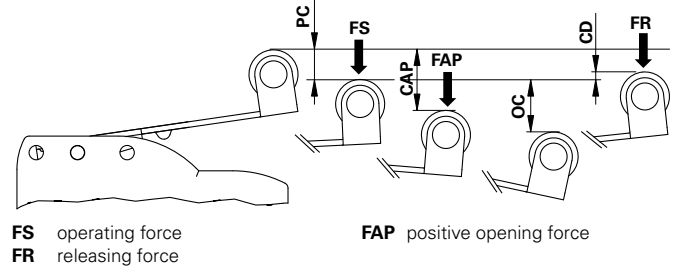
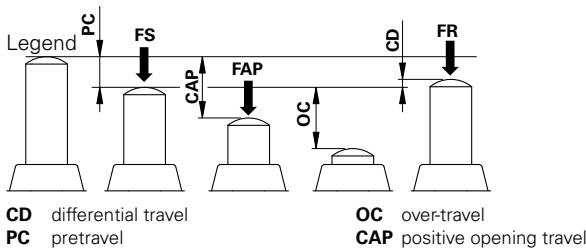
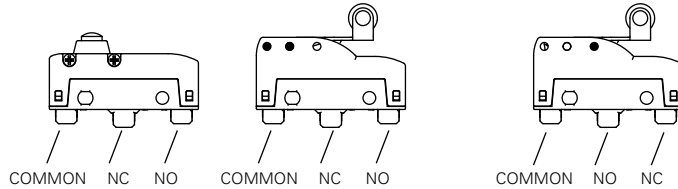
Wire diagram



Contacts with single interruption and double contacts

With direct and back direct action (F, D)

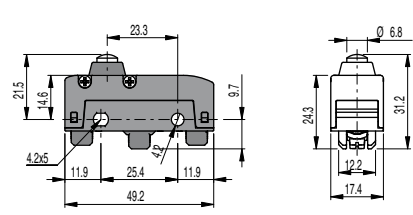
With inverted action (R)



Microswitches with direct action

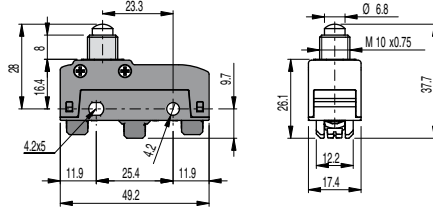
10 pcs packs

| | |
|--|--|
| | |
| <p>MK V11D01 1NO+1NC PC 0,5 mm FS 4 N OC 1,5 mm FR 3 N CD 0,05 mm</p> | <p>MK V11D02 1NO+1NC PC 0,5 mm FS 4 N OC 2 mm FR 3 N CD 0,05 mm</p> |
| <p>Max and min. speed page 7/11 - type 1</p> | |
| | |
| <p>MK V11D03 1NO+1NC PC 0,5 mm FS 4 N OC 2 mm FR 3 N CD 0,05 mm</p> | <p>MK V11D04 1NO+1NC PC 0,5 mm FS 4 N OC 2 mm FR 3 N CD 0,05 mm</p> |
| <p>Max and min. speed page 7/11 - type 1</p> | |



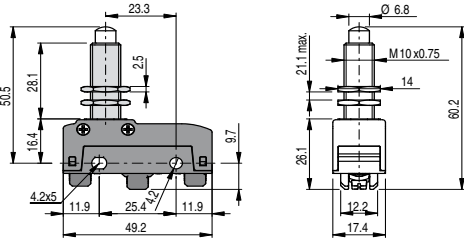
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|----------------------------|-----|---------|-----|------|
| MK V11D05 → 1NO+1NC | PC | 0,5 mm | FS | 4 N |
| | OC | 2 mm | FR | 3 N |
| | CD | 0,05 mm | FAP | 20 N |
| | CAP | 2,2 mm | | |

Max and min. speed page 7/11 - type 1



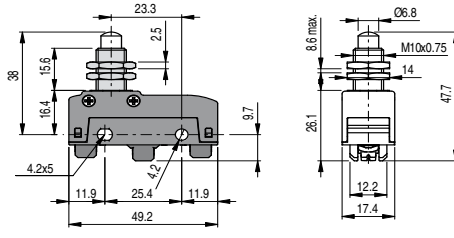
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| MK V11D06 → 1NO+1NC | PC | 0,5 mm | FS | 4 N |
| | OC | 3 mm | FR | 3 N |
| | CD | 0,05 mm | FAP | 20 N |
| | CAP | 2,2 mm | | |

Max and min. speed page 7/11 - type 1



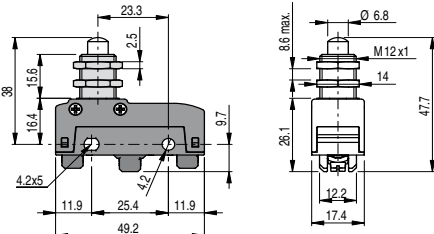
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| MK V11D08 → 1NO+1NC | PC | 0,5 mm | FS | 4 N |
| | OC | 5,5 mm | FR | 3 N |
| | CD | 0,05 mm | FAP | 20 N |
| | CAP | 2,2 mm | | |

Max and min. speed page 7/11 - type 1



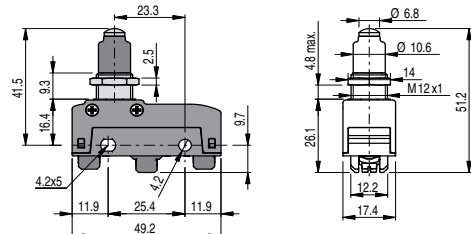
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|----------------------------|-----|---------|-----|------|
| MK V11D09 → 1NO+1NC | PC | 0,5 mm | FS | 4 N |
| | OC | 5,5 mm | FR | 3 N |
| | CD | 0,05 mm | FAP | 20 N |
| | CAP | 2,2 mm | | |

Max and min. speed page 7/11 - type 1



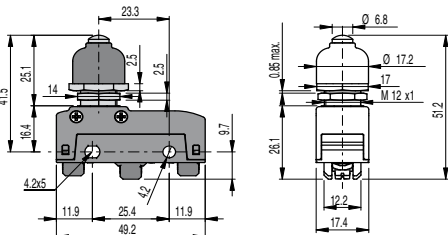
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|----------------------------|-----|---------|-----|------|
| MK V11D10 → 1NO+1NC | PC | 0,5 mm | FS | 4 N |
| | OC | 5,5 mm | FR | 3 N |
| | CD | 0,05 mm | FAP | 20 N |
| | CAP | 2,2 mm | | |

Max and min. speed page 7/11 - type 1



| | | | | |
|----------------------------|-----|---------|-----|-------|
| MK V11D12 → 1NO+1NC | PC | 0,5 mm | FS | 4,5 N |
| | OC | 5,5 mm | FR | 3 N |
| | CD | 0,05 mm | FAP | 20 N |
| | CAP | 2,2 mm | | |

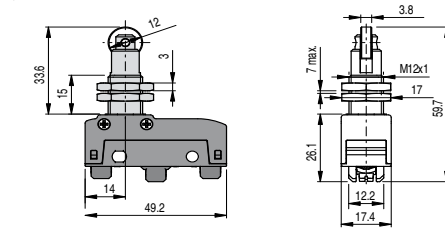
Max and min. speed page 7/11 - type 1



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|----------------------------|-----|---------|-----|------|
| MK V11D13 → 1NO+1NC | PC | 0,6 mm | FS | 6 N |
| | OC | 5,4 mm | FR | 4 N |
| | CD | 0,05 mm | FAP | 20 N |
| | CAP | 2,2 mm | | |

Max and min. speed page 7/11 - type 1

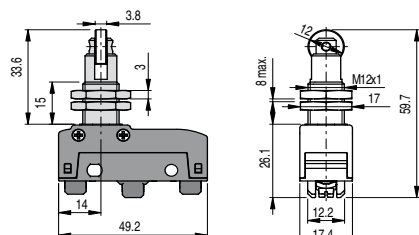
Fixed only by threaded head



| | | | | |
|----------------------------|-----|---------|-----|------|
| MK V11D15 → 1NO+1NC | PC | 0,5 mm | FS | 4 N |
| | OC | 5,5 mm | FR | 3 N |
| | CD | 0,05 mm | FAP | 20 N |
| | CAP | 2,2 mm | | |

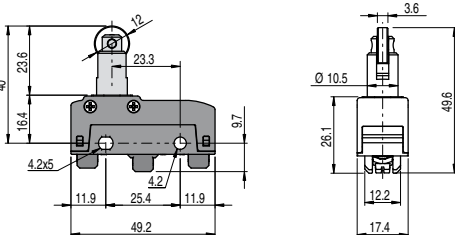
Max and min. speed page 7/11 - type 2

Fixed only by threaded head



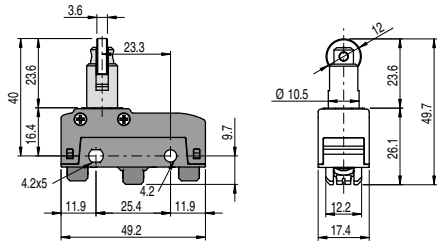
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| MK V11D17 → 1NO+1NC | PC | 0,5 mm | FS | 4 N |
| | OC | 5,5 mm | FR | 3 N |
| | CD | 0,05 mm | FAP | 20 N |
| | CAP | 2,2 mm | | |

Max and min. speed page 7/11 - type 2



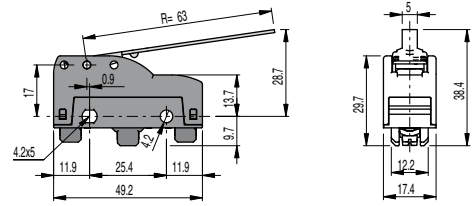
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| MK V11D18 → 1NO+1NC | PC | 0,5 mm | FS | 4 N |
| | OC | 5,5 mm | FR | 3 N |
| | CD | 0,05 mm | FAP | 20 N |
| | CAP | 2,2 mm | | |

Max and min. speed page 7/11 - type 2



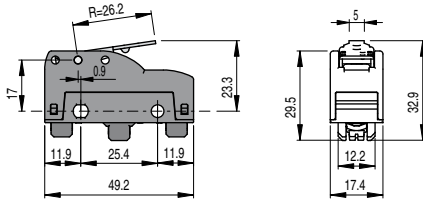
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|------------------|---------|------------|----------|
| MK V11D19 | 1NO+1NC | PC 0,5 mm | FS 4 N |
| | | OC 5,5 mm | FR 3 N. |
| | | CD 0,05 mm | FAP 20 N |
| | | CAP 2,2 mm | |

Max and min. speed page 7/11 - type 2



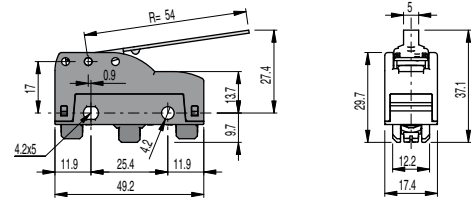
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|------------------|---------|-----------|-----------|
| MK V11D30 | 1NO+1NC | PC 9 mm | FS 0,65 N |
| | | OC 10 mm | FR 0,5 N |
| | | CD 1,1 mm | |

Max and min. speed page 7/11 - type 3



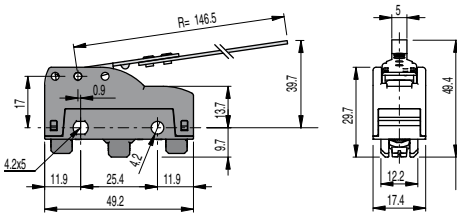
| | | | |
|------------------|---------|------------|-----------|
| MK V11D31 | 1NO+1NC | PC 4,54 mm | FS 1,66 N |
| | | OC 3,86 mm | FR 1,32 N |
| | | CD 0,42 mm | |

Max and min. speed page 7/11 - type 3



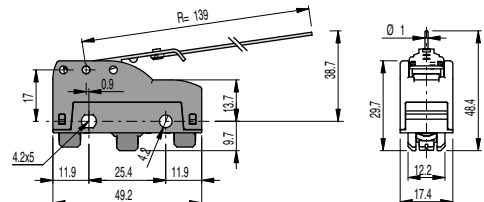
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|------------------|---------|-----------|-----------|
| MK V11D32 | 1NO+1NC | PC 7,7 mm | FS 0,76 N |
| | | OC 8,3 mm | FR 0,58 N |
| | | CD 0,9 mm | |

Max and min. speed page 7/11 - type 3



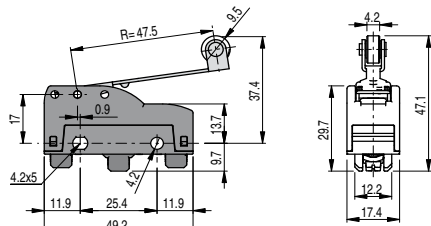
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|------------------|---------|------------|-----------|
| MK V11D35 | 1NO+1NC | PC 19 mm | FS 0,28 N |
| | | OC 16,7 mm | FR 0,22 N |
| | | CD 2,5 mm | |

Max and min. speed page 7/11 - type 3



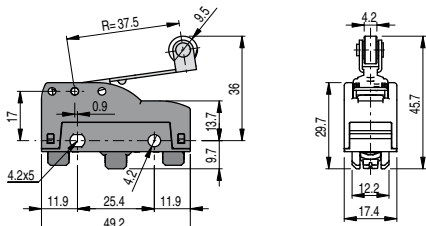
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|------------------|---------|-----------|-----------|
| MK V11D37 | 1NO+1NC | PC 19 mm | FS 0,08 N |
| | | OC 9,5 mm | FR 0,04 N |
| | | CD 2,3 mm | |

Max and min. speed page 7/11 - type 3



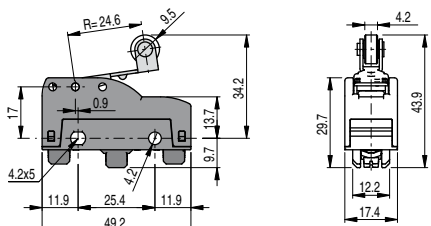
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|------------------|---------|-----------|-----------|
| MK V11D40 | 1NO+1NC | PC 6,7 mm | FS 0,86 N |
| | | OC 7,8 mm | FR 0,66 N |
| | | CD 0,8 mm | |

Max and min. speed page 7/11 - type 6



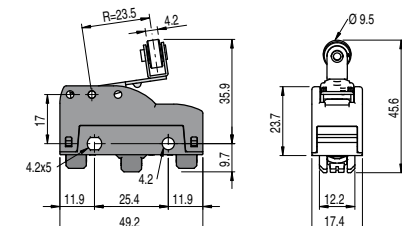
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| MK V11D42 | 1NO+1NC | PC 5,3 mm | FS 1,09 N |
| | | OC 5,7 mm | FR 0,84 N |
| | | CD 0,6 mm | |

Max and min. speed page 7/11 - type 6



| | | | |
|------------------|---------|-----------|-----------|
| MK V11D45 | 1NO+1NC | PC 3,5 mm | FS 1,66 N |
| | | OC 4,5 mm | FR 1,28 N |
| | | CD 0,4 mm | |

Max and min. speed page 7/11 - type 6



| | | | |
|------------------|---------|-----------|-----------|
| MK V11D46 | 1NO+1NC | PC 3,5 mm | FS 1,66 N |
| | | OC 4,5 mm | FR 1,28 N |
| | | CD 0,4 mm | |

Max and min. speed page 7/11 - type 6

Items with code on the green background are available in stock

It switch → ← It does not switch

| | | | |
|------------------|---------|-----------|-----------|
| MK V11D47 | 1NO+1NC | PC 3,5 mm | FS 1,66 N |
| | | OC 4 mm | FR 1,28 N |
| | | CD 0,4 mm | |

Max and min. speed page 7/11 - type 6

| | | | |
|------------------|---------|---------------|--|
| MK V11D49 | 1NO+1NC | Hand operated | |
|------------------|---------|---------------|--|

Max and min. speed page 7/11 - type 3

| | | | |
|------------------|---------|-----------|-----------|
| MK V11D53 | 1NO+1NC | PC 7,7 mm | FS 0,76 N |
| | | OC 8,9 mm | FR 0,58 N |
| | | CD 0,9 mm | |

Max and min. speed page 7/11 - type 6

| | | | |
|------------------|---------|-----------|-----------|
| MK V11D59 | 1NO+1NC | PC 2,5 mm | FS 2,3 N |
| | | OC 4,5 mm | FR 1,77 N |
| | | CD 0,2 mm | |

Max and min. speed page 7/11 - type 6

Microswitches with inverted action **10 pcs packs**

| | | | |
|------------------|---------|-----------|----------|
| MK V11R30 | 1NO+1NC | PC 4,4 mm | FS 0,6 N |
| | | OC 14 mm | FR 0,4 N |
| | | CD 1 mm | |

Max and min. speed page 7/11 - type 4

| | | | |
|------------------|---------|------------|-----------|
| MK V11R31 | 1NO+1NC | PC 0,7 mm | FS 1,47 N |
| | | OC 6,01 mm | FR 0,72 N |
| | | CD 0,23 mm | |

Max and min. speed page 7/11 - type 4

| | | | |
|------------------|---------|------------|----------|
| MK V11R32 | 1NO+1NC | PC 3,7 mm | FS 0,7 N |
| | | OC 11,8 mm | FR 0,5 N |
| | | CD 0,8 mm | |

Max and min. speed page 7/11 - type 4

| | | | |
|------------------|---------|------------|----------|
| MK V11R35 | 1NO+1NC | PC 14,3 mm | FS 0,3 N |
| | | OC 25,7 mm | FR 0,2 N |
| | | CD 3,2 mm | |

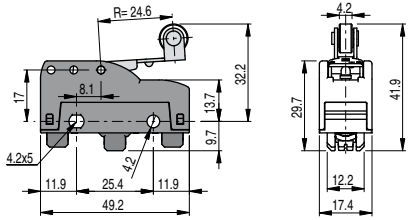
Max and min. speed page 7/11 - type 7

| | | | |
|------------------|---------|------------|----------|
| MK V11R40 | 1NO+1NC | PC 3,4 mm | FS 0,8 N |
| | | OC 10,3 mm | FR 0,5 N |
| | | CD 0,7 mm | |

Max and min. speed page 7/11 - type 7

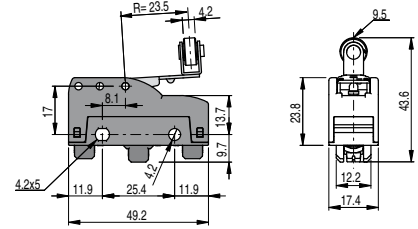
| | | | |
|------------------|---------|-----------|----------|
| MK V11R42 | 1NO+1NC | PC 2,7 mm | FS 1,2 N |
| | | OC 7,9 mm | FR 1,7 N |
| | | CD 0,5 mm | |

Max and min. speed page 7/11 - type 7



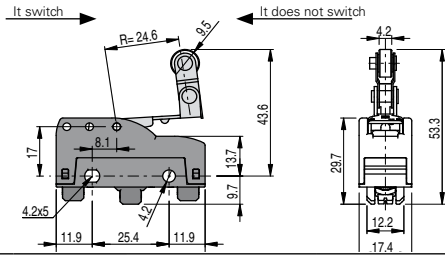
| | | | |
|------------------|---------|-----------|----------|
| MK V11R45 | 1NO+1NC | PC 1,5 mm | FS 1,7 N |
| | | OC 5,5 mm | FR 1 N |
| | | CD 0,3 mm | |

Max and min. speed page 7/11 - type 7



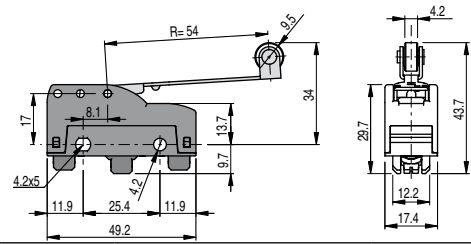
| | | | |
|------------------|---------|-----------|-----------|
| MK V11R46 | 1NO+1NC | PC 3,5 mm | FS 1,5 N |
| | | OC 5,4 mm | FR 1,45 N |
| | | CD 0,2 mm | |

Max and min. speed page 7/11 - type 7



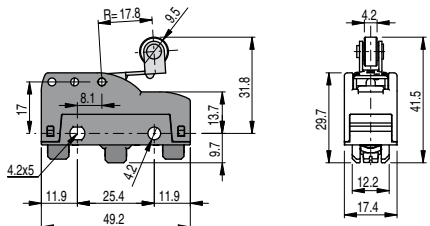
| | | | |
|------------------|---------|-----------|----------|
| MK V11R47 | 1NO+1NC | PC 1,7 mm | FS 1,7 N |
| | | OC 5,3 mm | FR 1 N |
| | | CD 0,3 mm | |

Max and min. speed page 7/11 - type 7



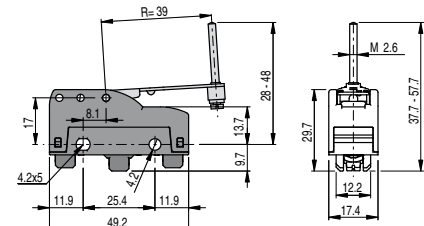
| | | | |
|------------------|---------|------------|----------|
| MK V11R53 | 1NO+1NC | PC 4,3 mm | FS 0,8 N |
| | | OC 11,6 mm | FR 0,4 N |
| | | CD 0,8 mm | |

Max and min. speed page 7/11 - type 7



| | | | |
|------------------|---------|-----------|----------|
| MK V11R59 | 1NO+1NC | PC 1,5 mm | FS 2,4 N |
| | | OC 3,9 mm | FR 1,3 N |
| | | CD 0,3 mm | |

Max and min. speed page 7/11 - type 7

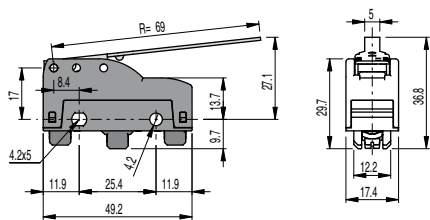


| | | | |
|------------------|---------|-----------|----------|
| MK V11R60 | 1NO+1NC | PC 2,7 mm | FS 1,2 N |
| | | OC 9,2 mm | FR 0,6 N |
| | | CD 0,5 mm | |

Max and min. speed page 7/11 - type 4

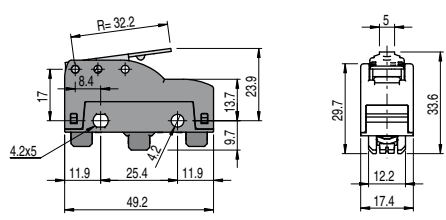
Microswitches with back direct action

10 pcs packs



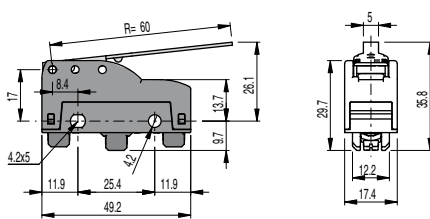
| | | | |
|------------------|---------|------------|----------|
| MK V11F30 | 1NO+1NC | PC 2,7 mm | FS 0,6 N |
| | | OC 12,9 mm | FR 0,5 N |
| | | CD 0,35 mm | |

Max and min. speed page 7/11 - type 5



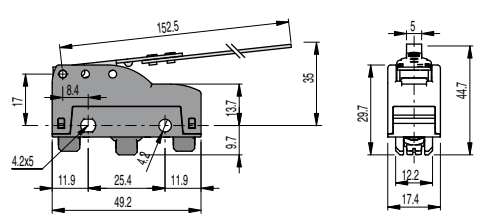
| | | | |
|------------------|---------|-------------|------------|
| MK V11F31 | 1NO+1NC | PC 1,63 mm | FS 1,76 N |
| | | OC 4,64 mm | FR 1,08 N |
| | | CD 0,17 mm | FAP 5,78 N |
| | | CAP 5,72 mm | |

Max and min. speed page 7/11 - type 5



| | | | |
|------------------|---------|------------|----------|
| MK V11F32 | 1NO+1NC | PC 2,5 mm | FS 0,7 N |
| | | OC 11,5 mm | FR 0,6 N |
| | | CD 0,3 mm | |

Max and min. speed page 7/11 - type 5



| | | | |
|------------------|---------|------------|-----------|
| MK V11F35 | 1NO+1NC | PC 7,5 mm | FS 0,25 N |
| | | OC 25,9 mm | FR 0,2 N |
| | | CD 1,3 mm | |

Max and min. speed page 7/11 - type 5

Items with code on the green background are available in stock

| | | | |
|------------------|---------|------------|-----------|
| MK V11F40 | 1NO+1NC | PC 2,4 mm | FS 0,85 N |
| | | OC 10,4 mm | FR 0,65 N |
| | | CD 0,25 mm | |

Max and min. speed page 7/11 - type 8

| | | | |
|------------------|---------|-----------|-----------|
| MK V11F42 | 1NO+1NC | PC 1,6 mm | FS 1 N |
| | | OC 8,4 mm | FR 0,7 N |
| | | CD 0,2 mm | FAP 4,9 N |
| | | CAP 9 mm | |

Max and min. speed page 7/11 - type 8

| | | | |
|------------------|---------|------------|-----------|
| MK V11F45 | 1NO+1NC | PC 1,1 mm | FS 1,3 N |
| | | OC 6,6 mm | FR 0,9 N |
| | | CD 0,1 mm | FAP 6,9 N |
| | | CAP 6,3 mm | |

Max and min. speed page 7/11 - type 8

| | | | |
|------------------|---------|------------|-----------|
| MK V11F46 | 1NO+1NC | PC 1,1 mm | FS 1,3 N |
| | | OC 6,6 mm | FR 0,9 N |
| | | CD 0,1 mm | FAP 6,9 N |
| | | CAP 6,3 mm | |

Max and min. speed page 7/11 - type 8

| | | | |
|------------------|---------|------------|-----------|
| MK V11F47 | 1NO+1NC | PC 1,1 mm | FS 1,3 N |
| | | OC 5,6 mm | FR 0,9 N |
| | | CD 0,1 mm | FAP 6,9 N |
| | | CAP 6,3 mm | |

Max and min. speed page 7/11 - type 8

| | | | |
|------------------|---------|-----------|-----------|
| MK V11F49 | 1NO+1NC | PC 1,5 mm | FS 1 N |
| | | OC 7,5 mm | FR 0,7 N |
| | | CD 0,2 mm | FAP 4,8 N |
| | | CAP 9 mm | |

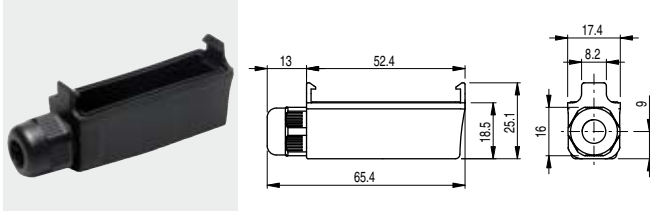
Max and min. speed page 7/11 - type 5

| | | | |
|------------------|---------|------------|----------|
| MK V11F53 | 1NO+1NC | PC 2,5 mm | FS 0,7 N |
| | | OC 11,5 mm | FR 0,6 N |
| | | CD 0,3 mm | |

Max and min. speed page 7/11 - type 8

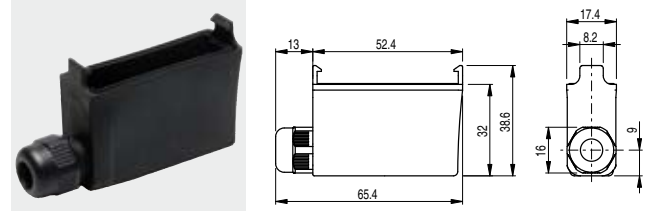
| | | | |
|------------------|---------|------------|-----------|
| MK V11F59 | 1NO+1NC | PC 0,8 mm | FS 1,7 N |
| | | OC 5,2 mm | FR 1,3 N |
| | | CD 0,08 mm | FAP 8,9 N |
| | | CAP 4,9 mm | |

Max and min. speed page 7/11 - type 8

Protections (terminals covers)
10 pcs packs


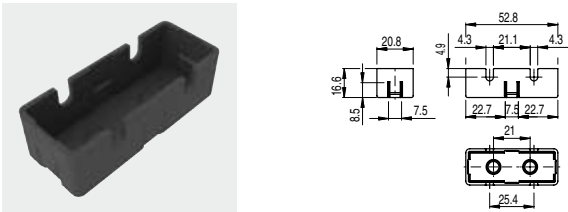
Protection terminal cover for screw terminals snap-in assembled and with wire trap cable gland. It allows the installation of more switches side by side.

| Article | Description | Protection degree |
|-----------|---|-------------------|
| VF MKCV11 | Protection terminal cover without gasket for multipolar cables from Ø 5 to Ø 7,5 mm | IP40 |
| VF MKCV12 | Protection terminal cover without gasket for multipolar cables from Ø 4 to Ø 7,5 mm | IP40 |
| VF MKCV13 | Protection terminal cover without gasket for multipolar cables from Ø 2 to Ø 5,5 mm | IP40 |
| VF MKCV22 | Protection terminal cover with gasket for multipolar cables from Ø 4 to Ø 7,5 mm | IP65 |
| VF MKCV23 | Protection terminal cover with gasket for multipolar cables from Ø 2 to Ø 5,5 mm | IP65 |

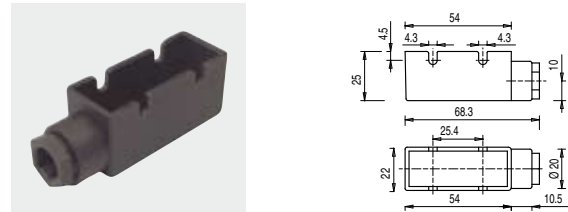


Protection terminal cover for vertical faston terminals snap-in assembled and with wire trap cable gland. It allows the installation of more switches side by side.

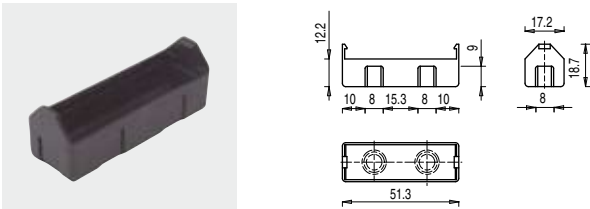
| Article | Description | Protection degree |
|-----------|---|-------------------|
| VF MKCH11 | Protection terminal cover without gasket for multipolar cables from Ø 5 to Ø 7,5 mm | IP40 |
| VF MKCH12 | Protection terminal cover without gasket for multipolar cables from Ø 4 to Ø 7,5 mm | IP40 |
| VF MKCH13 | Protection terminal cover without gasket for multipolar cables from Ø 2 to Ø 5,5 mm | IP40 |
| VF MKCH22 | Protection terminal cover with gasket for multipolar cables from Ø 4 to Ø 7,5 mm | IP65 |
| VF MKCH23 | Protection terminal cover with gasket for multipolar cables from Ø 2 to Ø 5,5 mm | IP65 |



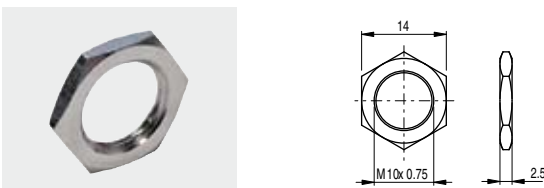
| Article | Description | Protection degree |
|---------|---|-------------------|
| VF C01 | Protection terminal cover for screw terminals | IP20 |



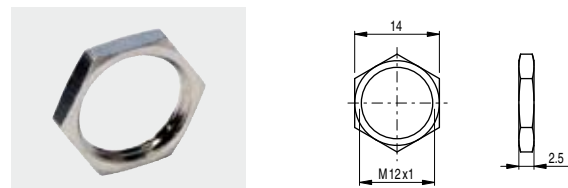
| Article | Description | Protection degree |
|---------|---|-------------------|
| VF C02 | Protection terminal cover for screw terminals with cable gland PG9 for multipolar cables from Ø 5 to Ø 7 mm | IP40 |



| Article | Description | Protection degree |
|---------|---|-------------------|
| VF C03 | Protection terminal cover for screw terminals snap-in assembled. It allows the installation of more switches side by side | IP20 |

Accessories
10 pcs packs


| Article | Description |
|---------|---|
| VF AC83 | Hexagonal threaded nut M10 x 0,75 for microswitches |



| Article | Description |
|---------|--|
| VF AC72 | Hexagonal threaded nut M12 x 1 for microswitches |

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