



# **DC Isolation Monitor**

- ✓ Detects insolation faults between the (+) and (-) conductors and ground
- ✓ Potential-free commuted **output relay**, depending on the model
- √ Self-powered device
- ✓ For IT systems from **9V<sub>DC</sub> 230V<sub>DC</sub>**, depending on the model



# Applications

Monitoring ground faults in IT DC systems:

- · Electrical installations that are isolated from ground
- Battery systems
- Systems with power conversion for components with rectifiers or inverters
- Recreational or military vessels











#### **9** Function Features

- · Potential-free output relay to signal a detected fault
- TEST button to simulate a connection between (+) or
  (-) and ground.
- RESET button to reset the device and clear the fault
- LED indicators for fault signaling
- Self-powered by the installation

#### Models

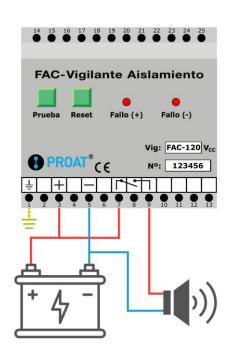
Model	Nominal Voltage U <sub>N</sub>	Operating Range	Alarm Level	Power Voltage	DIN Size
FAC-12D	12 V <sub>DC</sub>	9-18 V <sub>DC</sub>	1 kΩ	Self-powered	1M – 18,5mm
FAC-24D	$24V_{DC}$	$18-32V_{DC}$	1 kΩ	Self-powered	1M – 18,5mm
FAC-48D	42 V <sub>DC</sub>	36-55 V <sub>DC</sub>	1 kΩ	Self-powered	1M – 18,5mm
FAC-055	$48V_{DC}$	$24\text{-}55V_{DC}$	80 kΩ	Self-powered	4M – 71mm
FAC-120	$120V_{DC}$	60-138 V <sub>DC</sub>	80 kΩ	Self-powered	4M – 71mm
FAC-200	$200V_{\text{DC}}$	$100\text{-}230V_{DC}$	80 kΩ	Self-powered	4M – 71mm

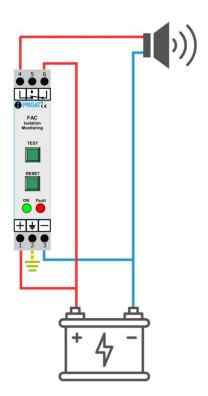




\* Other models can be manufactured upon request.

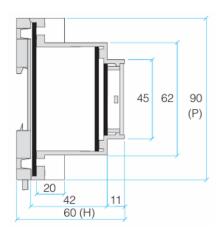
## Wiring

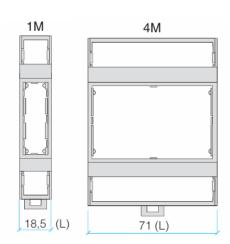




#### **Onstructive Features**

- DIN rail mounting
- Front plate terminals
- Class VO self-extinguishing plastic enclosure









## Technical Data

MODEL	FAC-12/24/48	FAC-055/120/200	
Voltage Range			
Voltage range $U_{\text{\tiny N}}$	U <sub>N</sub> ±20%	U <sub>N</sub> /2 - U <sub>N</sub> +15%	
Power consumption	≤6W	≤6W	
Consumption at rest	≤0,5W	≤0,5W	
Response Values			
Alarm level	1 kΩ	80 kΩ	
Measurement error	±10%	±10%	
Response time $T_{\text{R}}$	< 5 s	<100 ms	
Fault detection	Symmetrical	Simple	
Measuring Circuit			
Max voltage U <sub>N</sub>	U <sub>N</sub> +20%	U <sub>N</sub> +15%	
Internal resistance R+	>10kΩ	>56 kΩ (V <sub>N</sub> =120)	
Internal resistance R-	>10 kΩ	>56 kΩ (V <sub>N</sub> =120)	
Ground impedance	>10kΩ	>300 kΩ	
Leakage capacity	<5 μF	<1000 µF	
Front View			
ON	Green Led	-	
Fault	Red Led	-	
Fault (+)	-	Red Led	
Fault (-)	-	Red Led	
Test button	Yes	Yes	
Reset button	Yes	Yes	
Dielectric Test			
V <sub>DC</sub> input - output contacts	3k V <sub>RMS</sub> – 1min	3k V <sub>RMS</sub> – 1min	

Switching Elements		
Number of switching elements	1	
Type of outputs	FAC-12/24/48 – Switched	
Type of outputs	FAC-55/120/200 – Contact	
Voltage outputs	Voltage free	
Max AC load	250V <sub>AC</sub> 2A	
Max DC load	300V <sub>DC</sub> 0,1A	
Switching time RL	< 10 ms	
Number of cycles	20,000,000	
General Data		
Operation mode	Continually	
Mounting	DIN rail	
Connection	Screw M2,5	
Screw torque	≤0,4 Nm	
Protection grade	IP20	
Flammability class	UL94V-0	
Weight	310g. aprox.	
Operating temperature	-20°C+55°C	
Storage temperature	-25°C+80°C	
Relative humidity (without condensation)	<95%	
Setting values method	Fixed	
Standards		
Electrical safety requirements	UNE-EN 61010-1	
Electrical safety requirements	UNE-EN 61010-2-0081	
Electromagnetic compatibility (EMC)	UNE-EN 61000-6-1	
Electromagnetic compatibility (EMC)	UNE-EN 61000-6-3/A1	
European Directive	2006/95/CE	
European Directive	2004/108/CE	
Standard	IEC-61557-8	

