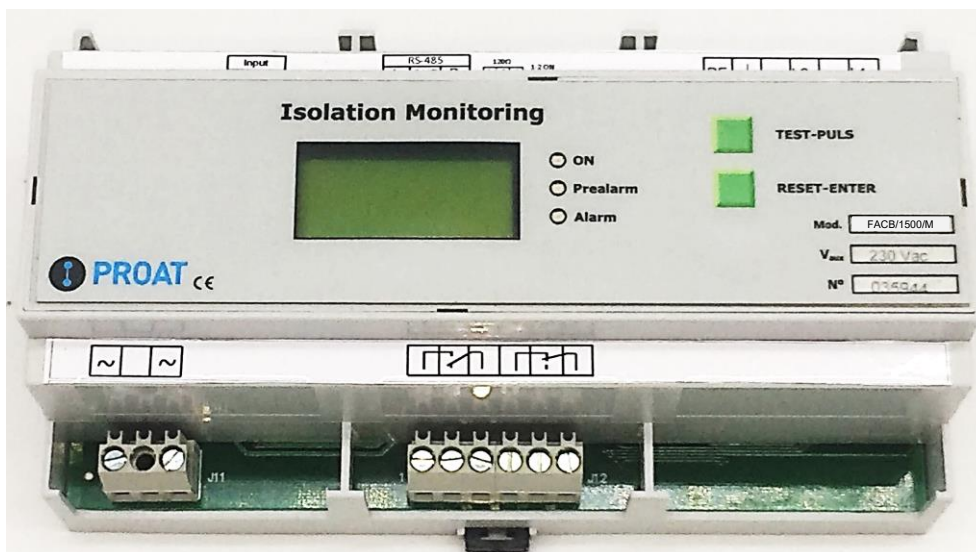


FACB/1500/M

Isolation Monitoring DC with ModBus output



• Description

The FACB/1500/M detects insulation faults in DC circuits (IT systems) until 1500 VDC. It detects symmetrical and asymmetrical faults to ground.

It has two levels of action programmable independents: pre-alarm and alarm. Each one is associated with a signaling LED and a switched contact.

External input, which allows to stop the device, in case of installations in which other elements of isolation surveillance exist.

Version / M, has RS-485 output with Modbus RTU protocol. the installation.

It has a liquid crystal display, which permanently shows the existing level of insulation. The measurement range is between 1 k Ω and 8 M Ω .

• Applications

There are IT systems in the industries, in photovoltaic installations (side DC), in battery systems, etc.

• Functional characteristics

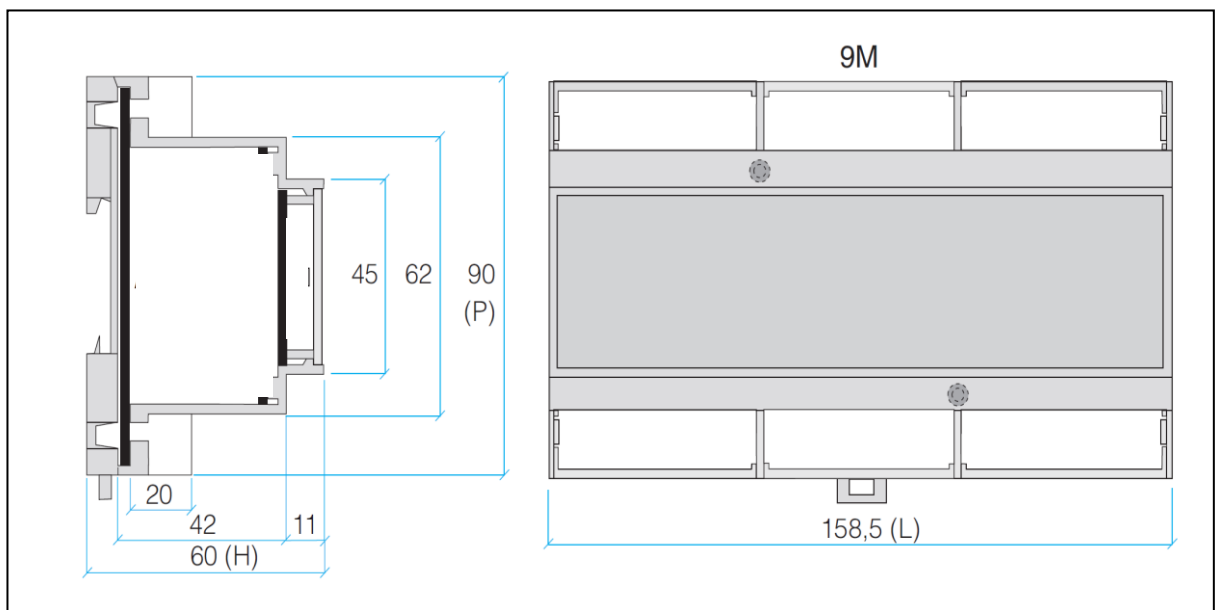
- The earth resistance value is displayed on screen. You can easily detect any change in isolation.
- When the pre-alarm threshold is exceeded, it lights on the front panel LED labeled ' pre-alarm ' and PR auxiliary contact closes.
- There are two LEDs, that indicate if the pre-alarm or alarm level has been exceeding.
- When the alarm level acts, the led 'Alarm' turn on and when the time 'alarm' is exceeding, the auxiliary contact RL2 will be connected.

- The test button simulates the fault (the pre-alarm and the alarm led's, turn on and the output contacts RL1 is disconnected and RL2 is connected).
- Reset button: turn off the Leds and the output relays, after the fault was memorized.
- Reclosing time programmable.
- Times adjustable performance.
- Programming adjustment values can be easily made using the keys on the front of the device: (levels of pre-alarm, alarm, times and memory).
- Electrically isolated RS-485 interface, with ModBus-RTU Protocol, or own PROAT communication software.

● **Construction Specifications**

- Polycarbonate.
- Quick DIN rail mounting.
- Screw terminals on front cover.
- Output contacts potential free.

● **External dimensions (millimeters)**

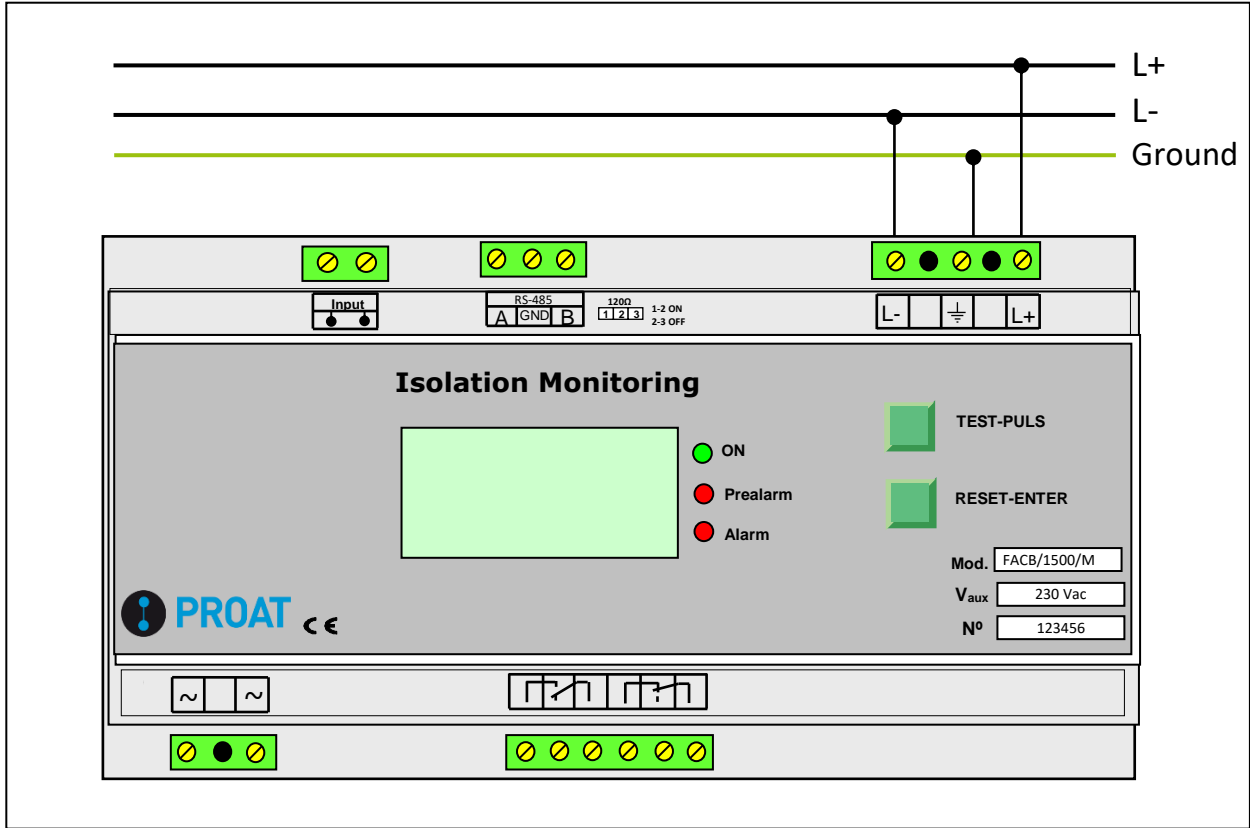


FACB/1500/M Isolation Monitoring (060624)

● **Models**

Reference	Voltage to monitoring	Power supply	Others
FACB/1500/M	1.500 VDC	86...264 VAC/120-370 VDC	Port RS-485
FACB/1500/M-24V	1.500 VDC	24 VDC	Port RS-485

• Connections



FACB/1500/M Isolation Monitoring 060624)

Technical data

Dielectric Test	
Input VDC versus power supply	3k Vrms 1 min
Input VDC versus switching elements	3k Vrms 1 min
Power supply versus switching elements	3k Vrms 1 min
Input VDC versus output 0-10V	3k Vrms 1 min

Voltage Ranges	
Voltage Range U_N	0,3* U_N ... U_N 86...264 VAC
Power supply	96...307 VDC
Power	≤12 VA
Minimal Voltage for work	>30% U_N

Response Values	
Level of Isolation IL (PreAlarm)	1 MΩ...8 MΩ
Level of Isolation IL (Alarm)	100 kΩ...1 MΩ
Timing PreAlarma	0..30 sec
Timing Alarm	0..10 sec
Reclose time	1...60 min.
Measure Errors 50...500 kΩ	±50kΩ
Measure Errors 500 kΩ...10 MΩ	±10%
PreAlarma level, by defect	1000 kΩ
Alarm level, by defect	150 kΩ
Timing PreAlarma, by defect	10 seg.
Timing Alarm, by defect	5 seg.
Reclose time by defect	1 min.

Measure circuit	
Internal Resistance R+	2,1 MΩ
Internal Resistance R-	2,1 MΩ
Impedance to ground	750 KΩ
Voltage max versus U_N	U_N +10%
Leakage Capacity max	<5μF
Fault detects	Symmetrical and Asymmetrical

Frontal view	
signals	3 leds
ON	Led green
PreAlarma	Led red
Alarm	Led red
Button Test	yes
Button Reset	yes
Display	LCD 2x8 digits
Information	continually

External input	
Activation	Short circuit between terminals
Deactivation	Open circuit between terminals

Switching elements.	
Number of switching elements	2 elements
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	
Operating mode	continuously
Mounting	DIN rail
Connection	screw M2,5
Maximum torque	0,4 Nm
Protection grade	IP20
Flammability	UL94V-0
Weight	310g.aprox.
Operation temperature	-20°C...+55°C
Storage temperature	-25°C...+70°C
Relative humidity (no condensation)	<95%
Setting values method	frontal selection

Standards	
Electrical Safety Requirements	UNE-EN 61010-1
Electrical Safety Requirements	UNE-EN 61010-2-0081
Electromagnetic Compatibility(CEM)	UNE-EN 61000-6-1
Electromagnetic Compatibility(CEM)	UNE-EN 61000-6-3/A1
European standards	2006/95/CE
European standards	2004/108/CE
Insulation detection devices for IT systems	UNE-EN 61557-8

Serial Interface	
Interface	RS-485
Connection	Terminals A/B
Cable length (m)	≤1200
Protocol	ModBus-RTU
Software own	PROAT com v1.1
Parameters	9600,8,0,1
ID Modbus	1...248
ID by defect	1
Available functions	3,4 y 6
Functioning	slave

FACB/1500/M Isolation Monitoring 060624)



Sistema de Gestión
ISO 9001:2015



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