

FAC3/1000/C

Isolation Monitoring Device with reclosing

• Description and applications

FAC3/1000/C detects ground fault of isolation to ground in photovoltaic installations (IT). The device gives two outside orders (RL-1 y RL2). The order RL-1 is instantaneous, the order RL-2 is temporized 1, 2, 3 or 4 seconds. One order may be used to advise the inverter and the other to connect an alarm, or both to inverter. Includes automatic reset function, which allows you to restore the normal situation if the insulation fault has disappeared.

• Functional characteristics

- The RL-1 output contact acts in reverse logic, when it receives power supply it changes state and when it detects insulation failure it returns to standby. In this way, if power supply does not reach the isolation monitor, it gives an alarm signal.
- Two red leds, one for fault in pole (+) and other for fault in pole (-), to memorize the fault.
- Proof key to connect the relay and the two red leds, (+) and (-).
- RESET key, in case of fault, clears the memorized LEDs and returns the relays to the no-fault state.
- Eight reconnects times. Internal selection between 1 to 60 minutes.
- Isolation level fit to 20 k Ω . It can be adjusted between 10 k Ω and 80 k Ω .

• Constructive features

- Internal microcontroller.
- Bornas in front panel.
- Contacts free of voltage.
- Isolation between monitoring and control circuits.
- Plastic box, rail DIN installation.

• Technical data

- Voltage Monitoring: until 1000 VDC (UN)
- Range of actuation: UN-50% ... UN
- Time actuation: 250 msec.
- Power supply: 230 VAC 50/60Hz
- Power used: 6W (max)
- Standards:
 - Regulation Low tension
 - Normative EMC
 - According to RD 1663/2000
 - Isolation: class II (VAC and VDC)
- Proprieties to relay contact:
 - Current permanent: 5 A.
 - Voltage max. switch : 230 VAC
 - Max. Power switch : 1000 VA
 - Max. Power switch : 1000 VA.



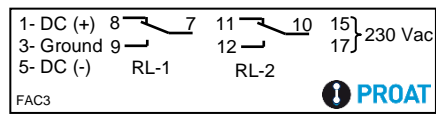
• Maintenance

Each six months or in the periodicals revisions is recommended to press the Test key to verify that the device is running correctly.

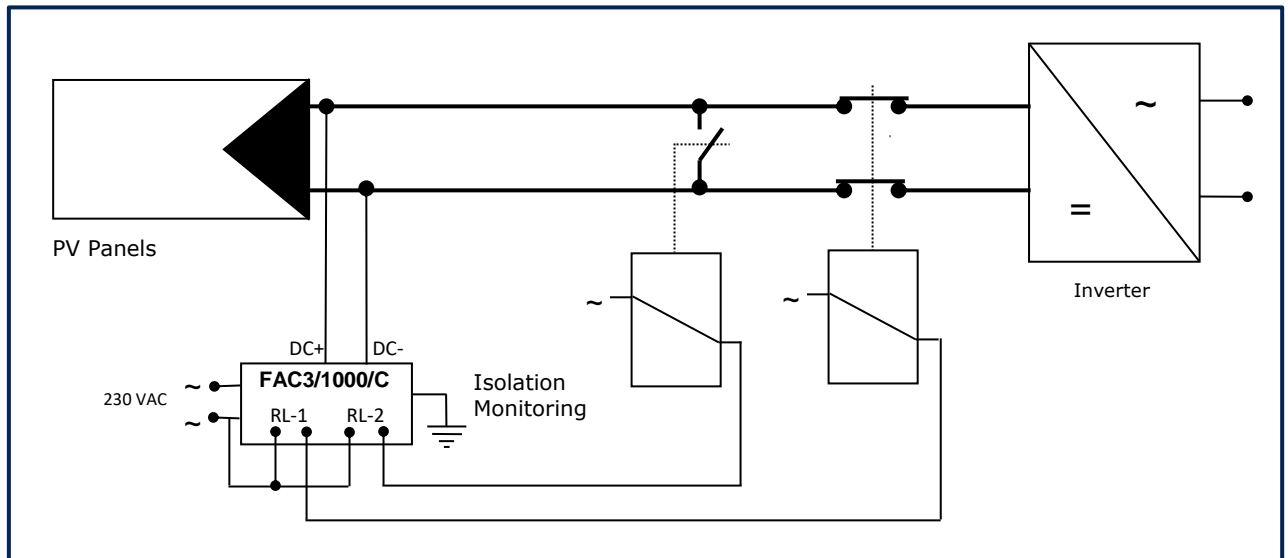
- Models

Reference	Voltage range	Power supply
FAC3/1000/C	500 ... 1.000 Vdc	230 Vac/50-60Hz
FAC3/900/C	450 ... 900 Vdc	230 Vac/50-60Hz
FAC3/800/C	400 ... 800 Vdc	230 Vac/50-60Hz
FAC3/600/C	300 ... 600 Vdc	230 Vac/50-60Hz
FAC3/400/C	200 ... 400 Vdc	230 Vac/50-60Hz
FAC3/1000/C- 24Vdc	500 ... 1.000 Vdc	24 Vdc
FAC3/900/C- 24Vdc	450 ... 900 Vdc	24 Vdc
FAC3/800/C- 24Vdc	400 ... 800 Vdc	24 Vdc
FAC3/600/C- 24Vdc	300 ... 600 Vdc	24 Vdc
FAC3/400/C- 24Vdc	200 ... 400 Vdc	24 Vdc

- External connections

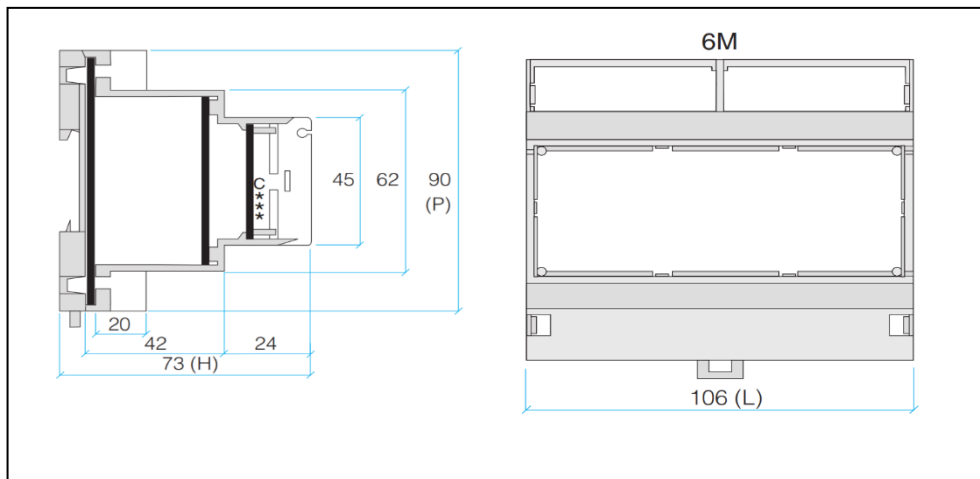


- Connection scheme



FAC3/1000/C Isolation Monitor (050624)

- Box dimensions (mm)





• Technical Data FAC3/C

Dielectric Test	
Input VDC to power supply	3k VDC
Input VDC to outputs contacts	3k VDC
Power supply to outputs contacts	3k VDC

Voltage Range	
Monitoring voltage U_N	$0,5 \cdot U_N \dots U_N$
Power supply V_{aux}	AC 207...251V
Frequency range V_{aux}	50..60 Hz
Power consumption	$\leq 6VA$

Programmable and Response values	
Isolation level I_n	10 k Ω ...80 k Ω
Measure Error (I_n)	$\pm 10\%$
Response time T_R	<100 ms
Timing Failure	1 second
Reconnection time	1...60 min.
Timing between contacts RL1-RL2 connection	1...4 s
Timing between contacts RL1-RL2 disconnection	1...4 s
Switching Time RL1	<100 ms
Switching Time RL2	<100 ms

Measuring circuit	
Internal resistance R_+	1 M Ω
Internal resistance R_-	1 M Ω
Impedance to ground	>500 K Ω
Monitoring voltage U_N	$U_N + 10\%$
Permissible system leakage capacitance	40 μF

Frontal view	
Signals type	3 leds
ON	Led green
Fault (+)	Led red
Fault (-)	Led red
Test button	Yes
Reset button	Yes

Switching Elements	
Number of switching elements	2
Type of outputs	commuted
Voltage outputs	Voltage free
Rated contact voltage	250VAC/300VDC
Making capacity	5A/0,1A
Electrical service life, number of cycles	20,000,000
Breaking Capacity	2A-AC239V
	0,4-0,2 - DC220V

General Data	
Operation Mode	Continuously
Mounting	DIN rail
Connection	screw M2,5
Maximum torque	0,4 Nm
Protection grade	IP20
Flammability class	UL94V-0
Weight	310g.aprox.
Operation temperature	-20°C...+55°C
Storage temperature	-25°C...+80°C
Relative Humidity (without condensation)	<95%
Setting values method	front opening

Ruling	
Requisitos de seguridad eléctrica	UNE-EN 61010-1
	UNE-EN 61010-2-0081
Compatibilidad electromagnética (CEM)	UNE-EN 61000-6-1
Compatibilidad electromagnética (CEM)	UNE-EN 61000-6-3/A1
Directiva europea	2006/95/CE
Directiva europea	2004/108/CE
Factory Settings	
Isolation level	80 k Ω
Reconnection time	1 minute
Timing RL2	4 second

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Sistema de Gestión
ISO 9001:2015



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