



Electrical Distribution

Underground

Extract of Catalogue
Low Voltage Energy

MICHAUD



60 YEARS EXPERTISE

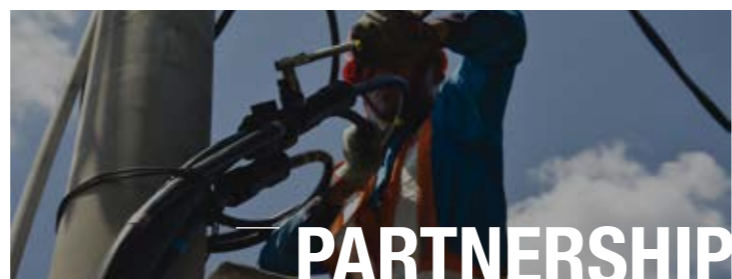
MICHAUD is a French industrial group specialised in energy distribution networks for more than 60 years.

MICHAUD Export, subsidiary dedicated to international markets, develops and sells solutions according to applicable standards thanks to its know-how as well as its relationships with local users.

-  60 Million €
-  + 70 countries
-  70 protected innovations yearly
-  10 locations
-  + 250 employees
-  + 8 000 references
-  10 million € stock value
-  20 million products leaving factories yearly

PRESCRIPTION & DIAGNOSIS

A strong market understanding and a recognised technical knowledge to serve your projects in order to propose suitable solutions.



INNOVATION & QUALITY

Investing near 8% of the turnover in R&D, we develop tomorrow's solutions and guarantee quality and reliability of products thanks to a COFRAC and ASEFA accredited and independent test laboratory (accreditation n°1-0579 / www.cofrac.fr).



FITTERS TRAINING

As preferred technical partner, we encourage learning and knowledge transmission together with product commercialisation.



According to the international standards, Michaud Export designs and develops energy distribution solutions. The product range is focused on two fields of expertise:

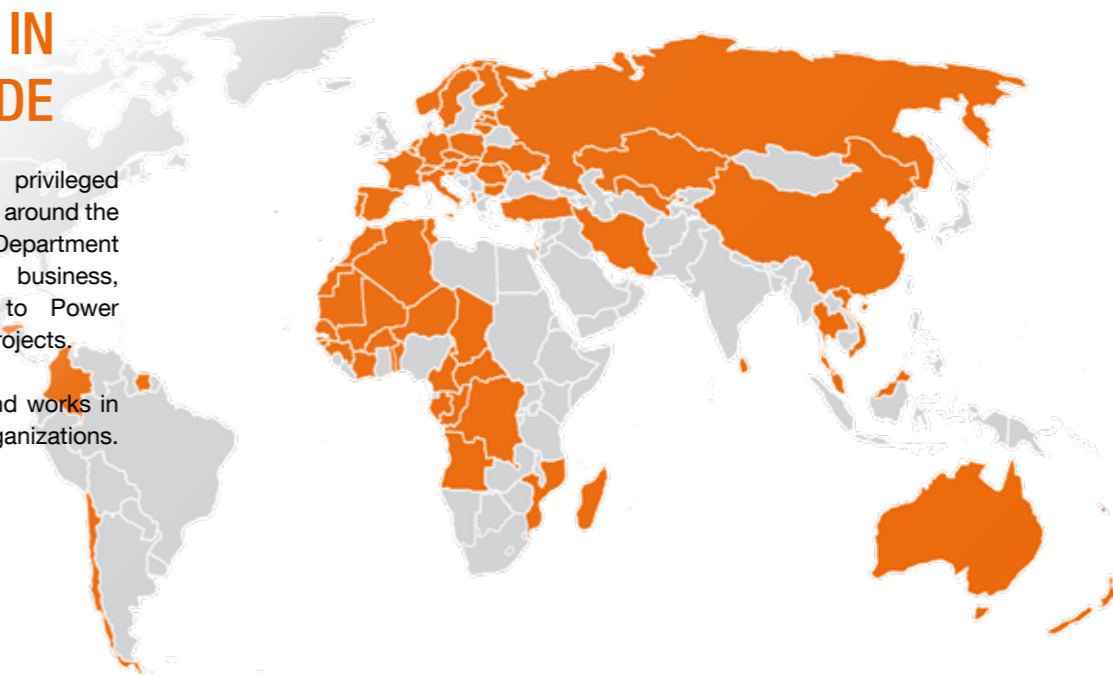
- **Low Voltage Network:** to connect and protect the overhead and underground electrical lines ;
- **Energy Controlling:** to manage and offer easy access to electricity.



+70 PARTNERS IN THE WORLD-WIDE

MICHAUD benefits from a privileged collaboration with many partners around the world. Thanks to an engineering Department dedicated to international business, MICHAUD provides support to Power Utilities in their grid expansion projects.

Besides, MICHAUD supports and works in partnership with power sector organizations.



PRODUCTS BRANDS

MICHAUD
HABITAT ET RÉSEAU ÉLECTRIQUE

MIPROTEC
PROTECTION ET INSTALLATION



PROTECTION



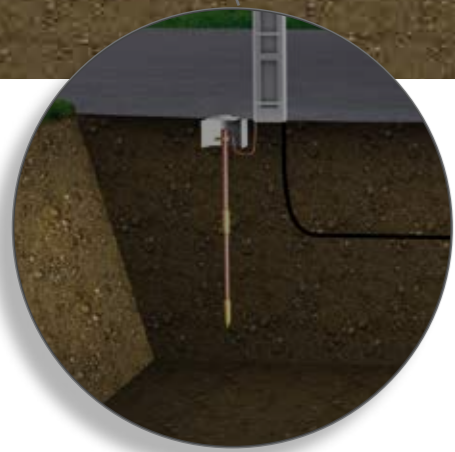
HOUSING



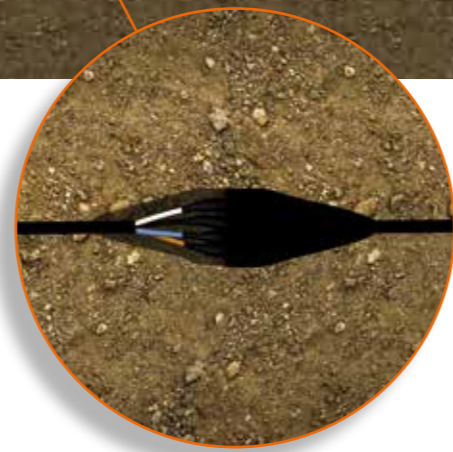
OVERHEAD



MICHAUD



EARTH SYSTEM

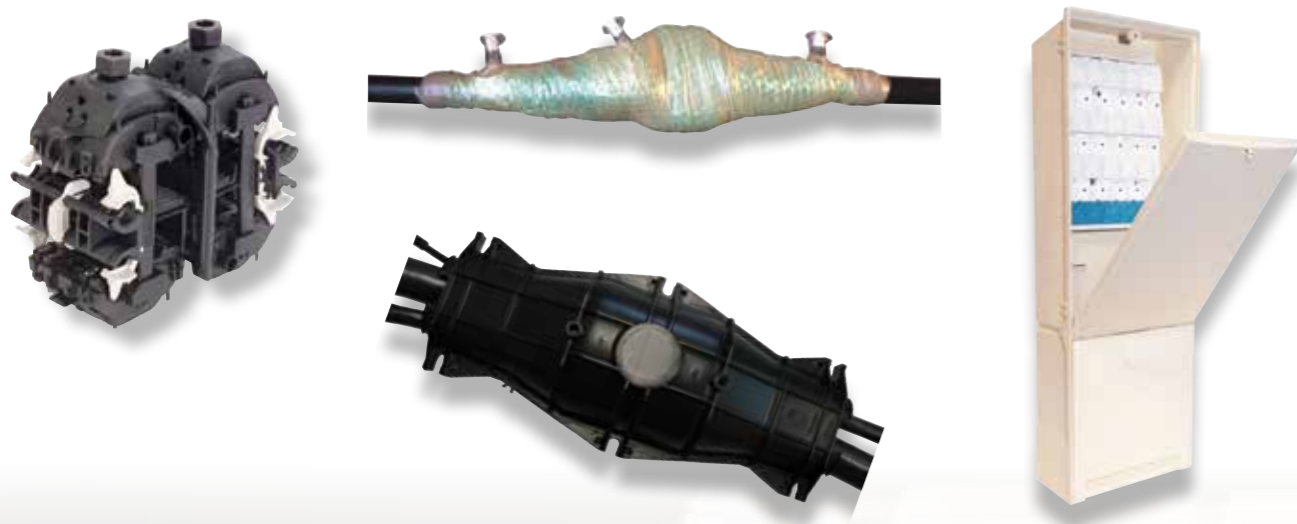


UNDERGROUND



INSTALLATION

With a solid experience acquired in insulated cables connections, MICHAUD expanded its skills to **the underground field.**



Underground networks

Many assets

The use of underground technology is growing. Buried networks offer many benefits compared to overhead ones.

- Safety**
 - + To reduce incidents risk
 - + To reduce electrical contacts risk
- Quality**
 - + To increase lines durability
 - + To guarantee a service without disruptions in case of violent winds, storms...
- Optimization**
 - + Preservation of ground for building
 - + Limit fraudulent manipulation
- Aestheticism**
 - + No pollution landscape

Underground

Underground

A recognized experience in the sector

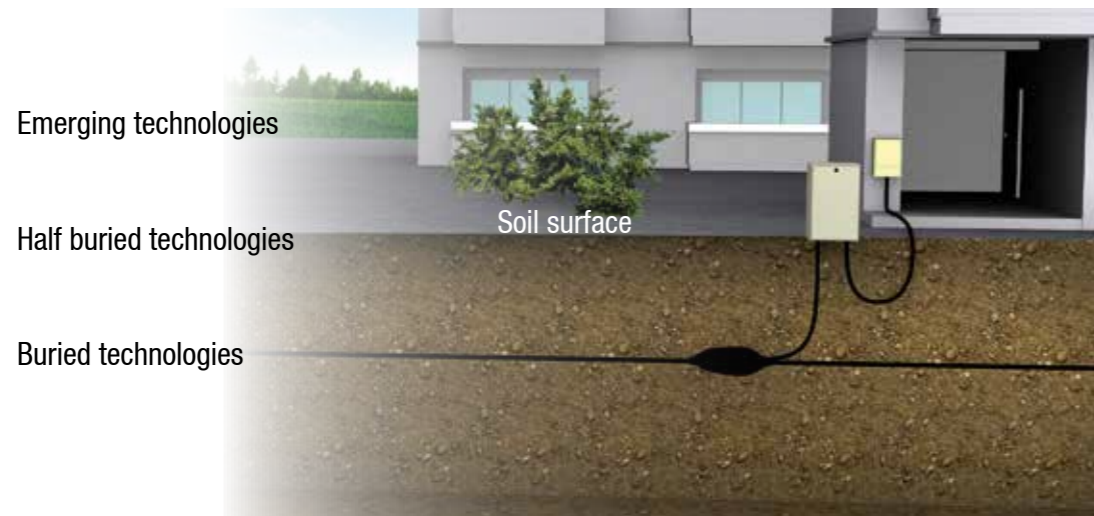
- The company developed the underground field, based on its **skills acquired** in insulation piercing technology demonstrating **high innovation ability**.
- The underground field requires a high level of reliability. Mistakes during installation can be expensive and MICHAUD reduces risks with **high technical equipment** and establishes itself as a leader of buried connections.
- This field matches with **new applications** such as the three-phase supply, electrical cars load, air conditioners designing solutions suitable for higher power conductors.

- For 20 years**: Development of single phase connectors
- For 15 years**: Co-operation with cable manufacturers
- For 10 years**: Establishment of new generation of RING connectors
- Today**: Distribution of solutions around the world

Logos: EDF, ENEDIS (L'ELECTRICITE EN RESEAU)

Filed patent

Three levels of installations

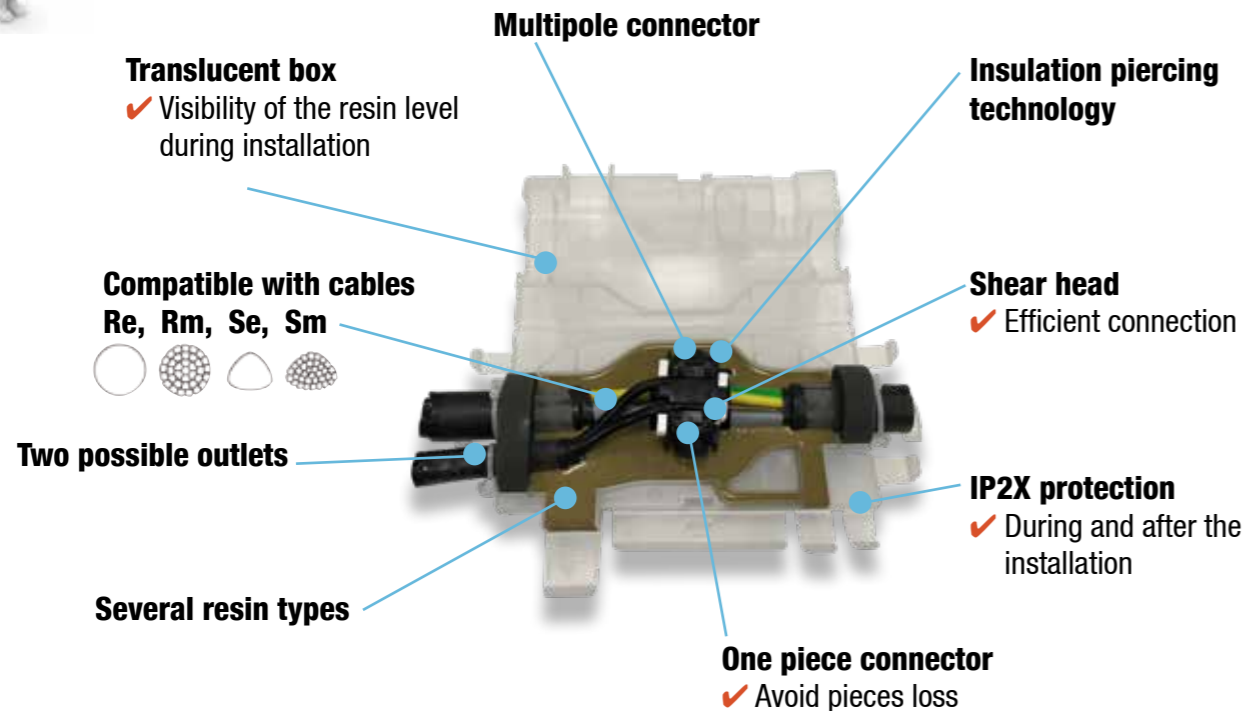


1 - Buried solutions

To enable the achievement of connections and tap-connections in underground environment, MICHAUD designed watertight systems avoiding water penetration being able to run over 30 years without maintenance.



Zoom on RING connector and the underground service box



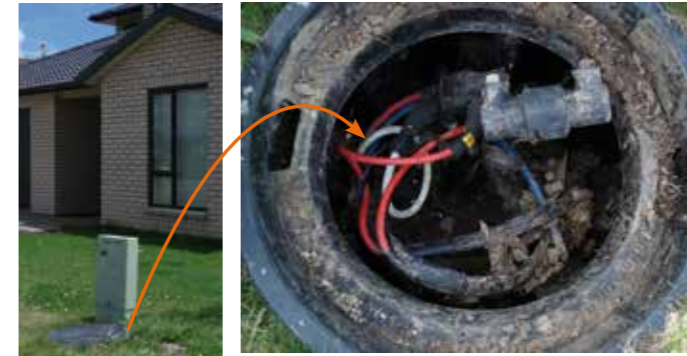
2 - Half-buried solutions

These solutions give the advantage to follow the requirements due to an operation in underground environment while being accessible from the soil surface.



Zoom on the pit cutout sleeve

This sleeve enables the protection of the underground network connection.



- ✓ Installation in a pit
- ✓ Full waterproof connection
- ✓ Temporary working into water



3 - Emerging connection solutions

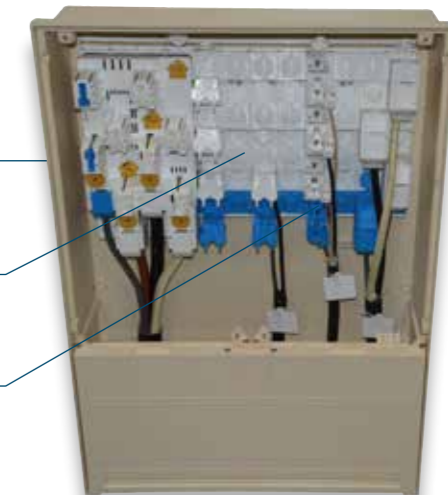
The modular range of emerging cabinets makes possible an adaptation to different searched configurations.

1 - Cabinet

2 - Set of bars

3 - Modules

- ✓ Service / Network
- ✓ Single phase / Three phases
- ✓ One outlet / Several outlets
- ✓ Fuse protection



Set of bars and modules are suitable to every type of cabinets in order to insert inside the environment, keeping the existing.



In order to better suit the market expectations, **Michaud Export** encourages co-development.

Many solutions adapted to conductors

Michaud guides you in your installations



- + Showroom
- + Video to explain the installation
- + Training by our team

Application field

Service



	150mm ²	240mm ²	300mm ²
Main section	95-150mm ²	50-240mm ²	150-300mm ²
Tap section	1x10-35mm ²	2x10-35mm ²	2x10-35mm ²
Volume	2.1 liters	6 liters	6 liters
Work space	170 max	330 max	
Connector diameter	119mm	140mm	150mm

Network

Realization of connection or tap-connection

Conductors capacity
✓ Up to 240mm²

Unipolar technology

- ✓ Three phases
- ✓ One neutral

Round or sectoral conductor

Technology

- ✓ Cast
- ✓ Injected

Underground

Underground

Two technologies

Cast technology

The +
Easy installation

The -
No possible flexibility in the installation configuration

Injected technology

The +
Easy adaptation to specific environments

The -
Installation requiring fitters training



The polyurethane resin

- ✓ Used injected or cast
- ✓ Polymerized at ambient temperature
- ✓ Perfectly suitable to MICHAUD underground boxes
- ✓ High mechanical strength
- ✓ Perfect adhesion on synthetic material as well as on modern accessories

+ Soft dismantable non hazardous resin is also available



Multipole ring connector 150mm²



MICHAUD Exclusivity
Patented system



K449

Application

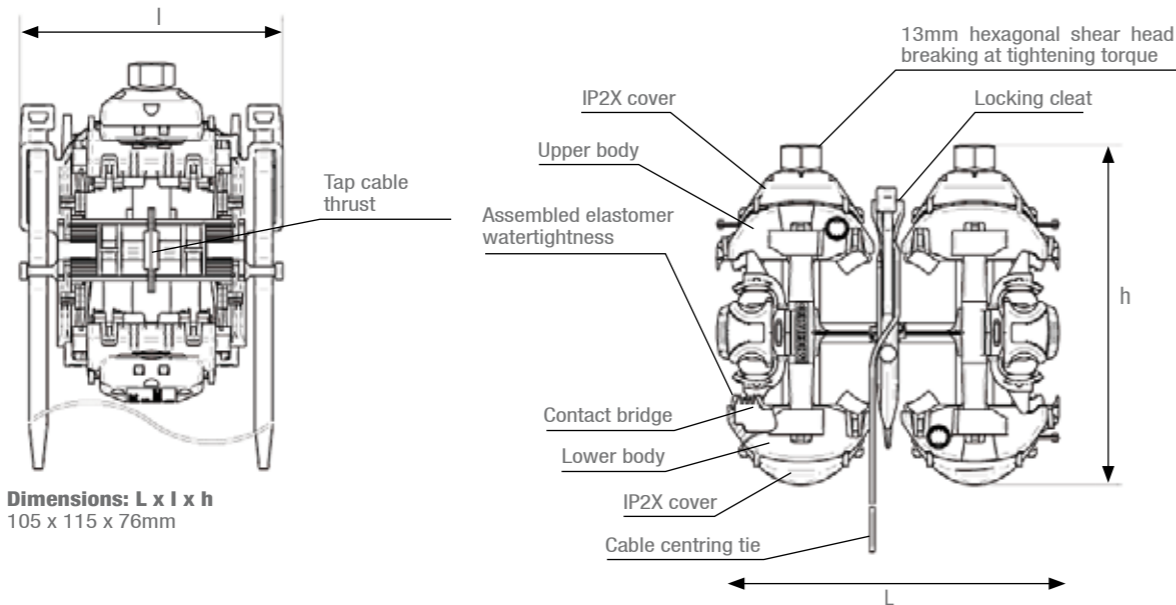
This RING connector is designed to establish a tap connection on low voltage underground networks. It is installed inside an underground box. It is used on a main cable with the following type of synthetic insulation:

- Circular or sectoral,
- Copper or aluminium,
- Solid or stranded core.

Description

- Connection is ensured through insulation piercing technology, simultaneously on main and tap lines.
- Connector capacities are 95 to 150mm² main and 1x10 to 35mm² tap.
- The connector accepts a reduced neutral.
- Adjustable clips are used to guide the cable and act as stops. The tap can be established on the right or left.
- The connector comprises:
 - 2 identical IP2X tightening modules enabling non-oriented mounting and simultaneous tightening from the top.
 - 1 cleat for locking the modules and for permanently securing the connector on the cable.
- The body is made of synthetic materials to make live-line work safe.
- The ergonomics has been designed to meet the specific constraints of underground work.
- Tightening efficiency is ensured by 2 shear heads, thereby reducing the assembly time.
- All connector components are captive to make the installation easier.
- The connector dimensions once implemented: $\varnothing \leq 119\text{mm}$.
- IP2X connector once implemented.

This connector is tested according to the **DIN VDE 0220** and **DIN EN 50393** standards.



Code	Designation	Main Capacities (mm ²)	Tap Capacities (mm ²)	Weight (kg)	Sales unit
K449	4 POLES SERVICE CONNECTOR 150 / 1x35	95-150	1 x 10-35	0.450	10

For compatibility with your conductors, please contact us (cable compatibility shall be tested before use).

Accessory



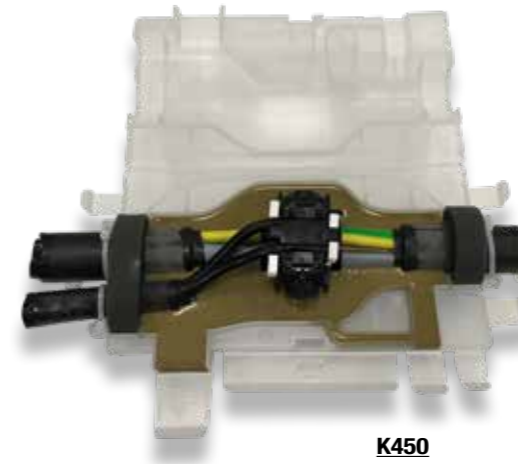
The insulated wedge separator is used for installing the multitap connector. It is used to separate the conductors.

Code	Designation	Weight (kg)	Sales unit
K007	WEDGE SEPARATOR 200x15x9mm	0.050	100

Underground box

Utilisation

This underground box enables the tap connection from an underground network. It makes possible the tap connection of every conductors type (stranded, solid, multi-stranded, round or sectoral). It comprises the connector, the resin, the box and accessories according to the local standard.



K450

Description

- The box comprises a translucent shell made of thermoplastic material (PP).
- Box accessories required for the assembly are supplied: section reducer, strips of adhesive foam, foams, links, gloves, etc.
- The polyurethane resin, delivered in a dual-bag, is qualified according to the **NF C33-010** (MPF01/DC and MPF PM) and **HD631.1** (LMPW, LIN, MMPW, NIW) standards.
- Once implemented, the dimensions of the box are 380x180x150mm.
- The connector shapes are studied to perform a good display of the resin.

The underground box is tested according to the **DIN EN 50393** standard.

Code	Designation	Capacities (mm ²)	Weight (kg)	Sales unit
K450	MULTIPOLE CONNECTOR 150 + UNDERGROUND BOX	95-150 / 1x10-35	4.300	1

For compatibility with your conductors, please contact us (cable compatibility shall be tested before use).

Multipole ring connector 240mm²



MICHAUD Exclusivity
Patented system



K459

Application

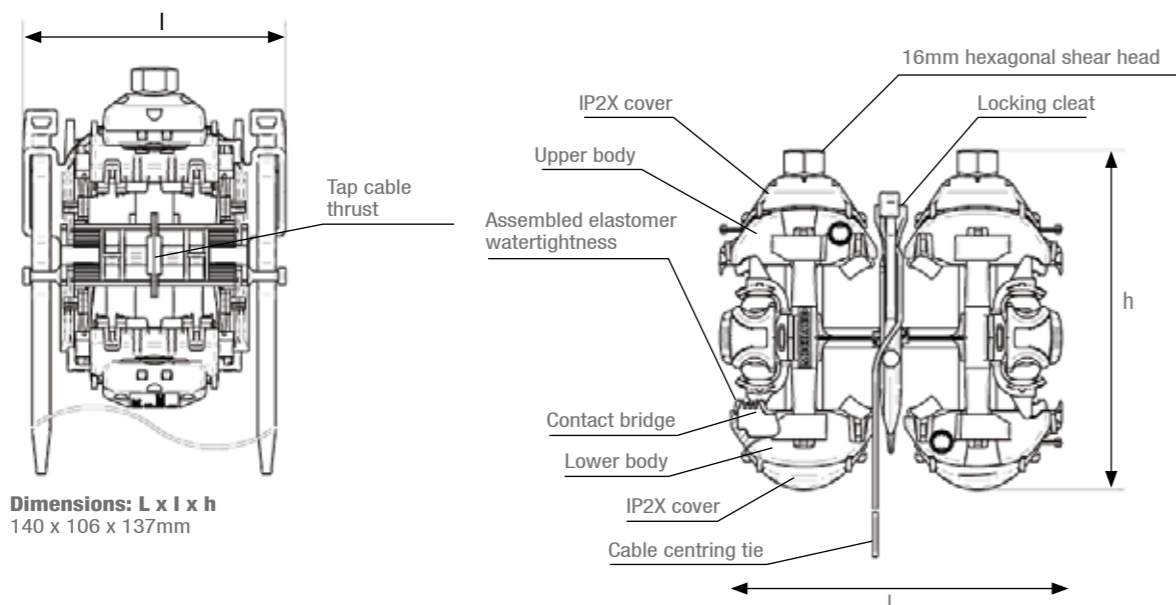
This RING connector is designed to establish a tap connection on low voltage underground networks. It is installed inside an underground box. It is used on a main cable with the following type of synthetic insulation:

- Circular or sectoral,
- Copper or aluminium,
- Solid or stranded core.

Description

- Connection is ensured through insulation piercing technology, simultaneously on main and tap lines.
- Connector capacities are: 50 to 240mm² main and 1 up to 2x10 to 35mm² tap.
- The connector accepts a reduced neutral.
- Adjustable clips are used to guide the cable and act as stops. The tap can be established on the right or left.
- The connector comprises:
 - 2 identical IP2X tightening modules enabling non-oriented mounting and simultaneous tightening from the top.
 - 1 cleat for locking the modules and for permanently securing the connector on the cable.
- The body is made of synthetic materials to make live-line work safe.
- The ergonomics has been designed to meet the specific constraints of underground work.
- Tightening efficiency is ensured by 2 shear heads, thereby reducing the assembly time.
- All connector components are captive to make the installation easier.
- IP2X connector once implemented.

This connector is tested according to 1 000 cycles electrical ageing according to the **EN 61 238-1** standard.



Code	Designation	Main Capacities (mm ²)	Tap Capacities (mm ²)	Weight (kg)	Sales unit
K459	4 POLES SERVICE CONNECTOR 240 / 2x35	50-240	2 x 10-35	0.820	8

For compatibility with your conductors, please contact us (cable compatibility shall be tested before use).



Accessory



This kit comprising a cable and a blue synthetic sheath is used as a complement to the K459 to ensure earth system of the multitap connector.

The insulated wedge separator is used for installing the multitap connector. It is used to separate the conductors.

Code	Designation	Weight (kg)	Sales unit
K007	WEDGE SEPARATOR 200x15x9mm	0.050	100

Underground box



K645

Application

This underground box enables the tap connection from an underground network. It makes possible the tap connection of every conductors type (stranded, solid, multi-stranded, round or sectoral). It comprises the connector, the resin, the box and accessories according to the local standard.

Description

- The box comprises a translucent shell made of thermoplastic material (PP).
- The box is available in 2 versions: injected box or cast box.
- Box accessories required for the assembly are supplied: section reducer, strips of adhesive foam, foams, links, gloves, etc.
- The polyurethane resin, delivered in a dual-bag, is qualified according to the **NF C33-010** (MPF01/DC and MPF PM) and **HD631.1** (LMPW, LIN, MMPW, NIW) standards.
- Once implemented, the dimensions of the box are 540x240x190mm.
- The connector shapes are studied to perform a good display of the resin.

Code	Designation	Main Capacities (mm ²)	Tap Capacities (mm ²)	Weight (kg)	Sales unit
K640	SERVICE BOX MULTI-CONNECTION INJECTED 240-35	50-240	2x10-35	15	1
K645	SERVICE BOX MULTI-CONNECTION CAST 240-35	50-240	2x10-35	15	10

For compatibility with your conductors, please contact us (cable compatibility shall be tested before use).

Multipole ring connector 300mm²



K642

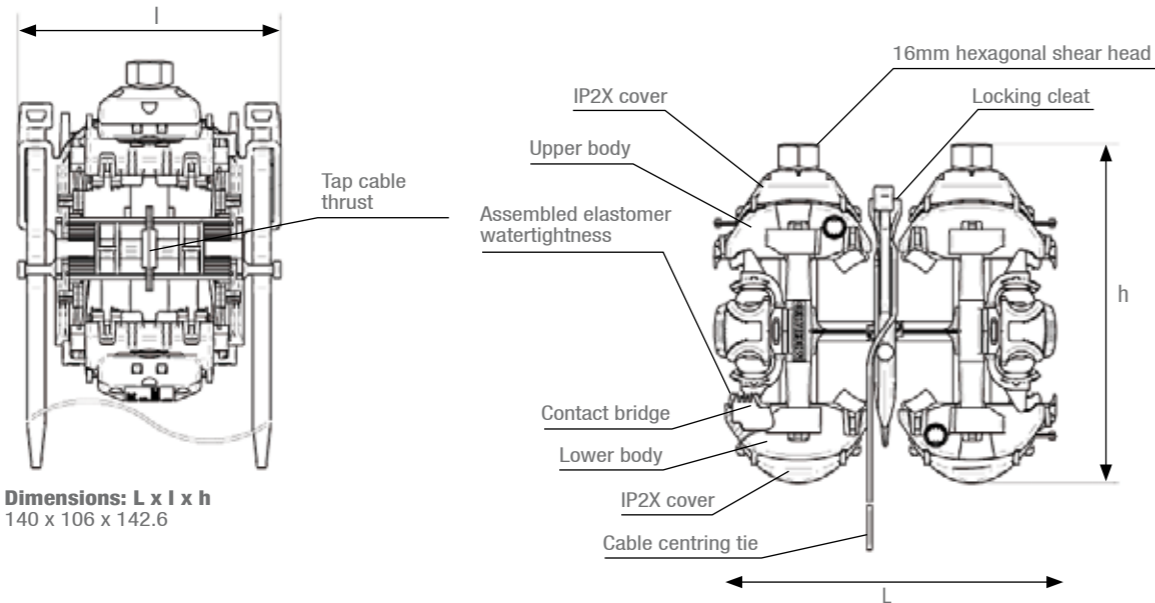
Application

This RING connector is designed to establish a tap connection on low voltage underground networks. It is installed inside an underground box. It is used on a main cable with the following type of synthetic insulation:

- Circular or sectoral,
- Copper or aluminium,
- Solid or stranded core.

Description

- Connection is ensured through insulation piercing technology, simultaneously on main and tap lines.
- Connector capacities are 240 to 300mm² main and 1 up to 2x10 to 35mm² tap.
- The connector accepts a reduced neutral.
- Adjustable clips are used to guide the cable and act as stops. The tap can be established on the right or left.
- The connector comprises:
 - 2 identical IP2X tightening modules enabling non-oriented mounting and simultaneous tightening from the top.
 - 1 cleat for locking the modules and for permanently securing the connector on the cable.
- The body is made of synthetic materials to make live-line work safe.
- The ergonomics has been designed to meet the specific constraints of underground work.
- Tightening efficiency is ensured by 2 shear heads, thereby reducing the assembly time.
- All connector components are captive to make the installation easier.
- IP2X connector once implemented.



Code	Designation	Capacities Main (mm ²)	Capacities Tap (mm ²)	Weight (kg)	Sales unit
K642	4 POLES SERVICE CONNECTOR 300 / 2x35	240-300	2x10 - 35	0.850	10

For compatibility with your conductors, please contact us (cable compatibility shall be tested before use).

Accessory



The insulated wedge separator is used for installing the multitap connector. It is used to separate the conductors.

Code	Designation	Weight (kg)	Sales unit
K007	WEDGE SEPARATOR 200x15x9mm	0.050	100

Underground box



K646

Application

This underground box enables the tap connection from an underground network. It makes possible the tap connection of every conductors type (stranded, solid, multi-stranded, round or sectoral). It comprises the connector, the resin, the box and accessories according to the local standard.

Description

- The box comprises a translucent shell made of thermoplastic material (PP).
- The box is available in 2 versions: injected box or cast box.
- Box accessories required for the assembly are supplied: section reducer, strips of adhesive foam, foams, links, gloves, etc.
- The polyurethane resin, delivered in a dual-bag, is qualified according to the **NF C33-010** (MPF01/DC and MPF PM) and **HD631.1** (LMPW, LIN, MMPW, NIW) standards.
- Once implemented, the dimensions of the box are 540x240x190mm.
- The connector shapes are studied to perform a good display of the resin.

Code	Designation	Capacities Main (mm ²)	Capacities Tap (mm ²)	Weight (kg)	Sales unit
K646	SERVICE BOX MULTI-CONNECTIONS CAST + CONNECTOR 300²	240-300	2x10-35	15.050	10

For compatibility with your conductors, please contact us (cable compatibility shall be tested before use).

Single pole service connector

1 tap



Phase - **K317**



Neutral - **K318**

2 taps



Phase - **K419**



Neutral - **K420**

Application

This connector is designed to establish a tap connection on low voltage underground networks. It is located in underground cast or injected boxes. It can be used on a main cable with paper or synthetic insulation of type:

- circular or sectoral,
- aluminium,
- stranded or solid core.

Description

- Connection is ensured through insulation piercing technology simultaneously on main and tap lines.
- The K419 and K420 models can be used for connecting 2 taps with identical or different sections.
- The K420 model integrates an earth system conductor.
- Connectors are fully insulated (IP2X protection degree). Bodies are made of synthetic materials to make live-line work safe.
- The ergonomics has been designed to meet the specific constraints of underground work.
- Tightening efficiency is ensured by a shear head screw.

The components are tested for 200 cycles according to the **NF C 63-061** and 1 000 cycles electrical ageing according to the **NF EN 61238-1** standards.

Code	Designation	Main Capacities (mm ²)	Tap Capacities (mm ²)	Weight (kg)	Sales unit
K317	CONNECTOR CBS/CS 240	50-240	10-35	0.230	3
K318	CONNECTOR CBS NEUTRAL/CS	50-95	10-35	0.135	1
K419	CONNECTOR CB2p/CS 240	50-240	2x10-35	0.200	3
K420	CONNECTOR CB2p NEUTRAL/CS	50-95	2x10-35	0.310	1

Accessory



K001

End cap is used in addition to the K317 and K318 connector in order to insulate the end of the tap cable.

Code	Designation	Weight (kg)	Sales unit
K001	BLACK FLEXIBLE END CAP 10-50M	0.003	20

Underground box injection type

Application

This underground box enables the tap connection with one or two service connections from an underground network. The conductors should be circular or sectoral (as define in NF C 33-210 standard).



Description

- This product comprises :
 - 4 single pole IP2X connectors with a earthing device, for circular or sectoral conductors and for stranded or solid core, made of aluminium or copper,
 - 1 device enables to ensure the insulation and the connection between cable screens.
 - Accessories for the layout,
 - Packs of hardening Epoxy resin.
 - Components for indentification and tracability of the product.
- The installation is injection type.
- The injection box is usable with synthetic insulation or paper impregnated cables.

Code	Designation	Main Capacities (mm ²)	Tap Capacities (mm ²)	Weight (kg)	Sales unit
BE211	DOUBLE TAP INJECTION BOX 240-35	3x50+50 - 3x250+120	10-50M	-	1

Service repairing junction kit - JRB



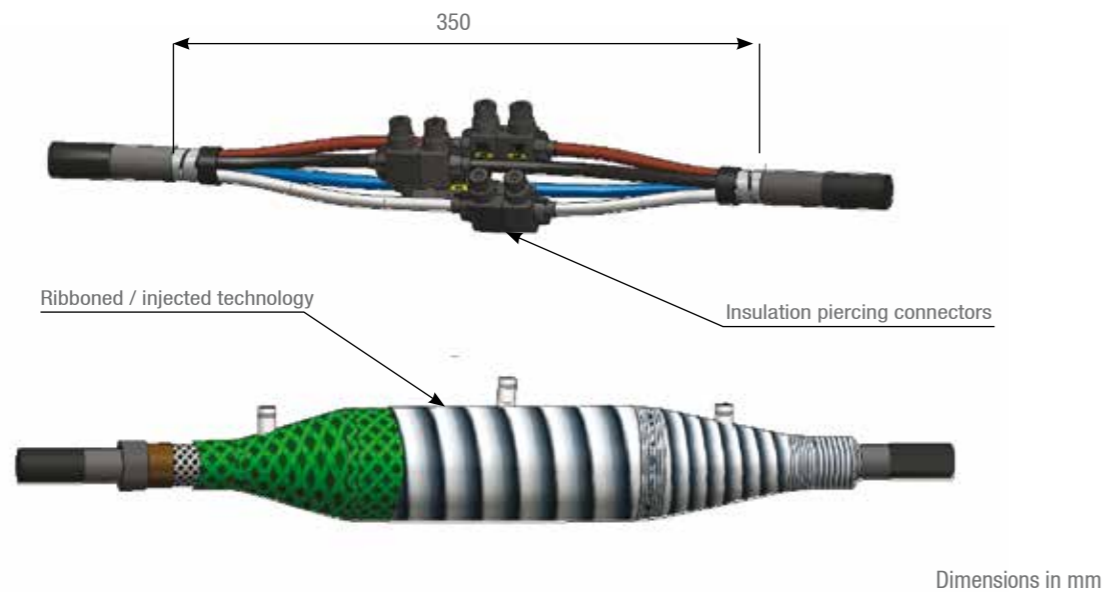
BE004

Application

This accessory is designed to repair connection of service underground damaged cables.

Description

- This kit comprises the following accessories:
 - 4 pre-insulated junction sleeves using insulation piercing technology,
 - 1 device enabling the reconstitution of the cable screen,
 - 1 hardening resin.
- The installation is of ribboning / injection type.

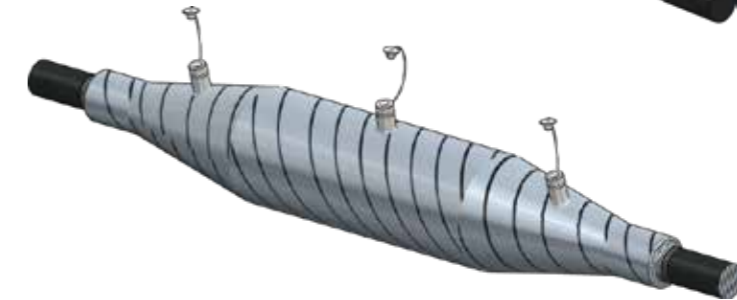


Installation

- Cables preparation

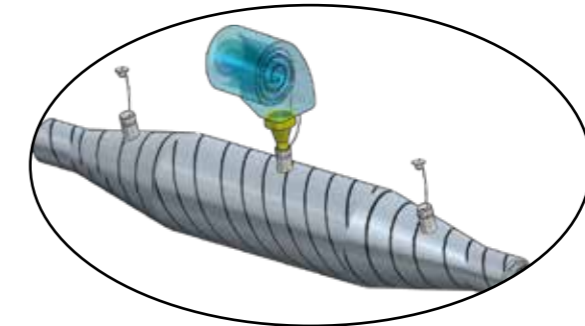


- Cables connection



- Ribboning

- Resin injection



Code	Designation	Cable section (mm ²)		Weight (kg)	Sales unit
		Mini	Maxi		
BE004	SERVICE REPAIRING JUNCTION KIT JRB 10-50	4x10	4x35	2.97	1

Single pole network connector



Phase 50-240 / 50-240
K383



Phase 50-240 / 50-150
K384



Phase 50-95 / 50-95
K313



Neutral 50-150 / 50-95
K360

Application

This connector is designed to be used with underground low voltage network for tapping or junction applications. It is implemented in underground cast or injected boxes. It can be used on aluminium, circular or sectoral type cables with paper or synthetic insulation.

Description

- Connection is established simultaneously using insulation piercing technology on the main and tap lines.
- The connectors are fully insulated (IP2X degree of protection). Their bodies are made of synthetic materials to make live-line work safe.
- They are tested for 1 000 cycles electrical ageing according to the **NF EN 61238-1** standard.
- The dielectric strength in air is greater than 4kV.
- The ergonomics has been designed to meet the specific constraints of underground work.
- Tightening efficiency is ensured by shear head screws.

These connectors meet the criteria of the technical specification **HN 68 S-12**.

Code	Designation	Main Capacities (mm ²)	Tap Capacities (mm ²)	Weight (kg)	Sales unit
K383	CONNECTOR CDR/CS 50-240	50-240	50-240	0.700	1
K384	CONNECTOR CDR/CS 50-240/50-150	50-240	50-150	0.400	1
K313	CONNECTOR CDR/CS 50-95	50-95	50-95	0.210	3
K360	CONNECTOR CDR NEUTRAL/CS 50-95	50-150	50-95	0.210	1

Accessories



K247



K002

The end cap K247 and K002 are used in addition to K383 + K384 and K313 + K360 respectively for the insulation of the tap cable end.

SEE SHEET
OVERHEAD / LV Ending fitting / Seal and cap

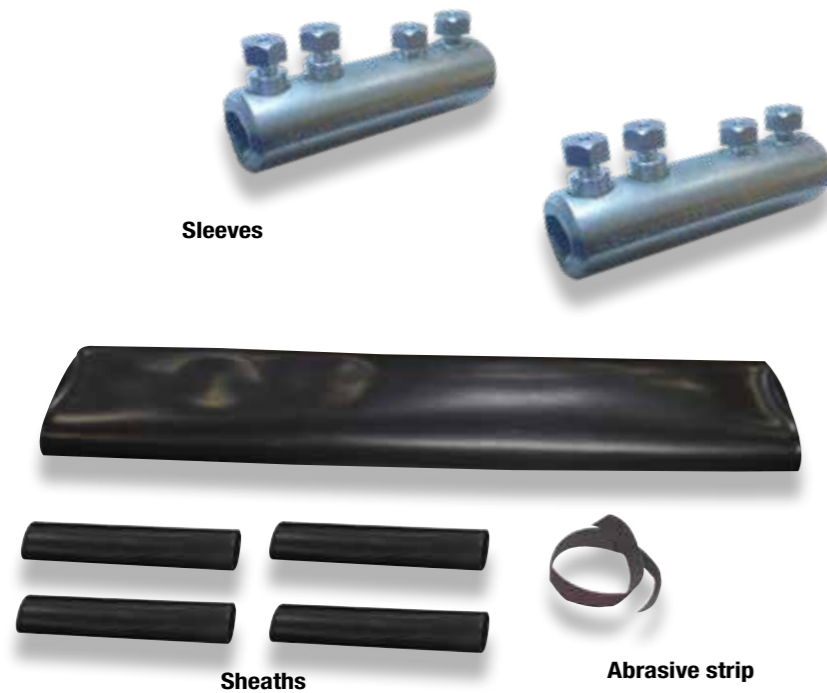


K314

This connector is designed for earthing the neutral. For the supply of the earth system cable, please contact us.

Code	Designation	Weight (kg)	Sales unit
K314	EARTH SYSTEM CONNECTOR 50-95 / 25	0.140	1

Mechanical tightening underground junction 1kV - Heat-shrinkable



Application

This set is designed to perform low voltage underground cables junctions. The system can be buried once implemented. It comprises junction sleeves, heat-shrinkable sheaths and an abrasive strip. Junction sleeves use mechanical tightening enabling to cover a wide sections range and an easier installation. The delivered heat-shrinkable sheaths make possible the insulation reconstitution of the conductor and the outside sheath.

Description

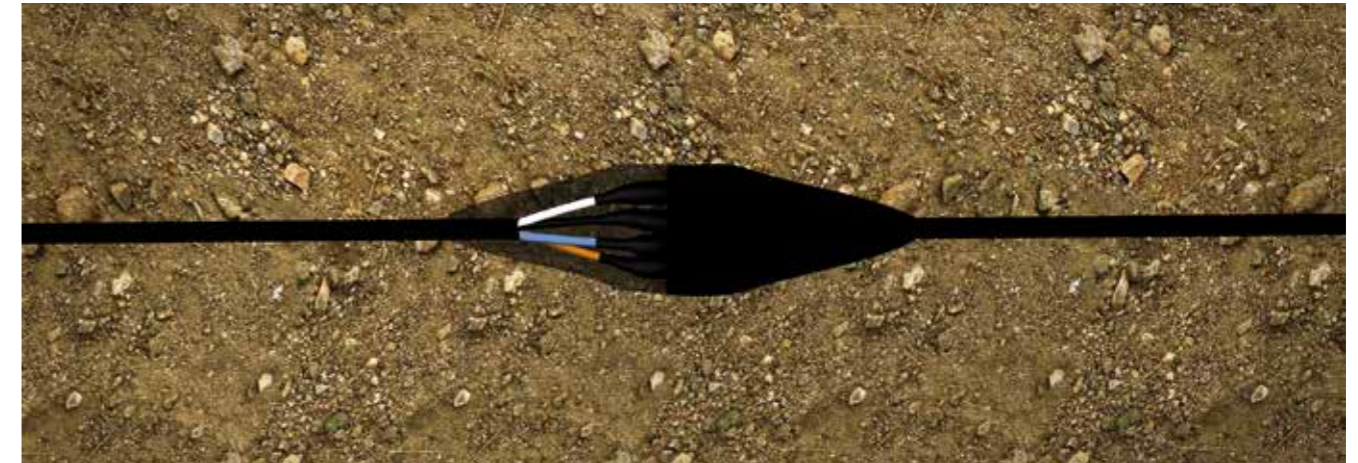
Junction sleeves:

- Junction sleeves are made of tinned aluminium enabling the compatibility with aluminium and copper cables.
- The shear head tightening ensures an optimized electrical contact and a sleeve shape suitable to the heat-shrinkable sheath covering.
- Sleeves offer a central stop and ensure a water barrier because of non-through piercing.
- The cable range sections are from 50 up to 240mm².
- Sectoral cores shall be rounded before connection.
- The sleeves are to be used with cables with 4 sector conductors of the same cross section.
- Sleeves meet the criteria of the **EN 61 281-1** class A standard.

Heat-shrinkable sheaths:

- Internal sheaths ensure the insulation of every conductor. External sheaths rebuild the mechanical protection.
- They can be used from -40°C up to +90°C.
- Sheaths are without halogen and are resistant to UV, mould and chemical substances.
- They are qualified according to the criteria of the **IEC 60 684** standard.
- The sheaths internal surface is covered with glue ensuring a good watertightness once heated and implemented.
- A strip is supplied in order to abrade the cable insulation and to ensure a good adhesion with the heat-shrinkable sheath.
- Other kits are available according to conductors nature and shape : contact us.

The whole set meets the criteria of the **EN 50 393-3** standard.



Code	Designation	Weight (kg)	Sales unit
K660-120_2V	JUNCTION 1kV HEAT-SHRINK CABLE4 C 50-120	-	1
K660-150_2V	JUNCTION 1kV HEAT-SHRINKABLE CABLE 4 C 95-150	0.500	1
K660-240_4V	JUNCTION 1kV HEAT-SHRINK CABLE 4 C 95-240	1.150	1

Option: Sleeve alone



Code	Designation	Weight (kg)	Sales unit
K661-120_2V	MECHANICAL TIGHTENING SLEEVE 50-120 2 SCREWS	-	1
K661-150_2V	MECHANICAL TIGHTENING SLEEVE 95-150 2 SCREWS	0.100	1
K661-240_4V	MECHANICAL TIGHTENING SLEEVE 95-240 4 SCREWS	0.280	1

Short-circuiting lost end BPMCC



BE002

Utilisation

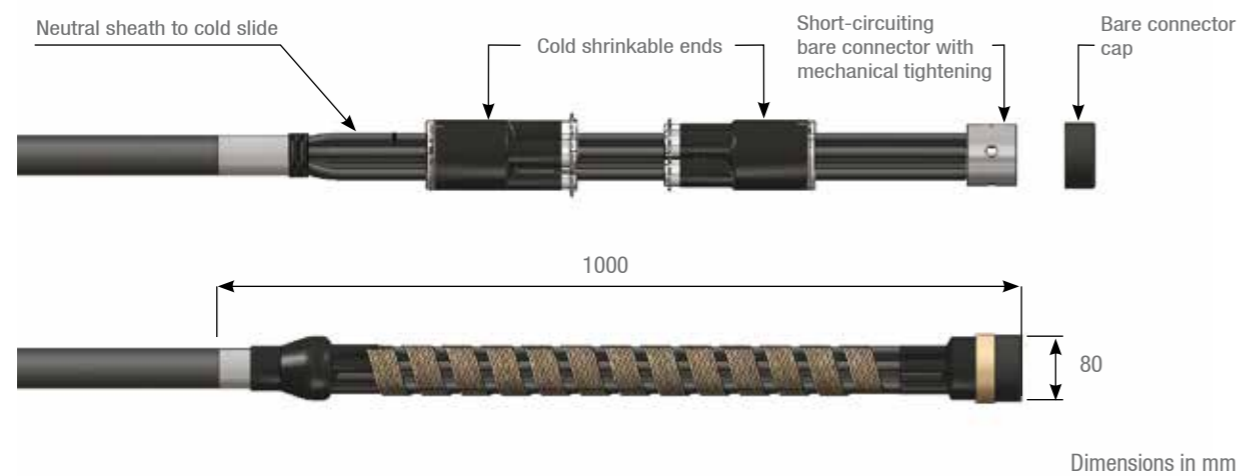
This accessory is designed to short-circuit waiting networks without power. It is used to warn accidental powering at one end. It ensures cables watertightness.

The benefit:

- + Easy installation

Description

- This kit comprises the following accessories:
 - 1 short-circuiting bare connector with mechanical tightening,
 - 1 neutral sheath to cold slide,
 - 2 cold shrinkable ends.

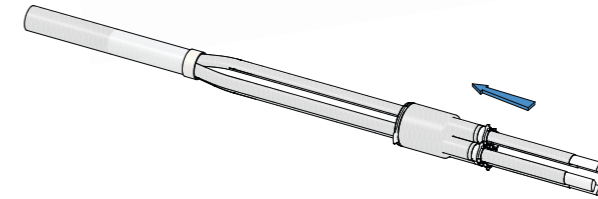


Installation

- Cables preparation.



- Cable re-insulation.



- Conductors short-circuiting.



- Accessory reinforcement.



Code	Désignation	Cable section (mm ²)		Weight (kg)	Sales unit
		Mini	Maxi		
BE002	SHORT-CIRCUITING LOST END BPMCC 50-240	3x95+50	3x240+120M*	1.320	1

* The letter M means that the core of the conductor is solid.

Aerial sub-surface connection for LV network (NJAS)

Phase sleeves and sheaths



Neutral sleeve and sheath



4 outlets end



Utilisation

Aerial sub-surface junction is designed to establish the connection from an underground network to a low voltage overhead network. They are implemented on overhead environment along a pole, under a mechanical protection as a conduit.

Description

This kit comprises the following accessories:
 - 3 phase sleeves made in aluminium and 1 neutral of type MJT,
 - 4 heat-shrinkable sheaths for the sleeves insulation,
 - 1 heat-shrinkable end with 4 outlets for the cable head of the underground conductor.



Cable		Sleeve + Sheath	Ø R (mm)	B (mm)	L (mm)	H		
S (mm ²)	A (mm ²)							
50	54.6	MJT 50 - 54	FRM 25 - 200	8.5	20	110	E173	
50	70N	MJT 50 - 70N		10.5				
70	54.6	MJT 70 - 54		10.5				
70	70N	MJT 70 - 70N	FRM 30 - 200	15	25	120	E 215	
95	54.6	MJT 95 - 54						12
95	70	MJT 95 - 70						
95	150	MJT 95 - 150	FRM 35 - 200	18.5	32	142	E 280	
150	70	MJT 150 - 70						
150	95N	MJT 150 - 95N						
150	150	MJT 150 - 150	FRM 35 - 200	18.5	32	142	E 280	
240	70	MJT 240 - 70						
240	150	MJT 240 - 150						

Code	Designation	Cable (mm ²)		Set composition		Weight (kg)	Sales unit
		Underground	Overhead	Sleeve	Sheath		
U580	NJAS 95 - 50/70-54	3x95+50	3x70+54.6	MJTASE 95-70 1 MJT 50-54	3 FRM 30 - 200	0.520	1
U581	NJAS 95 - 50/70-70N	3x95+50	3x70+70N	MJTASE 95-70 1 MJT 50-70N	1 FRM 25 - 200	0.510	1
U582	NJAS 95 - 50/150-70N	3x95+50	3x150+70N	MJTASE 95-150 1 MJT 50-70N	4 FRM 25 - 200	0.680	1
U583	NJAS 95 - 70/70-54	3x95+70	3x70+54.6	MJTASE 95-70 1 MJT 70-54	3 FRM 30 - 200 1 FRM 25 - 200	0.640	1
U589	NJAS 150-70N / 70-54.6	3x150+70	3x70+54.6	MJTASE 150-70 1MJT 70-54	3 FRM 30-200 1 FRM 25-200	0.660	1
U584	NJAS 150 - 70/70-70N	3x150+70	3x70+70N	MJTASE 150-70 1 MJT 70-70N	3 FRM 30 - 200 1 FRM 25 - 200	0.670	1
U585	NJAS 150 - 70/150-70N	3x150+70	3x150+70N	MJTASE 150-150 1 MJT 70-70N	3 FRM 30 - 200 1 FRM 25 - 200	0.720	1
U586	NJAS 240 - 95/70-54	3x240+95	3x70+54.6	MJTASE 240-70 1 MJT 95-54	3 FRM 35 - 200 1 FRM 25 - 200	0.810	1
U587	NJAS 240 - 95/70-70N	3x240+95	3x70+70N	MJTASE 240-70 1 MJT 95-70N	3 FRM 35 - 200 1 FRM 25 - 200	0.840	1
U588	NJAS 240 - 95/150-70N	3x240+95	3x150+70N	MJTASE 240-150 1 MJT 95-70N	3 FRM 35 - 200 1 FRM 25 - 200	0.920	1

REMIC bare cabinet



600 cabinet:
12 connection
terminals

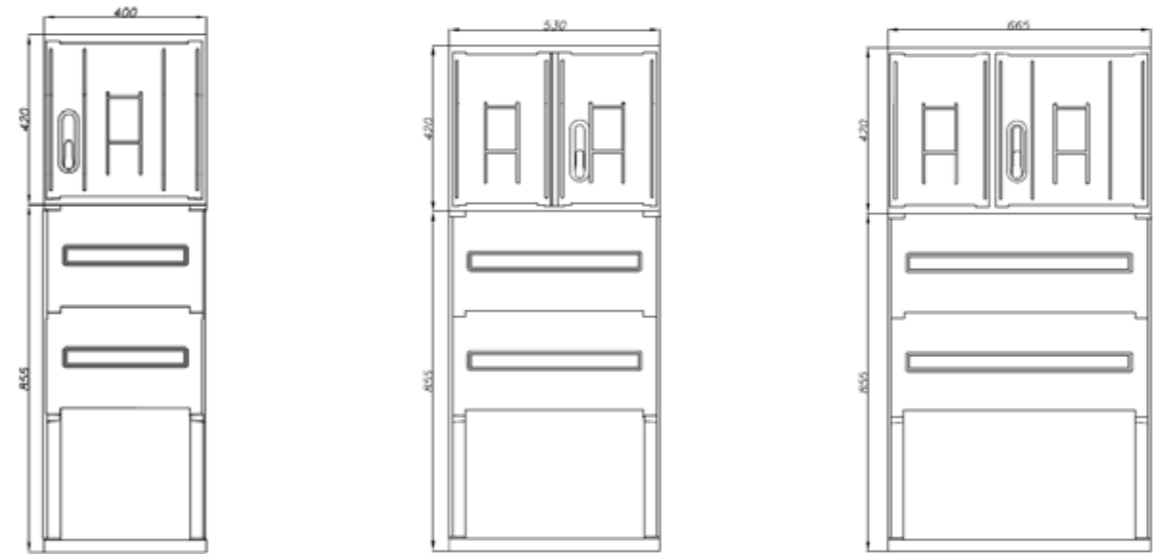
- + 180° opening door
- + Modular



Application

DIN cabinets exist in 3 widths and are designed to receive a 300, 450 or 600mm REMIC set of bars support. They use "common" equipment (direct connection network, service) and RRCP cutting / protection network connection modules. They are also designed for possible re-supply of the set of bars support without additional re-supply doors.

Dimensions



Dimensions in mm

Code	Designation	Weight (kg)	Sales unit
U701	DIN CABINET FOR 6 STEPS REMIC GRID	15.000	1
U702	DIN CABINET FOR 9 STEPS REMIC GRID	18.000	1
U703	DIN CABINET FOR 12 STEPS REMIC GRID	20.000	1

All of the references are available in remote meter reading system or with flash marking: please contact us.

Accessories

- SEE SHEET
LV modular connection cabinet / REMIC equipped cabinet

Description

- These cabinets are made for outdoor use. They are IP44 and IK10.
- These DIN cabinets have a V0 flammability category.
- They are equipped with inserts for receiving the REMIC sets of bars supports.
- They are available in 3 versions, depending on the type of bars supports needed.
- Cabinet's doors can be open at 180° which facilitate implementation, operation and maintenance.
- The monobloc front face is completely removable to facilitate connection inside the cabinet.
- The plinth is used to adapt the above ground height of the cabinets.
- A re-supply trapdoor is included in the cabinet.
- The cabinets are delivered with their fixing foundations.
- These cabinets meet the criteria of **EN 62208:2011**.

REMIC set of bars



Set of bars 300
Q 600



Set of bars 450
Q 601



Set of bars 600
Q 602

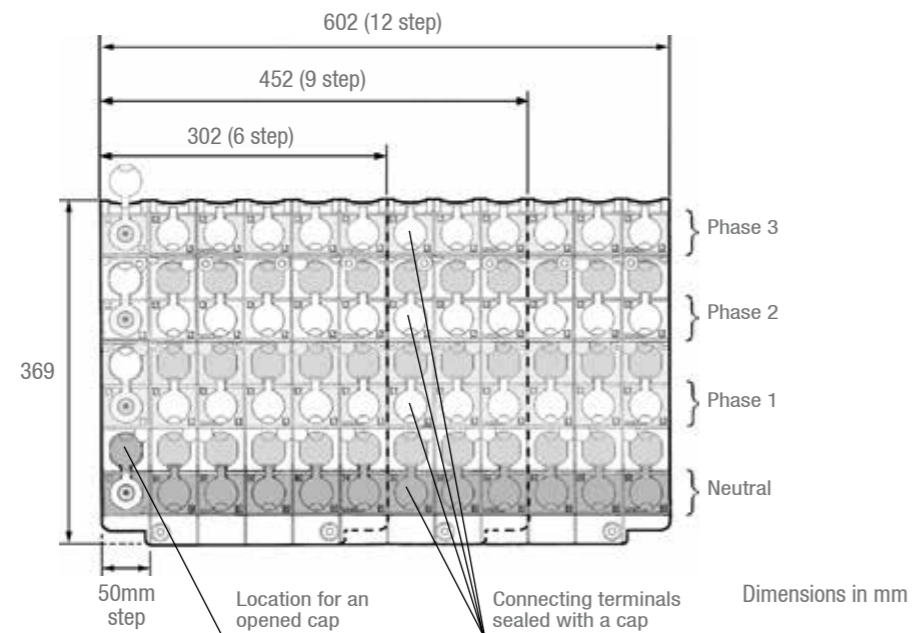
Application

The sets of bars supports 300, 450 and 600 respectively offer 6, 9 and 12 connection terminals for each pole.

Description

- The sets of bars supports 300, 450 and 600 are respectively made of 6, 9 and 12 steps of 50mm.
- The set of bars support is fixed to the bottom of all REMBT cabinets on standardised inserts.
- The inclination of the phase bars facilitates connection.
- The poles are identified (N, L1, L2, L3).
- The modules are fixed using standardised M12 threads.
- The product is IP2X before and after installation. The unused connection terminals are covered using a captive cap.
- A 400A re-supply device can be connected directly to the connection terminals. IP2X is maintained thanks to the 35mm diameter of the terminals.

These sets of bars supports meet the criteria of the **HN 63-S-65** standard.

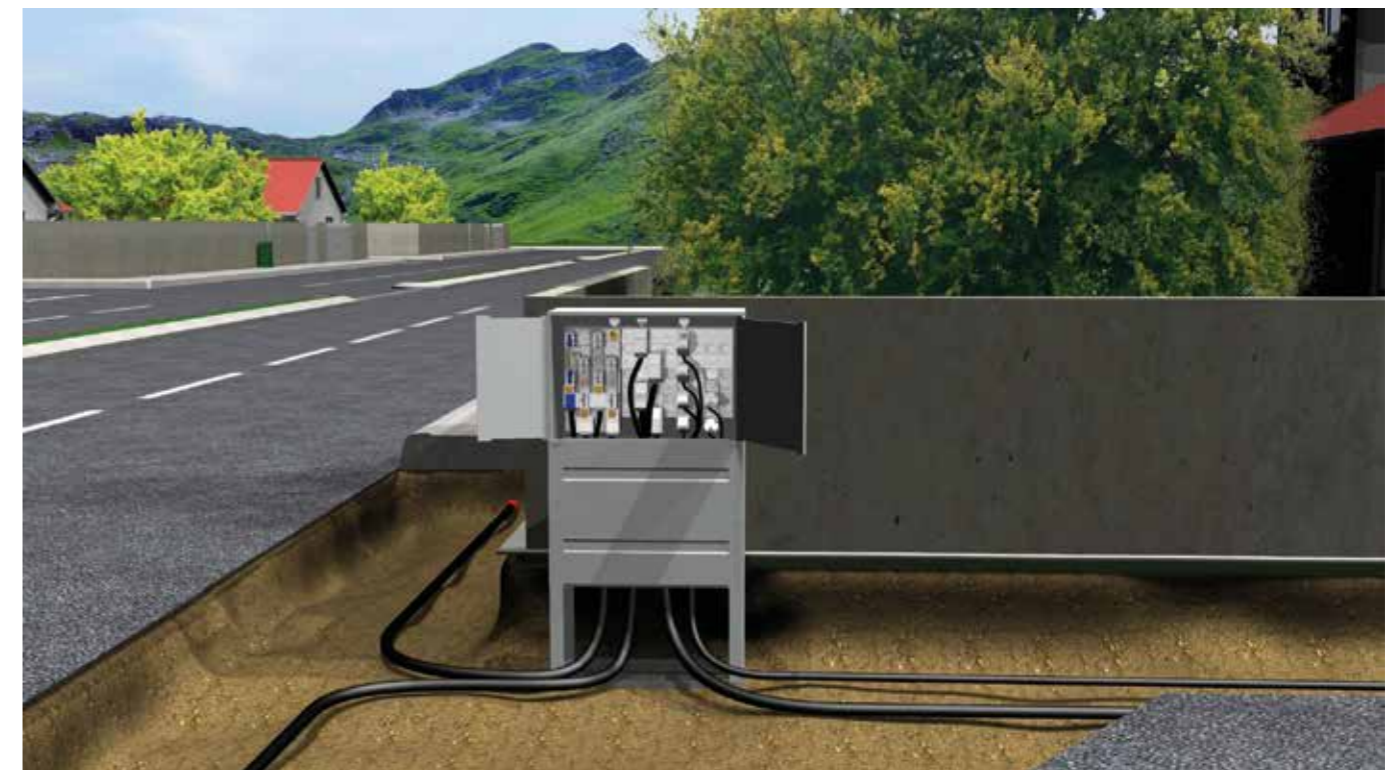


Code	Designation	Weight (kg)	Sales unit
Q600	REMIC SET OF BARS SUPPORT 300	2.630	1
Q601	REMIC SET OF BARS SUPPORT 450	3.760	1
Q602	REMIC SET OF BARS SUPPORT 600	4.870	1

Accessories

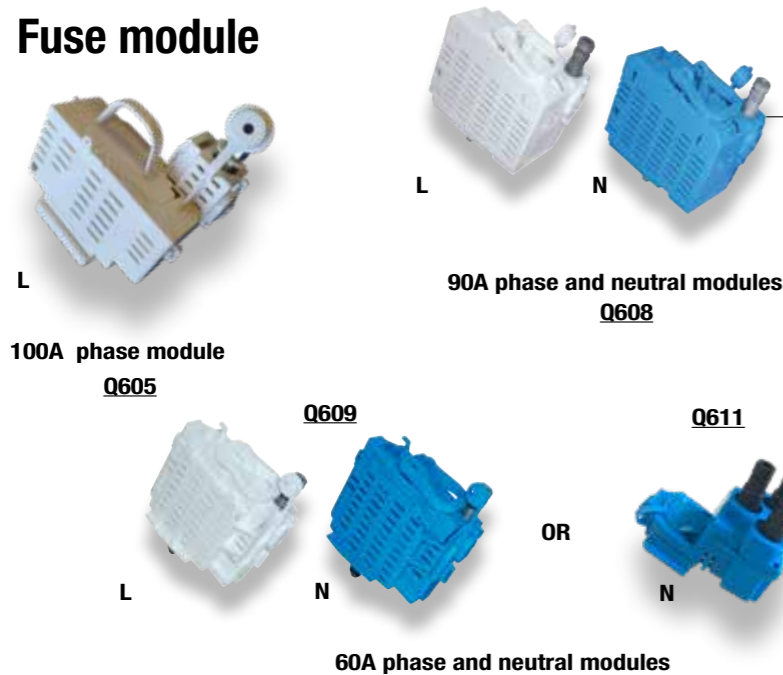
ADAPTORS FOR S15-S20 CABINETS

Code	Designation	Weight (kg)	Sales unit
Q618	REMIC STANDARD S20 CABINET FRAME	1.030	1
Q619	REMIC STANDARD S15 CABINET FRAME	1.550	1



REMIC service module

Fuse module



Application

The fuse service module exists in 3 versions: 60A, 90A and 100A available in single or three phase kits depending on the model. In variation of the fused neutral, a triple neutral is possible. It is installed on the M12 standardized connection terminals of the set of bars support. It is used to tap a single or three phase service connection ensuring protection through fuses size 00 (60A and 90A modules) or 22x58 (100A module).

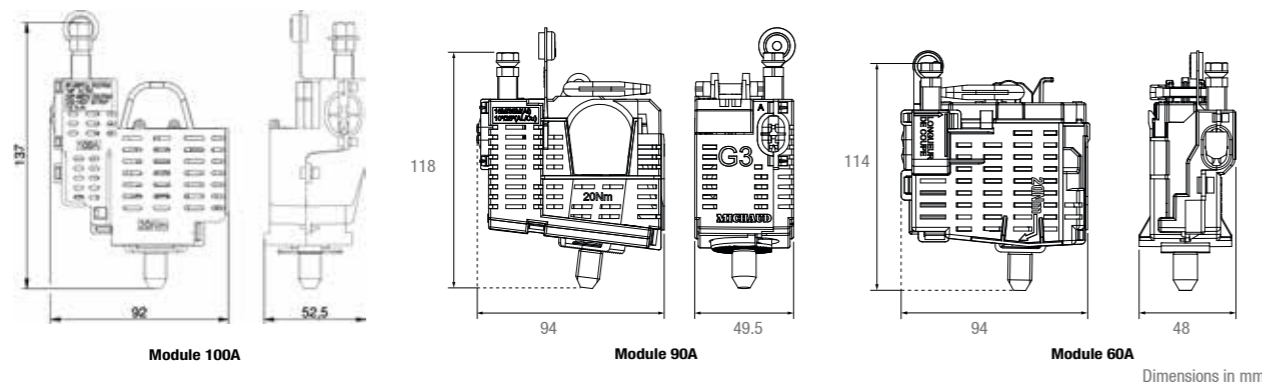
The benefit:

+ In case of long service connections, the terminal can receive 50M solid core to avoid voltage drop.

Description

- The fuse service module has a protection degree type IP2X before and after installation.
- The neutral is identified thanks to its blue colour.
- The connection terminals use insulation piercing technology and are equipped with shear head screws. Capacity is 10-25mm² Cu / 16M-50M Al or 6M-50M mm² Cu / 25M-50M Al (Q605) (the letter M means that the core of the conductor is solid).

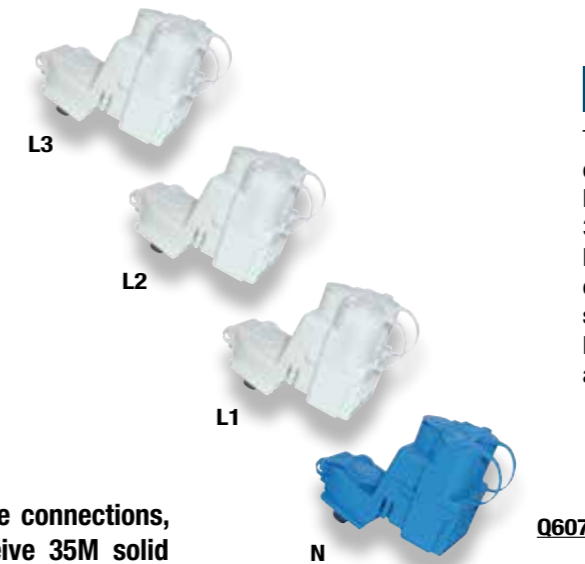
This module meets the criteria of the **H 63-S-65** standard.



Code	Designation	Number of phase modules	Neutral type module	ENEDIS capacity (A)	Real capacity (A)	Weight (kg)	Sales unit
Q605	REMIC MODULE TYPE FUSE SERVICE 22x58 100A RBP	1	-	-	100	0.592	1
Q608	REMIC MODULE TYPE FUSE SERVICE SINGLE PHASE 90A RBPM	1	Disconnection	90	108	0.590	1
Q606	REMIC MODULE TYPE FUSE SERVICE THREE PHASE 60A RBPT	3	Disconnection	60	72	0.850	1
Q609	REMIC MODULE TYPE FUSE SERVICE SINGLE PHASE 60A RBPM	1	Disconnection	60	72	0.430	1
Q611	KIT MODULES FUSE PHASES + TRIPLE NEUTRAL G2	3	Triple neutral	60	72	0.100	1

SEE SHEET PROTECTION / Fuses / Fuse cartridge AD

Multitap module



Application

The multitap connection module comprises 1 neutral and 3 phases. It allows a maximum of 3 single phase or 3 three phase services to be connected. It is installed on the M12 standardized connection terminals of the set of bars support. It is mainly used when the AD fuses are installed in the customer premises.

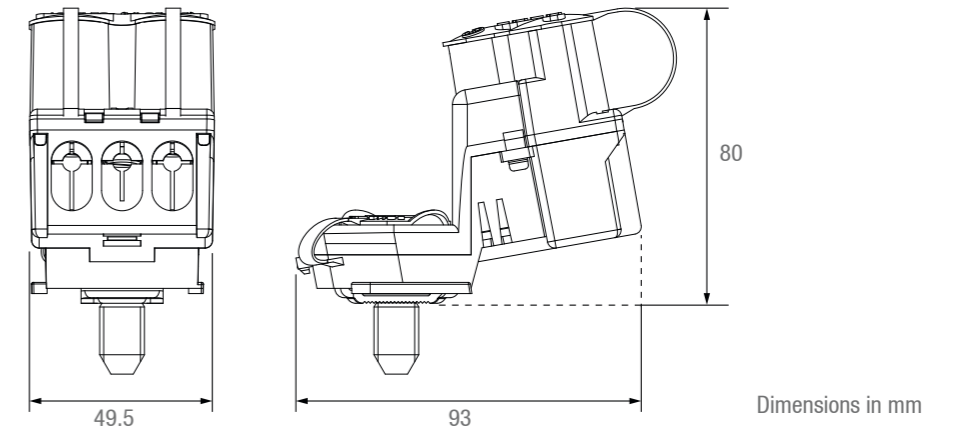
The benefit:

+ In case of long service connections, the terminal can receive 35M solid core to avoid the voltage drop.

Description

- The multitap connection module has a degree of protection type IP2X before and after installation.
- The neutral and phases have 3 insulation piercing connection terminals.
- The neutral is identified thanks to its blue colour.
- The terminals are equipped with shear head screws. Capacity is 16-25mm² Al-Cu / 16M-35M Al (the letter M means that the core of the conductor is solid).
- The product design allows the conductors to be wired on the top of the lower terminals.
- The small size of the IP2X caps provides access to the tightening screws of the terminals even when all of the conductors are connected.

This module meets the criteria of the **HN 63-S-65** standard.



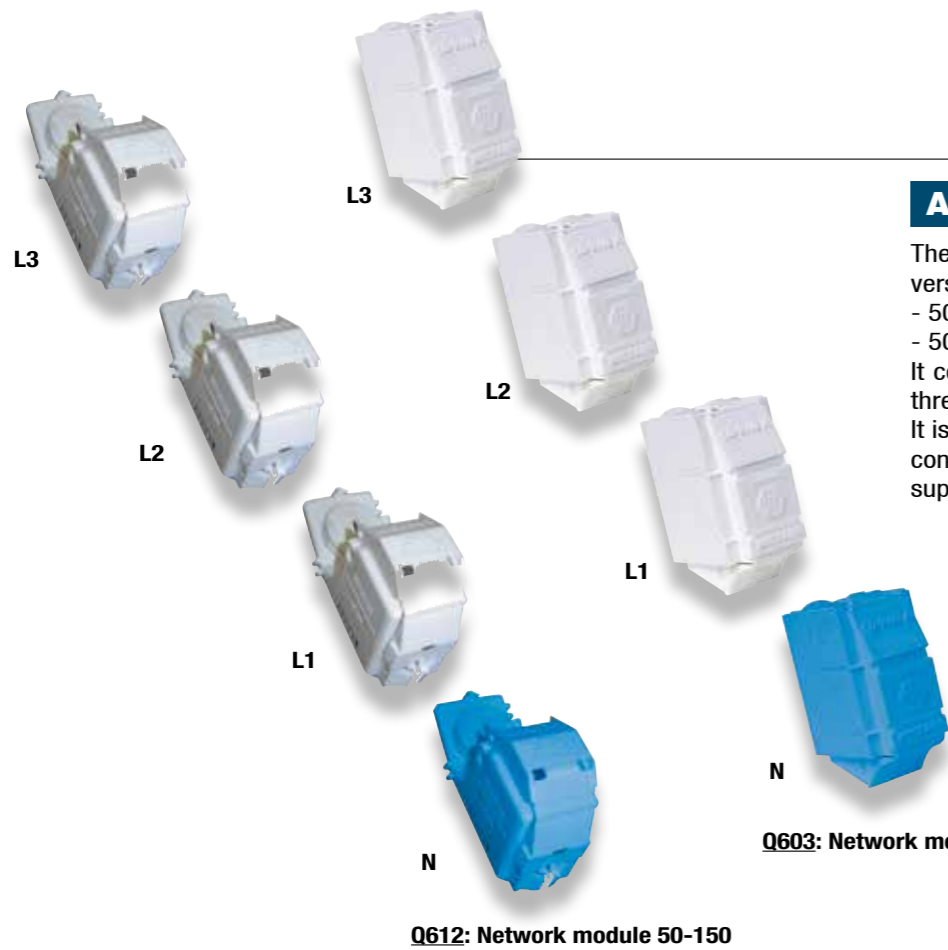
Code	Designation	Weight (kg)	Sales unit
Q607	REMIC MULTITAP CONNECTION MODULE RBD (1 NEUTRAL + 3 PHASES)	0.950	1

Variant:

The multitap connection module is available in single phase version.

Code	Designation	Weight (kg)	Sales unit
Q610	REMIC MULTITAP CONNECTION MODULE SINGLE PHASE (1 NEUTRAL + 1 PHASE)	0.580	1

REMIC network module



Application

The network module is available in 2 versions:
- 50-240mm²,
- 50-150mm².
It comprises one neutral terminal and three phase terminals.
It is installed on the M12 standardized connection terminals of the sets of bars supports.

Q603: Network module 50-240

Q612: Network module 50-150

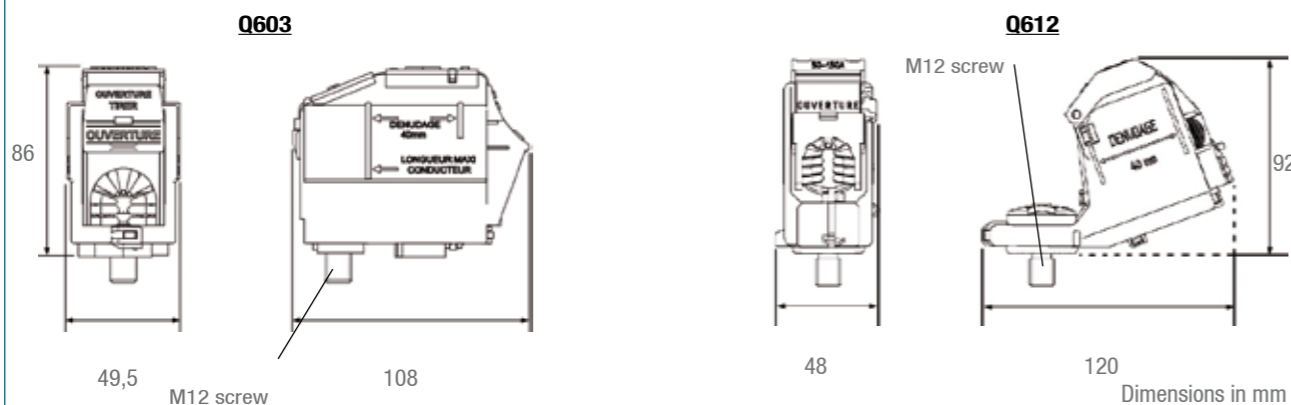
The benefits:

- + Easy installation of the NETWORK module 50-240.
- + 50mm² or 95mm² connection on a terminal of the NETWORK module 50-150.

Description

- The terminals are of Class A according to the **NF C 63-061** standard (Electrical ageing: 700 cycles).
- They are IP2X before and after installation regardless of the conductors section.
- The neutral is identified thanks to its blue colour.
- The terminals receive round or sectoral shape aluminium or copper conductors.
- The conductors are tightened using a hexagonal H14 shear head screw. A second H14 head is used for possible dismantling and reuse using a 40Nm torque wrench.

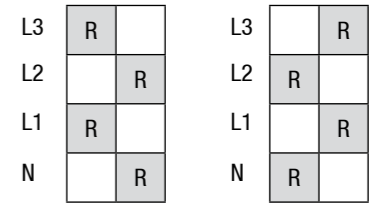
This module meets the criteria of the **HN 63-S-65** standard.



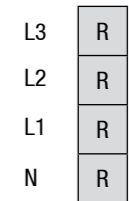
Installation

PRINCIPLE

- For all cable sections
Install the network module on two 50mm steps. The design of the set of bars supports allows one or the other of the configurations besides.



R = Network terminal



- For the cables with sections up to 95mm²
The network module 50-150 can be installed on only one step.

CHRONOLOGY OF THE OPERATIONS

- For the 50-240 module



1°) Fixing of the module to the set of bars support (tightening at 30Nm).

2°) Moving the **captive** slide of the module to the top so the conductor can be grasped from the front.

3°) Tightening of the conductor until the shear head breaks after bringing the upper part of the terminal back to the bottom.

- For the 50-150 module

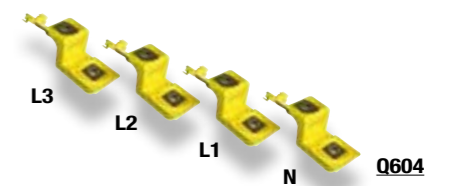
The principle is the same except the fact that the slide of the terminal does not have a retention system in the upper part (the slide is installed and removed from the front).

Code	Designation	Weight (kg)	Sales unit
Q603	REMIC MODULE TYPE NETWORK RRD 50-240 (1 NEUTRAL + 3 PHASES)	1.780	1
Q612	REMIC MODULE TYPE NETWORK RRD 50-150 (1 NEUTRAL + 3 PHASES)	1.670	1

Accessory

The insulation bloc module enables a network module to be temporarily separated from the set of bars support and possibly resupplied.

This module meets the criteria of the **HN 63-S-65** standard.



Code	Designation	Weight (kg)	Sales unit
Q604	REMIC 4-TYPE INSULATION BLOC MODULE	0.668	1

REMIC disconnection and protection module RRCP



Q614

Application

The REMIC module type RRCP offers a network outlet that can be cut (400 A function) or protected using maximum 200A fuses 115mm size 2 (200A function).
It is installed on the M12 standardised connection terminals of the sets of bars supports.
It is mainly used for supplying a collective or individual service with supervised power.

The benefits:

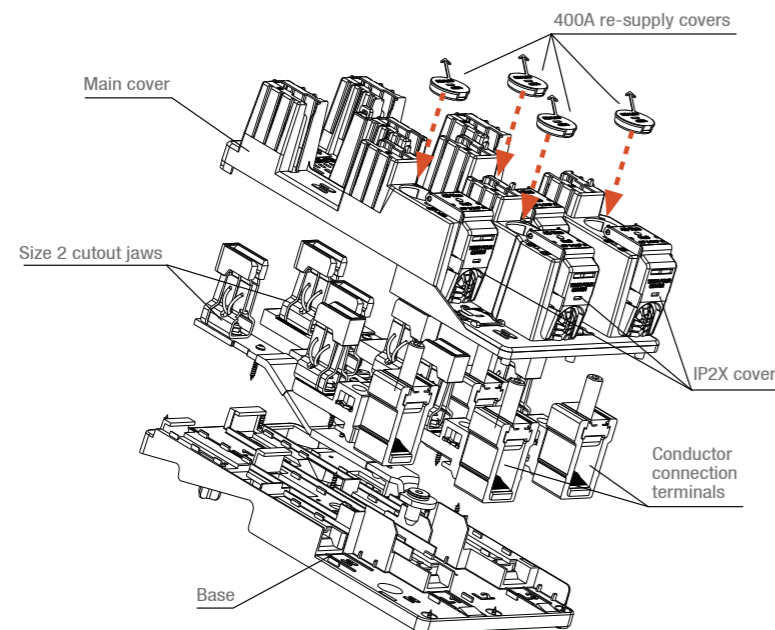
- + 1 single tool for installation
- + Compatibility with flat doors
- + Clear poles separation
- + Integrated IP2X protection on each pole

Description

- The small thickness of the new generation of module type RRCP facilitates use in small depth cabinets (flat door).
- The neutral is identified thanks to its blue colour.
- The terminals allow the connection of round or sectoral shape, copper or aluminium conductors.
- The capacity of the terminals is 50 to 240mm² for the neutral and for the phases.

This module meets the criteria of the **HN 63-S-65** standard.

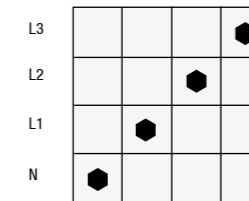
Caution: the RRCP module is installed exclusively on REMIC sets of bars supports.



Installation

PRINCIPLE

A disconnection and protection module (RRCP) requires four 50mm steps.



● : Fixing points on the set of bars support

CHRONOLOGY OF THE OPERATIONS

ASSEMBLY

- On the set of bars supports installed (450 or 600), open the 4 poles diagonally in the required place for installing the RRCP (the other captive caps above and below the diagonal must remain closed).
- Remove the IP2X captive caps then place and fix the RRCP on the set of bars support using 4 H16 screws.
- Replace all of the captive caps while waiting connection of the outlet.

LEADING-OUT WIRING

- Prepare end cable as usual.
- Remove the covers of the terminal blocks to connect.
- Cut the conductors to length, strip them over 45mm, brush them with neutral grease then insert them into the terminals.
- Replace the slides in U shape and tighten the screws until 40Nm.
- Replace the covers.

INSTALLATION OF THE BARS OR FUSES SIZE 2 (CENTRE-TO-CENTRE DISTANCE 115mm)

- Install the links or fuses using an insulated operating handle.

INSTALLATION OF THE RE-SUPPLY

- Remove the 4 re-supply covers.
- Perform necessary electrical measurements.
- Insert and screw the M12 re-supply socket.



Code	Designation	Weight (kg)	Sales unit
Q614	REMIC MODULE RRCP 400A / 200A	5.658	1

Variation:

The ERDF technical specification also defines a product known as RRC exclusively dedicated to the 400A cutout. For Michaud this is exactly the same product.

Code	Designation	Weight (kg)	Sales unit
Q613	REMIC MODULE RRC 400A	5.658	1

REMIC Tool set



Application

The tool set **U804** provides various tools required for the connection of the underground incoming and outgoing cables to the REMIC emergency junction box.

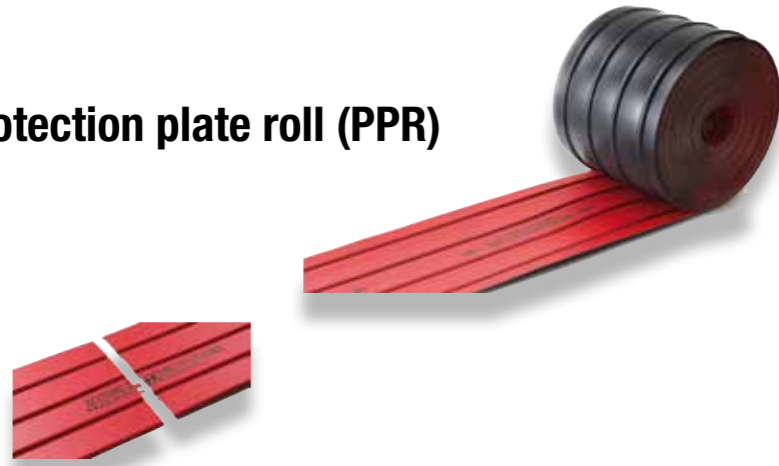
Description

- The tool kit U804 contains the following accessories :
- Insulated handle for installing and removing fuses and neutral knives. **(P237)**
 - Square flat triangle operating key to open/close the front part of the emerging junction box **(P091)**
 - 3/8" Insulated torque wrench **(U814-4)**
 - Insulated extension for torque wrench **(U801)**
 - 3 sizes of insulated hexagon sockets for the torque wrench **(U803-1X)** :
 - 10mm **(U803-10)**
 - 13mm **(U803-13)**
 - 14mm **(U803-14)**
 - 2 sizes of allen sockets for the torque wrench (U803-XA) :
 - 6mm **(U803-6A)**
 - 4mm **(U803-4A)**

Code	Designation	Weight (kg)	Sales unit
U804	REMIC'S INSULATED TOOLS KIT	-	1
TOOLS			
U814-4	ISULATED TORQUE WRENCH 3/8" - 50Nm	-	1
P237	HANDLE FOR FUSES SIZE 00 - SIZE 2	0.256	1
U801	EXTENSION FOR INSULATED RATCHET SPANNER	-	1
P091	14 SQUARE 11 TRIANGULAR 9x4 FLAT WRENCH	0.042	10
HEXAGONAL SOCKET			
U803-10	HEXAGONAL SOCKET FOR INSULATED RATCHET SPANNER - 10mm	-	20
U803-13	HEXAGONAL SOCKET FOR INSULATED RATCHET SPANNER - 13mm	-	20
U803-14	HEXAGONAL SOCKET FOR INSULATED RATCHET SPANNER - 14mm	-	20
INSULATED SOCKET WRENCH			
U803-6A	INSULATED SOCKET WRENCH - 6mm	-	20
U803-4A	INSULATED SOCKET WRENCH - 4mm	-	20

Protection and warning

Protection plate roll (PPR)



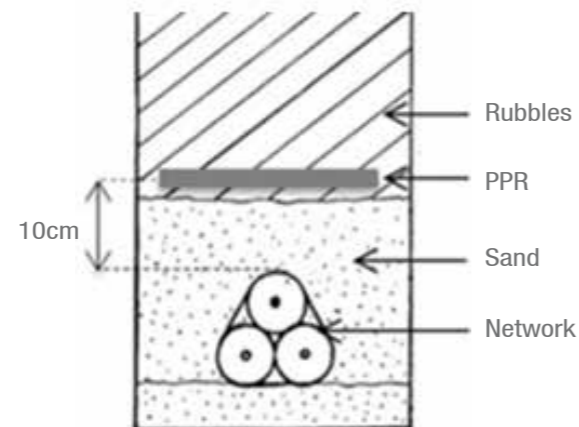
Application

This protection plate roll (PPR) is designed to protect underground networks from extraction (pipes and/or cables). It can be used for underground network under weak load, engineering structure crossing, or in area of high density network.

Description

- The plate roll offers permanent mechanical protection.
- It is rot-proof, corrosion and water resistant and shock absorbing.
- The plate is of red colour. Other colours are available upon request.

This protection plate roll meets the criteria of the **DIN 54841-5** standard.



Code	Designation	Dimensions LxHxD (mm)	Weight (kg)	Sales unit
U591	PROTECTION PLATE ROLL (width 160mm)	50 000 x 160 x 2	16	1
U592	PROTECTION PLATE ROLL (width 180mm)	50 000 x 180 x 2	18	1
U593	PROTECTION PLATE ROLL (width 240mm)	25 000 x 240 x 2	12	1
U594	PROTECTION PLATE ROLL (width 300mm)	30 000 x 300 x 3	27	1

Other colours are available, please contact us.

Warning netting



Application

This warning netting is designed to indicate the presence of low voltage power line cables buried in the ground.

Description

- This warning netting is available in 3 widths: 100, 200 and 300mm.
- It is made of red or green synthetic materials according to the requirement.

This flexible netting meets the criteria of the **NF EN 12613** standard.

Code	Designation	Width (m)	Length (m)	Weight (kg)	Sales unit
F860	WARNING MESH 0.1m (300m roll)	0.1	300	1.500	3
F861	WARNING MESH 0.2m (100m roll)	0.2	100	1.100	1
F862	WARNING MESH 0.3m (100m roll)	0.3	100	1.625	1

IRO tube



U339

Application

These IRO tube are used outside to allow mechanical protection round electrical cables.

Description

These products offer a compressive strength of 750 Nw (maximum deformation of 25%).

- These tubes offer an impact resistance of 2 Joules.
- These products are delivered in rigid bar of 3 meters and with a sleeve.
- Installation and operating temperature is between -5°C et +60°C.
- The protection degree is IP43.

This product meets the requirements of the **EN 61386-1** and **EN 61386-21** standards..

Code	Designation	External diameter (mm)	Tolerance	Internal diameter (mm)	Meters per pallet	Weight (kg)	Sales unit
U339_16	IRO TUBE DIAM 16 (3m length)	16	+0/-0.3	12.5	3078	-	1026
U339_20	IRO TUBE DIAM 20 (3m length)	20	+0/-0.3	16	1995	-	665
U339_25	IRO TUBE DIAM 25 (3m length)	25	+0/-0.4	20	1368	-	456
U339_32	TUBE IRO DIAM 32 (3m length)	32	+0/-0.4	27	990	-	330
U339_40	TUBE IRO DIAM 40 (3m length)	40	+0/-0.4	34.5	600	-	200
U339_50	TUBE IRO DIAM 50 (3m length)	50	+0/-0.5	44	495	-	165
U339_63	TUBE IRO DIAM 63 (3m length)	63	+0/-0.6	56.5	330	-	110

The sales unit is the number of tubes on a pallet.

Junction sleeve



U340

Application

This sleeve allows to connect two IRO tubes.

Code	Designation	External diameter (mm)	Weight (kg)	Sales unit
U340_16	SLEEVE FOR IRO TUBE DIAM 16	16	0.004	250
U340_20	SLEEVE FOR IRO TUBE DIAM 20	20	0,008	150
U340_25	SLEEVE FOR IRO TUBE DIAM 25	25	0.010	100
U340_32	SLEEVE FOR IRO TUBE DIAM 32	32	0.014	50
U340_40	SLEEVE FOR IRO TUBE DIAM 40	40	0.016	30
U340_50	SLEEVE FOR IRO TUBE DIAM 50	50	0.020	15
U340_63	SLEEVE FOR IRO TUBE DIAM 63	63	0.025	5

Connection sleeve



U341

Application

This sleeve allows a connection between the sheath and the general protection box.

Code	Designation	External diameter (mm)	Weight (kg)	Sales unit
U341_16	SLEEVE FOR IRO TUBE AND SHEATH DIAM 16	16	0.005	250
U341_20	SLEEVE FOR IRO TUBE AND SHEATH DIAM 20	20	0.009	150
U341_25	SLEEVE FOR IRO TUBE AND SHEATH DIAM 25	25	0.012	100
U341_32	SLEEVE FOR IRO TUBE AND SHEATH DIAM 32	32	0.016	50
U341_40	SLEEVE FOR IRO TUBE AND SHEATH DIAM 40	40	0.018	30
U341_50	SLEEVE FOR IRO TUBE AND SHEATH DIAM 50	50	0.022	15
U341_63	SLEEVE FOR IRO TUBE AND SHEATH DIAM 63	63	0.027	5

T-sleeve and elbow



U342



U343

Application

This T-sleeves and the elbows allow connection and adaptation of the circuit of the tubes.

Code	Designation	External diameter (mm)	Weight (kg)	Sales unit
T-SLEEVE				
U342_16	T-SLEEVE FOR IRO TUBE DIAM 16	16	0.014	25
U342_20	T-SLEEVE FOR IRO TUBE DIAM 20	20	0.018	25
U342_25	T-SLEEVE FOR IRO TUBE DIAM 25	25	0.022	25
U342_32	T-SLEEVE FOR IRO TUBE DIAM 32	32	0.028	15
ELBOW 90°				
U343_16	ELBOW 90° FOR IRO TUBE DIAM 16	16	0.013	25
U343_20	ELBOW 90° FOR IRO TUBE DIAM 20	20	0.016	25
U343_25	ELBOW 90° FOR IRO TUBE DIAM 25	25	0.020	25
U343_32	ELBOW 90° FOR IRO TUBE DIAM 32	32	0.025	15

Mounting bracket



U344

Application

This mounting bracket allows to set the sheath beside a facade.

Code	Designation	External diameter (mm)	Weight (kg)	Sales unit
U344_16	MOUNTING BRACKET IRO TUBE DIAM 16	16	0.003	20
U344_20	MOUNTING BRACKET IRO TUBE DIAM 20	20	0.004	10
U344_25	MOUNTING BRACKET IRO TUBE DIAM 25	25	0.005	10
U344_32	MOUNTING BRACKET IRO TUBE DIAM 32	32	0.006	10
U344_40	MOUNTING BRACKET IRO TUBE DIAM 40	40	0.008	10
U344_50	MOUNTING BRACKET IRO TUBE DIAM 50	50	0.009	5
U344_63	MOUNTING BRACKET IRO TUBE DIAM 63	63	0 010	25

TPC sheath



U345

Application

This sheath is used for protection of underground cables. It is available in ring (with draw needle) or in bar.

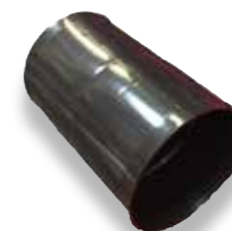
Description

- This sheath offers a compressive strength of 450 N (maximum deformation of 5%).
 - This sheath offers an impact resistance in accordance of EN 61386-24 standard.
 - This product is delivered in ring (bendable) or in bar (rigid).
 - Installation and operating temperature is between -10°C et +90°C.
 - The protection degree is IP44.
 - The sheath is made with allogen free materials and without heavy metals.
- This product meets the requirements of the **EN 61386-1** and **EN 61386-24** standards.

Code	Designation	Nominal diameter (mm)	Internal diameter (mm)	Tolerance	Sheath length (m)	Weight (kg)	Sales unit
SHEATH DRUM							
U345_40	TPC SHEATH DRUM 50M LENGTH DIAM 40	40	30	+0.8	50	6.000	10
U345_50	TPC SHEATH DRUM 50M LENGTH DIAM 50	50	37	+1	50	7.500	10
U345_63	TPC SHEATH DRUM 50M LENGTH DIAM 63	63	47	+1.2	50	9.375	10
U345_75	TPC SHEATH DRUM 50M LENGTH DIAM 75	75	58.5	+1.4	50	11.250	10
U345_90	TPC SHEATH DRUM 50M LENGTH DIAM 90	90	74	+1.7	50	14.000	10
U345_110	TPC SHEATH DRUM 50M LENGTH DIAM 110	110	90	+2	50	15.500	10
U345_125	TPC SHEATH DRUM 50M LENGTH DIAM 125	125	102	+2.3	50	15.750	10
U345_160	TPC SHEATH DRUM 50M LENGTH DIAM 160	160	135	+2.9	25	14.500	10
U345_200	TPC SHEATH DRUM 50M LENGTH DIAM 200	200	169	+3.6	25	15.000	10
SHEATH TUBE							
U346_90	TPC SHEATH TUBE 6M LENGTH DIAM 90	90	74	+1.7	1038*	1.680	173
U346_110	TPC SHEATH TUBE 6M LENGTH DIAM 110	110	90	+2	690*	1.860	115
U346_125	TPC SHEATH TUBE 6M LENGTH DIAM 125	125	102	+2.3	516*	1.870	86
U346_160	TPC SHEATH TUBE 6M LENGTH DIAM 160	160	135	+2.9	318*	3.000	53
U346_200	TPC SHEATH TUBE 6M LENGTH DIAM 200	200	169	+3.6	210*	3.600	35
U346_250	TPC SHEATH TUBE 6M LENGTH DIAM 250	250	212	+4.5	120*	4.500	20

Sheath lengths, delivered in 6m bars, are expressed per pallet.

Junction sleeve



U347

Application

This sleeve allows connection between two ends of sheaths.

Code	Designation	Nominal diameter (mm)	Tolerance	Weight (kg)	Sales unit
U347_40	TPC SHEATH JUNCTION SLEEVE DIAM 40	40	+0.8	0.010	30
U347_50	TPC SHEATH JUNCTION SLEEVE DIAM 50	50	+1	0.013	30
U347_63	TPC SHEATH JUNCTION SLEEVE DIAM 63	63	+1.2	0.017	30
U347_75	TPC SHEATH JUNCTION SLEEVE DIAM 75	75	+1.4	0.020	30
U347_90	TPC SHEATH JUNCTION SLEEVE DIAM 90	90	+1.7	0.022	30
U347_110	TPC SHEATH JUNCTION SLEEVE DIAM 110	110	+2	0.024	5
U347_125	TPC SHEATH JUNCTION SLEEVE DIAM 125	125	+2.3	0.028	5
U347_160	TPC SHEATH JUNCTION SLEEVE DIAM 160	160	+2.9	0.036	5
U347_200	TPC SHEATH JUNCTION SLEEVE DIAM 200	200	+3.6	0.045	1
U347_250	TPC SHEATH JUNCTION SLEEVE DIAM 250	250	+4.5	0.060	1

Separator



U348

Application

This separator allows to facilitate the installation of sheaths and to split each one.

Code	Designation	Sheath diameter (mm)	Number of tubes per separator	Weight (kg)	Sales unit
U348_63-4	TPC SHEATH SEPARATOR DIAM 63-4	63	4	0.010	50
U348_63-8	TPC SHEATH SEPARATOR DIAM 63-8	63	8	0.010	50
U348_75-4	TPC SHEATH SEPARATOR DIAM 75-4	75	4	0.010	50
U348_90-4	TPC SHEATH SEPARATOR DIAM 90-4	90	4	0.011	50
U348_110-4	TPC SHEATH SEPARATOR DIAM 110-4	110	4	0.011	50
U348_110-8	TPC SHEATH SEPARATOR DIAM 110-8	110	8	0.023	50
U348_125-4	TPC SHEATH SEPARATOR DIAM 125-4	125	4	0.015	50
U348_160-4	TPC SHEATH SEPARATOR DIAM 160-4	160	4	0.025	50
U348_200-4	TPC SHEATH SEPARATOR DIAM 200-4	200	4	0.035	50
U348_200-8	TPC SHEATH SEPARATOR DIAM 200-8	200	8	0.040	50

Sheath end cap



U349

Application

This sheath end cap allows to seal the sheath by closing its end.

Code	Designation	Nominal diameter (mm)	Weight (kg)	Sales unit
U349_40	TPC SHEATH END CAP DIAM 40	40	0.010	50
U349_50	TPC SHEATH END CAP DIAM 50	50	0.013	50
U349_63	TPC SHEATH END CAP DIAM 63	63	0.017	50
U349_75	TPC SHEATH END CAP DIAM 75	75	0.030	50
U349_110	TPC SHEATH END CAP DIAM 110	110	0.032	50
U349_125	TPC SHEATH END CAP DIAM 125	125	0.040	50
U349_160	TPC SHEATH END CAP DIAM 160	160	0.049	50
U349_200	TPC SHEATH END CAP DIAM 200	200	0.060	50
U349_250	TPC SHEATH END CAP DIAM 250	250	0.080	50

Cold-shrinkable seal

E2R RF - E4R RF cable sealing end



E4R RF 95-240
L103



E4R RF 35-70
L102



E4R RF 10-35
L101



E2R RF 10-35
L100

Application

This cable sealing end is designed to ensure the watertightness of network and service stripped conductors ends. It is slid on the conductors and implemented without using flame.

The benefits:

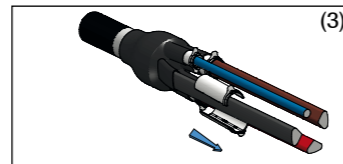
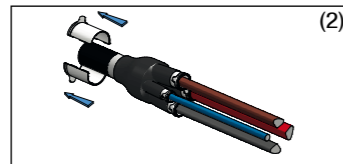
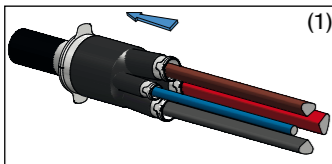
- + No tool is required
- + Very short installation time

Description

- Cable sealing ends are made of elastomer materials very elastic, flexible, resistant and treated to ensure a good protection to UV.
- For 2 conductors :
 - Service cable of 10 up to 35mm² (L100),
- For 4 conductors :
 - Service cable of 10 up to 35mm² (L101),
 - Network cable of 35 up to 70mm² (L102),
 - Network cable of 95 up to 240mm² (L103).

Installation

- Clean and strip the cable over the appropriate length.
- Remove the cable screen as well as stockings and clean each conductor.
- Cover the cut with three turns of adhesive tape.
- Re-insulate the neutral using a re-insulation sheath.
- Slide the cable sealing end up to the stop on the cable side (1).
- Remove the applicator ring on the cable side (2).
- Remove successively applicator rings on each conductor (3).



Code	Désignation	Capacity** (mm ²)	Weight (kg)	Sales unit
L090	COLD-SHRINKABLE SHEATH FRF 50-240	-	-	4
L100	CABLE SEALING END E2R RF 10-35 SILICONE	2x10 up to 2x35	0.050	20
L101	CABLE SEALING END E4R RF 10-35 SILICONE	4x10 up to 4x35	0.075	20
L102	CABLE SEALING END E4R RF 35-70 SILICONE	4x35 up to 4x70	0.100	20
L103	CABLE SEALING END E4R RF 95-240 SILICONE	3x95 + 50/70M* up to 3x240 + 95/120M*	0.130	10

* M means that the conductor core is solid.

** Capacities according to NF standards.

Cable cap



CRC RF 46-80
L115



CRC RF 26-48
L114



CRC RF 16-27
L113



CRC RF 8-16
L112

Application

This cap is designed to ensure the watertightness of network and service cables conductors end. It can be used on cable drums. It is used exclusively without power.

The benefits:

- + No tool is required
- + Very short installation time



Installation video available on www.michaud-export.com

Description

- Cable caps are made of elastomer material very elastic, flexible, resistant and treated to ensure a good protection to UV.
- Cable caps are available in 4 dimensions:
 - For service cable of 1.5 up to 10mm² (L112),
 - For service cable of 16 up to 35mm² and peripheral three phase neutral (L113),
 - For network cable of 50 up to 150mm² (L114),
 - For network cable of 240mm² (L115).



Installation

- Make sure that the cable end is cleanly cut. If not, cut it again (1).
- Put the seal cap on the conductor end (2).
- Remove the applicator ring until total cap shrinking on the conductor (3).



Code	Désignation	Capacity (mm ²)	Covered diameter (mm)	Weight (kg)	Sales unit
L112	SEAL CAP CRC RF 8-16	2x1.5 up to 2x10 or 4x1.5 up to 4x6	8 to 16	0.026	10
L113	SEAL CAP CRC RF 16-27	LV: 4x16M* up to 4x35M*	16 to 27	0.050	10
L114	SEAL CAP CRC RF 26-48	LV: 4x50 up to 3x150 + 95M* HV: 50 up to 240	26 to 48	0.070	10
L115	SEAL CAP CRC RF 46-80	LV: 3x240 + 120M* HV: 630 up to 1200	46 to 80	0.102	10

* M means that the conductor core is solid.

Cold-shrinkable sheath

Cold-shrinkable sleeve



L090

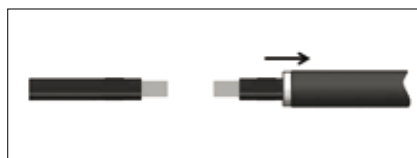
Application

This sleeve is designed to ensure weathertightness and insulation of bare fittings on low voltage network cables. It is designed for round or sectoral type conductors.

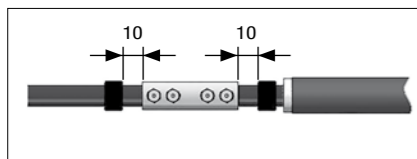
Description

- This sleeve is made of elastomer material, highly elastic, flexible and resistant.
- It expands and waits on an application ring which is breakable and disposable.
- The product is delivered with a mastic tape allowing to reinforce the weathertightness of the sleeve.

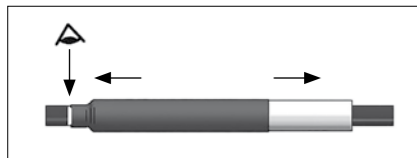
Installation



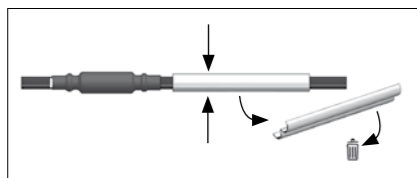
- Put on the sleeve around cable or conductor.



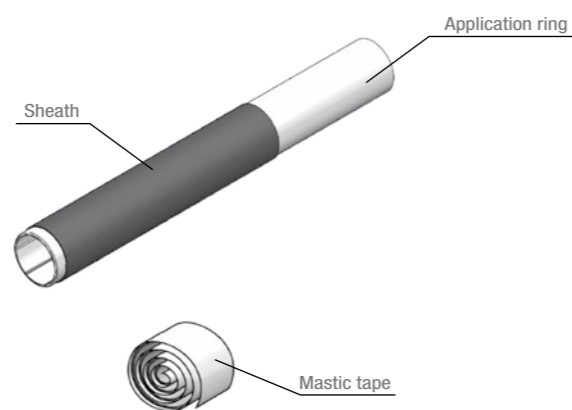
- Install the fitting and roll up the mastic tape on each side of it.



- Place the sleeve above the fitting. It should cover the two mastic tapes. Remove the application ring.



- Open the application ring.



Code	Designation	Weight (kg)	Sales unit
L090	COLD-SHRINKABLE SHEATH FRF 50-240	0.144	4

Cold-slidable sheath



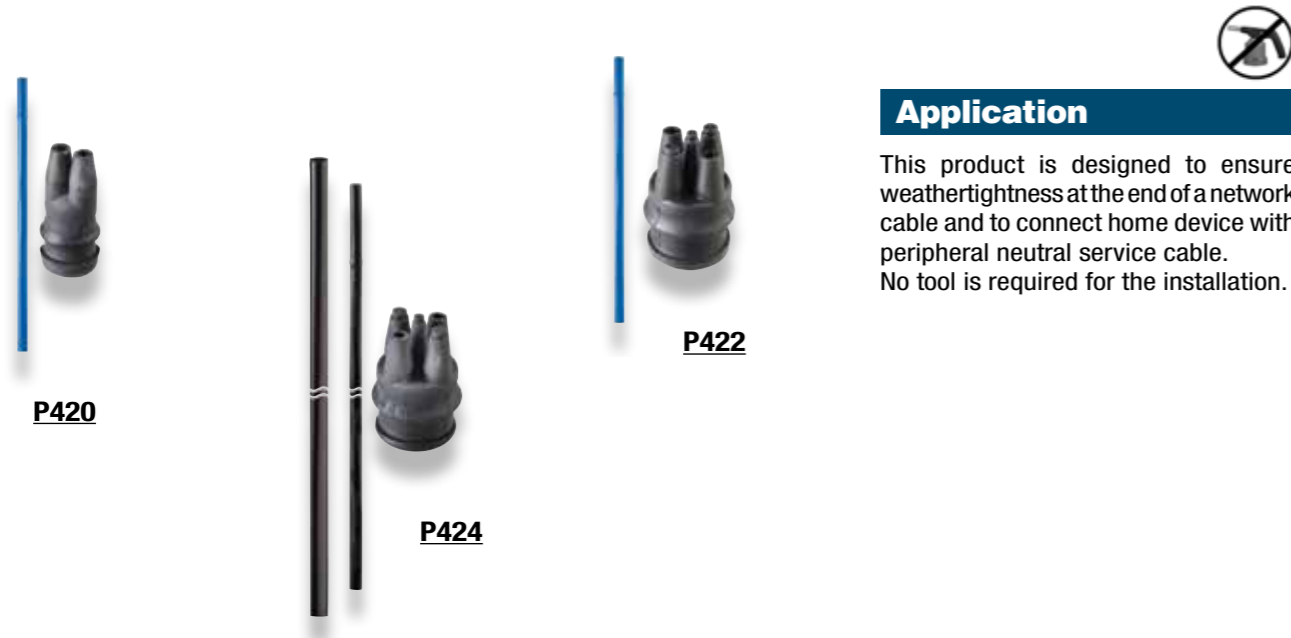
L12X

Application

This sheath is used to insulate the neutral conductor. Before the installation, lubricate the bare neutral conductor.

Code	Designation	Weight (kg)	Sales unit
L119	COLD-SLIDABLE SHEATH GEF 16m	0.243	1
L120	COLD-SLIDABLE SHEATH GEF 25m	0.250	1
L121	COLD-SLIDABLE SHEATH GEF 35m	0.257	1
L122	COLD-SLIDABLE SHEATH GEF 50m	0.262	1
L123	COLD-SLIDABLE SHEATH GEF 70m	0.225	1
L124	COLD-SLIDABLE SHEATH GEF 95m	0.271	1
L125	COLD-SLIDABLE SHEATH GEF 120m	0.280	1

Mecanico-shrinkable service end



Application

This product is designed to ensure weathertightness at the end of a network cable and to connect home device with peripheral neutral service cable. No tool is required for the installation.



Description

- These end kits include a cold-shrinkable end and one or two sheaths designed to be put on conductors. The inside kits (EI) contain one sheath for the neutral. The outside kits (EE) contain two sheaths for three-phases cables. The detail of each kit is below.
- The neutral sheaths have a tinned copper socket on one end, designed to gather strands of the peripheral neutral conductor.
- Cold-shrinkable ends is implemented by the removal of 2 pieces in synthetic material, located at the product base.
- Three-phases cable caps have a fifth outlet for implementation of a meter-reading system. Especially when using meter reading system cable, type **NF C 33-214**.

		P420	P422	P424
Package contents	Cold-shrinkable cap	2 outlets	5 outlets	5 outlets
	Sheath	Blue with socket Length: 40 cm	Blue with socket Length: 40 cm	Black with socket, UV resistant, marked « Neutral » Length: 1 m + Black, UV resistant. Length: 3 m
Application	Cable type	Peripheral neutral cable HM-27/03/139	-Peripheral neutral cable HM-27/03/139 -Solid cable NF C 33-210 -meter reading system cable NF C 33-214 -U1000 R02V cable NF C 32-321	

Installation of the end on a peripheral neutral cable

- Strip the cable 10 cm longer than the useful length and remove the insulation and the stuffing.
- If needed, cut the sheath on the opposite side of the socket.
- Adjust approximatively the length of the neutral conductor to the sheath length.
- Slip on the sheath under the neutral conductor. The socket should be at the cable end.
- Slip the cold-shrinkable cap.
 - Remove the 2 pieces in synthetic material.
- Cut the exceed strands from the socket.

References

Code	Designation	Weight (kg)	Sales unit
P420	INSIDE END EI2TF 25-35 D	0.030	1
P422	INSIDE END EI5TF 25-35 D	0.045	1
P424	OUTSIDE END EE5TF 25-35 D	0.140	1

Variants

The sheaths can be delivered alone.

Code	Designation	Weight (kg)	Sales unit
P428	SET OF 10 BLUE INTERIOR SHEATHS 40cm D	0.150	1

The five-outlet inside end is also available with socket. In this case, it cannot be use on a peripheral neutral cable.

Code	Designation	Weight (kg)	Sales unit
P251	INTERIOR END EI5TF 25-35	0.050	1



INSTALLATION

These products must be implemented and used in **compliance with the applicable regulations** with a skilled, qualified professional undertaking to do so following the generally accepted rules of the trade.

For **live-line** implementation or handling, the electrician must comply with the requirements for live-line work conditions and must be equipped with the necessary personal protection equipment. The implementation temperature limits are: -10°C to +40°C.

Live-line work is carried out under the responsibility of the ordering customer in compliance with the applicable rules.

Before powering up the equipment, all the required verifications must be carried out.



TOOLS

The product should be installed and used with **suitable tools**.

The screw heads should be tightened with the appropriate tool: **Spanner** for hexagonal cap screws, **flat screwdriver** for slotted screw heads of the right size, **Phillips screwdriver** for cruciform screw heads, **HSHC screw head (awls)** for hollow hexagonal screw heads, etc. The screw heads with no torque-limiting device must be tightened to the recommended torque and must not be tightened again.



RECOMMENDATIONS

The installation instructions must be read carefully before using the product.

The product must be used and implemented in compliance with these recommendations for use and installation instructions. It must be used for the applications for which it was defined by the operator/manager of the network and on an electrical installation that is compliant and compatible with the product.

Never exceed the capacities indicated on the device and in the instructions sheet.

Unless explicitly indicated, products are designed for no-load connection.



ENVIRONMENT

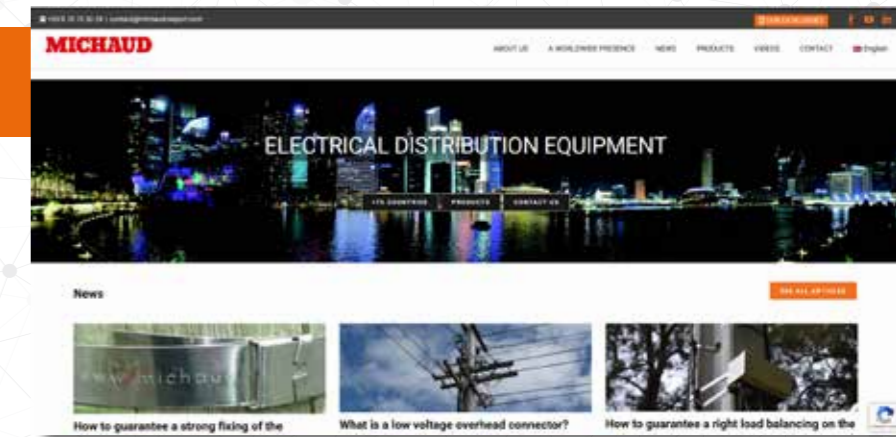
Please group your waste together and follow the recycling and destruction instructions before leaving the worksite.

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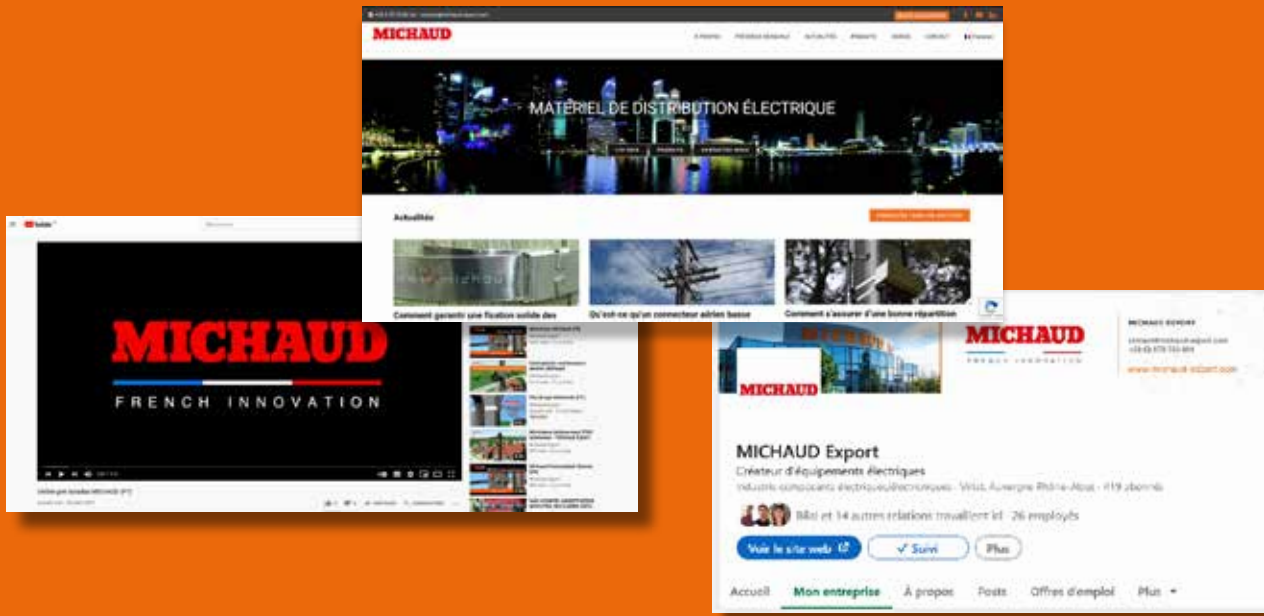
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