HARTBR

Single-Phase Recloser
ROCKET-1

SINGLE AND THREE-PHASE NETWORK
PROTECTION AND AUTOMATION

01
IINSTALLED IN CONVENTIONAL FUSE CUTOUT

PROTECTION, COMMUNICATION AND REMOTE CONTROL

Protection with high reclosing times

Configurable operation modes:
- Single-Phase Recloser Mode
- Three-Phase mode (operation synchronized with Rockets partners)
- Switch Mode (protections off)
- Sectionalizer Mode

, Everything configurable, no extra accessories, no additional licenses!

Bluetooth and IoT Network Communication

Communication and parameterization are done locally, through Hart Devices App (Bluetooth), or remotely by IoT networks.

Remote commands through IoT Networks

By using an embedded communication module, it's possible to supervise and remotely send commands to Rocket-1® via SCADA systems or by Hart Devices App.

Product tested and approved for CESI-Itália

In compliance with IEEE C37.60-2019, Rocket-1 Recloser has been tested and approved in all tests, according to the international standard.

CESI
Shaping a Better Energy Future

Smart grid solution, remotely controlled, which reduces up to 80% of permanent fault events

- Embedded GPS, to indicate the exact location of the fault;
- Digital and analog sensors, with remote supervision;
- Bistable magnetic actuator, without springs for operations - robustness;
- It remains in the cutout after lockout, and can receive remote or local closing command;
- In open position, Rocket-1 has an **autonomy of up 5 days,** being able, during this period, to receive remote commands from SCADA system.

DESIGNED FOR **10.000 OPERATIONS,**
maintenance-free

SMARTPHONE ACCESS (Android and IOS)

EMBEDDED IoT RADIO

INTEGRATION WITH SCADA

SELF-POWERED BY HARVEST ENERGY

COMPETITIVE PRICE

NO BATTERIES, NO MAINTENANCE

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MAIN FEATURES

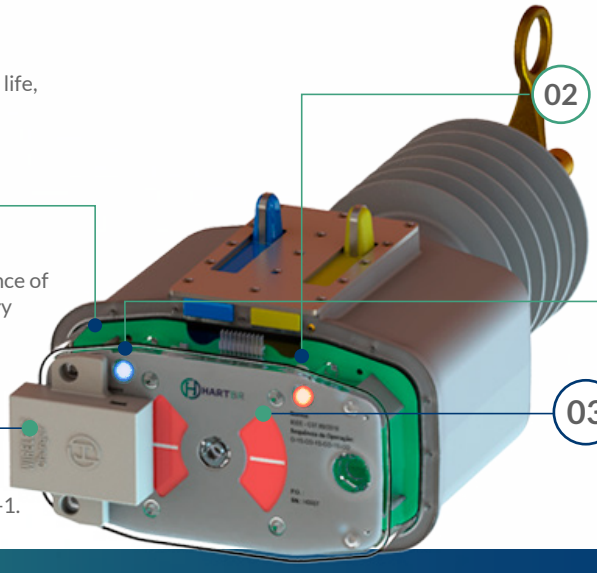
Rocket -1 has a 100% polymeric outer body. The polymer is specified for 25 years of time life, without risk of corrosion or degradation.

DIGITAL AND ANALOG SENSORS 04

Internal temperature and humidity sensors. Electric field sensor for detecting the presence of medium voltage in the grid, to assist recovery schemes.

WIRELESS CHARGER 05

Wireless charger for workbench uses, in cases of configuration and testing of Rocket-1.



02 **SIGNALING LEDs**

Signaling through high intensity LEDs:

- Open
- Closed
- Mechanical Failure
- Switch Mode
- Boot
- Safeboot
- Hot Line
- Bluetooth Access
- SCADA Communication

03 **SIGNALING SEMAPHORE**

Mechanical indicator for local signaling.
1 - Closed: Red
0 - Open: Green

SCADA INTEGRATION

- Onboard Radio and Antenna
- Modules powered by the recloser itself
- No external modules required
- Integration via standard protocols (DNP3, IEC61850...)
- Low cost

GEOLOCATION

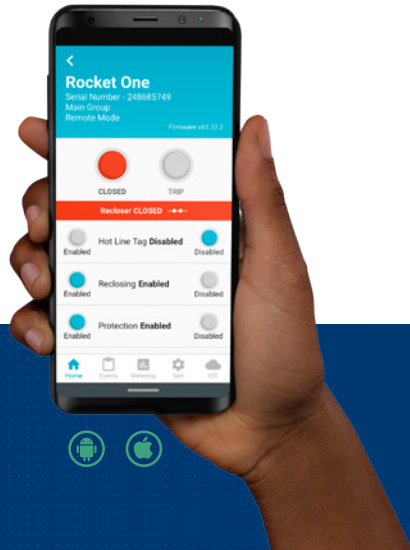
With an onboard GPS chip, Rocket-1 will dynamically inform SCADA system about the exact location of the fault. No configuration is required, ensuring fast field crew deployment, in cases of permanent faults.

TECHNICAL SPECIFICATIONS		15.5kV	27kV / 38kV-M
Interruption Mode		Vaccum	
Insulation		Polymeric	
Rated Frequency		50/60 Hz	
Rated Voltage		13.8 kV	24 kV
Maximum Voltage		15.5 kV	27 kV
Atmospheric Impulse Voltage		110 kV	150 kV
Insulation Voltage Power Frequency	Dry - 1 min	50 kV	60 kV
	Wet - 10 s	45 kV	60 kV
Rated Current		200 A	
Short Circuit Breaking Current		4.2 kA/ 1s	6.3 kA/ 1s
Minimum Pickup		4 A	
Metering Accuracy (Protection)		±5% plus 50mA for settings ≤ 200A and ±10% for settings > 200A	
Openings to Lockout		4 (Configurable)	
Number of Mechanical Operations		10,000	
Communication Interfaces		LoRa / NB-IoT / Bluetooth 5.0	
Communication Protocols		LoRaWAN/ DNP 3.0	
Protection Degree		IP65	
Standard		IEEE C37.60-2019	

Blue Lever: Active Hot Line function

MECHANICAL LEVERS

Yellow Lever: Opening and Closing



With Hart Devices App it's possible to access Rocket-1, through Bluetooth, for:

- Status readings and Commands
- Event logs analysis and download
- IoT network monitoring and full configuration.

Hart Devices App to assist field operations