



*Catalog*

**FAC**

**DC Isolation Monitor**


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## DC Isolation Monitor

- ✓ **Detects insulation** faults between the (+) and (-) conductors with regard to 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 of possible ground faults of IT ground isolated 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



### Function Features

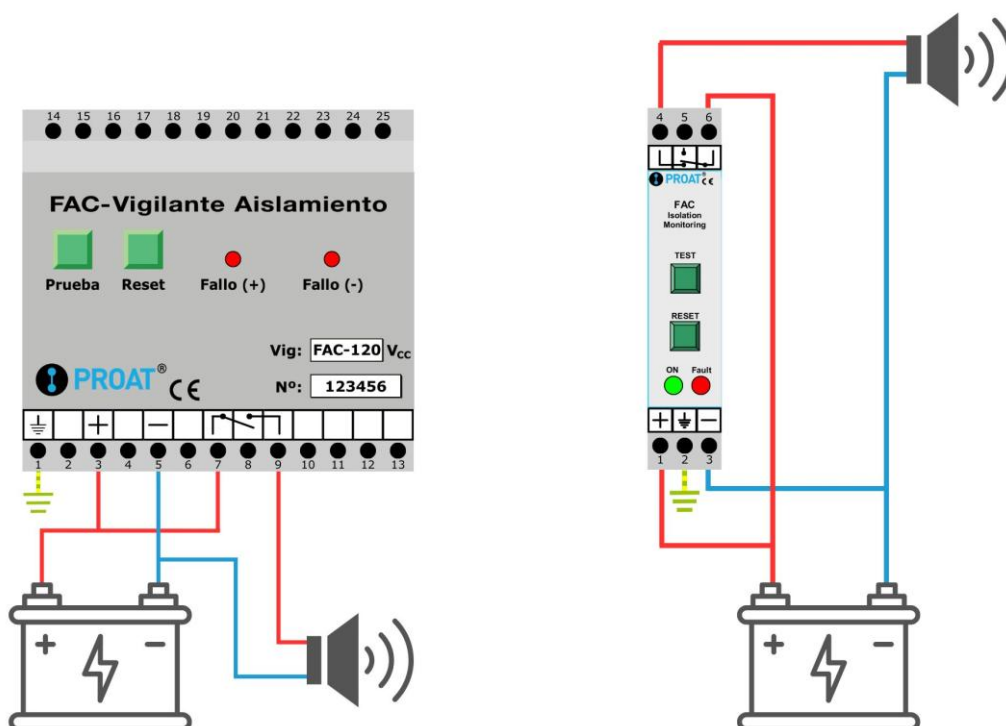
- Potential-free output relay to signal a detected fault
- **TEST** button to simulate a connection between (+) or (-) and ground
- **RESET** button to reset the device and clear the fault
- LED indicators for fault signaling
- Self-powered by the installation

## Models

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

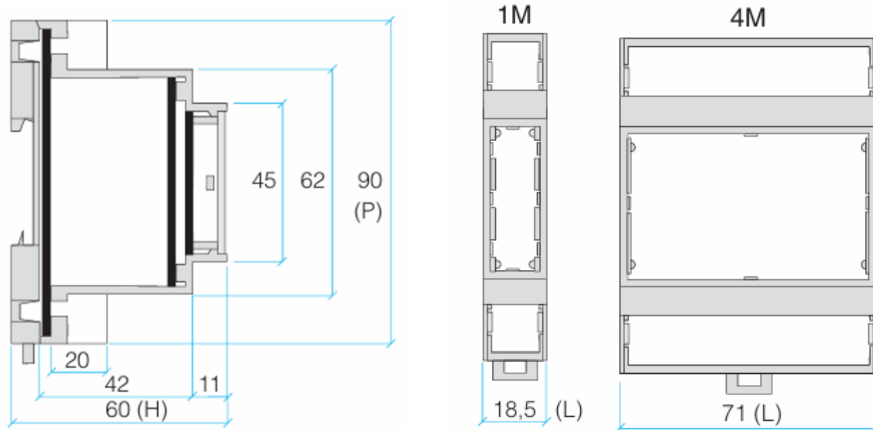
\* Other models can be manufactured upon request

## Wiring



## 🔌 Constructive Features

- DIN rail mounting
- Front plate terminals
- Class V0 self-extinguishing plastic enclosure



## 🔌 Technical Data

MODEL	FAC-12/24/48	FAC-055/120/200
<b>Voltage Range</b>		
Voltage range $U_N$	$U_N \pm 20\%$	$U_N/2 - U_N + 15\%$
Power consumption	$\leq 6W$	$\leq 6W$
Consumption at rest	$\leq 0,5W$	$\leq 0,5W$
<b>Response Values</b>		
Alarm level	<b>1 k<math>\Omega</math></b>	<b>80 k<math>\Omega</math></b>
Measurement error	$\pm 10\%$	$\pm 10\%$
Response time $T_R$	$< 5 s$	$< 100 ms$
Fault detection	Symmetrical	Simple
<b>Measuring Circuit</b>		
Max voltage $U_N$	$U_N + 20\%$	$U_N + 15\%$
Internal resistance R+	$> 10k\Omega$	$> 56 k\Omega (V_N=120)$
Internal resistance R-	$> 10 k\Omega$	$> 56 k\Omega (V_N=120)$
Ground impedance	$> 10k\Omega$	$> 300 k\Omega$
Parasitic capacity	$< 5 \mu F$	$< 1000 \mu F$
<b>Front View</b>		
ON	Green Led	-
Fault	Red Led	-
Fault (+)	-	Red Led
Fault (-)	-	Red Led
Test button	Yes	Yes
Reset button	Yes	Yes
<b>Dielectric Test</b>		
$V_{DC}$ input - output contacts	3k $V_{RMS}$ - 1min	3k $V_{RMS}$ - 1min
<b>Switching Elements</b>		
Number of switching elements	1	
Type of outputs	FAC-12/24/48 - Switched 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	
<b>General Data</b>		
Operation mode	Continually	
Mounting	DIN rail	
Connection	Screw M2,5	
Screw torque	$\leq 0,4 Nm$	
Protection grade	IP20	
Flammability class	UL94V-0	
Weight	310g. approx.	
Operating temperature	$-20^\circ C \dots +55^\circ C$	
Storage temperature	$-25^\circ C \dots +80^\circ C$	
Relative humidity (without condensation)	$< 95\%$	
Setting values method	Fixed	
<b>Standards</b>		
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	


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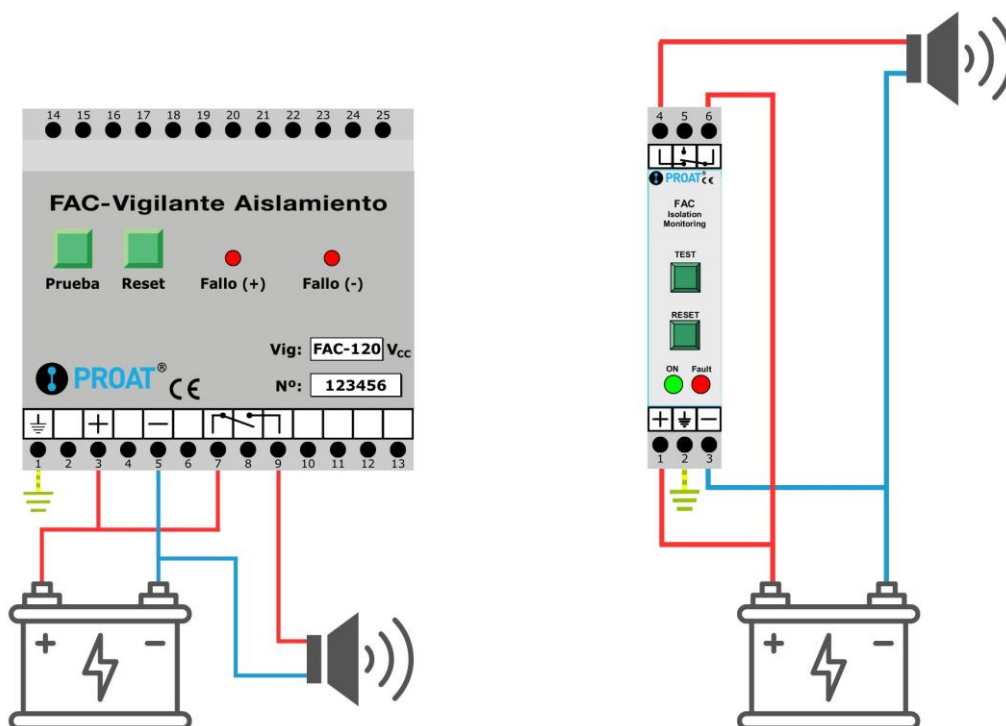
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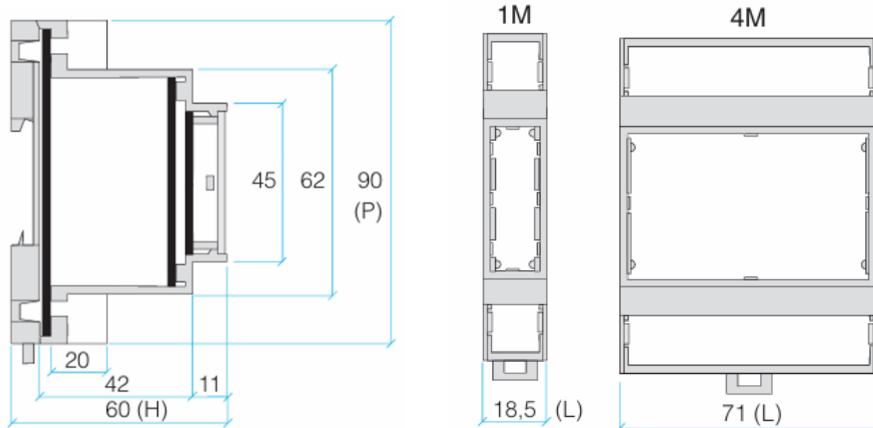
Optional **tropicalization** by adding the suffix **-T**  
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