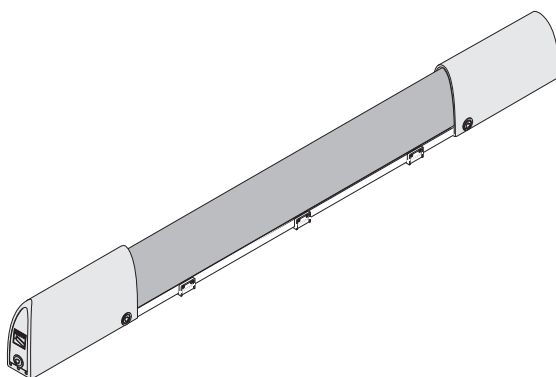


## Sensitive safety-edge

FA01753-EN






**DFWN1500 / 1700 / 2000 / 2500**  
**DFWN1500N / 1700N / 2000N / 2500N**

INSTALLATION MANUAL

EN English

**IMPORTANT SAFETY INSTRUCTIONS WHEN INSTALLING**  
**WARNING! IMPROPER INSTALLATION MAY RESULT IN SERIOUS DAMAGE, FOLLOW ALL INSTALLATION INSTRUCTIONS**  
**THIS MANUAL IS EXCLUSIVELY INTENDED FOR PROFESSIONAL, SKILLED STAFF**

**LEGEND**

-  Parts to read carefully.
-  Parts about safety.
-  What to tell users.

**REFERENCE REGULATIONS**

The product complies to the reference regulations in effect.

**DESCRIPTION**

This product is designed and built by Came S.p.A. in conformity with current safety standards, and is PR&S n.04.363 certified for vertical and horizontal applications.

The sensitive safety-edge consists of an aluminum support rail and a rubber edge and two rubber end caps. The rubber edge houses two joined and jointed lever mechanism and one  $\varnothing$  1.3 mm steel cable.

**Intended use**

The sensitive safety-edge is made for preventing crushing or entrapment by gates. Detection happens along the entire length of the edge, including the end caps.

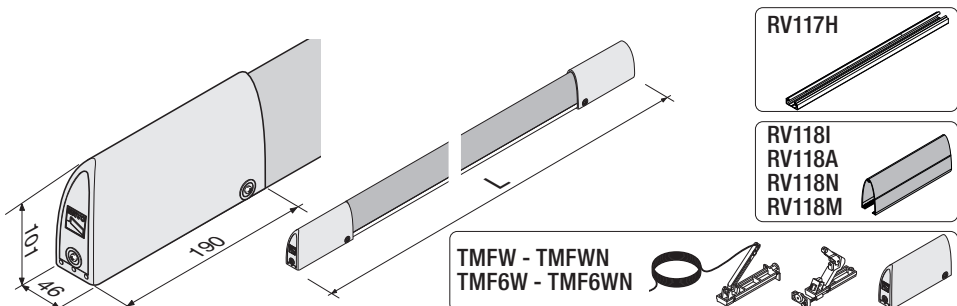
-  Any installation and/or use other than that specified in this manual is forbidden.
-  This manual is only intended for qualified technical staff or other persons trained in its installation.

**Technical data**

Type	DFWN	DFI
Protection rating (IP)	54 (fitted vertically) 44 (fitted horizontally)	56
Power supply (V)	-	12-24 AC / DC
Fuse (mA)	-	630
Operating temperature (°C)	-20 ÷ +55	-20 ÷ +55
Apparatus class	II	II
Materials	CCA 48SHA heat-resistant rubber edge SEBS 60SHA heat-resistant rubber end caps POM jointed levers Steel cable	Self-extinguishing insulating tech-polymer casing

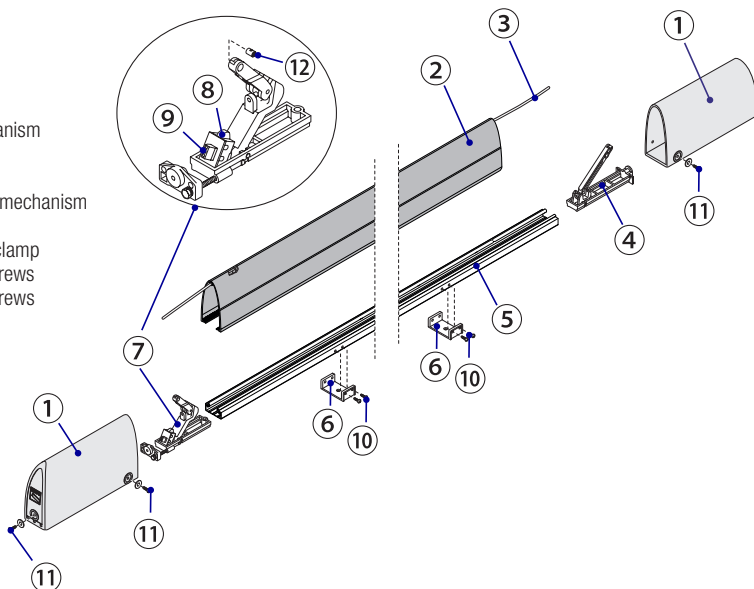
**Dimensions (mm)**

DFWN1500	DFWN1700	DFWN2000	DFWN2500	DFWN	DFWN
DFWN1500N	DFWN1700N	DFWN2000N	DFWN2500N	(RV117H+RV118I+TMFW)	(RV117H+RV118A+TMF6W)
				(RV117H+RV118N+TMFWN)	(RV117H+RV118M+TMF6WN)
1500	1700	2000	2500	4,000 max	6,000 max



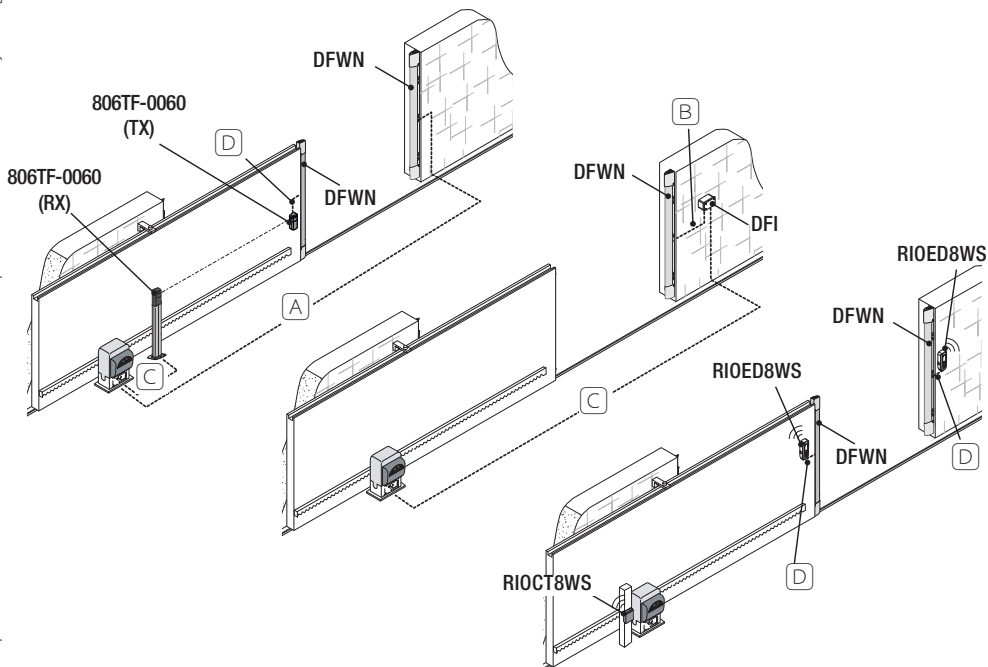
## Main components

1. Rubber caps
2. Rubber edge
3. Steel cable
4. Cable clamping mechanism
5. Aluminum rail
6. Fastening bracket
7. Micro-switch housing mechanism
8. Micro
9. Electrical connection clamp
10. UNI6954 Ø 2.9x13 screws
11. UNI6954 Ø 3.9x13 screws
12. Fastening clamp



## Standard installation

Connection	Cable type	Cable section
A C - NC		2 X 0.5 mm <sup>2</sup>
B C - NO - NC	FROR CEI 20-22	3 X 0.5 mm <sup>2</sup>
C C - NC Power supply 12/24 V	CEI EN 50267-2-1	4 X 0.5 mm <sup>2</sup>
D C - NC (Resistive 8.2 KOhm)		2 X 0.5 mm <sup>2</sup>

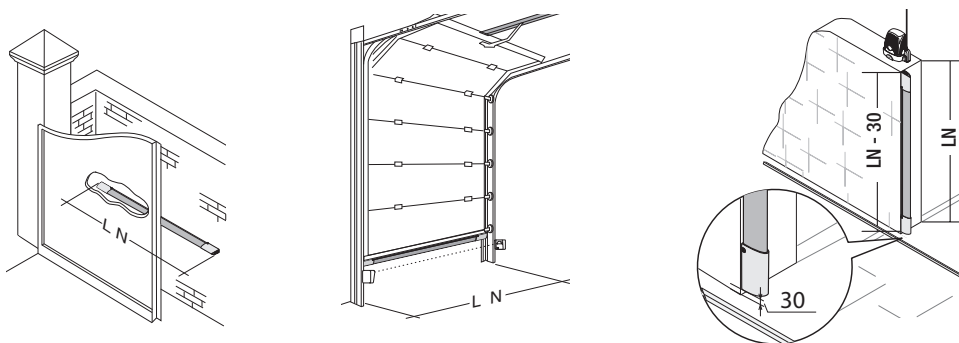


## INSTALLATION

△ Before installing, check that the sensitive safety-edge is to be fastened onto a suitable surface.

### Setting up the sensitive safety-edge.

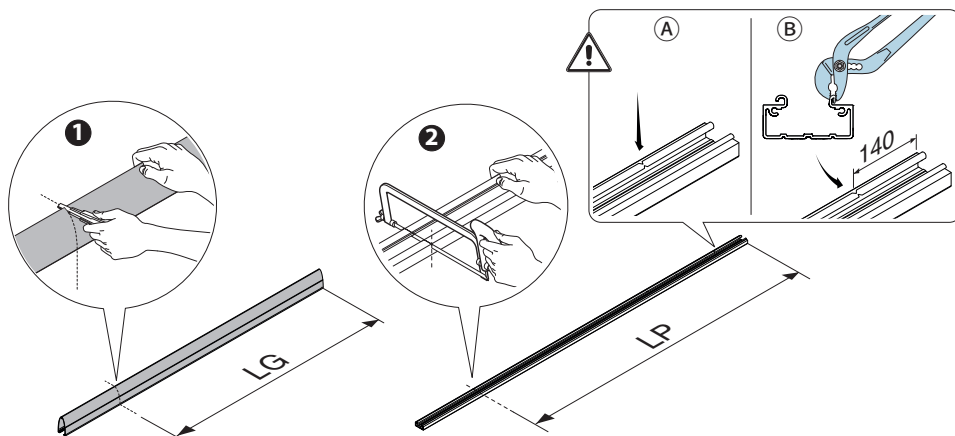
For non standard length sensitive safety-edges, establish the LN or nominal length of the area you wish to protect.  
Warning! With vertical fittings, reduce the LN by 30 to the edge from scraping the ground.



Cut the rubber edge  $LG = LN - 285 \text{ mm}$  ❶.

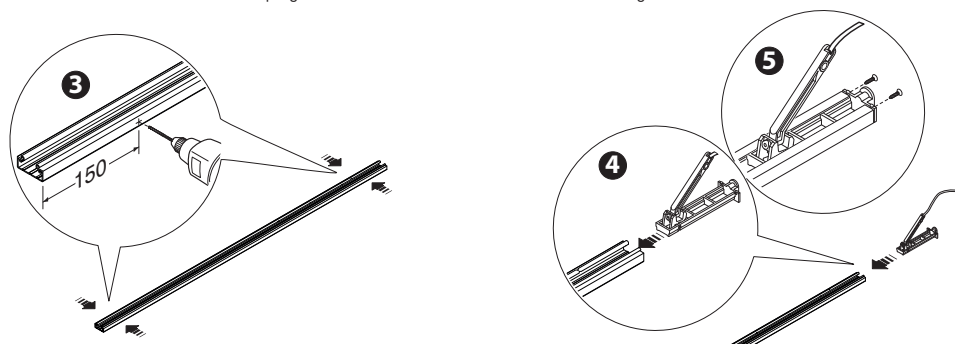
△ Products DFWN1500/1700/2000/2500 have a narrowing on the aluminum rail ❷. When assembling, mark the aluminum rail 140 mm from the end. Use channellock pliers ❸.

Cut the aluminum rail at the opposite end of the point marked  $LP = LN - 40 \text{ mm}$  ❹.

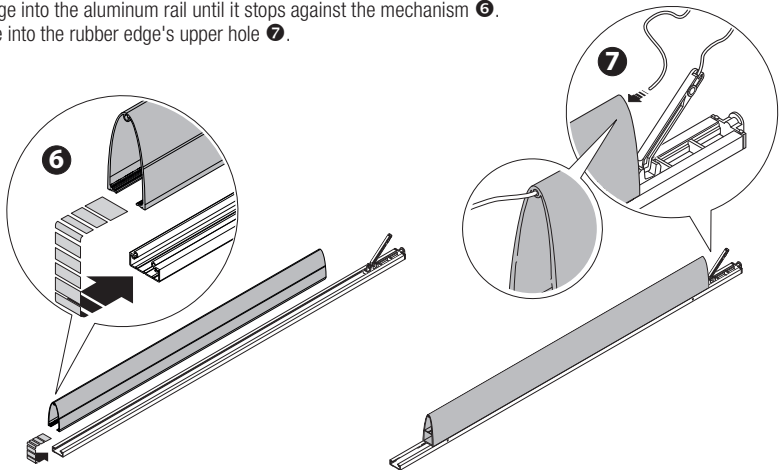


Use a  $\varnothing 3\text{-mm}$  bit to drill the rail on either side for fitting the end caps ❺.

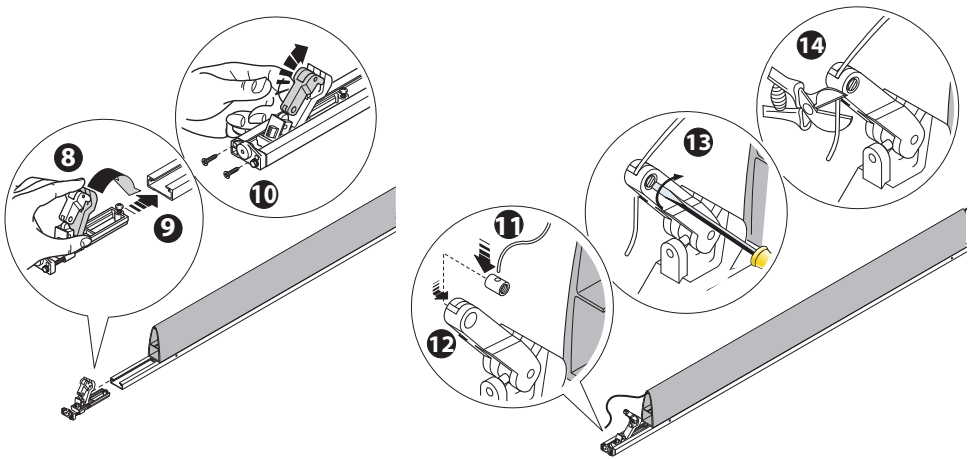
Fit marked end of the cable-clamping mechanism into the rail ❻ and fasten it using the two UNI6955  $\varnothing 3.9 \times 13$  screws ❼.




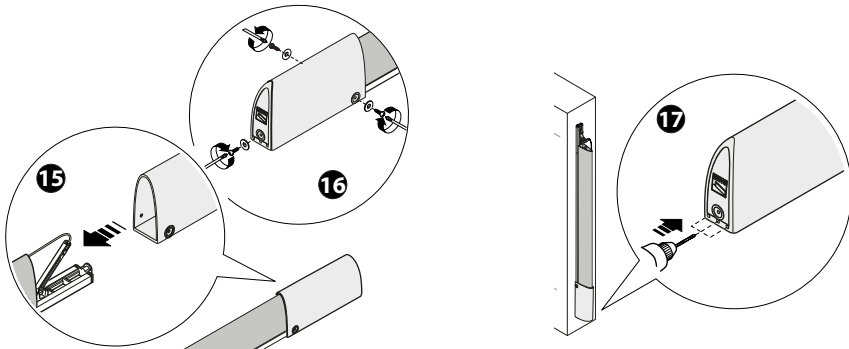
Fit the rubber edge into the aluminum rail until it stops against the mechanism **6**.  
Fit the steel cable into the rubber edge's upper hole **7**.



Release the lever of the micro-switch housing mechanism by gently pressing down **8**, fit the mechanism into the rail **9** and fasten it using the two UNI6955  $\varnothing$  3.9x13 screws **10**.  
Fit the steel cable into the clamp hole **11** and fit the clamp into the lever **12**.  
Tighten the cable by turning the grub screw in the clamp. **13** Cut the excess cable **14**.



Fit the end cap on the side of the cable clamping mechanism **15** and fasten it using the UNI 6954  $\varnothing$  3.9 x 13 bolts and washers **16**.  
 When fitting vertically, to prevent moisture build-up inside the sensitive safety-edge, use a  $\varnothing$  4 mm bit to drill the marked holes on the end cap, before actually fitting it **17**.



## Fastening the sensitive safety-edge

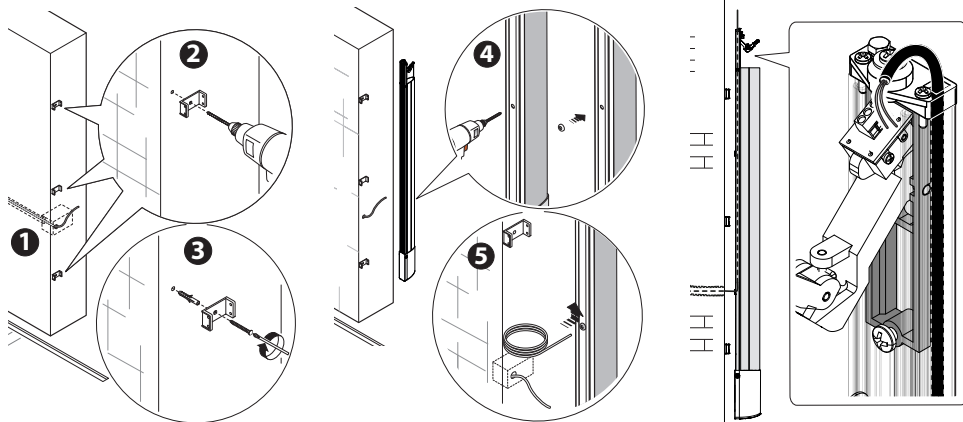
Set up a  $\varnothing$  10-mm corrugated connection tube ①.

Place the braces at equal distances from the center, mark and drill the fastening holes ②. Fasten the braces using  $\varnothing$  4-mm dowels and screws ③.

If necessary (for example, with metal structures), use washer head self tapping  $\varnothing$  3.9-mm screws.

Drill the back of the aluminum rail and set up the passing of the electrical cable ④. Items: DFWN1500/1700/2000/2500 already have pre-drilled holes.

Use a probe to help the cable along the rail ⑤.



Place the sensitive-safety edge onto the braces (with the micro-switch holding mechanism facing up), drill on either side of the rail using a  $\varnothing$  2.5 mm bit ⑥ and fasten it using the UNI 6954  $\varnothing$  2.9x13 screws ⑦.

Make the electrical connections depending on the type of system (see electrical connections).

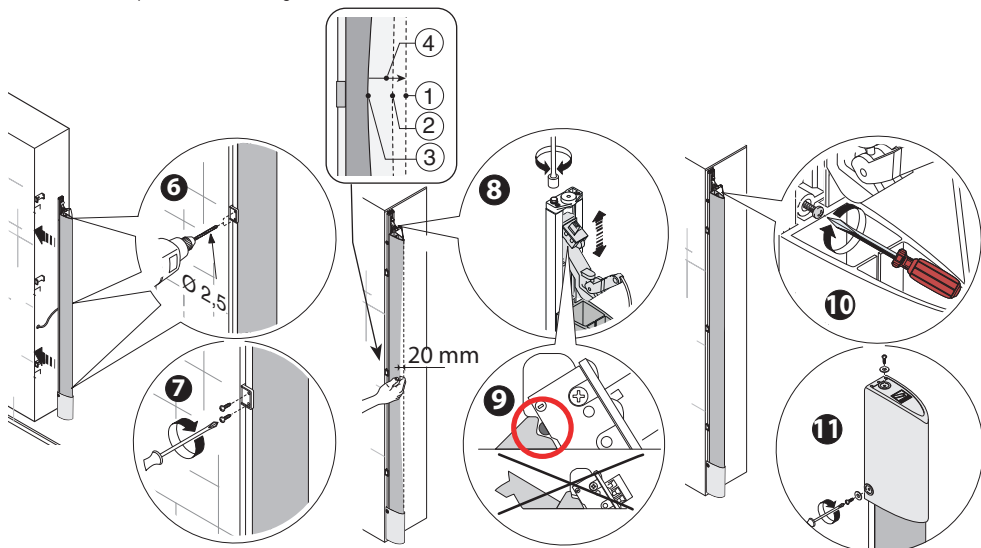
Adjust the tautness of the cable by turning the grub-screw on the micro-switch housing mechanism ⑧ and check whether the micro-switch is works correctly: it should activate after maximum 20 mm of deformation ⑨.

PROPER OPERATION:

- initial position ①;
- micro-switch activation point (20 mm from the initial position), response time = 0.2 seconds ②;
- maximum crushing position = 45 mm from the initial position ③;
- initial position restoring time = 2 seconds ④.

Fasten the mechanism using a screw ⑩.

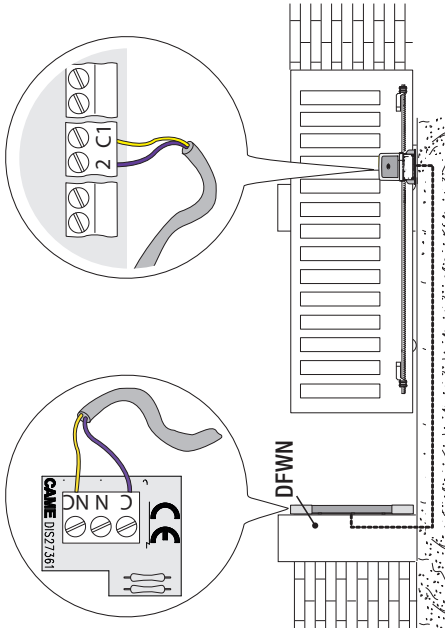
Fit the end cap and fasten it using UNI6954  $\varnothing$  3.9x13 screws and washers ⑪.



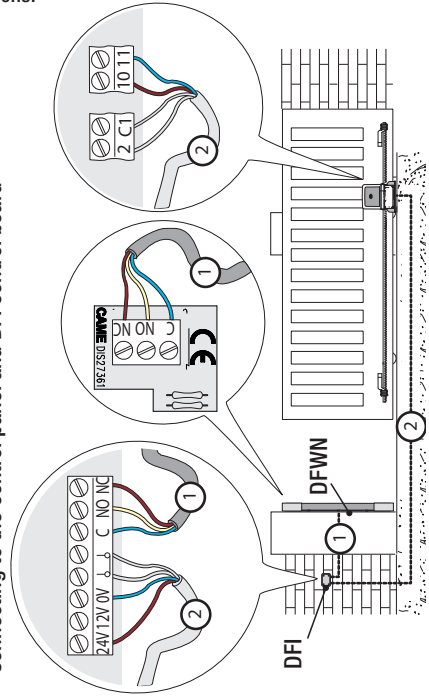
## ELECTRICAL CONNECTIONS

△ Lay the corrugated tubes needed for making the connections.

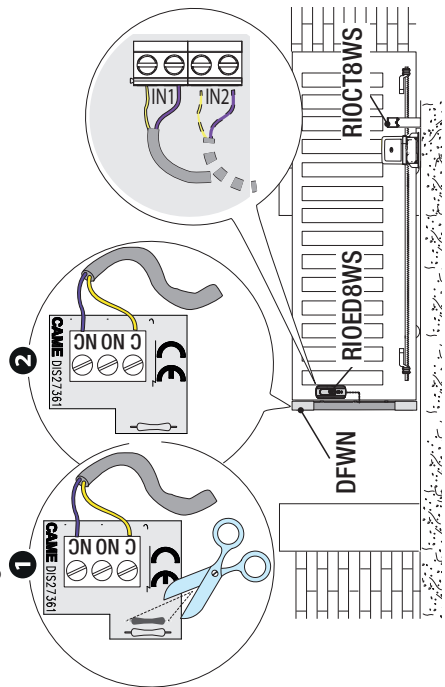
### Connecting to the control panel



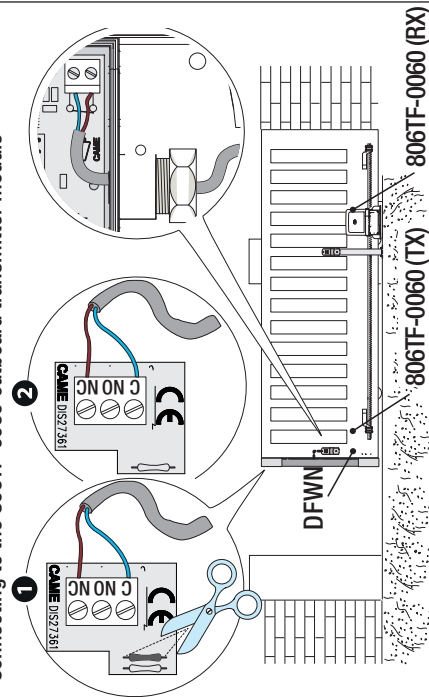
### Connecting to the control panel and DFI control board



### Connecting to the wireless module



### Connecting to the 806TF-0060 outboard transmitter module



## MAINTENANCE

☞ Before any maintenance jobs, cut off the mains power, to prevent possible hazards from unwanted movements by the operator.

☞ The sensitive safety-edge does not need special maintenances, but periodical twice yearly checks are recommended, as concerns the state of the rubber edge and to check how the device is performing.

You need to clean the device using a vacuum cleaner or a moist cloth. Do not use solvents or detergents.

⚠ Any modifications to this safety device may result in hazards.

## TROUBLESHOOTING

Problem	Possible cause	Checks and fixes
The edge does not activate	A cable is damaged	Call for technical assistance (the operator must not be used in the meantime)
The sensitive safety-edge activates late	The micro-switch is mis-calibrated	Call assistance
The operator does not shut.	The edge is engaged A cable is damaged	Check that no objects are resting against the edge or that it is not deformed (call for assistance).

## DISMANTLING AND DISPOSAL

Always make sure you comply with local laws before dismantling and disposing of the product. The packaging materials (cardboard, plastic, and so on) should be disposed of as solid household waste, and simply separated from other waste for recycling.

Whereas other components (control boards, batteries, transmitters, and so on) may contain hazardous pollutants. These must therefore be disposed of by authorized, certified professional services.

**DO NOT DISPOSE OF IN NATURE!**

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