



FACB/1000/M

Isolation Monitoring DC with ModBus output

• Description

The FACB/1000/M detects insulation faults in DC circuits (IT systems) until 1000 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.

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.

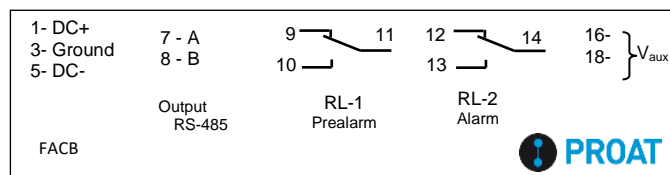
The measurement range is between 1 kΩ and 10 MΩ.



• Functional characteristics

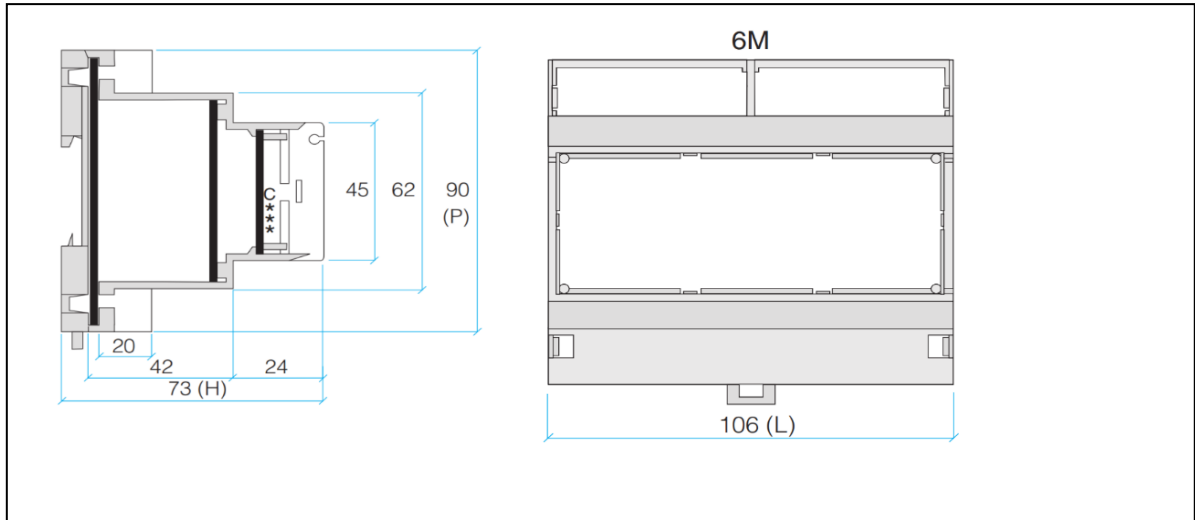
- The earth resistance value is displayed on screen. You can easily detect any change in isolation.
- When the pre-alarm threshold is exceeded, it lights on the front panel LED labeled ' pre-alarm ' and PR auxiliary contact closes.
- There are two LEDs, that indicate if the pre-alarm or alarm level has 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.

• Connections



FACB/1000/M Isolation Monitoring (060624)

• External dimensions (millimeters)

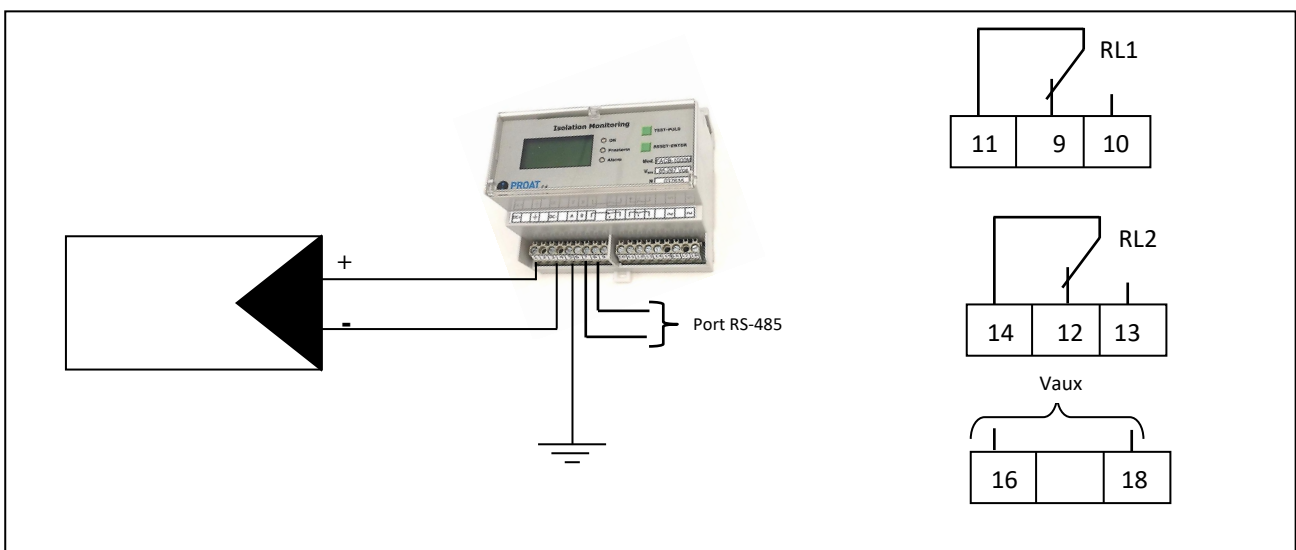


• Models

Reference	Voltage to monitoring (*)	Power supply	Others
FACB/600/M	600 VDC	86...264 VAC/120-370 VDC	Port RS-485
FACB/600/M-24V	600 VDC	24 VDC	Port RS-485
FACB/600/A	600 VDC	86...264 VAC/120-370 VDC	Output 0-10V
FACB/600/A-24V	600 VDC	24 VDC	Output 0-10V
FACB/600/C	600 VDC	86...264 VAC/120-370 VDC	----
FACB/600/C-24V	600 VDC	24 VDC	----
FACB/1000/M	1000 VDC	86...264 VAC/120-370 VDC	Port RS-485
FACB/1000/M-24V	1000 VDC	24 VDC	Port RS-485
FACB/1000/A	1000 VDC	86...264 VAC/120-370 VDC	Output 0-10V
FACB/1000/A-24V	1000 VDC	24 VDC	Output 0-10V
FACB/1000/C	1000 VDC	86...264 VAC/120-370 VDC	----
FACB/1000/C-24V	1000 VDC	24 VDC	----

(*) For other voltage values, consult PROAT (email: comercial@proat.es)

• Connections



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

Switching elements.	
Number of switching elements	1 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	-5°C...+60°C
Storage temperature	-20°C...+80°C
Relative humidity (no condensation)	<95%
Setting values method	frontal selection

Standards	
Electrical Safety Requirements	UNE-EN 61010-1 UNE-EN 61010-2-0081
Electromagnetic Compatibility(CEM)	UNE-EN 61000-6-1 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
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Serial Interface	
Interface	RS-485
Connection	Terminals A/B
Cable length	≤1200
Protocol	ModBus-RTU
Software own	PROAT com v1.1
Parameters	9600,8,0,1
ID Modbus	1...248
ID by defect	1

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Sistema de Gestión
ISO 9001:2015



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