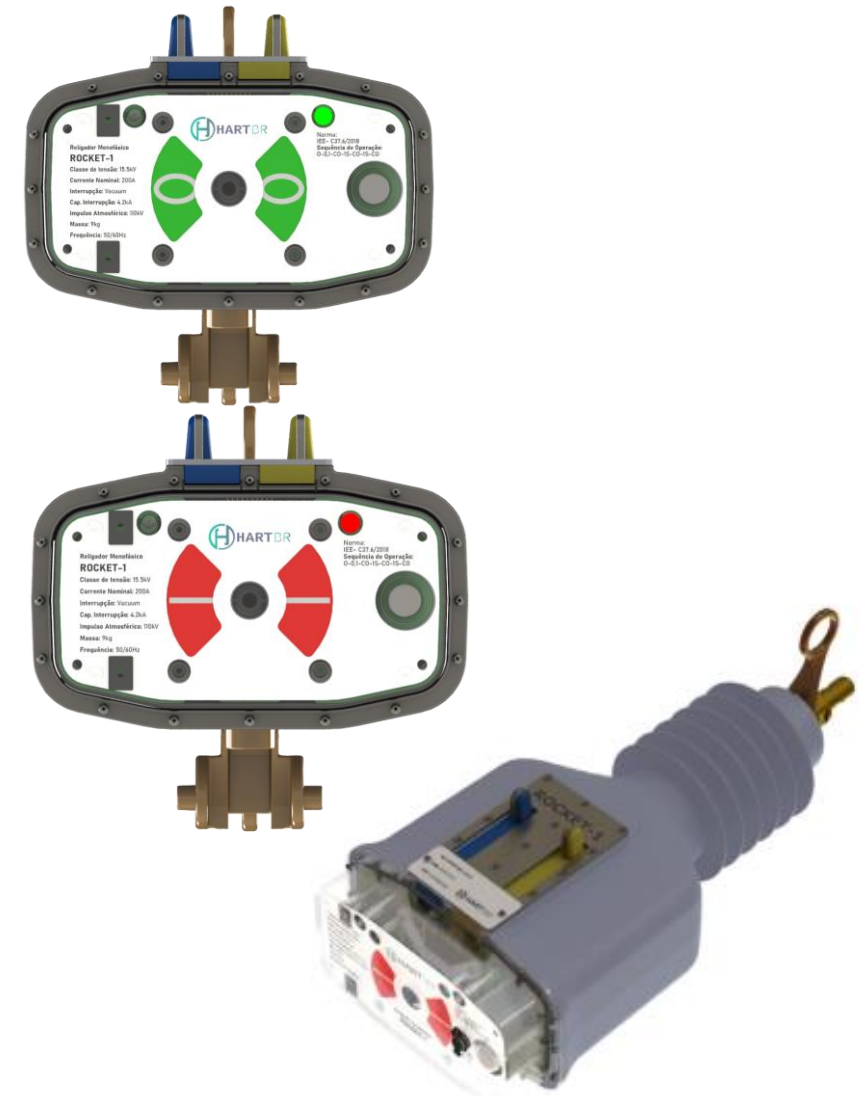


Single Phase Recloser Rocket-1

Rocket 1 – Technical Features

	15kV	27kV
Extinguish	Vacuum	
Insulation	Polymer	
Rated Frequency (Hz)	50/60 Hz	
Rated operational voltage (kV rms)	13.8 kV	24/36 kV
Max voltage (kV rms)	15.5kV	27/38 kV
Lightning impulse withstand voltage (BIL)	110 kV	150 kV
Power-frequency withstand voltage - 60 Hz (kV rms)		
- Dry, 1 min	50 kV	60 kV
- Wet, 10 s	45 kV	60 kV/1min
Rated Current	200 A	
Rated symmetrical interrupting	4.1 kA	6.3kA
Phase Metering		
Metering (A)	From 0,5 A	
Tolerances (%)	±5% plus 50mA for settings ≤ 200A Me and ±10% for settings > 200A	
Voltage sensor (MV)	Yes	
Openings to lockout	4	
Communications interfaces	LoRa / NB-IoT / CAT-M1	
Communications protocols	DNP3	
Protection grade	IP65	
Technical Standards	IEEE C37.60-2019	



Type Tests – CESI Italy



Test Report

Document No.	C0003103	Copy No.	1	Number of pages	36
Apparatus	Single-phase overhead line, cutout mounted, alternating current automatic circuit recloser with vacuum interrupter having the following ratings: 15,5kV – 200A – 50/60Hz – 4,1kAx1s				
Designation	Rocket-1				
Serial Number	RKT-191100024				
Manufacturer	HART ENERGIA PROJETOS E ENGENHARIA EIRELI Alameda Araguaia, 1142, Bloco 1, SL4, 06455-000 Barueri, Brazil				
Client	HART ENERGIA PROJETOS E ENGENHARIA EIRELI Alameda Araguaia, 1142, Bloco 1, SL4, 06455-000 Barueri, Brazil				
Tested for	-				
Date(s) of tests	February 21, 2020				
Tested by	CESI S.p.A. Via Rubattino, 54 20134 Milano – Italy				
Test performed	Time-current tests				

The apparatus, constructed in accordance with the description, drawings and photographs incorporated in this document has been subjected to the series of proving tests in accordance with:

Client's request based on:
IEC 62271-111 (2019-02)
IEEE C37.60 (2019-02)

The results are shown in the record of proving tests and the oscillograms attached hereto. The ratings assigned by the Manufacturer are listed on the ratings page.
The document applies only to the apparatus tested. The responsibility for conformity of any apparatus having the same designations with that tested rests with the Manufacturer.

February 21, 2020

Date Sheng Giuseppe Test Engineer in charge The Manager - Arcidiaco Lorenzo Approved By Document Digitally Signed

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CESI

Shaping a Better Energy Future

Type Test Report

Document No.	B9024568	Copy No.	1	Number of pages	16
Apparatus	Single-phase overhead line, cutout mounted, alternating current automatic circuit recloser with vacuum interrupter having the following ratings: 15,5kV – 200A – 50/60Hz – 4,1kAx1s				
Designation	Rocket-1				
Serial Number	RKT-191100001				
Manufacturer	HART ENERGIA PROJETOS E ENGENHARIA EIRELI Alameda Araguaia, 1142, Bloco 1, SL4, 06455-000 Barueri – BRAZIL				
Client	HART ENERGIA PROJETOS E ENGENHARIA EIRELI Alameda Araguaia, 1142, Bloco 1, SL4, 06455-000 Barueri – BRAZIL				
Tested for	-				
Date(s) of tests	November 26-27, 2019				
Tested by	CESI S.p.A. Via Rubattino 54 20134 Milano – ITALIA				
Test performed	Mechanical duty test				

The apparatus, constructed in accordance with the description, drawings and photographs incorporated in this document has been subjected to the series of proving tests in accordance with:
IEC 62271-111 (2019) & IEEE Std C37.60 (2012)

The results are shown in the record of proving tests and the oscillograms attached hereto. The values obtained and the general performance are considered to comply with the above Standard(s). The ratings assigned by the Manufacturer are listed on the ratings page.
The document applies only to the apparatus tested. The responsibility for conformity of any apparatus having the same designations with that tested rests with the Manufacturer.

February 11, 2020

Date Manoel Roberto Test Engineer in charge The Manager - Arcidiaco Lorenzo Approved By Document Digitally Signed

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CESI

Trust the Power of Experience

Type Test Report

Document No.	C0002789	Copy No.	1	Number of pages	36
Apparatus	Single-phase overhead line, cutout mounted, alternating current automatic circuit recloser with vacuum interrupter having the following ratings: 15,5kV – 200A – 50/60Hz – 4,1kAx1s				
Designation	Rocket-1				
Serial Number	0024				
Manufacturer	HART ENERGIA PROJETOS E ENGENHARIA EIRELI Alameda Araguaia, 1142, Bloco 1, SL4, 06455-000 Barueri, Brazil				
Client	HART ENERGIA PROJETOS E ENGENHARIA EIRELI Alameda Araguaia, 1142, Bloco 1, SL4, 06455-000 Barueri, Brazil				
Tested for	---				
Date(s) of tests	February 19-20, 2020				
Tested by	CESI S.p.A. Via Rubattino, 54 20134 Milano – Italy				

Test performed Dielectric tests on main circuits:
- Lightning impulse voltage tests
- Power-frequency voltage tests (dry and wet)

The apparatus, constructed in accordance with the description, drawings and photographs incorporated in this document has been subjected to the series of proving tests in accordance with:
IEC 62271-111:2012 & IEEE Std C37.60-2012 Edition 2.0 from clause 6.2 to clause 6.2.6.2

The results are shown in the record of proving tests and the oscillograms attached hereto. The values obtained and the general performance are considered to comply with the above Standard(s). The ratings assigned by the Manufacturer are listed on the ratings page.
The document applies only to the apparatus tested. The responsibility for conformity of any apparatus having the same designations with that tested rests with the Manufacturer.

February 20, 2020

Date Del Soglio Carlo Test Engineer in charge The Manager - Arcidiaco Lorenzo Approved By Document Digitally Signed

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The laboratory meets the requirements of the Standard EN ISO/IEC 17025:2005 "General Requirements for the Competence of Testing and Calibration Laboratories". The in force status of the accreditation and the list of accredited tests may be checked in the WEB site: www.accredia.it



CESI

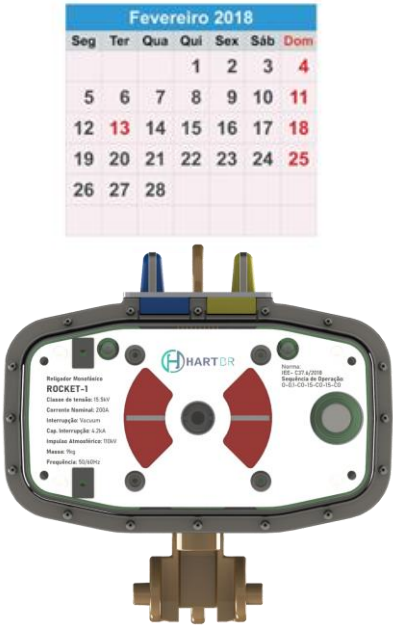
Shaping a Better Energy Future

PAD: C0003103 (27/02/20) - CONFIDENTIAL USE

PAD: B9024568 (27/02/20) - CONFIDENTIAL USE

PAD: C0002789 (27/02/20) - CONFIDENTIAL USE

Android APP



TOKEN (ARPEGGIO)

Rocket One
Número de Série - 692321353
Grupo Principal
Modo Remoto
Firmware vE1.43.16

Estado Fechado

Em Andamento | Ciclo de Religamento | Normal

Patrimônio:
Número de Aberturas:330
Orientação do Religador:Caído

6 10:25:19
são 2094 / 2400
1.0°C | 68.6%

Evento Log:

#	Data/Hora	Tipo	Evento	Info
0	15/11/2016 10:24:36	Acces		
1	15/11/2016 09:59:52	BLE SI		
2	15/11/2016 09:59:43	Acces		
3	15/11/2016 09:59:27	BLE SI		
4	15/11/2016 09:59:21	Acces		

Modo Remo | Circuito Fechado

Última leitura 0.1 [400A (máx)]
Leitura Média 0.10 [400A (máx)]
Leitura Máxima 0.10 [400A (máx)]

Rocket One
Serial Number - 1685207874
Main Group
Remote Mode
Firmware vE1.43.14

Identification

Type	LoRa
EUI	aabbcc0164723b42
Version	VA0.18.3
LoRaWAN Region	AU915
Connection State	Connected
Time LoRa	31/12/1969 22:14:26

Last Communication TX

Time	5/10/2023 3:17:58 PM
Fcnt	38787

Last Communication RX

Time	5/10/2023 3:17:10 PM
Fcnt	1541
RSSI	-94
SNR	4

Link Check

Time TX	5/10/2023 3:17:29 PM
Time RX	5/10/2023 3:17:10 PM
Gtws	1
Margin	9

Modo Remo

- C1 (IEC SI)
- C2 (IEC VI)
- C3 (IEC EI)
- C4 (IEC LTI)
- C5 (IEC STI)
- U1 (U.S. MI)
- U2 (U.S. I)
- U3 (U.S. VI)
- U4 (U.S. EI)
- U5 (U.S. STI)
- Definite Time (DT)
- USR1 (Def. Usuário 1)

Habilitar Elemento PTOC

Corrente de Pickup PTOC

PTOC Curva

PTOC Dial de Tempo

Home | Eventos | Medições | Configurações