

Description



Microswitches of MK series have been developed in order to add new features to traditional and tested microswitches of Pizzato Elettrica.

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.

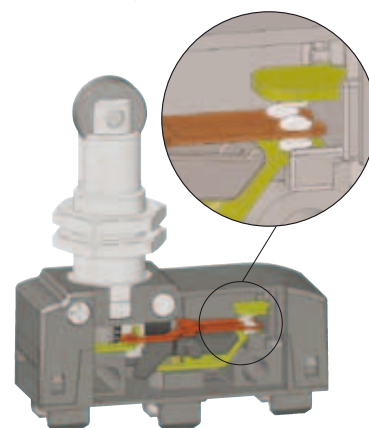
Contact block reliability

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 $fe \cong x^2$. This means that if in a certain situation the probability of a single interruption failure x is equal, for instance, to 1×10^{-4} (1 failed interruption every 10,000) we will have:

- for type A one failed commutation every 10,000.
- for type B one failed commutation every 100,000,000

Type	Diagram	Description	Contact resistance R	Failure probability fe
A C u s t o m a r y microswitch		mobile contact, single interruption	$R=R_c$	$fe=x$
B Pizzato MK series microswitch		contacts with single interruption and double contacts	$R=R_c/2$	$fe \cong x^2$

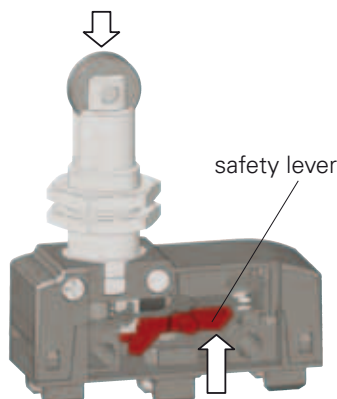


Extended temperature range

-40°C

For the new MK series versions with extended temperature range are available on request. 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



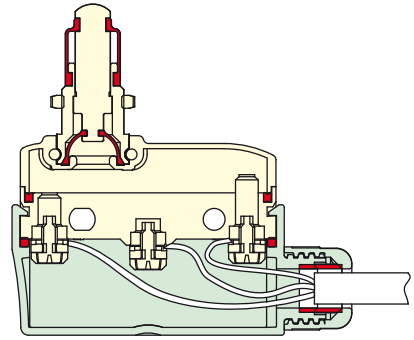
All microswitches that have the symbol \ominus beside the code are with positive opening, therefore suitable for safety applications. These microswitches are provided with a rigid connection between button and NC contacts, which are opened by force through a strong/sturdy internal safety lever.

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

Protection degree IP65

By installing microswitches MK ●●●● 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 button (internal + external). ex. MK ●●2●12 or MK ●●2●13.

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



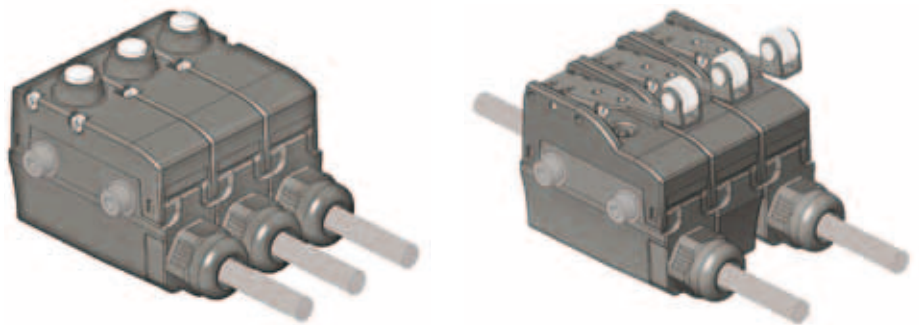
Clamping screw plates for different diameter cables (MK V●)



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.

Stackable terminal covers with wiretrap cable gland

New terminal covers supplied with wiretrap 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 154.



Orientable actuators



Thanks to the new patented lateral fixing system, 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.