cabur®
CONNECTING ENERGY
SINCE 1952

Solutions for renewable energy

2021 EDITION

cabur
CONNECTING ENERGY
SINCE 1952

Solutions for Renewable Energy

2021 EDITION

UNI EN-ISO 9001

UNI EN-ISO 14001

WARNINGS

The characteristics of the products contained in this catalogue are not binding for Cabur and can be changed, without prior notice, due to production requirements or to improve the products. Hence, please contact our technical-commercial network for any necessary confirmations or updates. You can find additional information about this and other Cabur products at our website www.cabur.eu

CABUR SINCE 1952

The Company

Founded in Italy in 1952, Cabur quickly conquered the role of leader amongst the national manufacturers of terminal blocks for electrical panels, always paying particular attention to the needs of installers and to cutting-edge technological solutions.

Today the company develops and manufactures a wide range of products for the electrotechnical and electronic industry which are renowned for their reliability even in extreme conditions of use.

The current production is the result of the many years of experience gained by Cabur as a partner of the main national bodies and companies, perfected through actions and collaborations abroad and includes:

- Connections for electrical panels
- Automation and control solutions
- Industrial marking systems
- Solutions for renevable energy

The wide and diversified offer guarantees a level of flexibility and unique ability to find solutions tailored to specific needs, which enables us to respond to the most varied and complex installation needs.

Always oriented towards the improvement of its products, in recent years Cabur has responded to the Industry 4.0 project with the expansion of production facilities and important product innovations.

In pursuing a corporate culture based on Total Quality, Cabur has adopted the main European directives of the reference market and collaborates with the most prestigious national and foreign Institutes and Laboratories.

Its products are the result of qualitative choices of particular relevance in the field of raw materials used that, in addition to providing an ample guarantee of functionality and reliability over time, also work in full compliance with all the Norms, Regulations, Laws and applicable requirements, binding and self-adopted, with full satisfaction of all compliance obligations.

INDUSTRIAL CONNECTIVITY SOLUTIONS

AUTOMATION AND CONTROL SOLUTIONS

INDUSTRIAL MARKING SOLUTIONS

SOLUTIONS FOR RENEWABLE ENERGY

www.cabur.eu

CONTENTS

CONNECTING ENERGY
SINCE 1952

Cabur Solar Connectors

A range of solutions suitable to implement safe and reliable connections with the most common inverters, PV panels and strings.

La gamma comprende connettori volanti e da pannello certificati TÜV.

Cabur Solar "Line 4" connectors allow simple and effective connections with the most common inverter/ junction boxes.
The Line 4 connectors are composed by:

- Flying connectors, male and female
- Panel connectors, male and female
- Y connectors

All Cabur Solar "Line 4" connectors are supplied with caps and relative accessories.
In order to assure a connection compliance with standard, Cabur reccomend use of pliers IS3161N.
The use of this tools is mandatory for guaranteed a excelent connection and the duration of the plant.

FAST, SIMPLE, AND EFFECTIVE: CONNECTION IN JUST THREE STEPS

1. Insert the stripped wire into the contact to be crimped -CRIMP IT-.
2. Insert the wire complete with contact into the connector and push hard until you hear the typical CLICK which indicates that the plastic and metal parts are hooked together. Do not make any joints without checking that the plastic and metal parts are hooked together.
3. Screw on the wire gland washer manually until it is firmly homed to guarantee IP67.

LINE 4 FLYING MALE - FEMALE CONNECTORS

Fig. 1 - Exploded view of the panel connector body.
The product is provided assembled.

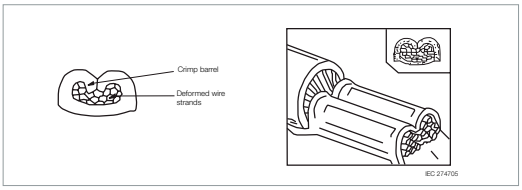


Fig. 3 - Wire crimped onto PIN (inner view)

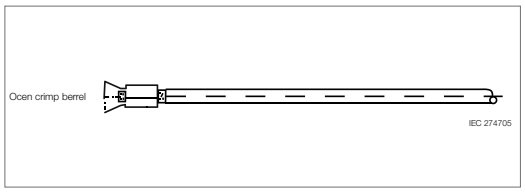


Fig. 2 - Wire crimped onto PIN (top view)

Fig. 4 - "Line 4" connector Pins

The fly connectors, both male and female, are made by four main parts:

1 **Metallic PIN**
2 **Rubber washer**
3 **Rigid PPO plastic washer**
4 **Main body made of PPO plastic**

1 **Pin** is a metallic contact made of tinned copper composed by two metallic wings allowing cable tightening via crimping action. The pin wings should be bending around the cable core. This action should be done with the appropriate Cabur Solar accessories.
2 **Rubber washer** is used to protect internal part of the connector, thus preventing penetration of external agents such as humidity, dust, and oils. This is achieved by pinching the electric wire insulating sleeve.
3 **PPO plastic washer** has a conical cavity that, after being screwed into the main body of the connector, forces the reeds together, compressing the rubber sheath into the wire insulation and hence acting to help ensure IP67 protection.
4 The **main body** holds the metallic PIN crimped onto the cable.

Connection from male and female connectors is made having the male metallic PIN paired with the female PIN, vice versa happens for the plastic shells.
Female connector has one red rubber ring which acts as insulating washer against the penetration of external atmospheric agents.
Male and female connectors are hooked together mechanically by means of two elastic wings on the female connector which must be inserted in the male connectors insulating body special slots.

MALE-FEMALE PANEL CONNECTORS OF LINE 4

Fig. 5 – Exploded view of the connector body. The product is provided assembled.

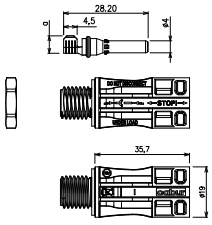
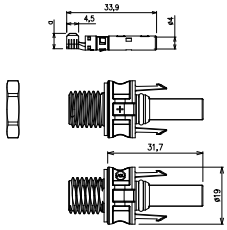
The connector are made by three parts:

1 **Metallic PIN**
2 **Rigid PPO hexagonal plastic washer**
3 **Main body made of PPO plastic**

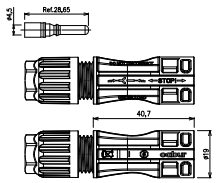
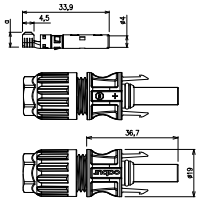
1 **Metallic PIN** is similar to the one of the flying version.
2 **Hexagonal nut** allows locking the connector on panel surface. Pay attention to the strength used to block the connector as, if excessive, could damage the connector.
3 **Main body** made of PPO plastic is similar to the one of the flying version.

LINE 4 — PANEL 4-6 MM² CABUR SOLAR CONNECTORS

(1) IS14110N replace the code IS14110P.
(2) IS24111N replace the code IS24111P.

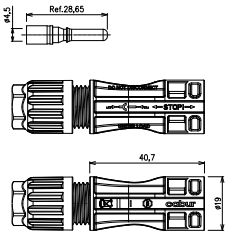
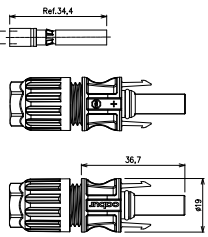
VERSION			CODE TYPE	IS14110N KX04PM4060N	IS24111N KX04PF4060N
SCHEME					
TECHNICAL DATA					
Application				Panel type	Panel type
Connector type				Male	Female
Max. applicable voltage			(Vdc)	1500	1500
Max. applicable current			(A)	35	35
Cable section			(mm²)	4-6	4-6
PIN diameter			(mm)	4	4
Pliers to use	Movable matrix			-	-
	Pliers to use			IS3161N	IS3161N
Matrix to use				-	-
PIN material				Tinned Copper	Tinned Copper
Insulation material				PPE / PA	PPE / PA
Contact resistance	Rc		(mΩ)	< 0.25	< 0.25
Nut Cap locking force			(Nm)	0.8 - 1.0	0.8 - 1.0
Operating temperature range			(°C)	-40...+85	-40...+85
Protection degree				IP67	IP67
Flame class				UL94-V0	UL94-V0
Packaging				100 (10 bag for every box, every single bag contains 10 plastic shell and 10 metallic PIN.)	100 (10 bag for every box, every single bag contains 10 plastic shell and 10 metallic PIN.)
APPROVALS				TÜV	TÜV
ACCESSORIES					
Open-end spanner and unlocking tool				IS15SBLOCKN	IS15SBLOCKN
	Quantity/package		pieces	2	2
Caps	Male			IS52400N	IS52400N
	Female			IS51400N	IS51400N
	Working Temperature range			-40...+85	-40...+85
	Protection degree			IP67	IP67
	Flame class			UL94-V0	UL94-V0
	Quantity/package		pieces	50	50
SPARE COMPONENTS					
Plastic shell				ISPAN4MN	ISPAN4FN
	Quantity/package		pieces	100	100
Metallic PIN wound on reel				IS0601207N	IS0601209N
	Quantity/package		pieces	2000	2000

(1) IS14240N replace the code IS14240.
(2) IS24241N replace the code IS24241.

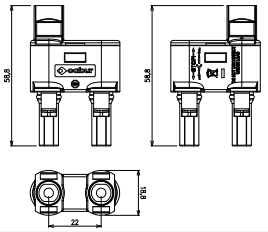
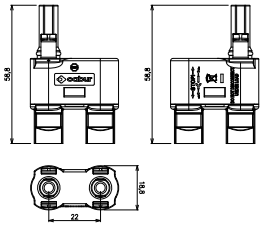
VERSION			CODE TYPE	IS14240N KX04VM4060N	IS24241N KX04VF4060N
SCHEME					
TECHNICAL DATA					
Application				Cable type	Cable type
Connector type				Male	Female
Max. applicable voltage			(Vdc)	1500	1500
Max. applicable current			(A)	35	35
Cable section			(mm^2)	4-6	4-6
PIN diameter			(mm)	4	4
Pliers to use	Movable matrix			-	-
	Pliers to use			IS3161N	IS3161N
Matrix to use				-	-
PIN material				Tinned Copper	Tinned Copper
Insulation material				PPE / PA	PPE / PA
Contact resistance	Rc		(mΩ)	< 0.25	< 0.25
Nut Cap locking force			(Nm)	1.5 - 1.8	1.5 - 1.8
Operating temperature range			(°C)	-40...+85	-40...+85
Protection degree				IP67	IP67
Flame class				UL94-V0	UL94-V0
Packaging				100 (10 bag for every box, every single bag contains 10 plastic shell and 10 metallic PIN.)	100 (10 bag for every box, every single bag contains 10 plastic shell and 10 metallic PIN.)
APPROVALS					
ACCESSORIES					
Open-end spanner and unlocking tool				IS15SBLOCKN	IS15SBLOCKN
	Quantity/package		pieces	2	2
Caps	Male			IS52400N	IS52400N
	Female			IS51400N	IS51400N
	Working Temperature range			-40...+85	-40...+85
	Protection degree			IP67	IP67
	Flame class			UL94-V0	UL94-V0
	Quantity/package		pieces	50	50
SPARE COMPONENTS					
Plastic shell				ISVOL4MN	ISVOL4FN
	Quantity/package		pieces	100	100
Metallic PIN wound on reel				IS0601207N	IS0601209N
	Quantity/package		pieces	2000	2000

LINE 4 — CABLE 10 MM² CABUR SOLAR CONNECTORS

(1) IS14242N replace the code IS14242.
(2) IS24243N replace the code IS24243.

VERSION			CODE TYPE	IS14242N KX04VM100N	IS24243N KX04VF100N
SCHEME					
TECHNICAL DATA					
Application				Cable type	Cable type
Connector type				Male	Female
Max. applicable voltage			(Vdc)	1500	1500
Max. applicable current			(A)	60	60
Cable section			(mm²)	10	10
PIN diameter			(mm)	4	4
Pliers to use	Movable matrix			-	-
	Pliers to use			IS3110N	IS3110N
Matrix to use				-	-
PIN material				Tinned Copper	Tinned Copper
Insulation material				PPE / PA	PPE / PA
Contact resistance	Rc		(mΩ)	< 0.25	< 0.25
Nut Cap locking force			(Nm)	1.5 - 1.8	1.5 - 1.8
Operating temperature range			(°C)	-40...+85	-40...+85
Protection degree				IP67	IP67
Flame class				UL94-V0	UL94-V0
Packaging				100 (10 bag for every box, every single bag contains 10 plastic shell and 10 metallic PIN.)	100 (10 bag for every box, every single bag contains 10 plastic shell and 10 metallic PIN.)
APPROVALS				TÜV	TÜV
ACCESSORIES					
Open-end spanner and unlocking tool				IS15SBLOCKN	IS15SBLOCKN
	Quantity/package		pieces	2	2
Caps	Male			IS52400N	IS52400N
	Female			IS51400N	IS51400N
	Working Temperature range			-40...+85	-40...+85
	Protection degree			IP67	IP67
	Flame class			UL94-V0	UL94-V0
	Quantity/package		pieces	50	50
SPARE COMPONENTS					
Plastic shell				-	-
	Quantity/package		pieces	-	-
Metallic PIN wound on reel				-	-
	Quantity/package		pieces	-	-

(1) IS41410N replace the code IS41410.
(2) IS42420N replace the code IS42420.

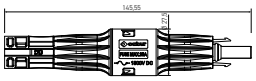
VERSION			CODE TYPE	IS41410N KX04MFFN	IS42420N KX04FMMN
SCHEME					
TECHNICAL DATA					
Application				Y type	Y type
Connector type				Male/ Female - Female	Female / Male - Male
Max. applicable voltage			(Vdc)	1500	1500
Max. applicable current			(A)	35	35
Cable section			(mm^2)	-	-
PIN diameter			(mm)	4	4
Pliers to use	Movable matrix			-	-
	Pliers to use			-	-
Matrix to use				-	-
PIN material				Tinned Copper	Tinned Copper
Insulation material				PPE / PA	PPE / PA
Contact resistance	Rc		(mΩ)	< 0.25	< 0.25
Nut Cap locking force			(Nm)	-	-
Operating temperature range			(°C)	-40...+85	-40...+85
Protection degree				IP67	IP67
Flame class				UL94-V0	UL94-V0
Packaging				30 (6 bag for every box, every single bag contains 5 Y connectors.)	30 (6 bag for every box, every single bag contains 5 Y connectors.)
APPROVALS				TÜV	TÜV
ACCESSORIES					
Open-end spanner and unlocking tool				IS15SBLOCKN	IS15SBLOCKN
	Quantity/package		pieces	2	2
Caps	Male			IS52400N	IS52400N
	Female			IS51400N	IS51400N
	Working Temperature range			-40...+85	-40...+85
	Protection degree			IP67	IP67
	Flame class			UL94-V0	UL94-V0
	Quantity/package		pieces	50	50
SPARE COMPONENTS					
Plastic shell				-	-
	Quantity/package		pieces	-	-
Metallic PIN wound on reel				-	-
	Quantity/package		pieces	-	-

LINE 4 FUSE HOLDERS CABUR SOLAR CONNECTOR

(1) IS43430N replace the code IS43430.
(2) Version produced upon request; contact our sales office for availability

VERSION	CODE TYPE	IS43430N KX04FMHN

SCHEME



TECHNICAL DATA			
Application			Fuse holder
Connector type			Male / Female
Max. applicable voltage		(Vdc)	1500
Max. applicable current		(A)	30 (see fuses table)
Cable section		(mm^2)	-
PIN diameter		(mm)	4
Pliers to use	Movable matrix		-
	Pliers to use		-
Matrix to use			-
PIN material			Tinned Copper
Insulation material			PPE / PA
Contact resistance	Rc	(mΩ)	< 0.25
Nut Cap locking force		(Nm)	-
Operating temperature range		(°C)	-40...+85
Protection degree			IP67
Flame class			UL94-V0
Packaging			50 (10 bags for every box, every single bag contains 5 connectors)

APPROVALS

ACCESSORIES			
Open-end spanner and unlocking tool			IS15SBLOCKN
	Quantity/package	pieces	2
Caps	Male		IS52400N
	Female		IS51400N
	Working Temperature range		-40...+85
	Protection degree		IP67
	Flame class		UL94-V0
	Quantity/package	pieces	50
SPARE COMPONENTS			
Plastic shell			-
	Quantity/package	pieces	-
Metallic PIN wound on reel			-
	Quantity/package	pieces	-

Pliers with fixed or exchangable inserts
Suitable for Cabur Solar Connectors, ferrules, ring and spade
Stripping pliers in pocket version for a rapid and easy operation

To ensure the guarantee's effectiveness, the use of Cabur Solar tools, in conformance with the standards and instructions found in Cabur official documentation, is an essential requirement

VERSION		CODE TYPE	IS31579002 KXCSLSPE	IS3170 IS3170	IS3161N KXCRI2506N
Description			Cabur Solar stripping pliers	Pocket Cabur Solar stripping pliers	Cabur Solar crimping pliers with fixed insert for cable with max. section 6 mm²
Quantity / Package		pcs	1	1	1
ACCESSORIES					
Replacement blade			-	IS3170L	-
Insert	Line 4 Cabur Solar connector		-	-	-
	Ferrules for cable section 0.2 - 10 mm²		-	-	-
	Ferrules for cable section 16 - 25 mm²		-	-	-
	Ferrules for cable section 35 - 50 mm²		-	-	-
	Ring and spade for cable section 1.5 - 2.5 mm²		-	-	-
	Ring and spade for cable section 4 - 6 mm²		-	-	-
Quantity / Package		pcs	1	1	1

VERSION		CODE TYPE	IS3110N KXCRI10N	UMCT3149 UMCT
Description			Cabur Solar crimping pliers with fixed insert for cable with max. section 10 mm²	Crimping pliers with interchangable insert
Quantity / Package		pcs	1	1
ACCESSORIES				
Replacement blade			-	-
Insert	Line 4 Cabur Solar connector		-	-
	Ferrules for cable section 0.2 - 10 mm²		-	UMCT3127
	Ferrules for cable section 16 - 25 mm²		-	UMCT3153
	Ferrules for cable section 35 - 50 mm²		-	UMCT3154
	Ring and spade for cable section 1.5 - 2.5 mm²		-	UMCT3129
	Ring and spade for cable section 4 - 6 mm²		-	UMCT3128
Quantity / Package		pcs	1	1

HOW TO STRIP WIRE USING IS31579002

1 The wire stripper works like a guillotine, suitable for wires of various thicknesses, allowing for fast and safe stripping.

2 It acts simultaneously on both the sleeves of the photovoltaic wire, cutting them precisely.

3 The blades move parallel to the wire, expelling the sheared off sleeve.

STRIPPING WITH IS3170

This wire stripper is able to strip wires with sections of 2.5, 4, 6 and 10 mm2. It is fitted with an end stop and allows for a
stripped constant length of approx. 8 mm, compliant with the requirements of our PINS. The blade can be replaced.

- To strip wires with a 2.5 mm2 section, the blade must make a complete turn around the external perimeter of the wire.
- To strip wires with a 4 mm2 section, the blade must make two complete turns around the external perimeter of the wire.
- To strip wires with a 6 mm2 section, the blade must make three complete turns around the external perimeter of the wire.

In order to preserve the number of strands, the blade should not be turned more times than those indicated in the recommendations above for each wire section.

HOW TO CRIMP

Example of use of the IS3161N crimper for Cabur Solar connectors.

HOW TO CHANGE THE UMCT CRIMPER MATRIX

(fig.1)

(fig.2)

(fig.3)

(fig.4)

(fig.5)

(fig.6)

- Open the pliers as wide as possible (fig. 1);
- slowly bring the two levers of the pliers together, until the locking/release mechanism makes three clicks (fig. 2);
- observe the anchorage pin on the matrix (fig. 2);
- insert the matrix, moving the anchorage pin towards the internal part of the pliers chamber (fig.3);
- make sure that the plastic tooth has locked the matrix in place or that it has risen (fig.4);
- press the two levers of the pliers, closing them as tightly as possible (fig.4);
- release the handles; the pliers should open automatically and completely (fig.5);
- if, when the pliers are closing, you realise that the crimping is not successful or the crimp tool is blocked for any reason, it can be released by pressing and releasing the handles a few times and simultaneously pressing with your thumb on the release lever on the internal part of the handle (fig.6).

cabur®
CONNECTING ENERGY
SINCE 1952

String Boxes, Control Units and related Components

To connect strings, distribute power and monitor installation performances in small, medium and large size photovoltaic systems.

Advantages of the StringBox series

1. Fast installation: components are already wired, able to connect using extractable connectors
2. Standardised product, in conformance with the regulations in effect: ideal to minimize design and inspection times and costs
3. Quality components in conformance with the regulations in effect
4. Large product range able to satisfy a wide range of needs
5. Box assembly completed and inspected by qualified personnel

Custom:
Cabur is able to design string box on demand in compliance with the standard. For information, please contact our sales network.

The choice of a particular type of stringboxes is left to the customer. This choice depends on the configuration of the plant, the inverter type and the power of the photovoltaic systems.

Cabur Photovoltaic Stringboxes are composed by the following main parts:

1 Enclosure with solid and elegant design.
It is suitable for external and internal ambient installations thanks to the IP65 degree protection.

2 "Line 4" panel connectors that allow a fast and secure connection. These are equipped with caps to ensure a 65 degree protection.

3 Surge protection devices: 20kA (8/20), available in 600Vdc or 1000Vdc version to match voltage effectively generated by the system.

4 DC circuit breaker with 600Vdc or 1000Vdc nominal voltage. It's ideal for protection and isolation for maintainance of solar strings in total safety. With handle and padlock.

5 Thermal magnetic circuit breaker with RCCB, single phase and three phase, A or AC class, with 300mA sensibility and interruption power of 6kA or 10kA.

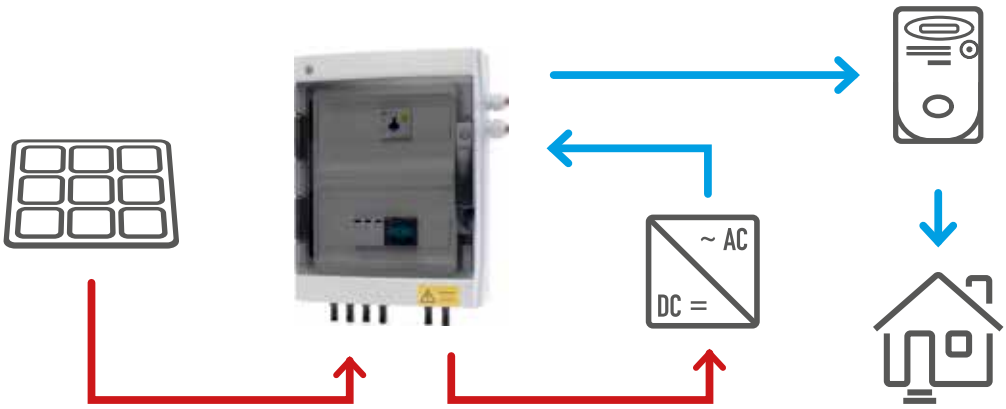
6 AC SPD of 20kA, available on single phase and three phase version.

Every cabur photovoltaic electrical panel is provided together with all the documentation necessary to certify the photovoltaic system:

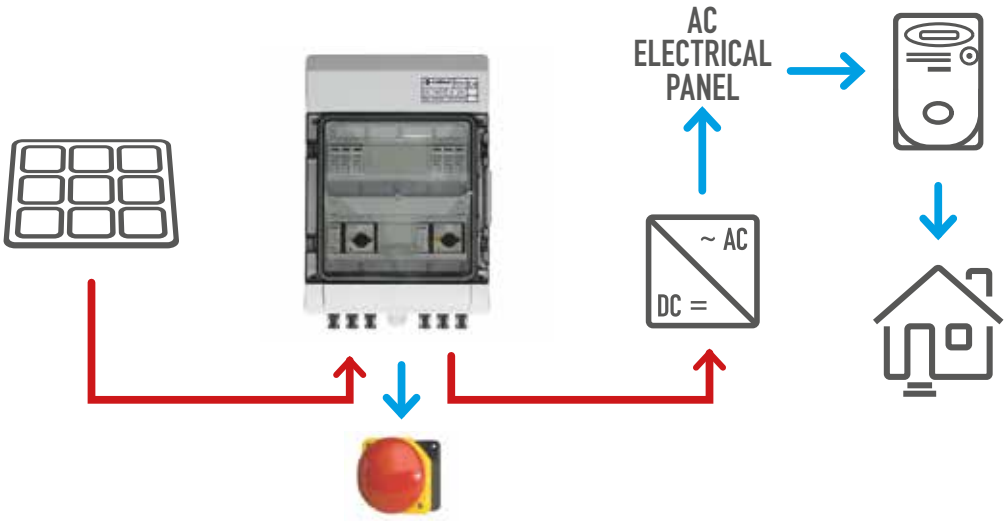
- **The installation manual** with the risk assessment document, in compliance with CEI EN 61439-2.
  This document contains all information about possible risks during the installation and maintenance.
- **Electrical and front panel scheme**, to be used during the installation to check the polarity of the connectors, the single-phase connections or the release coil.

The declaration of conformity of the photovoltaic electrical panel can be provided on demand.

ISL LINE

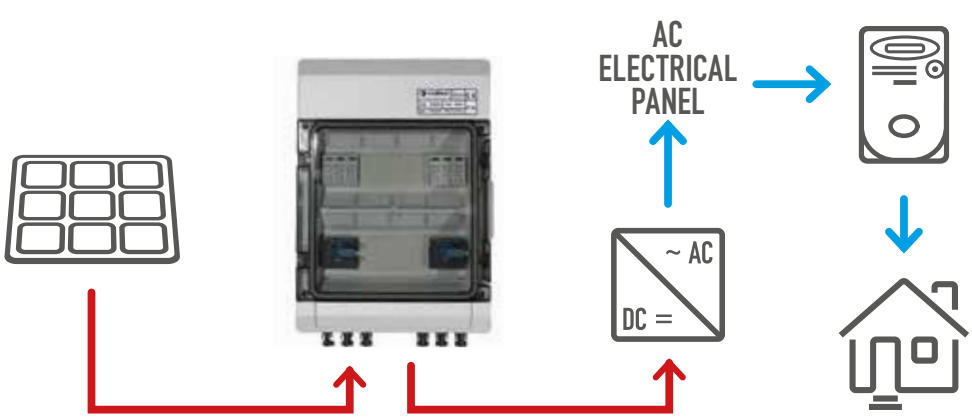


ISA LINE



Safety Remote Circuit Breaker

ISB LINE



	DC									AC									
LINE	SPD	CIRCUIT BREAKER	FUSE HOLDERS	RELEASE COIL	INPUT STRINGS	OUTPUT MPPT	STRING VOLTAGE (Vdc)	MAX. CURRENT FOR SINGLE INPUT (A)	MAX. CURRENT FOR SINGLE OUTPUT (A)	SCARICATORE	MCB	RCCB	MAX. INPUT VOLTAGE (Vac)	MCB MAX. CURRENT (A)	MCB TRIP CURVE	RCCB SENSIBILITY (mA)	RCCB CLASS	CODE	PAGE
ISL	X	X	-	-	1	1	600	20	20	X	X	X	230	16	C	300	A	ISL0101CA06	21
ISL	X	X	-	-	1	1	1000	20	20	X	X	X	230	16	C	300	A	ISL0101CA10	21
ISL	X	X	-	-	2	1	600	10	20	X	X	X	230	32	C	300	A	ISL0201CA06	22
ISL	X	X	-	-	2	1	1000	10	20	X	X	X	230	32	C	300	A	ISL0201CA10	22
ISL	X	X	-	-	2	2	600	10	10	X	X	X	230	32	C	300	A	ISL0202CA06	22
ISL	X	X	-	-	2	2	1000	10	10	X	X	X	230	32	C	300	A	ISL0202CA10	23
ISL	X	X	-	-	2	2	600	10	10	X	X	X	230	32	C	300	A	ISL0202CX06	24
ISL	X	X	-	-	1	1	1000	20	20	X	X	X	230	25	C	300	A	ISL11MSNA03251	24
ISL	X	X	-	-	1	1	600	20	20	X	X	X	230	20	C	300	AC	ISL11MSNC03206	25
ISL	X	X	-	-	2	2	600	10	10	X	X	X	230	25	C	300	AC	ISL22MSNC03256	25
ISL	X	X	X	-	1	1	600	10	10	X	X	X	230	20	C	300	AC	ISL11MSSC03206	26
ISL	X	X	X	-	2	2	1000	10	10	X	X	X	230	25	C	300	AC	ISL22MSSC03251	26
ISL	X	X	X	-	2	2	1000	10	10	X	X	X	230	32	C	300	AC	ISL22MSSC03321	26
ISL	X	X	-	-	1	1	600	20	20	X	X	-	230	16	C	-	-	ISL0101MT06	27
ISL	X	X	-	-	2	2	600	10	10	X	X	-	230	32	C	-	-	ISL0202MT06	27
ISL	X	-	-	-	1	1	600	20	20	X	X	X	230	16	C	300	A	ISL0101NS06	28
ISL	X	-	-	-	1	1	1000	20	20	X	X	X	230	16	C	300	A	ISL11MNNA03161	28
ISL	X	-	-	-	1	1	600	20	20	X	X	X	230	20	C	300	AC	ISL11MNNC03206	29
ISL	X	-	-	-	1	1	600	20	20	X	X	X	230	25	C	300	AC	ISL11MNNC03256	29
ISL	X	-	-	-	2	1	1000	10	20	X	X	X	230	32	C	300	A	ISL21MNNA03321	30
ISL	X	-	-	-	2	2	600	10	10	X	X	X	230	32	C	300	A	ISL0202NS06	30
ISL	X	-	-	-	1	1	600	20	20	X	X	-	230	16	C	-	-	ISL0101NSMT06	31
ISL	X	-	-	-	2	2	600	10	10	X	X	-	230	32	C	-	-	ISL0202NSMT06	31
ISL	X	X	-	-	2	1	600	10	20	X	X	X	400	16	C	300	A	ISL02T01CA06	32
ISL	X	X	-	-	2	1	1000	10	20	X	X	X	400	16	C	300	A	ISL02T01CA10	32
ISL	X	X	-	-	2	2	600	10	10	X	X	X	400	16	C	300	A	ISL02T02CA06	33
ISL	X	X	-	-	2	2	1000	10	10	X	X	X	400	16	C	300	A	ISL02T02CA10	33
ISL	X	X	-	-	2	2	600	10	10	X	X	X	400	16	C	300	A	ISL02T02CX06	34
ISL	X	X	-	-	2	1	1000	10	20	X	X	X	400	10	C	300	AC	ISL21TSNC03101	34
ISL	X	X	-	-	2	2	1000	10	10	X	X	X	400	20	C	300	AC	ISL22TSNC03201	34
ISL	X	-	-	-	2	1	1000	10	20	X	X	X	400	10	C	300	AC	ISL21TNNC03101	35
ISL	X	-	-	-	2	1	1000	10	20	X	X	X	400	20	C	300	AC	ISL11TNNC03201	35
ISL	X	-	-	-	2	1	1000	10	20	X	X	X	400	16	C	300	A	ISL02T01NS10	36
ISL	X	-	-	-	2	2	600	10	10	X	X	X	400	16	C	300	A	ISL02T02NS06	36
ISS	-	-	-	-	-	-	-	-	-	X	X	X	230	16	C	300	A	ISS00MNNA03160	37
ISS	-	-	-	-	-	-	-	-	-	X	X	X	230	32	C	300	A	ISS00MNNA03320	37
ISB	X	X	-	-	1	1	1000	16	16	-	-	-	-	-		-	-	ISB0101CA10	38
ISB	X	X	-	-	2	1	600	12,5	25	-	-	-	-	-		-	-	ISB0201CA06	38
ISB	X	X	-	-	2	1	1000	12,5	25	-	-	-	-	-		-	-	ISB0201CA10	38
ISB	X	X	-	-	2	2	1000	16	16	-	-	-	-	-		-	-	ISB0202CA10	39
ISB	X	X	X	-	4	1	600	8	32	-	-	-	-	-		-	-	ISB0401CA06	39
ISB	X	X	X	-	4	1	1000	8	32	-	-	-	-	-		-	-	ISB0401CA10	39
ISB	X	X	-	-	4	2	600	12,5	25	-	-	-	-	-		-	-	ISB0402CA06	40
ISB	X	X	-	-	4	2	1000	12,5	25	-	-	-	-	-		-	-	ISB0402CA10	40
ISA	X	X	-	X	2	1	600	10	20	-	-	-	-	-		-	-	ISA0201CA06	41
ISA	X	X	-	X	2	1	1000	10	20	-	-	-	-	-		-	-	ISA0201CA10	41
ISA	X	X	-	X	4	2	600	12,5	25	-	-	-	-	-		-	-	ISA0402CA06	42
ISA	X	X	-	X	4	2	1000	12,5	25	-	-	-	-	-		-	-	ISA0402CA10	42
ISA	X	X	X	X	8	1	1000	10	80	-	-	-	-	-		-	-	ISA0801CA10	43
ISM	X	X	X	-	8	1	1000	10	80	-	-	-	-	-		-	-	ISM0801CA10	45
ISM	X	X	X	-	16	1	1000	10	160	-	-	-	-	-		-	-	ISM1601CA10	45

MCB = MIGNATURE CIRCUIT BREAKER

RCCB = RESIDUAL CURRENT CIRCUIT BREAKER

DC/AC 1-PHASE STRINGBOXES

1 DC inputs from the Photovoltaic field
1 DC outputs to the Photovoltaic inverters
DC inputs/outputs based on Cabur Line 4 connectors
1 MPPT management
A-class Residual-Current Circuit Breaker
6 kA Thermal-Magnetic Circuit Breaker
AC and DC surge protective device
Suitable for 600V or 1000V systems
CEI EN 61439-2 compliant

PRESENTATION PURPOSE ONLY

PRESENTATION PURPOSE ONLY

VERSION		CODE TYPE	ISL0101CA06 ISL0101CA06	ISL0101CA10 ISL0101CA10
DC CIRCUIT				
Number of Input (solar strings)			1	1
Number of Outputs MPPT			1	1
Max. Input Voltage		(V)	600	1000
Max. Current for each string		(A)	20	20
Max. MPPT output current		(A)	20	20
With fuse holder			No	No
Circuit breaker			1	1
Surge protective device	Nominal voltage Un	(V)	600	1000
	Protection level Up	(V)	2000	3000
	Nominal discharge current 8/20 In	(kA)	20	20
Input connection			Cabur Line 4 connectors	Cabur Line 4 connectors
Output connection			Cabur Line 4 connectors	Cabur Line 4 connectors
AC CIRCUIT				
Max. input voltage		(V)	230	230
Max. input current		(A)	16	16
Nominal frequency		(Hz)	50	50
Thermal - magnetic circuit breaker	Type		1P+N	1P+N
	Flow Rate	(A)	16	16
	Tripping curve		C	C
	Short circuit current	(kA)	6	6
Residual-current circuit breaker	Class		A	A
	Sensitivity	(A)	0.3	0.3
Surge protective device	Nominal voltage Un	(V)	230	230
	Protection level Up	(V)	1500	1500
	Nominal discharge current 8/20 In	(kA)	20	20
Input connection			6 mm² terminal block	6 mm² terminal block
Output connection			6 mm² terminal block	6 mm² terminal block
GENERAL DATA				
Protection Degree			IP65	IP65
Size (including connectors)		(L x H x D)	460x340x143	460x340x143
Standard compliancy			CEI EN 61439-2	CEI EN 61439-2

DC/AC 1-PHASE STRINGBOXES

Up to 2 DC inputs from the Photovoltaic field
1 DC outputs to the Photovoltaic inverters
DC inputs/outputs based on Cabur Line 4 connectors
1 MPPT management
A-class Residual-Current Circuit Breaker
6 kA Thermal-Magnetic Circuit Breaker
AC and DC surge protective device
Suitable for 600V or 1000V systems
CEI EN 61439-2 compliant

PRESENTATION PURPOSE ONLY

PRESENTATION PURPOSE ONLY

VERSION		CODE TYPE	ISL0201CA06 ISL0201CA06	ISL0201CA10 ISL0201CA10
DC CIRCUIT				
Number of Input (solar strings)			2	2
Number of Outputs MPPT			1	1
Max. Input Voltage		(V)	600	1000
Max. Current for each string		(A)	10	10
Max. MPPT output current		(A)	20	20
With fuse holder			No	No
Circuit breaker			1	1
Surge protective device	Nominal voltage Un	(V)	600	1000
	Protection level Up	(V)	2000	3000
	Nominal discharge current 8/20 In	(kA)	20	20
Input connection			Cabur Line 4 connectors	Cabur Line 4 connectors
Output connection			Cabur Line 4 connectors	Cabur Line 4 connectors
AC CIRCUIT				
Max. input voltage		(V)	230	230
Max. input current		(A)	32	32
Nominal frequency		(Hz)	50	50
Thermal - magnetic circuit breaker	Type		1P+N	1P+N
	Flow Rate	(A)	32	32
	Tripping curve		C	C
	Short circuit current	(kA)	6	6
Residual-current circuit breaker	Class		A	A
	Sensitivity	(A)	0.3	0.3
Surge protective device	Nominal voltage Un	(V)	230	230
	Protection level Up	(V)	1500	1500
	Nominal discharge current 8/20 In	(kA)	20	20
Input connection			10 mm² terminal block	10 mm² terminal block
Output connection			10 mm² terminal block	10 mm² terminal block
GENERAL DATA				
Protection Degree			IP65	IP65
Size (including connectors)		(L x H x D)	460x340x143	460x340x143
Standard compliancy			CEI EN 61439-2	CEI EN 61439-2

DC/AC 1-PHASE STRINGBOXES

Up to 2 DC inputs from the Photovoltaic field
Up to 2 DC outputs to the Photovoltaic inverters
DC inputs/outputs based on Cabur Line 4 connectors
Up to 2 MPPT management
A-class Residual-Current Circuit Breaker
6 kA Thermal-Magnetic Circuit Breaker
AC and DC surge protective device
Suitable for 600V or 1000V systems
CEI EN 61439-2 compliant

PRESENTATION PURPOSE ONLY

PRESENTATION PURPOSE ONLY

VERSION		CODE TYPE	ISL0202CA06 ISL0202CA06	ISL0202CA10 ISL0202CA10
DC CIRCUIT				
Number of Input (solar strings)			2	2
Number of Outputs MPPT			2	2
Max. Input Voltage		(V)	600	1000
Max. Current for each string		(A)	10	10
Max. MPPT output current		(A)	10	10
With fuse holder			No	No
Circuit breaker			2	2
Surge protective device	Nominal voltage Un	(V)	600	1000
	Protection level Up	(V)	2000	3000
	Nominal discharge current 8/20 In	(kA)	20	20
Input connection			Cabur Line 4 connectors	Cabur Line 4 connectors
Output connection			Cabur Line 4 connectors	Cabur Line 4 connectors
AC CIRCUIT				
Max. input voltage		(V)	230	230
Max. input current		(A)	32	32
Nominal frequency		(Hz)	50	50
Thermal - magnetic circuit breaker	Type		1P+N	1P+N
	Flow Rate	(A)	32	32
	Tripping curve		C	C
	Short circuit current	(kA)	6	6
Residual-current circuit breaker	Class		A	A
	Sensitivity	(A)	0.3	0.3
Surge protective device	Nominal voltage Un	(V)	230	230
	Protection level Up	(V)	1500	1500
	Nominal discharge current 8/20 In	(kA)	20	20
Input connection			10 mm² terminal block	10 mm² terminal block
Output connection			10 mm² terminal block	10 mm² terminal block
GENERAL DATA				
Protection Degree			IP65	IP65
Size (including connectors)		(L x H x D)	460x340x143	460x340x143
Standard compliancy			CEI EN 61439-2	CEI EN 61439-2

DC/AC 1-PHASE STRINGBOXES

Up to 2 DC inputs from the Photovoltaic field
Up to 2 DC outputs to the Photovoltaic inverters
DC inputs/outputs based on Cabur Line 4 connectors
Up to 2 MPPT management
A-class Residual-Current Circuit Breaker
6 kA or 10 kA Thermal-Magnetic Circuit Breaker
AC and DC surge protective device
Suitable for 600V or 1000V systems
CEI EN 61439-2 compliant

(1) With only one circuit breaker you can disconnect at the same time the two DC circuits

PRESENTATION PURPOSE ONLY

PRESENTATION PURPOSE ONLY

VERSION		CODE TYPE	ISL0202CX06 ISL0202CX06	ISL11MSNA03251 ISL11MSNA03251
DC CIRCUIT				
Number of Input (solar strings)			2	1
Number of Outputs MPPT			2	1
Max. Input Voltage		(V)	600	1000
Max. Current for each string		(A)	10	20
Max. MPPT output current		(A)	10	20
With fuse holder			No	No
Circuit breaker			1 (1)	1
Surge protective device	Nominal voltage Un	(V)	600	1000
	Protection level Up	(V)	2000	3000
	Nominal discharge current 8/20 In	(kA)	20	20
Input connection			Cabur Line 4 connectors	Cabur Line 4 connectors
Output connection			Cabur Line 4 connectors	Cabur Line 4 connectors
AC CIRCUIT				
Max. input voltage		(V)	230	230
Max. input current		(A)	32	25
Nominal frequency		(Hz)	50	50
Thermal - magnetic circuit breaker	Type		1P+N	1P+N
	Flow Rate	(A)	32	25
	Tripping curve		C	C
	Short circuit current	(kA)	6	10
Residual-current circuit breaker	Class		A	A
	Sensitivity	(A)	0.3	0.3
Surge protective device	Nominal voltage Un	(V)	230	230
	Protection level Up	(V)	1500	1500
	Nominal discharge current 8/20 In	(kA)	20	20
Input connection			10 mm² terminal block	10 mm² terminal block
Output connection			10 mm² terminal block	10 mm² terminal block
GENERAL DATA				
Protection Degree			IP65	IP65
Size (including connectors)		(L x H x D)	460x340x143	460x340x143
Standard compliancy			CEI EN 61439-2	CEI EN 61439-2

DC/AC 1-PHASE STRINGBOXES

Up to 2 DC inputs from the Photovoltaic field
Up to 2 DC outputs to the Photovoltaic inverters
DC inputs/outputs based on Cabur Line 4 connectors
Up to 2 MPPT management
AC-class Residual-Current Circuit Breaker
10 kA Thermal-Magnetic Circuit Breaker
AC and DC surge protective device
Suitable for 600V systems
CEI EN 61439-2 compliant

NEW

PRESENTATION PURPOSE ONLY

NEW

PRESENTATION PURPOSE ONLY

VERSION		CODE TYPE	ISL11MSNC03206 ISL11MSNC03206	ISL22MSNC03256 ISL22MSNC03256
DC CIRCUIT				
Number of Input (solar strings)			1	2
Number of Outputs MPPT			1	2
Max. Input Voltage		(V)	600	600
Max. Current for each string		(A)	20	10
Max. MPPT output current		(A)	20	10
With fuse holder			No	No
Circuit breaker			1	2
Surge protective device	Nominal voltage Un	(V)	600	600
	Protection level Up	(V)	2000	2000
	Nominal discharge current 8/20 In	(kA)	20	20
Input connection			Cabur Line 4 connectors	Cabur Line 4 connectors
Output connection			Cabur Line 4 connectors	Cabur Line 4 connectors
AC CIRCUIT				
Max. input voltage		(V)	230	230
Max. input current		(A)	20	25
Nominal frequency		(Hz)	50	50
Thermal - magnetic circuit breaker	Type		1P+N	1P+N
	Flow Rate	(A)	20	25
	Tripping curve		C	C
	Short circuit current	(kA)	10	10
Residual-current circuit breaker	Class		AC	AC
	Sensitivity	(A)	0.3	0.3
Surge protective device	Nominal voltage Un	(V)	230	230
	Protection level Up	(V)	1500	1500
	Nominal discharge current 8/20 In	(kA)	20	20
Input connection			10 mm² terminal block	10 mm² terminal block
Output connection			10 mm² terminal block	10 mm² terminal block
GENERAL DATA				
Protection Degree			IP65	IP65
Size (including connectors)		(L x H x D)	460x340x143	460x340x143
Standard compliancy			CEI EN 61439-2	CEI EN 61439-2

DC/AC 1-PHASE STRINGBOXES

Up to 2 DC inputs from the Photovoltaic field
Up to 2 DC outputs to the Photovoltaic inverters
DC inputs/outputs based on Cabur Line 4 connectors
Up to 2 MPPT management
AC-class Residual-Current Circuit Breaker
10 kA Thermal-Magnetic Circuit Breaker
AC and DC surge protective device
With fuse holders
Suitable for 600V or 1000V systems
CEI EN 61439-2 compliant

PRESENTATION PURPOSE ONLY

PRESENTATION PURPOSE ONLY

PRESENTATION PURPOSE ONLY

VERSION		CODE TYPE	ISL11MSSC03206 ISL11MSSC03206	ISL22MSSC03251 ISL22MSSC03251	ISL22MSSC03321 ISL22MSSC03321
DC CIRCUIT					
Number of Input (solar strings)			1	2	2
Number of Outputs MPPT			1	2	2
Max. Input Voltage		(V)	600	1000	1000
Max. Current for each string		(A)	10	10	10
Max. MPPT output current		(A)	10	10	10
With fuse holder			Yes	Yes	Yes
Circuit breaker			1	2	2
Surge protective device	Nominal voltage Un	(V)	600	1000	1000
	Protection level Up	(V)	2000	3000	3000
	Nominal discharge current 8/20 In	(kA)	20	20	20
Input connection			Cabur Line 4 connectors	Cabur Line 4 connectors	Cabur Line 4 connectors
Output connection			Cabur Line 4 connectors	Cabur Line 4 connectors	Cabur Line 4 connectors
AC CIRCUIT					
Max. input voltage		(V)	230	230	230
Max. input current		(A)	20	25	32
Nominal frequency		(Hz)	50	50	50
Thermal - magnetic circuit breaker	Type		1P+N	1P+N	1P+N
	Flow Rate	(A)	20	25	32
	Tripping curve		C	C	C
	Short circuit current	(kA)	10	10	10
Residual-current circuit breaker	Class		AC	AC	AC
	Sensitivity	(A)	0.3	0.3	0.3
Surge protective device	Nominal voltage Un	(V)	230	230	230
	Protection level Up	(V)	1500	1500	1500
	Nominal discharge current 8/20 In	(kA)	20	20	20
Input connection			10 mm² terminal block	10 mm² terminal block	10 mm² terminal block
Output connection			10 mm² terminal block	10 mm² terminal block	10 mm² terminal block
GENERAL DATA					
Protection Degree			IP65	IP65	IP65
Size (including connectors)		(L x H x D)	460x340x143	520x462x143	520x462x143
Standard compliancy			CEI EN 61439-2	CEI EN 61439-2	CEI EN 61439-2

DC/AC 1-PHASE STRINGBOXES

Up to 2 DC inputs from the Photovoltaic field
Up to 2 DC outputs to the Photovoltaic inverters
DC inputs/outputs based on Cabur Line 4 connectors
Up to 2 MPPT management
Without residual circuit breaker
10 kA Thermal-Magnetic Circuit Breaker
AC and DC surge protective device
Suitable for 600V systems
CEI EN 61439-2 compliant

PRESENTATION PURPOSE ONLY

PRESENTATION PURPOSE ONLY

VERSION		CODE TYPE	ISL0101MT06 ISL0101MT06	ISL0202MT06 ISL0202MT06
DC CIRCUIT				
Number of Input (solar strings)			1	2
Number of Outputs MPPT			1	2
Max. Input Voltage		(V)	600	600
Max. Current for each string		(A)	20	10
Max. MPPT output current		(A)	20	10
With fuse holder			No	No
Circuit breaker			1	2
Surge protective device	Nominal voltage Un	(V)	600	600
	Protection level Up	(V)	2000	2000
	Nominal discharge current 8/20 In	(kA)	20	20
Input connection			Cabur Line 4 connectors	Cabur Line 4 connectors
Output connection			Cabur Line 4 connectors	Cabur Line 4 connectors
AC CIRCUIT				
Max. input voltage		(V)	230	230
Max. input current		(A)	16	32
Nominal frequency		(Hz)	50	50
Thermal - magnetic circuit breaker	Type		1P+N	1P+N
	Flow Rate	(A)	16	32
	Tripping curve		C	C
	Short circuit current	(kA)	6	6
Residual-current circuit breaker	Class		-	-
	Sensitivity	(A)	-	-
Surge protective device	Nominal voltage Un	(V)	230	230
	Protection level Up	(V)	1500	1500
	Nominal discharge current 8/20 In	(kA)	20	20
Input connection			10 mm² terminal block	10 mm² terminal block
Output connection			10 mm² terminal block	10 mm² terminal block
GENERAL DATA				
Protection Degree			IP65	IP65
Size (including connectors)		(L x H x D)	460x340x143	460x340x143
Standard compliancy			CEI EN 61439-2	CEI EN 61439-2

DC/AC 1-PHASE STRINGBOXES

Up to 2 DC inputs from the Photovoltaic field
Up to 2 DC outputs to the Photovoltaic inverters
DC inputs/outputs based on Cabur Line 4 connectors
Up to 2 MPPT management
Without DC circuit breaker
A-class Residual-Current Circuit Breaker
6 kA Thermal-Magnetic Circuit Breaker
AC and DC surge protective device
Suitable for 600V or 1000V systems
CEI EN 61439-2 compliant

NEW

PRESENTATION PURPOSE ONLY

NEW

PRESENTATION PURPOSE ONLY

VERSION		CODE TYPE	ISL0101NS06 ISL0101NS06	ISL11MNNA03161 ISL11MNNA03161
DC CIRCUIT				
Number of Input (solar strings)			1	1
Number of Outputs MPPT			1	1
Max. Input Voltage		(V)	600	1000
Max. Current for each string		(A)	20	20
Max. MPPT output current		(A)	20	20
With fuse holder			No	No
Circuit breaker			0	0
Surge protective device	Nominal voltage Un	(V)	600	1000
	Protection level Up	(V)	2000	3000
	Nominal discharge current 8/20 In	(kA)	20	20
Input connection			Cabur Line 4 connectors	Cabur Line 4 connectors
Output connection			Cabur Line 4 connectors	Cabur Line 4 connectors
AC CIRCUIT				
Max. input voltage		(V)	230	230
Max. input current		(A)	16	16
Nominal frequency		(Hz)	50	50
Thermal - magnetic circuit breaker	Type		1P+N	1P+N
	Flow Rate	(A)	16	16
	Tripping curve		C	C
	Short circuit current	(kA)	6	6
Residual-current circuit breaker	Class		A	A
	Sensitivity	(A)	0.3	0.3
Surge protective device	Nominal voltage Un	(V)	230	230
	Protection level Up	(V)	1500	1500
	Nominal discharge current 8/20 In	(kA)	20	20
Input connection			10 mm² terminal block	10 mm² terminal block
Output connection			10 mm² terminal block	10 mm² terminal block
GENERAL DATA				
Protection Degree			IP65	IP65
Size (including connectors)		(L x H x D)	460x340x143	460x340x143
Standard compliancy			CEI EN 61439-2	CEI EN 61439-2

DC/AC 1-PHASE STRINGBOXES

1 DC inputs from the Photovoltaic field
1 DC outputs to the Photovoltaic inverters
DC inputs/outputs based on Cabur Line 4 connectors
Up to 1 MPPT management
Without DC circuit breaker
AC-class Residual-Current Circuit Breaker
10 kA Thermal-Magnetic Circuit Breaker
AC and DC surge protective device
Suitable for 600V systems
CEI EN 61439-2 compliant

NEW

PRESENTATION PURPOSE ONLY

NEW

PRESENTATION PURPOSE ONLY

VERSION		CODE TYPE	ISL11MNNC03206 ISL11MNNC03206	ISL11MNNC03256 ISL11MNNC03256
DC CIRCUIT				
Number of Input (solar strings)			1	1
Number of Outputs MPPT			1	1
Max. Input Voltage		(V)	600	600
Max. Current for each string		(A)	20	20
Max. MPPT output current		(A)	20	20
With fuse holder			No	No
Circuit breaker			0	0
Surge protective device	Nominal voltage Un	(V)	600	600
	Protection level Up	(V)	2000	2000
	Nominal discharge current 8/20 In	(kA)	20	20
Input connection			Cabur Line 4 connectors	Cabur Line 4 connectors
Output connection			Cabur Line 4 connectors	Cabur Line 4 connectors
AC CIRCUIT				
Max. input voltage		(V)	230	230
Max. input current		(A)	20	25
Nominal frequency		(Hz)	50	50
Thermal - magnetic circuit breaker	Type		1P+N	1P+N
	Flow Rate	(A)	20	25
	Tripping curve		C	C
	Short circuit current	(kA)	10	10
Residual-current circuit breaker	Class		AC	AC
	Sensitivity	(A)	0.3	0.3
Surge protective device	Nominal voltage Un	(V)	230	230
	Protection level Up	(V)	1500	1500
	Nominal discharge current 8/20 In	(kA)	20	20
Input connection			10 mm² terminal block	10 mm² terminal block
Output connection			10 mm² terminal block	10 mm² terminal block
GENERAL DATA				
Protection Degree			IP65	IP65
Size (including connectors)		(L x H x D)	460x340x143	460x340x143
Standard compliancy			CEI EN 61439-2	CEI EN 61439-2

DC/AC 1-PHASE STRINGBOXES

Up to 2 DC inputs from the Photovoltaic field
Up to 2 DC outputs to the Photovoltaic inverters
DC inputs/outputs based on Cabur Line 4 connectors
Up to 2 MPPT management
Without DC circuit breaker
AC or A-class Residual-Current Circuit Breaker
10 kA or 6 kA Thermal-Magnetic Circuit Breaker
AC and DC surge protective device
Suitable for 600V or 1000V systems
CEI EN 61439-2 compliant

NEW

PRESENTATION PURPOSE ONLY

NEW

PRESENTATION PURPOSE ONLY

VERSION		CODE TYPE	ISL21MNNA03321 ISL21MNNA03321	ISL0202NS06 ISL0202NS06
DC CIRCUIT				
Number of Input (solar strings)			2	2
Number of Outputs MPPT			1	2
Max. Input Voltage		(V)	1000	600
Max. Current for each string		(A)	10	10
Max. MPPT output current		(A)	20	10
With fuse holder			No	No
Circuit breaker			0	0
Surge protective device	Nominal voltage Un	(V)	1000	600
	Protection level Up	(V)	3000	2000
	Nominal discharge current 8/20 In	(kA)	20	20
Input connection			Cabur Line 4 connectors	Cabur Line 4 connectors
Output connection			Cabur Line 4 connectors	Cabur Line 4 connectors
AC CIRCUIT				
Max. input voltage		(V)	230	230
Max. input current		(A)	32	32
Nominal frequency		(Hz)	50	50
Thermal - magnetic circuit breaker	Type		1P+N	1P+N
	Flow Rate	(A)	32	32
	Tripping curve		C	C
	Short circuit current	(kA)	10	6
Residual-current circuit breaker	Class		A	A
	Sensitivity	(A)	0.3	0.3
Surge protective device	Nominal voltage Un	(V)	230	230
	Protection level Up	(V)	1500	1500
	Nominal discharge current 8/20 In	(kA)	20	20
Input connection			10 mm² terminal block	10 mm² terminal block
Output connection			10 mm² terminal block	10 mm² terminal block
GENERAL DATA				
Protection Degree			IP65	IP65
Size (including connectors)		(L x H x D)	460x340x143	460x340x143
Standard compliancy			CEI EN 61439-2	CEI EN 61439-2

DC/AC 1-PHASE STRINGBOXES

Up to 2 DC inputs from the Photovoltaic field
Up to 2 DC outputs to the Photovoltaic inverters
DC inputs/outputs based on Cabur Line 4 connectors
Up to 2 MPPT management
Without DC circuit breaker
6 kA Thermal-Magnetic Circuit Breaker
AC and DC surge protective device
Suitable for 600V systems
CEI EN 61439-2 compliant
Conformi alla normativa CEI EN 61439-2

NEW

PRESENTATION PURPOSE ONLY

NEW

PRESENTATION PURPOSE ONLY

VERSION		CODE TYPE	ISL0101NSMT06 ISL0101NSMT06	ISL0202NSMT06 ISL0202NSMT06
DC CIRCUIT				
Number of Input (solar strings)			1	2
Number of Outputs MPPT			1	2
Max. Input Voltage		(V)	600	600
Max. Current for each string		(A)	20	10
Max. MPPT output current		(A)	20	10
With fuse holder			No	No
Circuit breaker			0	0
Surge protective device	Nominal voltage Un	(V)	600	600
	Protection level Up	(V)	2000	2000
	Nominal discharge current 8/20 In	(kA)	20	20
Input connection			Cabur Line 4 connectors	Cabur Line 4 connectors
Output connection			Cabur Line 4 connectors	Cabur Line 4 connectors
AC CIRCUIT				
Max. input voltage		(V)	230	230
Max. input current		(A)	16	32
Nominal frequency		(Hz)	50	50
Thermal - magnetic circuit breaker	Type		1P+N	1P+N
	Flow Rate	(A)	16	32
	Tripping curve		C	C
	Short circuit current	(kA)	6	6
Residual-current circuit breaker	Class		-	-
	Sensitivity	(A)	-	-
Surge protective device	Nominal voltage Un	(V)	230	230
	Protection level Up	(V)	1500	1500
	Nominal discharge current 8/20 In	(kA)	20	20
Input connection			10 mm² terminal block	10 mm² terminal block
Output connection			10 mm² terminal block	10 mm² terminal block
GENERAL DATA				
Protection Degree			IP65	IP65
Size (including connectors)		(L x H x D)	460x340x143	460x340x143
Standard compliancy			CEI EN 61439-2	CEI EN 61439-2

DC/AC 3-PHASE STRINGBOXES

Up to 2 DC inputs from the Photovoltaic field
1 DC outputs to the Photovoltaic inverters
DC inputs/outputs based on Cabur Line 4 connectors
1 or 2 MPPT management
A-class Residual-Current Circuit Breaker
6 kA Thermal-Magnetic Circuit Breaker
AC and DC surge protective device
Suitable for 600V or 1000V systems
CEI EN 61439-2 compliant

PRESENTATION PURPOSE ONLY

PRESENTATION PURPOSE ONLY

VERSION		CODE TYPE	ISL02T01CA06 ISL02T01CA06	ISL02T01CA10 ISL02T01CA10
DC CIRCUIT				
Number of Input (solar strings)			2	2
Number of Outputs MPPT			1	1
Max. Input Voltage		(V)	600	1000
Max. Current for each string		(A)	10	10
Max. MPPT output current		(A)	20	20
With fuse holder			No	No
Circuit breaker			1	1
Surge protective device	Nominal voltage Un	(V)	600	1000
	Protection level Up	(V)	2000	3000
	Nominal discharge current 8/20 In	(kA)	20	20
Input connection			Cabur Line 4 connectors	Cabur Line 4 connectors
Output connection			Cabur Line 4 connectors	Cabur Line 4 connectors
AC CIRCUIT				
Max. input voltage		(V)	440	440
Max. input current		(A)	16	16
Nominal frequency		(Hz)	50	50
Thermal - magnetic circuit breaker	Type		3P+N	3P+N
	Flow Rate	(A)	16	16
	Tripping curve		C	C
	Short circuit current	(kA)	6	6
Residual-current circuit breaker	Class		A	A
	Sensitivity	(A)	0.3	0.3
Surge protective device	Nominal voltage Un	(V)	440	440
	Protection level Up	(V)	1500	1500
	Nominal discharge current 8/20 In	(kA)	20	20
Input connection			10 mm² terminal block	10 mm² terminal block
Output connection			10 mm² terminal block	10 mm² terminal block
GENERAL DATA				
Protection Degree			IP65	IP65
Size (including connectors)		(L x H x D)	460x340x143	460x340x143
Standard compliancy			CEI EN 61439-2	CEI EN 61439-2

DC/AC 3-PHASE STRINGBOXES

Up to 2 DC inputs from the Photovoltaic field
Up to 2 DC outputs to the Photovoltaic inverters
DC inputs/outputs based on Cabur Line 4 connectors
1 or 2 MPPT management
A-class Residual-Current Circuit Breaker
6 kA Thermal-Magnetic Circuit Breaker
AC and DC surge protective device
Suitable for 600V or 1000V systems
CEI EN 61439-2 compliant

PRESENTATION PURPOSE ONLY

PRESENTATION PURPOSE ONLY

VERSION		CODE TYPE	ISL02T02CA06 ISL02T02CA06	ISL02T02CA10 ISL02T02CA10
DC CIRCUIT				
Number of Input (solar strings)			2	2
Number of Outputs MPPT			2	2
Max. Input Voltage		(V)	600	1000
Max. Current for each string		(A)	20	20
Max. MPPT output current		(A)	20	20
With fuse holder			No	No
Circuit breaker			2	2
Surge protective device	Nominal voltage Un	(V)	600	1000
	Protection level Up	(V)	2000	3000
	Nominal discharge current 8/20 In	(kA)	20	20
Input connection			Cabur Line 4 connectors	Cabur Line 4 connectors
Output connection			Cabur Line 4 connectors	Cabur Line 4 connectors
AC CIRCUIT				
Max. input voltage		(V)	440	440
Max. input current		(A)	16	16
Nominal frequency		(Hz)	50	50
Thermal - magnetic circuit breaker	Type		3P+N	3P+N
	Flow Rate	(A)	16	16
	Tripping curve		C	C
	Short circuit current	(kA)	6	6
Residual-current circuit breaker	Class		A	A
	Sensitivity	(A)	0.3	0.3
Surge protective device	Nominal voltage Un	(V)	440	440
	Protection level Up	(V)	1500	1500
	Nominal discharge current 8/20 In	(kA)	20	20
Input connection			10 mm² terminal block	10 mm² terminal block
Output connection			10 mm² terminal block	10 mm² terminal block
GENERAL DATA				
Protection Degree			IP65	IP65
Size (including connectors)		(L x H x D)	460x340x143	460x340x143
Standard compliancy			CEI EN 61439-2	CEI EN 61439-2

DC/AC 3-PHASE STRINGBOXES

Up to 2 DC inputs from the Photovoltaic field
Up to 2 DC outputs to the Photovoltaic inverters
DC inputs/outputs based on Cabur Line 4 connectors
1 or 2 MPPT management
A-class Residual-Current Circuit Breaker
6 kA Thermal-Magnetic Circuit Breaker
AC and DC surge protective device
Suitable for 600V or 1000V systems
CEI EN 61439-2 compliant

(1) The two DC circuits are disconnected at the same time

PRESENTATION PURPOSE ONLY

PRESENTATION PURPOSE ONLY

PRESENTATION PURPOSE ONLY

VERSION		CODE TYPE	ISL02T02CX06 ISL02T02CX06	ISL21TSNC03101 ISL21TSNC03101	ISL22TSNC03201 ISL22TSNC03201
DC CIRCUIT					
Number of Input (solar strings)			2	2	2
Number of Outputs MPPT			2	1	2
Max. Input Voltage		(V)	600	1000	1000
Max. Current for each string		(A)	10	10	10
Max. MPPT output current		(A)	10	20	10
With fuse holder			No	No	No
Circuit breaker			1 (1)	1	1
Surge protective device	Nominal voltage Un	(V)	600	1000	1000
	Protection level Up	(V)	2000	3000	3000
	Nominal discharge current 8/20 In	(kA)	20	20	20
Input connection			Cabur Line 4 connectors	Cabur Line 4 connectors	Cabur Line 4 connectors
Output connection			Cabur Line 4 connectors	Cabur Line 4 connectors	Cabur Line 4 connectors
AC CIRCUIT					
Max. input voltage		(V)	440	440	440
Max. input current		(A)	16	10	20
Nominal frequency		(Hz)	50	50	50
Thermal - magnetic circuit breaker	Type		3P+N	3P+N	3P+N
	Flow Rate	(A)	16	10	20
	Tripping curve		C	C	C
	Short circuit current	(kA)	6	10	10
Residual-current circuit breaker	Class		A	AC	AC
	Sensitivity	(A)	0.3	0.3	0.3
Surge protective device	Nominal voltage Un	(V)	440	440	440
	Protection level Up	(V)	1500	1500	1500
	Nominal discharge current 8/20 In	(kA)	20	20	20
Input connection			10 mm² terminal block	10 mm² terminal block	10 mm² terminal block
Output connection			10 mm² terminal block	10 mm² terminal block	10 mm² terminal block
GENERAL DATA					
Protection Degree			IP65	IP65	IP65
Size (including connectors)		(L x H x D)	460x340x143	520x462x143	520x462x143
Standard compliancy			CEI EN 61439-2	CEI EN 61439-2	CEI EN 61439-2

DC/AC 3-PHASE STRINGBOXES

Up to 2 DC inputs from the Photovoltaic field
1 DC outputs to the Photovoltaic inverters
DC inputs/outputs based on Cabur Line 4 connectors
1 or 2 MPPT management
Without DC circuit breaker
AC-class Residual-Current Circuit Breaker
10 kA Thermal-Magnetic Circuit Breaker
AC and DC surge protective device
Suitable for 1000V systems
CEI EN 61439-2 compliant

NEW

PRESENTATION PURPOSE ONLY

NEW

PRESENTATION PURPOSE ONLY

VERSION		CODE TYPE	ISL21TNNC03101 ISL21TNNC03101	ISL11TNNC03201 ISL11TNNC03201
DC CIRCUIT				
Number of Input (solar strings)			2	2
Number of Outputs MPPT			1	1
Max. Input Voltage		(V)	1000	1000
Max. Current for each string		(A)	10	10
Max. MPPT output current		(A)	20	20
With fuse holder			No	No
Circuit breaker			0	0
Surge protective device	Nominal voltage Un	(V)	1000	1000
	Protection level Up	(V)	3000	3000
	Nominal discharge current 8/20 In	(kA)	20	20
Input connection			Cabur Line 4 connectors	Cabur Line 4 connectors
Output connection			Cabur Line 4 connectors	Cabur Line 4 connectors
AC CIRCUIT				
Max. input voltage		(V)	440	440
Max. input current		(A)	10	20
Nominal frequency		(Hz)	50	50
Thermal - magnetic circuit breaker	Type		3P+N	3P+N
	Flow Rate	(A)	10	20
	Tripping curve		C	C
	Short circuit current	(kA)	10	10
Residual-current circuit breaker	Class		AC	AC
	Sensitivity	(A)	0.3	0.3
Surge protective device	Nominal voltage Un	(V)	440	440
	Protection level Up	(V)	1500	1500
	Nominal discharge current 8/20 In	(kA)	20	20
Input connection			10 mm² terminal block	10 mm² terminal block
Output connection			10 mm² terminal block	10 mm² terminal block
GENERAL DATA				
Protection Degree			IP65	IP65
Size (including connectors)		(L x H x D)	520x462x143	520x462x143
Standard compliancy			CEI EN 61439-2	CEI EN 61439-2

DC/AC 3-PHASE STRINGBOXES

Up to 2 DC inputs from the Photovoltaic field
Up to 2 DC outputs to the Photovoltaic inverters
DC inputs/outputs based on Cabur Line 4 connectors
1 or 2 MPPT management
Without DC circuit breaker
A-class Residual-Current Circuit Breaker
6 kA Thermal-Magnetic Circuit Breaker
AC and DC surge protective device
Suitable for 600V or 1000V systems
CEI EN 61439-2 compliant

NEW

PRESENTATION PURPOSE ONLY

NEW

PRESENTATION PURPOSE ONLY

VERSION		CODE TYPE	ISL02T01NS10 ISL02T01NS10	ISL02T02NS06 ISL02T02NS06
DC CIRCUIT				
Number of Input (solar strings)			2	2
Number of Outputs MPPT			1	2
Max. Input Voltage		(V)	1000	600
Max. Current for each string		(A)	10	10
Max. MPPT output current		(A)	20	10
With fuse holder			No	No
Circuit breaker			0	0
Surge protective device	Nominal voltage Un	(V)	1000	600
	Protection level Up	(V)	3000	2000
	Nominal discharge current 8/20 In	(kA)	20	20
Input connection			Cabur Line 4 connectors	Cabur Line 4 connectors
Output connection			Cabur Line 4 connectors	Cabur Line 4 connectors
AC CIRCUIT				
Max. input voltage		(V)	440	440
Max. input current		(A)	16	16
Nominal frequency		(Hz)	50	50
Thermal - magnetic circuit breaker	Type		3P+N	3P+N
	Flow Rate	(A)	16	16
	Tripping curve		C	C
	Short circuit current	(kA)	6	6
Residual-current circuit breaker	Class		A	A
	Sensitivity	(A)	0.3	0.3
Surge protective device	Nominal voltage Un	(V)	440	440
	Protection level Up	(V)	1500	1500
	Nominal discharge current 8/20 In	(kA)	20	20
Input connection			10 mm² terminal block	10 mm² terminal block
Output connection			10 mm² terminal block	10 mm² terminal block
GENERAL DATA				
Protection Degree			IP65	IP65
Size (including connectors)		(L x H x D)	460x340x143	460x340x143
Standard compliancy			CEI EN 61439-2	CEI EN 61439-2

AC 1-PHASE STRINGBOXES

A-class Residual-Current Circuit Breaker
10 kA Thermal-Magnetic Circuit Breaker
AC surge protective device
CEI EN 61439-2 compliant

NEW

PRESENTATION PURPOSE ONLY

NEW

PRESENTATION PURPOSE ONLY

VERSION		CODE TYPE	ISS00MNNA03160 ISS00MNNA03160	ISS00MNNA03320 ISS00MNNA03320
AC CIRCUIT				
Max. input voltage		(V)	230	230
Max. input current		(A)	16	32
Nominal frequency			50	50
Thermal - magnetic circuit breaker	Type		1P+N	1P+N
	Flow Rate	(A)	16	32
	Tripping curve		C	C
	Short circuit current	(kA)	10	10
Residual-current circuit breaker	Class		A	A
	Sensitivity		0.3	0.3
Surge protective device	Nominal voltage Un	(V)	230	230
	Protection level Up	(V)	1500	1500
	Nominal discharge current 8/20 In	(kA)	20	20
Input connection			circuit breaker terminals	circuit breaker terminals
Output connection			circuit breaker terminals	circuit breaker terminals
GENERAL DATA				
Protection Degree			IP65	IP65
Size (including connectors)		(mm)	275x111x200	275x111x200
Standard compliancy			CEI EN 61439-2	CEI EN 61439-2

DC STRINGBOXES WITHOUT RELEASE COIL

- Up to 2 DC inputs from the Photovoltaic field
- 1 DC outputs to the Photovoltaic inverter
- DC inputs/outputs based on Cabur Line 4 connectors
- 1 MPPT management
- DC surge protective device
- Suitable for 600V or 1000V systems
- CEI EN 61439-2 compliant

PRESENTATION PURPOSE ONLY

PRESENTATION PURPOSE ONLY

PRESENTATION PURPOSE ONLY

VERSION		CODE TYPE	ISB0101CA10 ISB0101CA10	ISB0201CA06 ISB0201CA06	ISB0201CA10 ISB0201CA10
DC CIRCUIT					
Number of Input (solar strings)			1	2	2
Number of Outputs MPPT			1	1	1
Max. Input Voltage		(V)	1000	600	1000
Max. Current for each string		(A)	16	12.5	12.5
Max. MPPT output current		(A)	16	25	25
Fuses	With fuse holder		No	No	No
	Maximum rate	(A)	-	-	-
	Type		-	-	-
Circuit breaker			1	1	1
Surge protective device	Nominal voltage Un	(V)	1000	600	1000
	Protection level Up	(V)	3000	2000	3000
	Nominal discharge current 8/20 In	(kA)	20	20	20
Input connection			Cabur Line 4 connectors	Cabur Line 4 connectors	Cabur Line 4 connectors
Output connection			Cabur Line 4 connectors	Cabur Line 4 connectors	Cabur Line 4 connectors
GENERAL DATA					
Protection Degree			IP65	IP65	IP65
Size (including connectors)		(mm)	275x200x111	275x200x111	275x200x111
Standard compliancy			CEI EN 61439-2	CEI EN 61439-2	CEI EN 61439-2

DC STRINGBOXES WITHOUT RELEASE COIL

- **Up to 4 DC inputs from the Photovoltaic field**
- **Up to 2 DC outputs to the Photovoltaic inverter**
- **DC inputs/outputs based on Cabur Line 4 connectors**
- **1 or 2 MPPT management**
- **DC surge protective device**
- **with fuse holders on positive circuit**
- **Suitable for 600V or 1000V systems**
- **CEI EN 61439-2 compliant**

(1) Our stringbox are sell without fuses, the choice of the correct size of fuse is mandatory by the customers

PRESENTATION PURPOSE ONLY

PRESENTATION PURPOSE ONLY

PRESENTATION PURPOSE ONLY

VERSION		CODE TYPE	ISB0202CA10 ISB0202CA10	ISB0401CA06 ISB0401CA06	ISB0401CA10 ISB0401CA10
DC CIRCUIT					
Number of Input (solar strings)			2	4	4
Number of Outputs MPPT			2	1	1
Max. Input Voltage		(V)	1000	600	1000
Max. Current for each string		(A)	16	8	8
Max. MPPT output current		(A)	16	32	32
Fuses	With fuse holder		No	Yes (1)	Yes (1)
	Maximum rate	(A)	-	10	10
	Type		-	10x38gPV	10x38gPV
Circuit breaker			1	1	1
Surge protective device	Nominal voltage Un	(V)	1000	600	1000
	Protection level Up	(V)	3000	2000	3000
	Nominal discharge current 8/20 In	(kA)	20	20	20
Input connection			Cabur Line 4 connectors	Cabur Line 4 connectors	Cabur Line 4 connectors
Output connection			Cabur Line 4 connectors	10 mm² terminal block	10 mm² terminal block
GENERAL DATA					
Protection Degree			IP65	IP65	IP65
Size (including connectors)		(mm)	295x495x130	400x370x130	400x370x130
Standard compliancy			CEI EN 61439-2	CEI EN 61439-2	CEI EN 61439-2

DC STRINGBOXES WITHOUT RELEASE COIL

- Up to 4 DC inputs from the Photovoltaic field
- Up to 2 DC outputs to the Photovoltaic inverter
- DC inputs/outputs based on Cabur Line 4 connectors
- 2 MPPT management
- DC surge protective device
- Suitable for 600V or 1000V systems
- CEI EN 61439-2 compliant

PRESENTATION PURPOSE ONLY

PRESENTATION PURPOSE ONLY

VERSION		CODE TYPE	ISB0402CA06 ISB0402CA06	ISB0402CA10 ISB0402CA10
DC CIRCUIT				
Number of Input (solar strings)			4	4
Number of Outputs MPPT			2	2
Max. Input Voltage		(V)	600	1000
Max. Current for each string		(A)	12.5	12.5
Max. MPPT output current		(A)	25	25
Fuses	With fuse holder		No	No
	Maximum rate	(A)	-	-
	Type		-	-
Circuit breaker			2	2
Surge protective device	Nominal voltage Un	(V)	600	1000
	Protection level Up	(V)	2000	3000
	Nominal discharge current 8/20 In	(kA)	20	20
Input connection			Cabur Line 4 connectors	Cabur Line 4 connectors
Output connection			Cabur Line 4 connectors	Cabur Line 4 connectors
GENERAL DATA				
Protection Degree			IP65	IP65
Size (including connectors)		(mm)	295x495x130	295x495x130
Standard compliancy			CEI EN 61439-2	CEI EN 61439-2

DC PHOTOVOLTAIC STRINGBOXES WITH RELEASE COIL

- Up to 2 DC inputs from the Photovoltaic field
- 1 DC outputs to the Photovoltaic inverter
- DC inputs/outputs based on Cabur Line 4 connectors
- 1 MPPT management
- DC surge protective device
- Suitable for 600V or 1000V systems
- With 230Vac release coil
- CEI EN 61439-2 compliant

PRESENTATION PURPOSE ONLY

PRESENTATION PURPOSE ONLY

VERSION		CODE TYPE	ISA0201CA06 ISA0201CA06	ISA0201CA10 ISA0201CA10
DC CIRCUIT				
Number of Input (solar strings)			2	2
Number of Outputs MPPT			1	1
Max. Input Voltage		(V)	600	1000
Max. Current for each string		(A)	10	10
Max. MPPT output current		(A)	20	20
Fuses	With fuse holder		No	No
	Maximum rate	(A)	-	-
	Type		-	-
Circuit breaker			1	1
Surge protective device	Nominal voltage Un	(V)	600	1000
	Protection level Up	(V)	2000	3000
	Nominal discharge current 8/20 In	(kA)	20	20
Input connection			Cabur Line 4 connectors	Cabur Line 4 connectors
Output connection			Cabur Line 4 connectors	Cabur Line 4 connectors
GENERAL DATA				
Protection Degree			IP65	IP65
Size (including connectors)		(mm)	275x200x111	275x200x111
Standard compliancy			CEI EN 61439-2	CEI EN 61439-2
Release Coil		(Vac)	230	230

DC PHOTOVOLTAIC STRINGBOXES WITH RELEASE COIL

- **Up to 8 DC inputs from the Photovoltaic field**
- **Up to 2 DC outputs to the Photovoltaic inverter**
- **DC inputs/outputs based on Cabur Line 4 connectors**
- **1 or 2 MPPT management**
- **DC surge protective device**
- **Suitable for 600V or 1000V systems**
- **With fuse holders mounted on positive and negative circuits**
- **With 230Vac release coil**
- **CEI EN 61439-2 compliant**

-

PRESENTATION PURPOSE ONLY

PRESENTATION PURPOSE ONLY

VERSION		CODE TYPE	ISA0402CA06 ISA0402CA06	ISA0402CA10 ISA0402CA10
DC CIRCUIT				
Number of Input (solar strings)			4	4
Number of Outputs MPPT			2	2
Max. Input Voltage		(V)	600	1000
Max. Current for each string		(A)	12.5	12.5
Max. MPPT output current		(A)	25	25
Fuses	With fuse holder		No	No
	Maximum rate	(A)	-	-
	Type		-	-
Circuit breaker			2	2
Surge protective device	Nominal voltage Un	(V)	600	1000
	Protection level Up	(V)	2000	3000
	Nominal discharge current 8/20 In	(kA)	20	20
Input connection			Cabur Line 4 connectors	Cabur Line 4 connectors
Output connection			Cabur Line 4 connectors	Cabur Line 4 connectors
GENERAL DATA				
Protection Degree			IP65	IP65
Size (including connectors)		(mm)	295x495x130	295x495x130
Standard compliancy			CEI EN 61439-2	CEI EN 61439-2
Release Coil		(Vac)	230	230

DC PHOTOVOLTAIC STRINGBOXES WITH RELEASE COIL

- **Up to 8 DC inputs from the Photovoltaic field**
- **Up to 2 DC outputs to the Photovoltaic inverter**
- **DC inputs/outputs based on Cabur Line 4 connectors**
- **1 or 2 MPPT management**
- **DC surge protective device**
- **Suitable for 600V or 1000V systems**
- **With fuse holders mounted on positive and negative circuits**
- **With 230Vac release coil**
- **CEI EN 61439-2 compliant**

(1) Our stringbox are sell without fuses, the choice of the correct size of fuse is mandatory by the customers.

PRESENTATION PURPOSE ONLY

VERSION		CODE TYPE	ISA0801CA10
			ISA0801CA10
DC CIRCUIT			
Number of Input (solar strings)			8
Number of Outputs MPPT			1
Max. Input Voltage		(V)	1000
Max. Current for each string		(A)	10
Max. MPPT output current		(A)	80
Fuses	With fuse holder		Yes (1)
	Maximum rate	(A)	10
	Type		10x38gPV
Circuit breaker			1
Surge protective device	Nominal voltage Un	(V)	1000
	Protection level Up	(V)	3000
	Nominal discharge current 8/20 In	(kA)	20
Input connection			Cabur Line 4 connectors
Output connection			35 mm² terminal block
GENERAL DATA			
Protection Degree			IP65
Size (including connectors)		(mm)	504x434x210
Standard compliancy			CEI EN 61439-2
Release Coil		(Vac)	230

DC STRINGBOXES WITH MONITORING CIRCUIT

The new **ISM** photovoltaic panel series are suitable for monitoring the energy production of the plant in every single moment.
Thanks to the transducers is possible to monitor the string currents and the overall voltage.
Inside the panel the **XCI04** analogue converters allow to acquire the signals and information from the strings and to put them on the Modbus line.

To setup the system connection it is necessary to use the following Modbus addresses.
Default Modbus addresses:

- **XCI04IMB-1**: STRINGS CURRENT 1-4 ID MODBUS 1
- **XCI04IMB-2**: STRINGS CURRENT 5-8 ID MODBUS 2
- **XCI04VMB**: PARALLEL VOLTAGE ID MODBUS 3

DEVICE	MODBUS ADDRESSES	MODBUS FUNCTION (*)	REGISTER	DESCRIPTION
XCI04IMB-1	01	04	07	String Current 1
	01	04	08	String Current 2
	01	04	09	String Current 3
	01	04	10	String Current 4
XCI04IMB-2	02	04	07	String Current 5
	02	04	08	String Current 6
	02	04	09	String Current 7
	02	04	10	String Current 8
XCI04VMB	03	04	07	Parallel Voltage

If the plant has more than one ISM panel, it will be necessary to increment the Modbus addresses of the additional devices, to avoid read conflicts (i.e. if we have a second ISM0801CA10:

ID MODBUS 3+1, ID MODBUS 3 + 2, ID MODBUS 3 + 3).
The devices setup can be performed with CaburLab free software, for more information please contact our technical office.

(*) Readings can also be performed with function 03, for more information please contact our technical office.

DC STRINGBOXES WITH MONITORING CIRCUIT

- Up to 16 DC inputs from the Photovoltaic field
- 1 DC outputs to the Photovoltaic inverter
- DC inputs based on Cabur Line 4 connectors
- 1 MPPT management
- Suitable for 1000V systems
- With 230 Vac release coil
- With current and voltage strings monitoring
- Modbus RTU comunication
- With fuse holders on positive and negative circuits
- CEI EN 61439-2 compliant

(1) Our stringbox are sell without fuses, the choice of the correct size of fuse is mandatory by the customers.

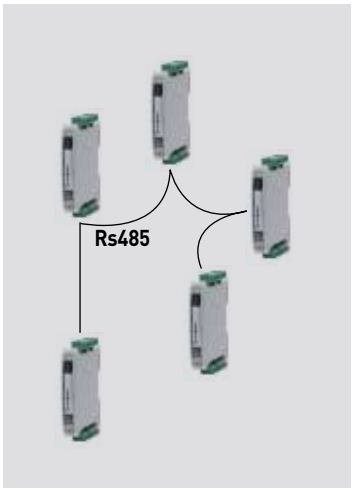
PRESENTATION PURPOSE ONLY

PRESENTATION PURPOSE ONLY

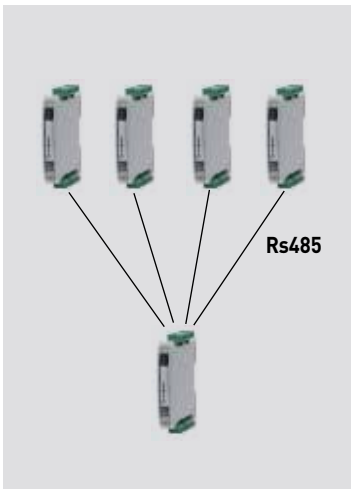
VERSION		CODE TYPE	ISM0801CA10 ISM0801CA10	ISM1601CA10 ISM1601CA10
DC CIRCUIT				
Number of Input (solar strings)			8	16
Number of Outputs MPPT			1	1
Max. Input Voltage		(V)	1000	1000
Max. Current for each string		(A)	10	10
Max. MPPT output current		(A)	80	160
Fuses	With fuse holder		Yes (1)	Yes (1)
	Maximum rate	(A)	10	10
	Type		gPV	gPV
Circuit breaker			1	1
Surge protective device	Nominal voltage Un	(V)	1000	1000
	Protection level Up	(V)	3000	3000
	Nominal discharge current 8/20 In	(kA)	20	20
Input connection			Cabur Line 4 connectors	Cabur Line 4 connectors
Output connection			35mmq Terminal blocks	70mmq Terminal blocks
GENERAL DATA				
Protection Degree			IP65	IP65
Size (including connectors)		(mm)	210x434x660	355x810x1056
Standard compliancy			CEI EN 61439-2	CEI EN 61439-2
Release Coil		(Vac)	-	230
Data comunication protocol			Mobdus RTU	Modbus RTU

The ISM control panels have an RS485 communication port, on which the modbus rtu protocol is mapped. It allows the communication with a remote device like PC or PLC. The phisically connection between the control panels and PC should be done with twisted shielded cable in order to reduce the noise and electromagnetic interference. It is advisable to connect the devices in input and output mode rather than making branched connections.
Never use the star connection. The modbus address of each device can be configured using CaburLab software, which can be downloaded for free from our website.

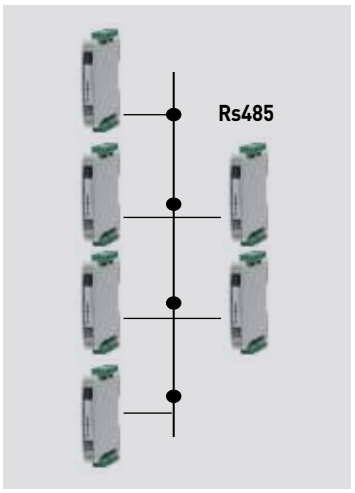
CONNECTION TYPES WITH RS485 TWISTED PAIR



EXCELLENT



NO



NOT RECOMMENDED

CIO4 GENERAL FEATURE

MODBUS-RTU PROGRAMMABLE ANALOG CONVERTERS

The XCIO4 devices are analog converters, fully programmable through a PC application and with ModBus communication interface.

There are four different models:

- XCIO4VMB voltage converter
- XCIO4IMB current converter
- XCIO4RMB thermoresistance and potentiometer converter
- XCIO4TMB thermocouple converter
- XCIO4RLYMB, actuation module

Each device has up to four independent channels, it is remotely configurable through the ModBus interface and in alternative with a uUSB port with no need for additional power supply.
The devices are fully programmable by means of CaburLab software application or directly accessing the ModBus registers by means of a PLC.
The XCIO4RLYMB can be configured to have a default safe condition called safestate that allows to set the state of the output when the power is off and/or when the device is remotely controlled.

XCIO4VMB / XCIO4IMB

Inside the ISM0801CA10 there are 2 XCIO4IMB that allow the acquisition and monitoring of the photovoltaic current strings and one XCIO4VMB that acquire the parallel voltage of the photovoltaic strings.

General data	xCIO4IMB	XCIO4VMB
Input range	± 20 mA programmable	± 10 V programmable
Maximum voltage/current signal IN	24mA	12V
Parametrization IN	Software CaburLab	Software CaburLab
Power supply voltage	24Vdc (8...30Vdc)	24Vdc (8...30Vdc)
Dimensions	101x79x17.5 mm	101x79x17.5 mm
Operation temperature range	-20...+70°C	-20...+70°C

ISM STRINGBOX GENERAL CHARACTERISTICS

SINGLE-PHASE SWITCHING POWER SUPPLY SERIES DOMOTIC POWER (CODE XCSD30F)

The single-phase switching power supply for DIN rail with 30W power, ideal for applications in civil and industrial automation. Standard modular DIN measurements for installations in control units. High output and a contained operating temperature to promote energy savings and longer component life.

Main characteristics:

- Small size
- Use on all power supply networks
- Insulation class II
- Thermal protection
- IP20 protection degree against accidental contact according to IEC529
- Reduced time and cost for installation in remote panels and surveillance and monitoring systems (an earth connection is required)
- Quantity per pack: 1

MEASUREMENT CURRENTS DEVICE (CODE ISPAMP4)

In the ISM0801CA10 there are 2 modules with magnetic Hall sensors for reading the string current.
The measurement is possible thanks to the Hall effect which allows non-invasive work to be carried out in the power circuit by keeping a very high galvanic insulation.

Characteristics:

- Accuracy of the measurement
- 3KV of insulation
- Fast response to transistors
- Quantity per pack: 1

General data	Value
Nominal current	25 A
Conversion ratio	1,000: 1
Power supply	15V - 15V + - 5%
Electricity consumption	16 mA
Minimum resistance of load	150 Ohm
Operating temperature	-10 °C ÷ +70 °C
Storage temperature	-25 °C ÷ +85 °C
Linearity	1% full scale
Limit of linearity	+55 A
Accuracy	5 % full scale
Band width	DC - 200 kHz
Quantity per pack	1

MEASUREMENT STRING VOLTAGE DEVICE (CODE ISPVLT1)

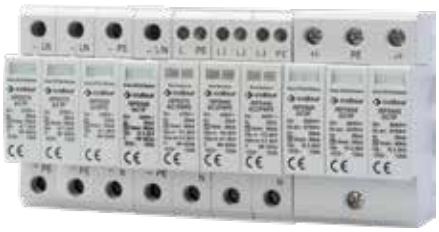
In the ISM series there is a unit for reading the string voltage. The measurement is possible thanks to the Hall effect which allows non-invasive work to be carried out in the power circuit by keeping a very high galvanic insulation.
The ISPVLT1 module permits a measurement of the voltage by maintaining a galvanic separation between the primary and the secondary circuit.

General data	Value
Primary current	10 mA
Primary current - field of measurement	0 .. ± 14 mA
Conversion ratio	2,500: 1,000
Power supply	± 12 .. 15 V
Electricity consumption	25 mA
Insulation voltage	2.5 kV
Quantity per pack	1

cabur®
CONNECTING ENERGY
SINCE 1952

Surge Protection Devices

Components for protection of DC and AC circuits.



Surge protection devices (SPD) prevent sudden electrical surges induced to the PV array by the earthed network and conducted to the AC power supply network or signal line from damaging the electronic equipment.
The surge protection device Cabur products are composed by varistory and gas cartridge for the AC protection, and Y configuration at 600VDC and 1000VDC for DC protections.

Where and how SPDs should be used

In the case of transitory power surges, the only way to protect equipment is to limit the difference in voltage between the various conductors that exit/enter the device. For this reason, in PV systems the surge protection must always be installed on both the AC and DC sides, so as to guarantee equal voltage between all the various system conductors, both in the case that the surge arrives from the PV array or from the AC or earthed network.
In the case of a power surge on the PV array, the DC side SPDs create an instantaneous short-circuit between the positive, negative, and earthed conductors, establishing a transitory voltage equilibrium. Hence the three conductors on the DC side of the inverter rise to thousands of V, but as the SPDs limit the difference in voltage between the three conductors to 4kV, no malfunctions will occur on the DC side of the inverter, which will have a resistance to impulse power surges greater than 4kV.
Alone, however, this is insufficient to protect the inverter from malfunctioning, because if the three conductors on the DC side rise to 10kV and on the AC side there are no SPDs able to create transitory voltage equilibrium with the DC side, then the DC side at 10kV will "see" the 230-400 AC exiting from the inverter as a lower voltage to which it can discharge through the insulation and/or components of the inverter, destroying them. Similarly, the same thing would occur if the power surge occurred on the AC side.
The concept of equal voltage requires the use of SPDs on all conductors that exit and enter the inverter, because only by limiting the difference in voltage between the AC and DC sides and the earthing, that is to say within the surge levels that the device is able to support, can destructive surges to the insulations or components be avoided.

Safe use of SPDs up to 1,000 VDC

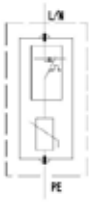
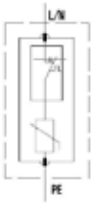
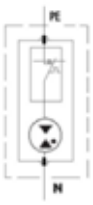
The varistor, the active element of the SPD, is a component that is able to support a limited number of discharges. It can still short circuit if subjected to a discharge that exceeds its max Isc, or if it is subjected to multiple discharges below its max Isc, gradually deteriorating its performance. Under these conditions, its resistance, which normally is in tens of MΩ, will decrease to a few hundreds/tens of Ω, the varistor will overheat due to the passage of current between the line and the earthing, and it can catch fire.
Regulations regarding Test Class II SPDs requires them to be provided with a device which disconnects them from the line at the end of their useful life. The device consists of a contact in series on the side of the line which has its ends welded airtight, one of which is spring-loaded. When the overheated varistor exceeds the fusion temperature of the seal, the spring-loaded conductor disconnects, opening the contact and disconnecting the varistor from the line, thereby preventing damage. In modern SPDs, created for us on AC lines, in which the disconnection device is able to eliminate the arc, during the pass to zero of the AC current, consequent to the opening of the broken varistor through which the short L/earthing current passes. In PV systems the varying conditions make the automatic disconnection task of the SPDs more difficult. DC voltages from 500 to 1,000 V and no pass to zero for the voltage/current makes interruption of the arc between the contacts at entry more difficult, because the air and surface distances designed for AC are not sufficient to guarantee disconnection power for the arc in DC. The problem is solved by using three varistors set up in a "Y" formation. With the Y set up, the discharge is divided into three varistors instead of the two found in the classic formation. This makes it much less likely that one of them will malfunction. Nevertheless, in the case of a shortcircuit in one of the varistors, in the circuit between the Line and the earthing, once the surge has passed, the second intact varistor returns to the resistance MΩ, cutting off the current to the contact on the malfunctioning varistor.
Cabur does not recommend the use of earthed gas discharge devices on the DC side, because while they are able to ensure insulation in terms of earthing, in the case of a short or semishort circuit to a varistor, the gas discharge device would not be set off by the DC voltage, meaning that the string Isc would pass through the varistor, and it could catch fire.

AC SURGE PROTECTION DEVICES

- **For single phase and three phase systems**

(1) the fuses is not mandatory on all plants, if it's necessary choose one that match correctly with the system

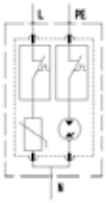
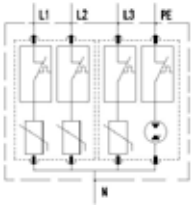


VERSION			CODE TYPE	ISPD275AC1P ISPD275AC1P	ISPD440AC1P ISPD440AC1P	ISPD255ACNPE ISPD255ACNPE
SCHEME						
TECHNICAL DATA						
Test Class				II	II	II
Type of Network				TN, IT, TT	TN, IT, TT	TN, IT, TT
Nominal voltage	Un	(V)		220 - 230	230 - 400	220 - 230
Max. continous voltage	Uc	(V)		275	440	255
Working frequency		(Hz)		50 - 60	50 - 60	50 - 60
Max. Discharge current (8/20µs)	Imax	(kA)		60	60	60
Nominal discharge current (8/20µs)	In	(kA)		30	30	30
Voltage protection level at In	Up	(kV)		1.5	2.2	1.5
Protection mode				L/N-PE	L/N-PE	N-PE
Isolation resistance	Riso	(MΩ)		> 10^2	> 10^2	> 10^2
Response time		(ns)		≤ 25	≤ 25	≤ 100
Recommended back-up fuse		(A)		125 (1)	125 (1)	125 (1)
Max. cables section		(mm^2)		25	25	25
Mounting	Guida TH35			Yes	Yes	Yes
Working temperature		(°C)		-40...+85	-40...+85	-40...+85
Protection degree				IP20	IP20	IP20
Housing material				PPO	PPO	PPO
Infiammabilty class				UL94-V0	UL94-V0	UL94-V0
Fault indicator	Green led			OK	OK	OK
	Red led			Fail	Fail	Fail
Remote control contact				-	-	-
Sizes (LxHxP)				18x90x66	18x90x66	18x90x66
Pack quantity			pieces	1	1	1
APPROVALS				CE	CE	CE
ACCESSORIES						
Parallel bridge	2 poles			9000582	9000582	9000582
	3 poles			9000583	9000583	9000583
	4 poles			9000584	9000584	9000584

AC SURGE PROTECTION DEVICES

- **For single phase and three phase systems**
- **Phase and neutral connection in one cartridge**
- **Compact sizes**

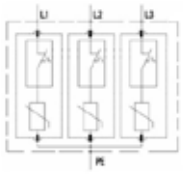
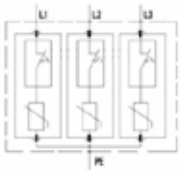
(1) the fuses is not mandatory on all plants, if it's necessary choose one that match correctly with the system

VERSION			CODE TYPE	ISPD275AC1PNPE ISPD275AC1PNPE	ISPD440AC3PNPE ISPD275AC3PNPE
SCHEME					
TECHNICAL DATA					
Test Class				II	II
Type of Network				TN, IT, TT	TN, IT, TT
Nominal voltage	Un	(V)		220 - 230	230 - 400
Max. continous voltage	Uc	(V)		275	440
Working frequency		(Hz)		50 - 60	50 - 60
Max. Discharge current (8/20µs)	Imax	(kA)		40	40
Nominal discharge current (8/20µs)	In	(kA)		20	20
Voltage protection level at In	Up	(kV)		1.5	1.5
Protection mode				L - N / N - PE	L1, L2, L3 - N / N - PE
Isolation resistance	Riso	(MΩ)		> 10^2	> 10^2
Response time		(ns)		≤ 25	≤ 25
Recommended back-up fuse		(A)		125 (1)	125 (1)
Max. cables section		(mm^2)		25	25
Mounting	Guida TH35			Yes	Yes
Working temperature		(°C)		-40...+85	-40...+85
Protection degree				IP20	IP20
Housing material				PPO	PPO
Infiammabilty class				UL94-V0	UL94-V0
Fault indicator	Green led			-	-
	Red led			Fail	Fail
Remote control contact				-	-
Sizes (LxHxP)				18x90x66	36x90x68
Pack quantity			pieces	1	1
APPROVALS				CE	CE
ACCESSORIES					
Parallel bridge	2 poles			-	-
	3 poles			-	-
	4 poles			-	-

DC SURGE PROTECTIVE DEVICE

- **For 600V or 1000V systems**

(1) the fuses is not mandatory on all plants, if it's necessary choose one that match correctly with the system

VERSION		CODE TYPE	ISPD600DC3P ISPD600DC3P	ISPD1000DC3P ISPD1000DC3P
SCHEME				
TECHNICAL DATA				
Test Class			II	II
Type of Network			-	-
Nominal voltage	Un	(V)	600	1000
Max. continous voltage	Uc	(V)	670	1060
Working frequency		(Hz)	-	-
Max. Discharge current (8/20µs)	Imax	(kA)	40	40
Nominal discharge current (8/20µs)	In	(kA)	20	20
Voltage protection level at In	Up	(kV)	2.4	3.6
Protection mode			-	-
Isolation resistance	Riso	(MΩ)	> 10^2	> 10^2
Response time		(ns)	≤ 25	≤ 25
Recommended back-up fuse		(A)	125 (1)	125 (1)
Max. cables section		(mm^2)	25	25
Mounting	Guida TH35		Si	Si
Working temperature		(°C)	-40...+85	-40...+85
Protection degree			IP20	IP20
Housing material			PPO	PPO
Infiammabilty class			UL94-V0	UL94-V0
Fault indicator	Green led		OK	OK
	Red led		Fail	Fail
Remote control contact			-	-
Sizes (LxHxP)			36x90x68	36x90x68
Pack quantity		pieces	1	1
APPROVALS			CE	CE
ACCESSORIES				
Parallel bridge	2 poles		-	-
	3 poles		-	-
	4 poles		-	-

cabur®
CONNECTING ENERGY
SINCE 1952

Accessories

Mounting on DIN rail
Designed for block the reverse current on the photovoltaic strings

Pay attention to the dissipation of the diode, before configure your system consider all dissipation of components and the dissipation of your panel

VERSION	CODE / TYPE	ISDS3516 KXDS3516	ISDS102 KXDS102	9000395 T20HF220
SCHEME				
Insulation voltage towards the DIN rail	(kVac)	3	3	5
Max. string voltage	(Vdc)	800	1000	1100
Max. continous current at 25°C	(A)	10	10	12
Dissipated power at 10A	(W)	8	16	-
Dissipated power at 7.5A	(W)	-	-	10
Dissipated power at 17A	(W)	-	-	20
Mounting		DIN rail TH35	DIN rail TH35	On metal plate
Connections		6.3 faston	6.3 faston	Wire terminals
Size (LxHxP)	(mm)	24x77x80	24x77x80	24x41x25
Weight	(g)	235	235	54
Pack quantity	pezzi	10	10	10
Approvals		CE	CE	CE

PREASSEMBLED CABLE

Cabur manufactures pre-wired cables with photovoltaic connectors on request.
Cables from 4 to 10 mm² are available in red or black.
For more information contact our sales department.

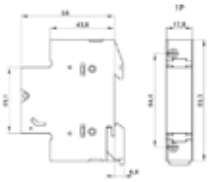
ACCESSORIES AND SPARE PARTS

Nominal voltage: 750 Vac - 1000 Vdc
Interruption power 100 kA

VERSION	CODE TYPE	9000401 DCT1-2	9000402 DCT2-2	9000403 DCT3-2	9000404 DCT4-2	9000405 DCT5-2	9000406 DCT6-2	9000407 DCT7-2
Nominal current	(A)	1	2	3	4	5	6	7
Q.ty / package		10	10	10	10	10	10	10
Approvals		CE cULus LISTED	CE cULus LISTED	CE cULus LISTED	CE cULus LISTED	CE cULus LISTED	CE cULus LISTED	CE cULus LISTED

VERSION	CODE TYPE	9000408 DCT8-2	9000409 DCT10-2	9000410 DCT12-2	9000411 DCT15-2	9000412 DCT20-2	9000413 DCT25-2	9000414 DCT30-2
Nominal current	(A)	8	10	12	15	20	25	30
Q.ty / package		10	10	10	10	10	10	10
Approvals		CE cULus LISTED	CE cULus LISTED	CE cULus LISTED	CE cULus LISTED	CE cULus LISTED	CE cULus LISTED	CE cULus LISTED

Ideal solution for use inside photovoltaic plants
Fuseholders for gPV cylindrical fuses
Suitable for 1000V systems

VERSION	CODE TYPE	9000446 9000446
SCHEME		
N poles		1
Rated current	(A)	20
Rated voltage	(V)	1000
Maximum cable section	(mm^2)	10
Maximum power dissipation of the inserted fuse	(W)	3
Maximum operating temperature	(°C)	80
Mounting		Su guida omega TH35
Q.ty / package		12
Approvals		CE

INDEX BY TYPE

INDEX BY CODE

AUTOMATION
AND CONTROL
SOLUTIONS

INDUSTRIAL
CONNECTIVITY
SOLUTIONS

SOLUTIONS
FOR RENEWABLE
ENERGY

INDUSTRIAL
MARKING
SOLUTIONS

8 017963 227018

D031G21A
04/2021

Cabur Srl

Headquarters (Italia)

17041 - Altare (SV)

Località Isola Grande, 45

T. +39 019 58999.1

F. +39 019 58999233

www.cabur.it

info@cabur.it

Cabur Romania Srl

Romanian Branch

Strada Calea Plevnei nr. 139

Corp B camera 25,26 sector 6

Bucaresti

T. +40 (21)31.17.140

F. +40 (21)31.17.140

www.cabur.eu

gabriel.buzaianu@cabur.eu