



Photovoltaic solutions

Protection and command devices
for photovoltaic systems



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Photovoltaic devices and switchboards

BTicino solutions represent a response to the most diversified application needs guaranteeing the maximum level of protection. The new offer, practical and flexible, makes it possible to satisfy all the requests of the residential and tertiary sectors, up to the large photovoltaic field.

With the Bticino offer it is possible to satisfy the different connection and management needs.

The offer consists of circuit breakers, disconnectors, surge protectors specially designed to ensure adequate protection for this type of application.

In addition to completion accessories, such as fuses and terminal blocks, different ready-to-use string boxes are also available, already pre-wired and usable immediately photovoltaics. The range consists of systems for the transformation, the transport of energy and containment of equipment.



Ready to use string box



Modular circuit breaker



Disconnector



Surge protective device

Application for residential, tertiary and solar fields

With its full range of proposals for the world of photovoltaic, Bticino represents the point of reference for applications in plants residential and tertiary. Designed to guarantee a connection and putting in simple and fast function, the proposal is complementary and perfectly integrated with traditional installations.



With the Bticino offer it is possible to satisfy the different connection and management needs of power generation in the photovoltaic fields.

Photovoltaic devices


F82N...FV...

F72N...FV...

F10LFVN1

F312FV2

Item

MODULAR DISCONNECTORS

Reference standards: EN 60947-3
 Utilization category: DC21B
 Insulation voltage U_i (Vd.c.): 1000
 Impulse withstand voltage (kV): 8
 Max. wiring section (mm²): 25/35

2-poles - 600 and 800 Vd.c.

	I_{max} (kA)	V_n (Vd.c.)	N° of modules
F72N16FV1	16	600	4
F72N32FV1*	32	600	4
F72N63FV1*	63	600	4
F72N16FV2	16	800	4
F72N32FV2*	32	800	4
F72N63FV2*	63	800	4

* polarized

MOULDED CASE DISCONNECTORS

Reference standards: EN 60947-3
 Utilization category: DC23A
 Impulse withstand voltage (kV): 8

2-poles - 1000 Vd.c.

	I_n (A)	V_n (Vd.c.)	
4 142 81	32	1000	rotary
4 142 82	63	1000	rotary
4 142 83	125	1000	rotary
4 142 44	32	1000	
4 142 46	63	1000	
T714FV125	125	1000	
T714FV160	160	1000	

SURGE PROTECTION DEVICES (SPD) - CLASS II

Varistor surge protectors for protection of photovoltaic systems (without system of energy storage), with replaceable cartridge and state indicator.

Reference standards: IEC 61643-1
 Max. wiring section (mm²): 25/35

	V_{max} (Vd.c.)	I_n (kA)	I_{max} (kA)	U_p (kV)	U_c (Vd.c.)	N° di moduli
F10LFVN1	600	20	40	<2,5	720	3
F10LFVN2	1000	20	40	<4	1200	3

Item

THERMAL-MAGNETIC MODULAR CIRCUIT BREAKERS

Reference standards: EN 60947-2
 Tripping characteristic: B
 Breaking capacity (kA): 4,5
 Insulation voltage U_i (Vd.c.): 1000
 Impulse withstand voltage (kV): 8
 Max. wiring section (mm²): 25/35

2-poles - 600-800-1000 Vd.c.

	I_{max} (kA)	V_n (Vd.c.)	N° of modules
F82N06FV1	6	600	4
F82N08FV1	8	600	4
F82N10FV1	10	600	4
F82N13FV1	13	600	4
F82N16FV1	16	600	4
F82N20FV1	20	600	4
F82N25FV1	25	600	4
F82N06FV2	6	800	4
F82N08FV2	8	800	4
F82N10FV2	10	800	4
F82N13FV2	13	800	4
F82N16FV2	16	800	4
F82N20FV2	20	800	4
F82N25FV2	25	800	4
4 144 46	10	1000	6
4 144 47	13	1000	6
4 144 48	16	1000	6
4 144 49	20	1000	6
4 144 50	25	1000	6
4 144 51	32	1000	6

REPLACEABLE CARTRIDGE FOR SPD

	V_{max} (Vd.c.)	I_n (kA)	I_{max} (kA)	U_p (kV)	U_c (Vd.c.)
F10LFVSN1	600	20	40	<2,5	720
F10LFVSN2	1000	20	40	<4	1200

FUSE CARRIERS

Reference standards: IEC 60269-1
 Utilization category: DC20B
 Breaking capacity: 50 kA
 Fuses: 10 x 38 mm (type T)

	Poli	V_n (V)	I_n (A)	N° of modules
F311FV2	1P	1000	20	1
F312FV2	2P	1000	20	2

FUSES FOR PHOTOVOLTAIC

	I_n (A)	V_n (Vd.c.)	I_{cc} (kA)
T05FV2	5	1000	50
T08FV2	8	1000	50
T10FV2	10	1000	50
T12FV2	12	1000	50
T15FV2	15	1000	50
T20FV2	20	1000	50

Ready-to-use string boxes and terminal blocks



F107DC2



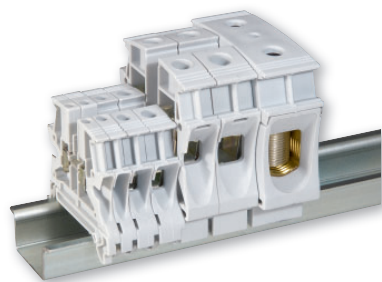
F107DC3



F107DC4

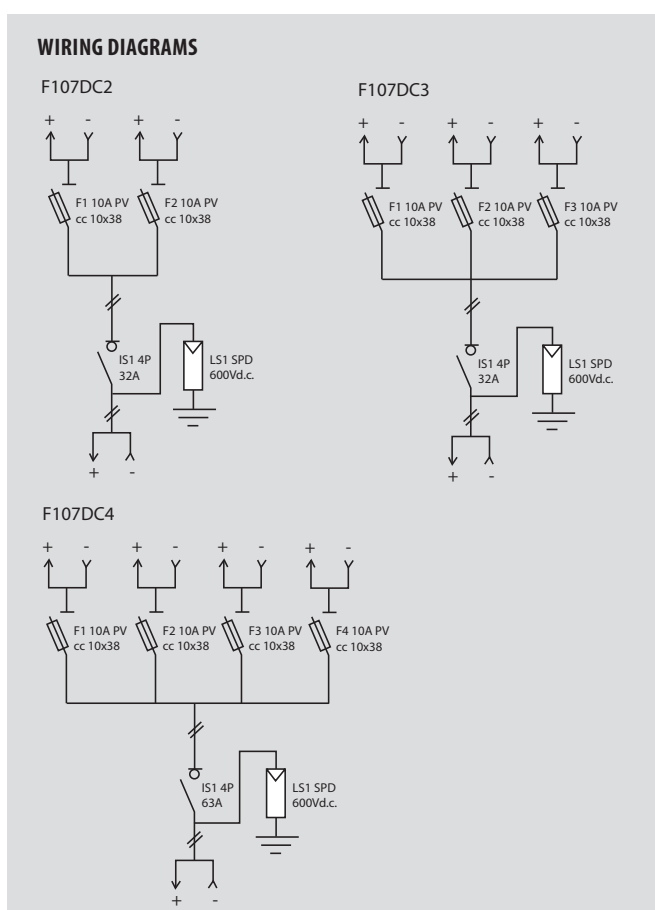
Switchboard IP65 with double insulation (Class II).
 2-poles disconnector 32 A - 600 Vdc
 Fusecarriers 10A - 10x38mm
 Varistor overvoltage protection device (SPD) with replaceable cartridge
 They guarantee high performance for the protection of low voltage lines in photovoltaic systems up to 600 Vd.c.

Item	READY-TO-USE STRING BOXES IP65 - 600 Vd.c.
	IDROBOARD pre-wired panels for the protection and connection of the DC side circuit that goes from the photovoltaic generator to the inverter. Solutions prepared with cables for photovoltaic systems (6mm ²) and MC4 type quick connectors for connecting the IN/OUT lines.
F107DC2	Switchboard 12 modules - 2 strings
F107DC3	Switchboard 2x12 modules - 3 strings
F107DC4	Switchboard 2x12 modules - 4 strings



Terminal blocks suitable for use in photovoltaic applications with insulation voltage U_i (1000 V) and impulse withstand voltage U_{imp} (8 kV).

Item		VIKING 3 TERMINAL BLOCKS WITH SCREWS			
Gray	Blue	Section (mm)	Step (mm)	Vn (Vd.c.)	Uimp (kV)
037162	037102	4	8	1000	8
037163	037103	6	10	1000	8
037164	037104	10	12	1000	8
037165	037105	16	15	1000	8
037166	-	35	22	1000	8
4 148 00	-	4	8	1000	8
4 148 01	-	6	10	1000	8
4 148 02	-	10	12	1000	8
4 148 03	-	16	15	1000	8
4 148 04	-	35	22	1000	8



Item	VIKING 3 TERMINAL BLOCKS WITH SCREWS FOR INSULATED PROTECTED CABLE			
Yellow/Green	Section (mm)	Step (mm)	Vn (Vd.c.)	Uimp (kV)
037177	4/6	6	1000	8
037178	6/10	8	1000	8

Item		VIKING 3 TERMINAL BLOCKS AUTOMATICS			
Gray	Blue	Section (mm)	Step (mm)	Vn (Vd.c.)	Uimp (kV)
037261	037201	4	6	1000	8
037262	037202	6	8	1000	8
037263	037203	10	10	1000	8
037264	037204	16	12	1000	8