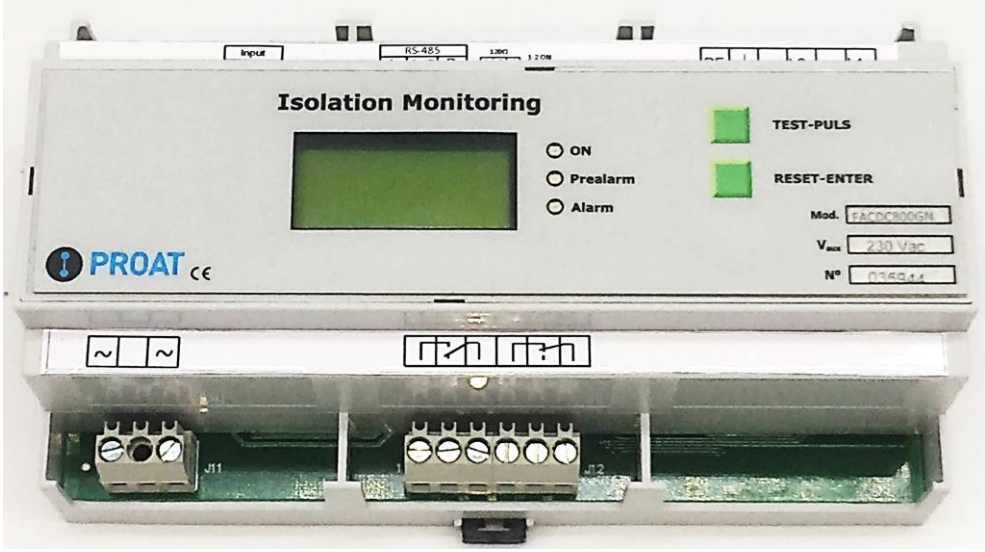
FACDC-800GN (800Vac/1500Vdc)

Isolation Monitoring systems AC+DC



- **Product description**

The FACDC-800GN device is monitoring the insulation resistance in IT systems (monophasic and three-phasic AC, y DC), in which both AC and DC voltage are present.
The FACDC-800GN model supports the following voltage levels AC/DC 0... 800 VAC/ 0...1500 VDC.
The FACDC-700GN model supports the following voltage levels AC/DC 0... 700 VAC/ 0...1080 VDC.
With the ACP-1750 coupler the voltage range can be extended by AC 0 ... 1150 V / DC 0 ... 1750 V
It has an RS-485 port with ModBus-RTU communications protocol.
The power supply independent allowed monitoring system although this is no voltage.
External input, which allows to stop the device, in case of installations in which other elements of isolation surveillance exist.
Admits parasitic capacity in the installation, up to 1000µF.

- **Applications**

There are IT systems in the industries, in photovoltaic installations (inverters), in rectifier systems, lighting installations, AC/DC auxiliary current circuits, etc.

- **Functional Characteristics**

- Screen is displayed resistance to ground. Can thus easily detect any change in the insulation.
- Permanently connects two outputs, one first level (warning) and the second level (alarm) after the programmed time has elapsed.
- Red LEDs, that indicate if the pre-alarm or alarm level has been exceeded.
- Test button that simulates the fault (pre-alarm and alarm), the LED's are ON and the output contacts are connected.
- Reset button: turns off the LEDs Prealarma and Alarm and off the output relays after a failure.
- Trip times adjustable.
- Scheduling adjustment values can be easily done using the buttons on the front panel. (levels of
- Scheduling adjustment values can be easily done using the buttons on the front panel. (levels of warning, alarm, timings and activation memorized, Modbus parameters, etc.).

- **Construction Specifications**

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

- **Applicable Installation Types**

  - Permanent service
  - IT systems:
    - 0…1500 VDC / 0…800VAC (DC, 50Hz)

- **Electrical Characteristics**

  - Range from: 1 a 1000 kΩ.
  - Leakage Capacity: ≤1000 µF
  - Two action thresholds: Pre-Alarm and Alarm.
  - Pre-alarm threshold: 50 to 150 kΩ.
  - Alarm Threshold: 5 to 45 kΩ.
  - Adjust timing Prealarm: 10 to 30 sec.
  - Adjust timing Alarm: 1 to10 sec.
  - Faulty Consumption: <20 VA
  - Wide range of power supply:
    - 86 ... 264 VAC (50/60Hz), 120 ... 370 VDC
    - 24 Vdc (depending on model).
  - Measurement System: voltage pulses
  - DC internal resistance R_i =294K
    - Factory default settings:
    - Warning: 100 kΩ
    - Alarm: 10 kΩ
    - Temp-Warning: 10 sec.
    - Temp-Alarm: 5 sec.
    - Memorization.: YES
    - ID ModBus: 1
  - Standards:
    - Low Voltage Regulation,
    - Isolation Monitoring EN 61557-8
    - EMC EN 61000-1
    - Support impulse 4kV EN 61000-4-5.
    - Insulation: Class II (Vac and Vdc)
  - Properties of relay contacts:
    - Continuous current: 5 A.
    - Max. Switching.: 230 Vac

- **Other Features**

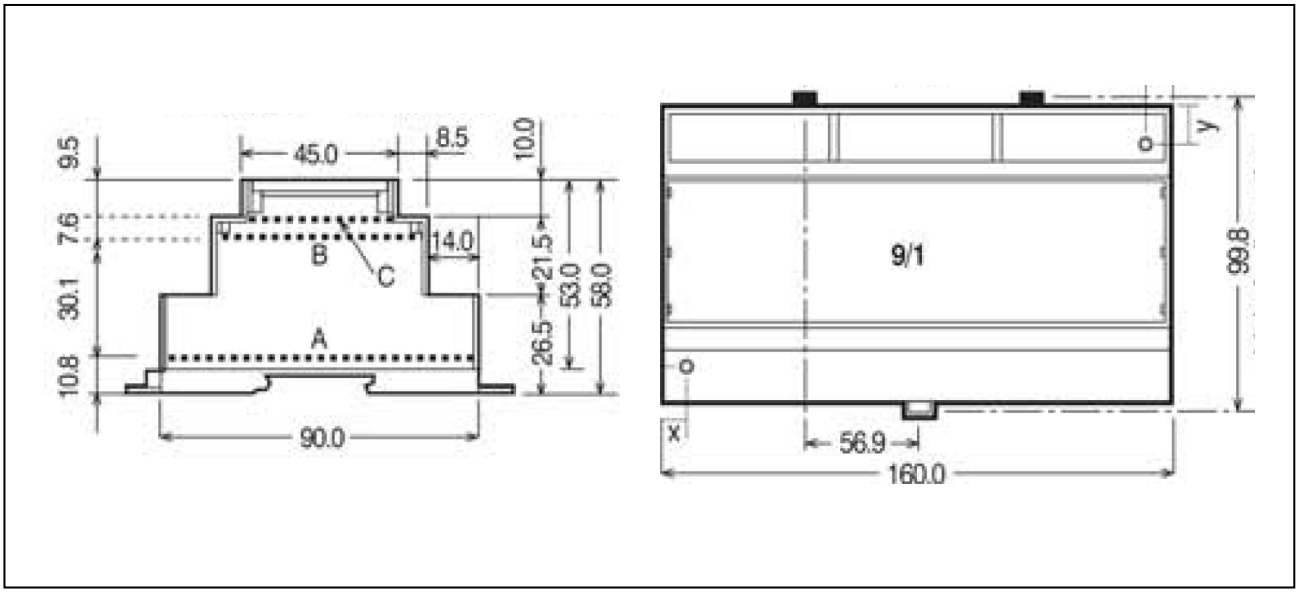
  - Weight: 350 gr. Approx.
  - Protection degree: IP20
  - Temperature Range
    - Operation: -10ºC a +70ºC
    - Humidity: <95%
    - Storage: -20ºC a +80ºC

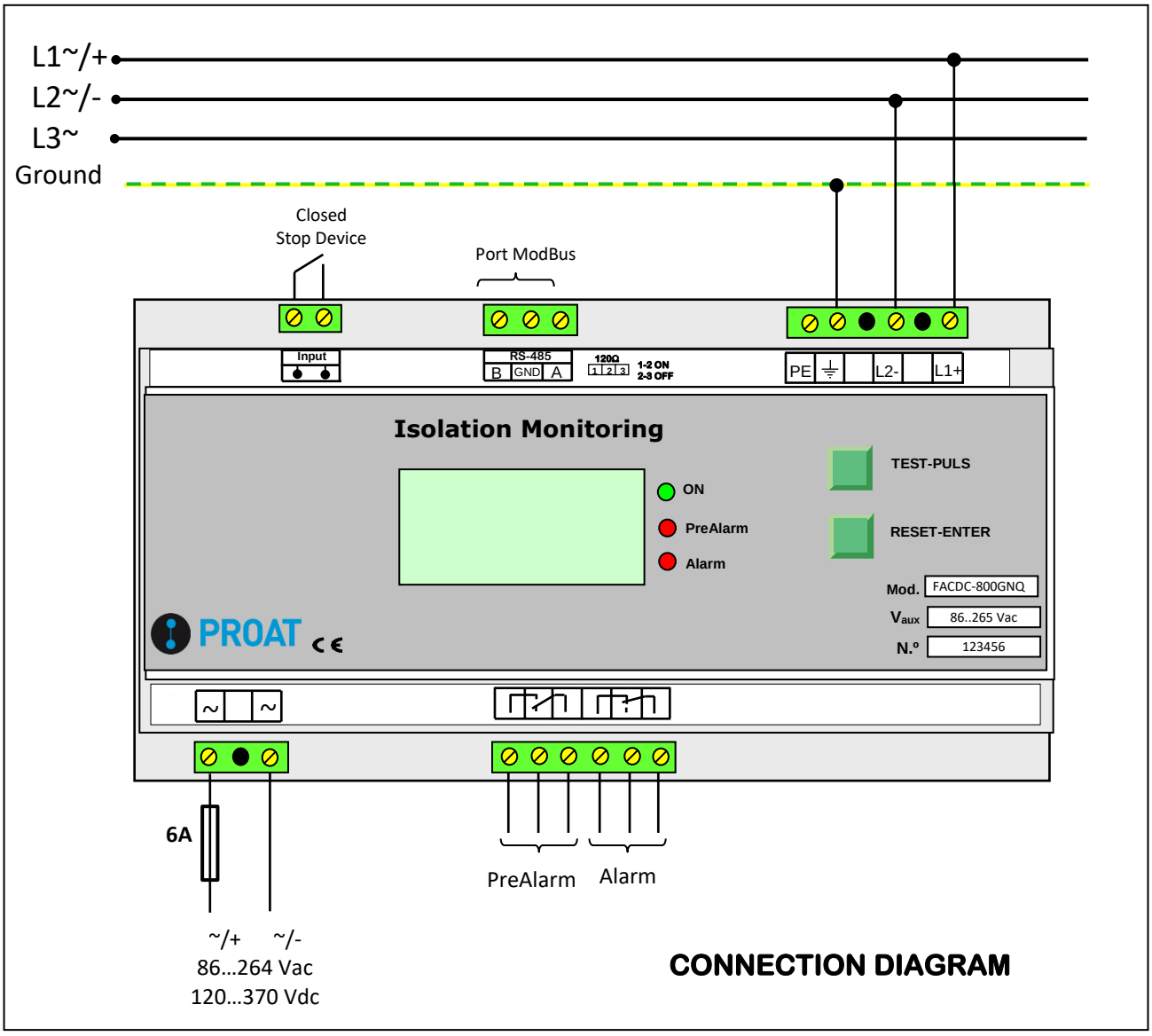
- **Models**

Reference	Power supply	Applicable Installation
FACDC-700GN	86…264VAC, 120…370VDC	700Vac/1080Vdc
FACDC-800GN	86…264VAC, 120…370VDC	800Vac/1500Vdc
FACDC-700GN	24VDC	700Vac/1080Vdc
FACDC-800GN	24 VDC	800Vac/1500Vdc

- **Dimensions external box (millimeters)**

Box for rail OMEGA DIN EN 50022. Plastic auto extinguishing, class UL94VO





Technical data

Dielectric test IEC 61010-1	
VDC input against power supply	3k VDC
VDC input against switching elements	3k VDC
Power supply against switching elements	3k VDC
System IT	
Monitoring Voltage UN (system IT)	AC 0... 800 Vac DC 0...1500 Vdc
Nominal Frequency fN	DC, 15...300Hz
Power supply	
Power supply Vaux	24VDC, 87-264VAC/90-370VDC
Power consumption	≤20 VA
Response Values	
Prealarm Isolation Level R_{pr}	50k...150kΩ
Alarm Isolation Level R_{al}	5k...45kΩ
Measure error 1..10 kΩ/10.....200 kΩ	±1 kΩ/±10%
Hysteresis	25%
Leakage Capacity Level (C_p)	0µF 1000µF
Timing	
Prealarm Timing	10...30 s
Alarm Timing	1...10 s
Response Time with RF=0,5 R_{al}, (C_p=1µF)	≤5 s
Response Time with RF=0,5 R_{al}, (C_p=100µF)	≤80 s
Measuring Circuit	
Measure Voltage	±24V
Measure Current (with RF=0)	≤2600µA
Internal Resistance	>294 kΩ
Impedance at 50Hz	>294 kΩ
Permissible system leakage capacitance	0µF....1000µF

Measure range	
Failure resistance measurement range	1kΩ...1MΩ
Measure error 1..10 kΩ/10.....200 kΩ	±1 kΩ/±10%
Alarm memory	selectable
Languages to select	ESP/ING

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
	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	-10ºC...+70ºC
Storage temperature	-20ºC...+80ºC
Relative humidity (without condensation)	<95%
Setting values method	frontal selection

Standards	
Safety requirements	EN50081
Safety requirements	EN50082-1
Electromagnetic Compatibility (CEM)	BT-Standard
Isolation Monitoring	UNE-EN 61557-8

Manufacture Levels	
Manufacture PreAlarm Level	100 KΩ
Manufacture Alarm Level	10 KΩ
Manufacture PreAlarm Timing	10 s
Manufacture Alarm Timing	5 s
Memory	NO
Leakage capacity	5µF
Language	ENG
ID ModBus	1

Communication Port RS-485	
Port Parameters	9600,8,N,1
Protocol	Modbus-RTU
Programmable ID	1.....240
Available functions	3,4 y 6
Functioning	slave

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