

# For Your Safety

The FCN series limit switches comply with the followings Directives and Norms:

2014/35/UE	Low voltage Directive
2006/42/CE	Machine Directive
2011/65/UE	RoHS
CEI EN 60947-1	Low-voltage switchgear and controlgear
CEI EN 60947-5-1	Control circuit devices
CEI EN 60204-1	Safety of machinery
CEI EN 60529	Degrees of protection



The range of FCN series limit switches is guaranteed by our EC Certificate of Conformity, available upon request, in which it is declared that such product was created by RAVIOLI in accordance to defined and recognised Safety Regulations, and in compliance with the Quality standards stated in our ISO 9001:2008 Quality System Certificate.

## Respect for people and environment

Ravioli activity and production are focusing on the respect of people, following the standards which are defined in our Code of Ethic Behaviour. Such products have been developed to improve the safety of people using them, and they are free from harmful substances, in the respect of environment.

## Installation and maintenance requirements

### INSTALLATION AND WIRING

The limit switches must be installed by qualified personnel, in compliance with the current safety norms. Before wiring, the machine power supply must compulsorily be interrupted. Correct installation calls for working temperatures from -20°C to +60°C. The limit switch must not be used in any area which turn out to be potentially explosive, corrosive or with high sodium chloride contents. Acid, oil and solvent may cause the device deterioration; therefore it is recommended not to use either oil or fat to lubricate any part of the limit switch. The wiring installation must be completed and tested according to the current norms, in conformity with the electrical wiring diagram of the machine. After the installation, it is compulsory to check if

Operations for limit switch installation:

- remove the cover by loosening the retaining screws
- connect the limit switch shaft to the external drive element by using a flexible joint, the male connection or the cog wheels, (page 6) in order to avoid any misalignment between the shafts
- fix firmly the limit switches by using the baseplate or the flange (page 6) to prevent it from anomalous vibrations.

Wiring Operations:

- introduce the multipolar cable into the special cable entry
- strip the cable for electrical connection to the microswitches and potentiometer
- tape the initial part of the cable
- lock the cable in the cable entry
- carry out the electrical connection by tightening the microswitch screws to maximum torque of 0,8 Nm
- in case a potentiometer as well as any other sensors are present, introduce the multipolar cable in the cable entry, tape and lock the cable in the gland; then connect properly the wires.
- set the position of the cams by adjusting the regulation screws (page 3)
- regulate the potentiometer (page 4)
- replace the cover and make sure that the gasket is correctly positioned in its housing.

### MAINTENANCE

Maintenance Operations:

- check if both the screws on the cover and the inner clamps are correctly tightened
- check if the multipolar cable is secured in the cable entry
- check wiring conditions
- check the integrity of the gasket inside the cover
- check that the drive system is functioning correctly and the shafts are in alignment
- check that the limit switches are safely fixed
- check the integrity of the box

**RAVIOLI S.p.a.** declines any responsibility for damage deriving from incorrect installation or improper use of the product.