

PEFS Series Firefighter Safety Switch



Features

- Up to 85A
- Up to 1500V DC
- CE certification
- Motor driven switch disconnection
- Robust plastic enclosure IP65
- Knock outs | Cable glands | MC4 connectors
- Built-in DC isolator with TUV, CE, CB, SAA, UL, CCC certifications.

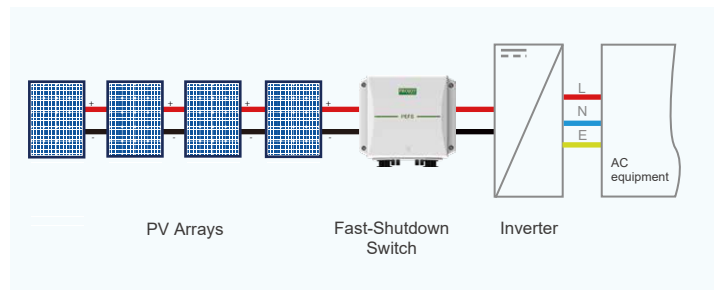
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Models: PEFS-ELx-y. Rated current: x=16/25/32/40/55, Wiring types: y=2/2H/4S/4T/4B or 4

Independent Strings	Number of Poles	Specifications
1	2	Kit with knock outs, 5 x M12
2	4	Kit with knock outs, 9 x M12
1	2	Kit with cable glands, 5 x M12
2	4	Kit with cable glands, 9 x M12
1	2	Kit pre-wired with 4 x MC4 connectors and 1 x M12 cable gland for AC
2	4	Kit pre-wired with 8 x MC4 connectors and 1 x M12 cable gland for AC

Diagram



Technical data

Technical Parameter	
Main Parameters	PEFS
String voltages (Vdc)	500~1500
String current (A)	9~85
Number of strings	1/2
Switch wiring	2/2H/4S/4T/4B or 4
Operating voltage	100Vac - 270Vac
Nominal voltage	230Vac
Nominal current	30mA
Start up (loading) current	average 100mA
Switch on action current	max 300mA
Feedback contact	24Vdc - 300mA max
Operating temperature range	-20°C - +50°C
Max. operating temperature before automatic switch off	+100°C
Storage temperature range	-40°C - +85°C
Protection degree	IP65
Protection level	Class II
Certification	CE
DC Switch disconnect according to	EN 60947-1&3
Number of operations	10000
Number of operations under load (PV1)	>1500

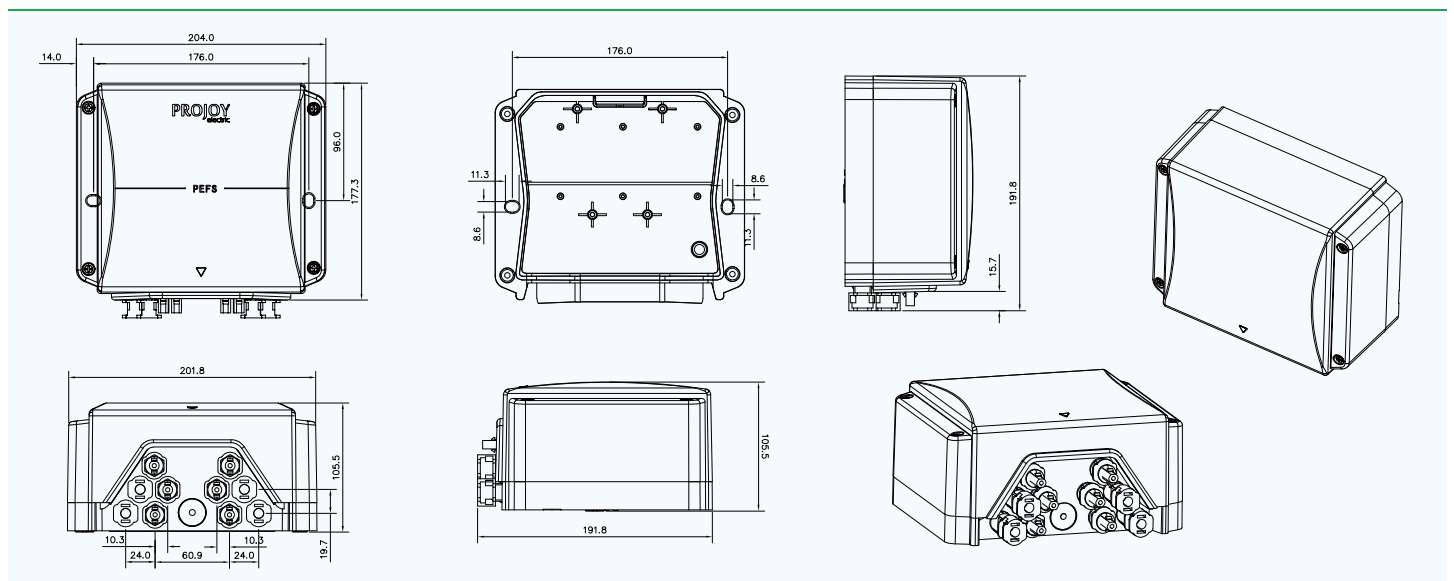
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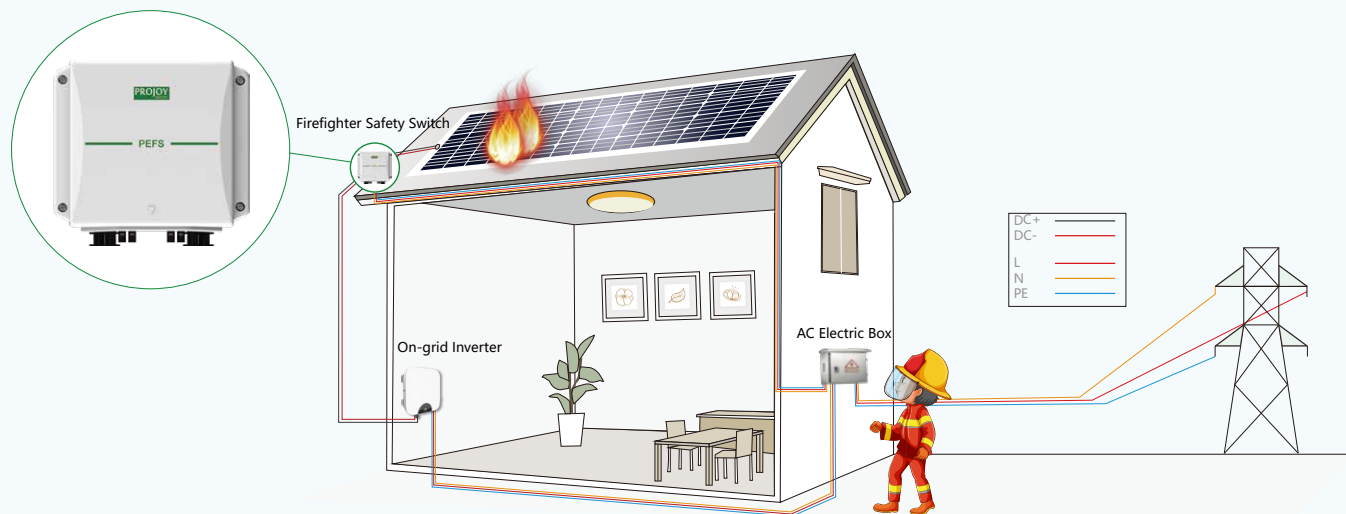
Technical data

Data of PEFS refer to built-in DC isolators. Data according to IEC60947-3(ed.3.2):2015, UL508i, GB14048.3. Utilization category DC-PV0/DC-PV1.								Poles	No. of Strings	Part Number	Contact Configuration
500V	600V	700V	800V	900V	1000V	1200V	1500V				
16	16	16	16	13	9	6	3	2	1	PEFS-EL16-2	+1 — — +1 -1 — — -1
25	25	23	20	16	11	8	4	2	1	PEFS-EL25-2	
32	32	27	23	20	13	10	5	2	1	PEFS-EL32-2	
40	40	35	30	25	20	10	6	2	1	PEFS-EL40-2	
55	55	55	45	35	25	15	8	2	1	PEFS-EL55-2	
29	29	16	16	13	9	6	3	4	1	PEFS-EL16-2H	+1 +1 -1 -1
45	45	23	20	16	11	8	4	4	1	PEFS-EL25-2H	
58	50	27	23	20	13	10	5	4	1	PEFS-EL32-2H	
72	64	35	30	25	20	10	6	4	1	PEFS-EL40-2H	
85	80	55	45	35	25	15	8	4	1	PEFS-EL55-2H	
16	16	16	16	13	9	6	3	4	2	PEFS-EL16-4	+1 +1 -1 -1 +2 +2 -2 -2
25	25	23	20	16	11	8	4	4	2	PEFS-EL25-4	
32	32	27	23	20	13	10	5	4	2	PEFS-EL32-4	
40	40	35	30	25	20	10	6	4	2	PEFS-EL40-4	
55	55	55	45	35	25	15	8	4	2	PEFS-EL55-4	
16	16	16	16	16	16	16	16	4	1	PEFS-EL16-4S	+1 +1 -1 -1
25	25	25	25	25	25	25	20	4	1	PEFS-EL25-4S	
32	32	32	32	32	32	32	23	4	1	PEFS-EL32-4S	
40	40	40	40	40	40	40	30	4	1	PEFS-EL40-4S	
55	55	55	55	55	55	55	40	4	1	PEFS-EL55-4S	
16	16	16	16	16	16	16	16	4	1	PEFS-EL16-4T	+1 +1 -1 -1
25	25	25	25	25	25	25	20	4	1	PEFS-EL25-4T	
32	32	32	32	32	32	32	23	4	1	PEFS-EL32-4T	
40	40	40	40	40	40	40	30	4	1	PEFS-EL40-4T	
55	55	55	55	55	55	55	40	4	1	PEFS-EL55-4T	
16	16	16	16	16	16	16	16	4	1	PEFS-EL16-4B	+1 +1 -1 -1
25	25	25	25	25	25	25	20	4	1	PEFS-EL25-4B	
32	32	32	32	32	32	32	23	4	1	PEFS-EL32-4B	
40	40	40	40	40	40	40	30	4	1	PEFS-EL40-4B	
55	55	55	55	55	55	55	40	4	1	PEFS-EL55-4B	

Dimensions



PROJOY'S FIREFIGHTER SAFETY SWITCH - EFFECTIVELY ENSURES THE SAFETY OF PV SYSTEM



In most PV systems, DC isolation switches are integrated into the PV inverters. But even when the DC switch is turned off, there will still be up to 1000VDC between the inverter and the PV panels. In case of fire, firefighters may be exposed to very serious potential hazards. But if firefighters shut down the AC before putting out the fire, the PEFS series firefighter safety switch will detect the grid failure, and after 5 seconds, the PEFS will automatically turn off the isolation switch. Because this safety switch is mounted close to the PV panel, the DC within the building is disconnected, which creates a safe environment for firefighters, reduces the potential damage, and ensures the safety of the PV system.

1. SEIZE THE VALUABLE TIME TO PUT OUT FIRE

PEFS series firefighter safety switch matches international standard firefighter working procedure. In case of fire, once the AC circuit is turned off, the fast-shutdown switch will automatically turn off and isolate the PV panels, so the firefighters can eliminate the high voltage risk of PV panels on the roof and obtain the precious time to deal with the accident.

2. ISOLATE PV PANELS COMPLETELY

The PEFS series is powered by PEDS switch and can be used directly with PV panels. In case of fire, the firefighter safety switch can rapidly shut down the PV array, without any risk of high DC voltage. If the client wants the entire roof to achieve an even lower DC voltage (e.g. under 80V ~ 120V), it is possible to apply multiple safety switches (one for each 2-3 panels) to ensure maximum safety.

3. RESET AUTOMATICALLY

Projoy's PEFS series firefighter safety switch resets automatically. When the AC power supply is turned off (e.g. during a power cut) and then the supply is restored, the PEFS series will reset and connect the circuit quickly and automatically. The client doesn't need to reset it manually each time.

4. REQUIRES NO ADDITIONAL NETWORKING AND MORE STABLE ON-OFF ABILITY

Compared with common fast isolation devices using remote communication technology in the market, Projoy PEFS series firefighter safety switch is directly controlled by the AC circuit which requires no additional networking. It just uses the existing AC power system. In addition, PEFS does not carry out on-off function through electronic components, but through an isolation switch with arc-extinguishing function, which disconnects the DC circuit directly with much more stability.

5. PROLONG THE LIFE CYCLE OF PV INVERTERS

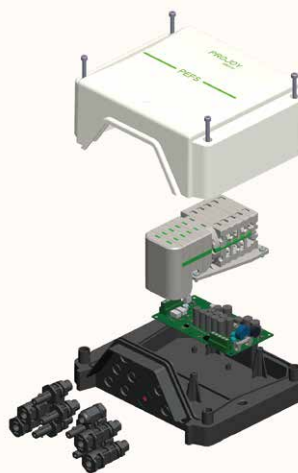
When Projoy's PEFS product is installed in the system, in case the AC circuit has no power such as during a power cut, powerline maintenance or grid failure, the DC circuit will be automatically shut down. This will greatly prolong the life of the PV inverters, and makes it safer to repair or replace PV inverters.

6. USE THE MOST POPULAR DC SWITCHES

Projoy's PEFS series are equipped with a PEDS switch, which is the most popular PV application DC switch worldwide. The response time of Projoy's spring mechanism bounce is only 5 milliseconds, which can quickly extinguish the arc. Combined with self-cleaning contacts, the switches have increased durability and safety. For this reason, the PEDS has been selected as the preferred DC switch by many PV inverter manufacturers.

7. AS A PROFESSIONAL DC SWITCH MANUFACTURER

Projoy has rich experience in developing DC switches and has customers worldwide. Projoy has become the No. 1 company in China developing physical isolation with arc extinguishing capability for direct current without using remote communication technology, effectively ensuring the safety of high DC voltage roofs.



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