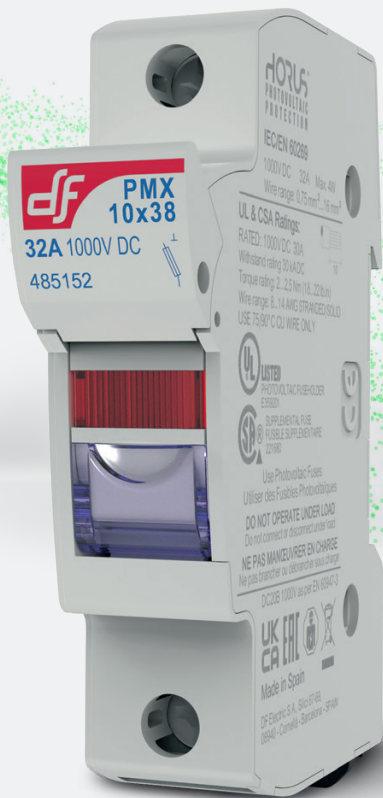


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PHOTOVOLTAIC  
PROTECTION



# PHOTOVOLTAIC

FUSE LINKS & FUSE HOLDERS FOR PHOTOVOLTAIC APPLICATIONS

## PMX 1000V DC

PV fuse holder  
for cylindrical fuse links



10x38



14x51



22x65

# PROTECTING THE WORLD



|   |
|---|
|   |
| <b>RATED CURRENT</b><br>32A                 |
| <b>RATED VOLTAGE</b><br>690V AC<br>1000V DC |
| <b>MAXIMUM POWER DISSIPATION</b><br>4W      |
| <b>PROTECTION INDEX</b><br>IP20             |



|   |
|---|
| <b>STANDARDS</b>  |
| IEC/EN 60269-1<br>IEC/EN 60269-2<br>UL 4248-1<br>UL 4248-19<br>UL 486E<br>CSA C22.2 N° 4248-1<br>CSA 22.2 N° 65 |

## Modular fuse holders that offer 1000V DC rated voltages

Modular fuse holder for cylindrical fuse link size 10x38 according IEC/EN 60269 standard.

Compact design, with reduced dimensions.

Ventilation zones optimized for a better heat dissipation.

Manufactured with a high quality materials

- Silver plated copper contacts.
- Plastic materials with high temperature resistance and self-extinguishable.
- All the materials are according to the European Directive RoHS.



Extended range of accessories is available.

UL certification (File E359201).  
CSA certification (File 221680).



## Accessories

| REFERENCE     | DESCRIPTION                           | PACKING<br>Uni /BOX |
|---------------|---------------------------------------|---------------------|
| <b>480005</b> | PINS FOR MULTIPOLE ASSEMBLY           | 12                  |
| <b>485050</b> | HANDLE TIES FOR MULTIPOLE ASSEMBLY    | 12                  |
| <b>485051</b> | LOCK ACCESSORY                        | 5                   |
| <b>485052</b> | SPECIAL IP20 PROTECTION ACCESSORY     | 24                  |
| <b>485053</b> | PHASE SEPARATOR ACCESSORY             | 12                  |
| <b>485056</b> | REPLACEMENT FUSING INDICATOR 1000V DC | 12                  |
| <b>485656</b> | SCREWS PROTECTION ACCESSORY           | 20                  |

## Range

| REFERENCE     | INDICATOR | POLES | MODULES | PACKING<br>Uni /BOX |
|---------------|-----------|-------|---------|---------------------|
| <b>485150</b> | —         | 1P    | 1       | 12/192              |
| <b>485151</b> | —         | 2P    | 2       | 6/96                |
| <b>485152</b> | •         | 1P    | 1       | 12/192              |
| <b>485153</b> | •         | 2P    | 2       | 6/96                |

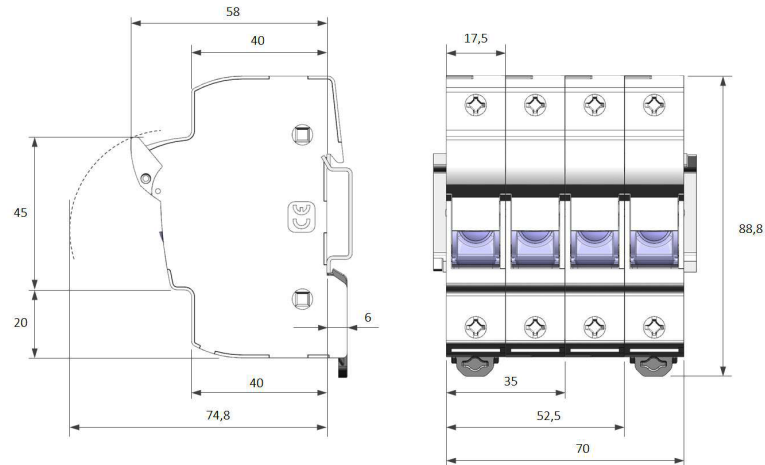


## Technical data

|   |   |                             |
|---|---|-----------------------------|
| Rated current   | 32A   |                             |
| Rated voltage   | 690V AC<br>1000V DC   |                             |
| Maximum power dissipation   | 4W  |                             |
| Power dissipation per pole  | 80% $I_n > 0,27W$<br>100% $I_n > 0,43W$   |                             |
| Utilization category as per EN 60947-3                              | 690V > AC-21B<br>1000V DC > DC-20B  |                             |
| Pollution degree  | 3   |                             |
| Protection index *  | IP20  |                             |
| Rated impulse withstand voltage                                     | 6kV U imp   |                             |
| Ambient temperature of service                                      | -40°C ... 70°C<br>(with carrier operation)<br>-50°C ... 80°C<br>(without carrier operation) |                             |
| Storage temperature   | -50°C ... 80°C  |                             |
| Derating by number of poles   | <b>POLES</b>  | <b><math>I_{MAX}</math></b> |
|   | 1 ... 4   | $I_n$                       |
|   | 5 ... 6   | 0,8 x $I_n$                 |
|   | 7 ... 9   | 0,7 x $I_n$                 |
|   | ≥ 10  | 0,6 x $I_n$                 |
| Correction of the admissible current in function of the temperature | 20° C   | 1                           |
|   | 30° C   | 0,95                        |
|   | 40° C   | 0,90                        |
|   | 50° C   | 0,80                        |
|   | 60° C   | 0,70                        |
|   | 70° C   | 0,60                        |

\* For wires of section  $\leq 6mm^2$  is necessary the use of the accessory to guarantee IP20 in clamps zone. ► **FIG. 4**

## Dimensions



## Weight

|           |       |
|-----------|-------|
| <b>1P</b> | 57gr  |
| <b>2P</b> | 114gr |

Weight without packing

## Standards

IEC/EN 60269-1  
IEC/EN 60269-2  
UL4248-1 Fuse holders  
UL4248-19 Photovoltaic fuse holders  
UL486E Wiring terminals  
CSA C22.2 N° 4248-1 Fuse holder assemblies  
CSA 22.2 N° 65 Wire connectors

## Certifications





## Application characteristics

For mounting on DIN/EN standard rail

DIN 46277/1-3 (EN50022)  
Clip fixation with 2 positions

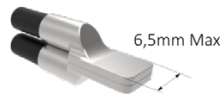
Connecting wire  
Copper wires only

| WIRES                            | METRIC   | AWG  | WIRING |
|----------------------------------|--|--|--------|
| 1                                | 0,75...16mm <sup>2</sup><br>Solid / Stranded                             | 8....14 AWG<br>Solid / Stranded                  |        |
| 2<br>Same cross section and type | 0,75...10mm <sup>2</sup><br>Solid<br>0,75...6mm <sup>2</sup><br>Stranded | 8....14 AWG<br>Solid<br>10....14 AWG<br>Stranded |        |

### Wire-end terminals

The use of wire-end terminals may allow to increase the connecting wire section.

Wire-end terminals recommended mounting:



The use of wire-end terminals could not guarantee the IP20 protection degree.

### Ferrules

It's recommended use of ferrules in wires with section  $\leq 2,5\text{mm}^2$



The product is delivered with the terminals opened and ready to connect

|  |  |
|--|--|
| Tightening torque on terminals                           | 2...2,5 Nm<br>18...22 lb.in                  |
| Screws with a combined head                              | SLOT + PZ2                                   |
| Multipolar assembly                                      | ► FIG. 1                                     |
| Fuse holders with fuse indicator                         | NEON VERSION<br>350...1000V DC               |
| Special zone for sealing                                 | Ø1,5 mm wire                                 |
| Label holder for a better circuit identification         | ► FIG. 2<br>Suitable size for label: 11x9 mm |
| Accessory available to lock the fuse holder by a padlock | ► FIG. 3<br>(máx. 3 padlocks of Ø 3mm)       |

## Accessories

FIG. 1 | Multipolar assembly

Standard system by DF, 2 clips and 1 pin for each union between poles

|        |                                    |
|--------|------------------------------------|
| 480005 | PINS FOR MULTIPOLE ASSE            |
| 485050 | HANDLE TIES FOR MULTIPOLE ASSEMBLY |

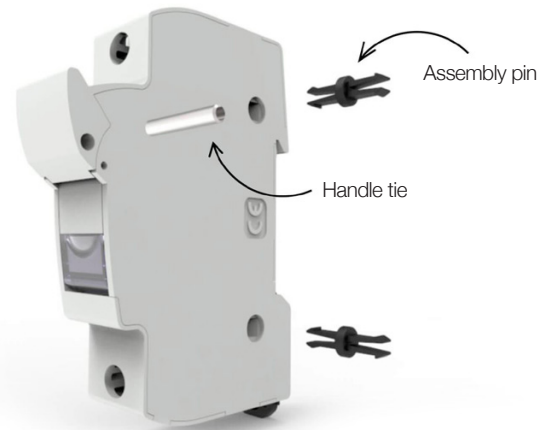
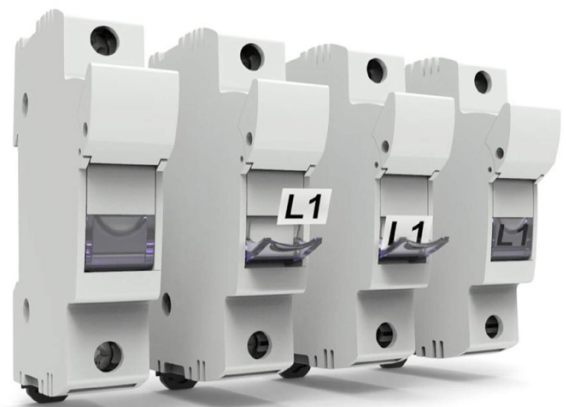


FIG. 2 | Identification by label

Open the label holder part with the fuse holder closed, put on the label and close it



Label measures **11x9mm**

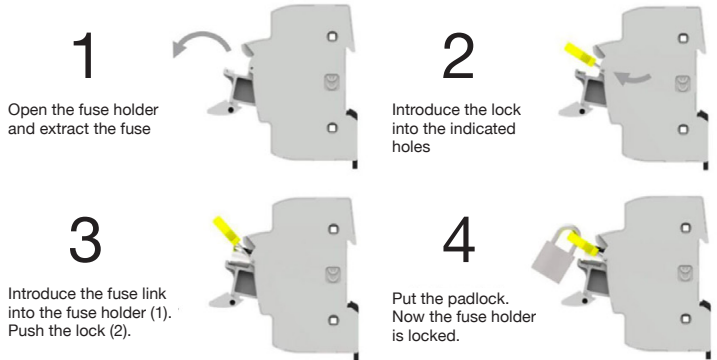
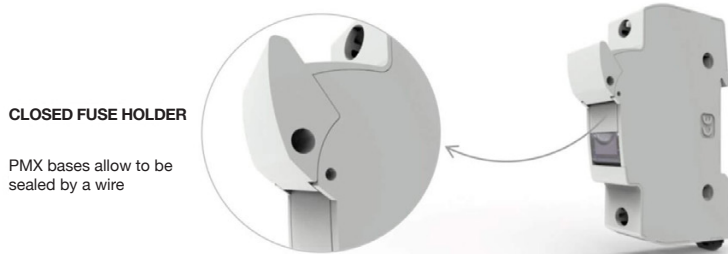


## Accessories

**FIG. 3 | Lock of the fuse holder**

Systems to avoid the operation and connection when the fuse holder is open or closed

**485051** LOCK ACCESSORY



**FIG. 4 | Special IP20 protection**

The accessory must be positioned in the wire entries, if it's necessary to achieve the IP20 degree of protection with thin wires

**485052** SPECIAL IP20 PROTECTION ACCESSORY

Manual assembly



To obtain an IP20 rating with cable protection of  $\varnothing \leq 4.5$ mm, use the special protection accessory

**FIG. 5 | Phase separators accessory**

The accessory increases the distance between phases in multipolar assemblies

**485053** PHASE SEPARATOR ACCESSORY





## Accessories

**FIG. 6 | Screw's protection accessory**

Protection accessory to avoid the screws manipulation and improve the protection degree

**485656** SCREW'S PROTECTION ACCESSORY

Manual assembly



**FIG. 7 | Fusing indicator replacement instructions**

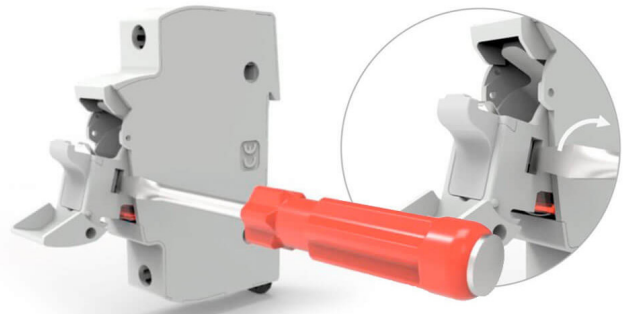
1

Open the fuse holder



2

Using a flat screwdriver, remove the cover with a slight rotation of the tool



3

Replace the fusing indicator. Enter the cover on the handle with a slight angle





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# PHOTOVOLTAIC

FUSE LINKS & FUSE HOLDERS FOR PHOTOVOLTAIC APPLICATIONS

## PMX 1100V DC

PV fuse holder  
for cylindrical fuse links

PMX

14x51



10x38



14x51



22x65

# PROTECTING THE WORLD



|  |
|--|
|  |
| <b>RATED CURRENT</b><br>50A  |
| <b>RATED VOLTAGE</b><br>690V AC<br>1100V DC  |
| <b>MAXIMUM POWER DISSIPATION</b><br>6W   |
| <b>PROTECTION INDEX</b><br>IP20  |
| <b>STANDARDS</b><br>IEC/EN 60269-1<br>IEC/EN 60269-2<br>UL 4248-1<br>UL 4248-19<br>UL 486E |



## Modular fuse holders that offer 1100V DC rated voltages

Modular fuse holder for cylindrical fuse link size 14x51 according IEC/EN 60269 standard.

Compact design, with reduced dimensions.

Ventilation zones optimized for a better heat dissipation.

Manufactured with a high quality materials

- Silver plated copper contacts.
- Plastic materials with high temperature resistance and self-extinguishable.
- All the materials are according to the European Directive RoHS.



Extended range of accessories is available.

## Accessories

| REFERENCE     | DESCRIPTION                                  | PACKING<br>Uni /BOX |
|---------------|--|---------------------|
| <b>480005</b> | PINS FOR MULTIPOLE ASSEMBLY                  | 12                  |
| <b>485356</b> | PMX-14/22 HANDLE TIES FOR MULTIPOLE ASSEMBLY | 12                  |
| <b>485258</b> | PMX-14 LOCK SUPPORT                          | 5                   |
| <b>485266</b> | SPECIAL IP20 PROTECTION ACCESSORY PMX-14     | 12                  |
| <b>485656</b> | SCREW'S PROTECTION ACCESSORY                 | 12                  |
| <b>485271</b> | PMX-14 SPECIAL ACCESSORY SCREW CONNECTION    | 12                  |

## Range

| REFERENCE     | INDICATOR | POLES | MODULES | PACKING<br>Uni /BOX |
|---------------|-----------|-------|---------|---------------------|
| <b>485250</b> | –         | 1P    | 1       | 6/90                |
| <b>485251</b> | –         | 2P    | 2       | 3/45                |
| <b>485252</b> | •         | 1P    | 1       | 6/90                |
| <b>485253</b> | •         | 2P    | 2       | 3/45                |



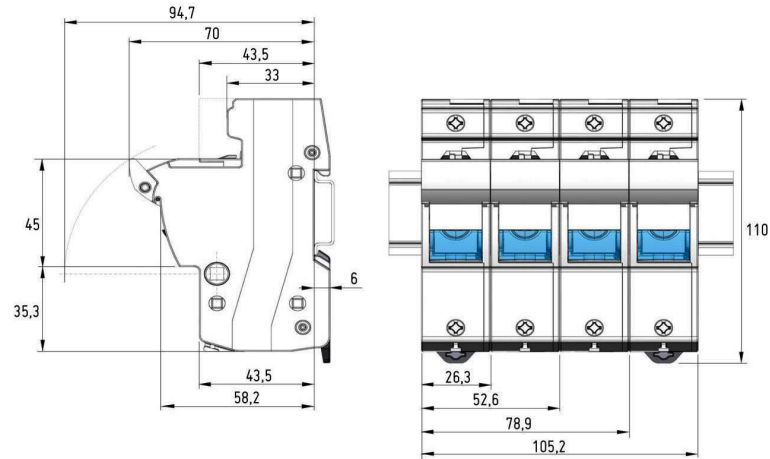


## Technical data

|   |   |                             |
|---|---|-----------------------------|
| Rated current   | 50A   |                             |
| Rated voltage   | 690V AC<br>1100V DC   |                             |
| Maximum power dissipation   | 6W  |                             |
| Power dissipation per pole  | 80% $I_n > 0,52W$<br>100% $I_n > 0,88W$   |                             |
| Utilization category as per EN 60947-3                              | 690V > AC-21B<br>1100V DC > DC-20B  |                             |
| Pollution degree  | 3   |                             |
| Protection index *  | IP20  |                             |
| Rated insulation voltage  | 6kV U imp   |                             |
| Ambient temperature of service                                      | -40°C ... 70°C<br>(with carrier operation)<br>-50°C ... 80°C<br>(without carrier operation) |                             |
| Storage temperature   | -50°C ... 80°C  |                             |
| Derating by number of poles   | <b>POLES</b>  | <b><math>I_{MAX}</math></b> |
|   | 1 ... 4   | $I_n$                       |
|   | 5 ... 6   | 0,8 x $I_n$                 |
|   | 7 ... 9   | 0,7 x $I_n$                 |
|   | ≥ 10  | 0,6 x $I_n$                 |
| Correction of the admissible current in function of the temperature | 20° C   | 1                           |
|   | 30° C   | 0,95                        |
|   | 40° C   | 0,90                        |
|   | 50° C   | 0,80                        |
|   | 60° C   | 0,70                        |
|   | 70° C   | 0,60                        |

\* For wires of section ≤ 10mm<sup>2</sup> is necessary the use of the accessory to guarantee IP20 in clamps zone. ► **FIG. 4**

## Dimensions



## Weight

|           |       |
|-----------|-------|
| <b>1P</b> | 101gr |
| <b>2P</b> | 202gr |

Weight without packing

## Standards

IEC/EN 60269-1  
IEC/EN 60269-2  
UL4248-1 Fuse holders  
UL4248-19 Photovoltaic fuse holders  
UL486E Wiring terminals



## Application characteristics

For mounting on DIN/EN standard rail

DIN 46277/1-3 (EN50022)  
Clip fixation with 2 positions

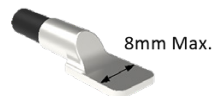
Connecting wire  
Copper wires only

| WIRES                            | METRIC                              | AWG                              | WIRING |
|----------------------------------|-------------------------------------|----------------------------------|--------|
| 1                                | 1,5...35mm <sup>2</sup><br>Solid    | 8.....16 AWG<br>Solid            |        |
|                                  | 1,5...25mm <sup>2</sup><br>Stranded | 6.....16 AWG<br>Stranded         |        |
| 2<br>Same cross section and type | 1,5...16mm <sup>2</sup><br>Solid    | 6.....16 AWG<br>Solid / Stranded |        |
|                                  | 1,5...10mm <sup>2</sup><br>Stranded |                                  |        |

### Wire-end terminals

The use of wire-end terminals may allow to increase the connecting wire section.

Wire-end terminals recommended mounting:



The use of wire-end terminals could not guarantee the IP20 protection degree.

### Ferrules

It's recommended use of ferrules in wires with section  $\leq 2,5\text{mm}^2$



The product is delivered with the terminals opened and ready to connect

## Accessories

FIG. 1 | Multipolar assembly

Standard system by DF, 3 clips and 1 pin for each union between poles

- 480005** PINS FOR MULTIPOLE ASSEMBLY
- 485356** PMX-14/22 HANDLE TIES FOR MULTIPOLE ASSEMBLY

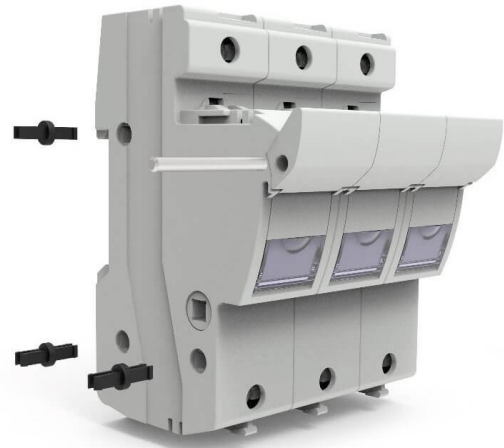
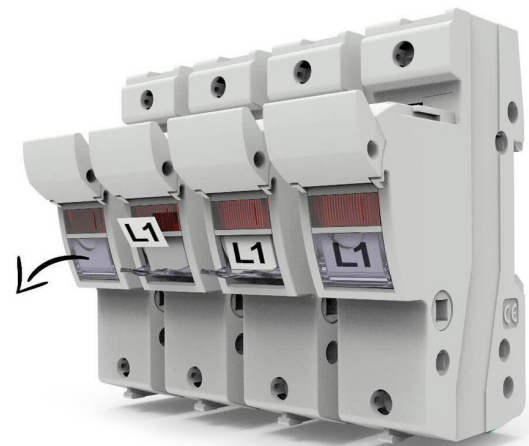


FIG. 2 | Identification by label

Open the label holder part when the fuseholder is totally closed or totally open, put on the label and close



Label measures **16x10mm**

|  |   |
|--|---|
| Tightening torque on terminals                           | 2,5...3 Nm<br>22...26 lb.in                   |
| Screws with a combined head                              | SLOT + PZ2                                    |
| Multipolar assembly                                      | ► FIG. 1                                      |
| Fuse holders with fuse indicator                         | NEON VERSION<br>350...1100V DC                |
| Label holder for a better circuit identification         | ► FIG. 2<br>Suitable size for label: 16x10 mm |
| Special zone for sealing                                 | Ø1,5 mm wire                                  |
| Accessory available to lock the fuse holder by a padlock | ► FIG. 3<br>(máx. 3 padlocks of Ø 3mm)        |



## Accessories

**FIG. 3 | Locking means a padlock**

To avoid the operation and connection when the fuse holder is open, put on the accessory "Padlock support" sliding it for the guides, and covering the fuse link zone. (Is possible the use with or without fuse link)

Introduce the padlock trough the symmetrical holes and close it

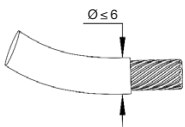
**485258** PMX-14 LOCK SUPPORT



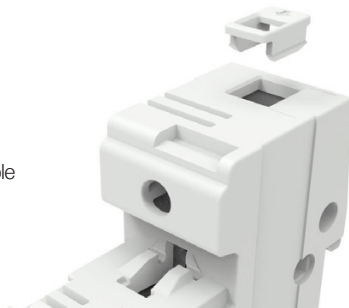
**FIG. 4 | Special IP20 protection**

The accessory must be positioned in the wire entries, if it's necessary to achieve the IP20 degree of protection with thin wires

**485266** SPECIAL IP20 PROTECTION ACCESSORY

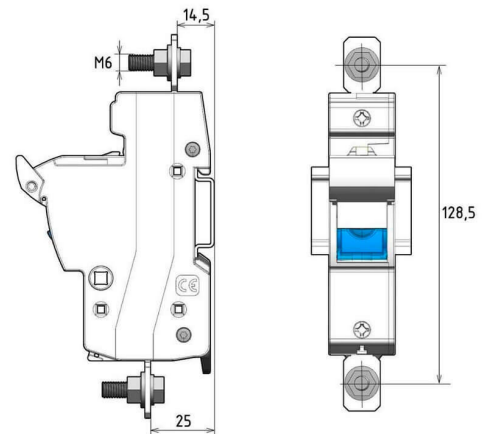
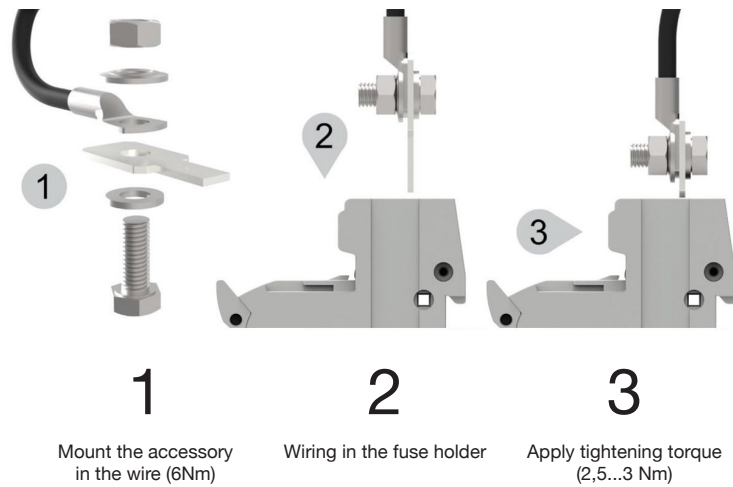


To obtain an IP20 rating with cable protection of  $\varnothing \le 6\text{mm}$ , use the special protection accessory



**FIG. 5 | PMX-14 Special accessory screw connection**

**485271** PMX-14 SPECIAL ACCESSORY SCREW CONNECTION



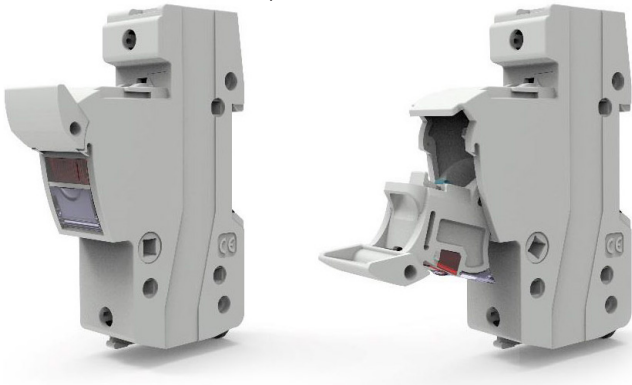


## Accessories

FIG. 6 | Fusing indicator replacement instructions

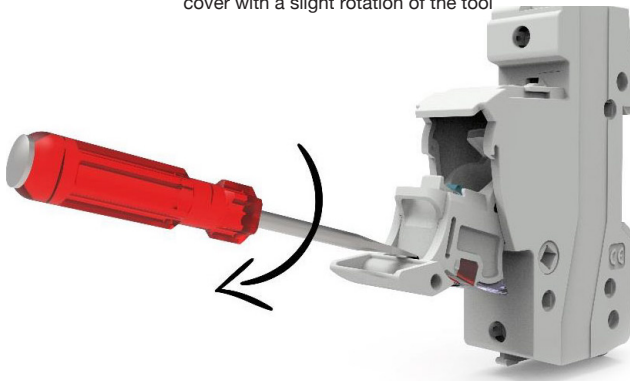
1

Open the fuse holder



2

Using a flat screwdriver, remove the cover with a slight rotation of the tool



3

Replace the fusing indicator and enter the cover on the handle

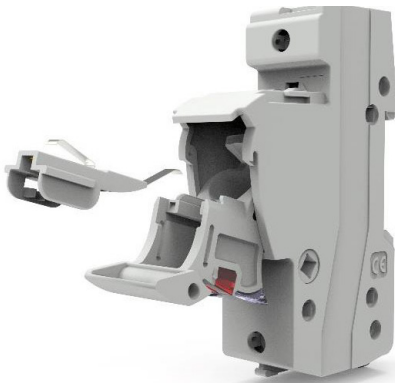


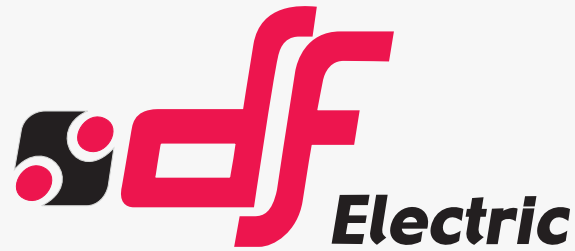
FIG. 7 | Screw's protection accessory

Protection accessory to avoid the screws manipulation and improve the protection degree

**485656**

SCREW'S PROTECTION ACCESSORY





# PROTECTING THE WORLD

## HEAD OFFICE AND FACTORY

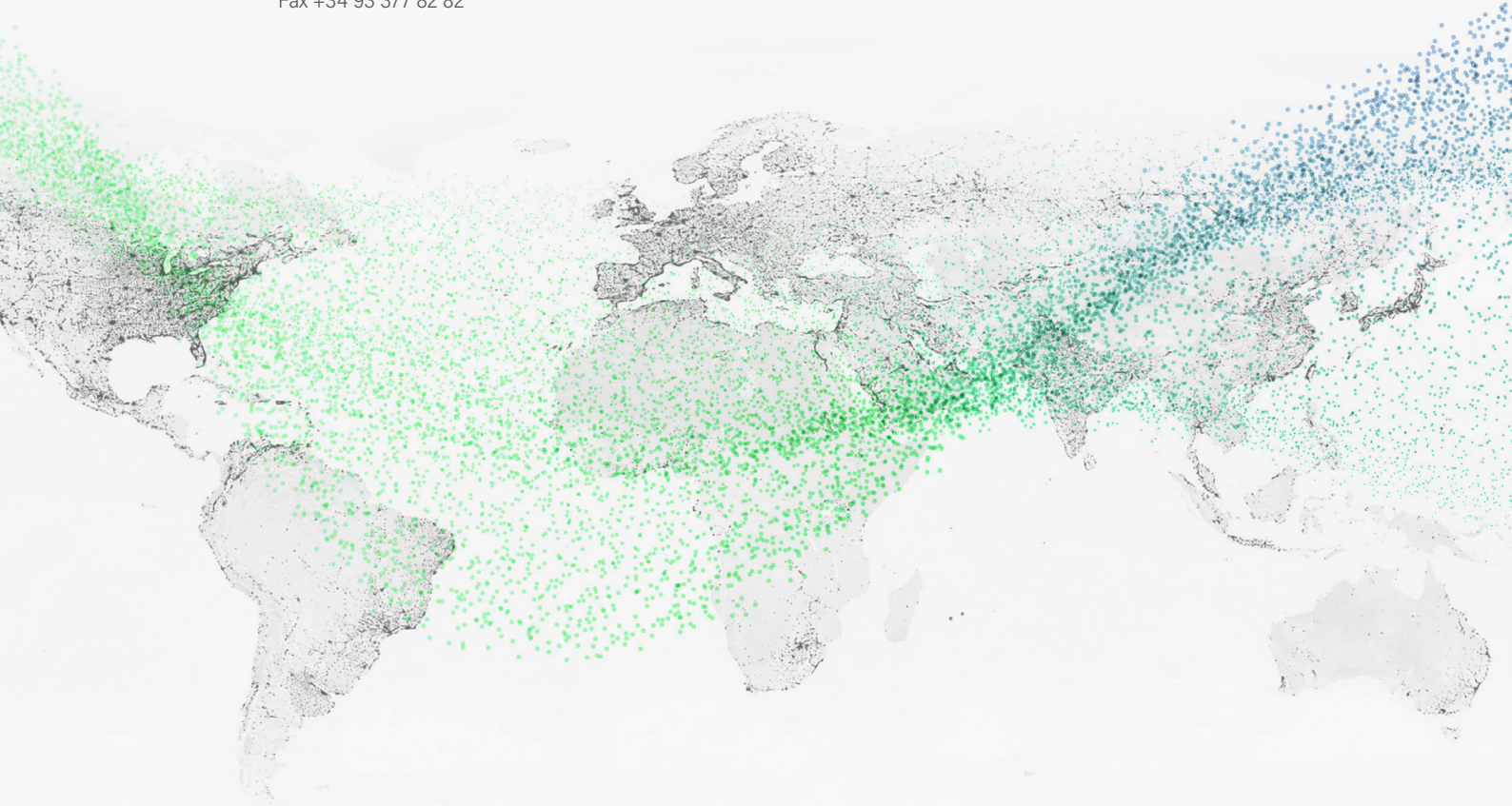
SILICI, 67-69  
08940 CORNELLA DE LLOBREGAT  
BARCELONA · SPAIN  
Tel. +34 93 377 85 85  
Fax +34 93 377 82 82

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Fax +34 93 480 07 75  
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To prevent electrical hazards, carry out the installation without voltage.



**Safety notice**  
Please capture the following QR code and read our safety notice carefully before installing our products.



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