

RECLOSER

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## SINGLE PHASE CIRCUIT RECLOSER

Standards

IEC 62271-111, IEEE C37.60



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# RECLOSER

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## Description

Equipped with switching under load technology due to the vacuum arc extinguishing element, the equipment is able to eliminate intermittent faults in pre-programmable activation cycles, providing greater robustness against locking failures.

A modern control platform, completely redesigned to meet a variety of customer profiles, regardless of specific utility characteristics or load types. This includes extensive networks for industrial loads, as well as those requiring massive and coordinated operation (self-healing).

The equipment can be parameterized through its various communication buses.

It eliminates the need for a control panel and minimum load current, relying on technology powered by internal capacitive voltage transformers (TPC).

## Features

- The pre-insertion spring mechanism adopts a single-phase connection, mounted in an aluminum housing.
- The magnetic mechanism features a locking function to maintain the mechanism's operation in good condition and keep the OPEN/CLOSED condition through an electromagnetic lock.
- Discharge is carried out through a capacitor present in the control unit.
- This energy storage device can operate even during transient events and with low battery load.
- It has a manual opening/closing function to operate the recloser between the OPEN/CLOSED positions, through the lever indicating ON/OFF.
- Easy observation by the operator of the recloser condition from the ground.



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# RECLOSER

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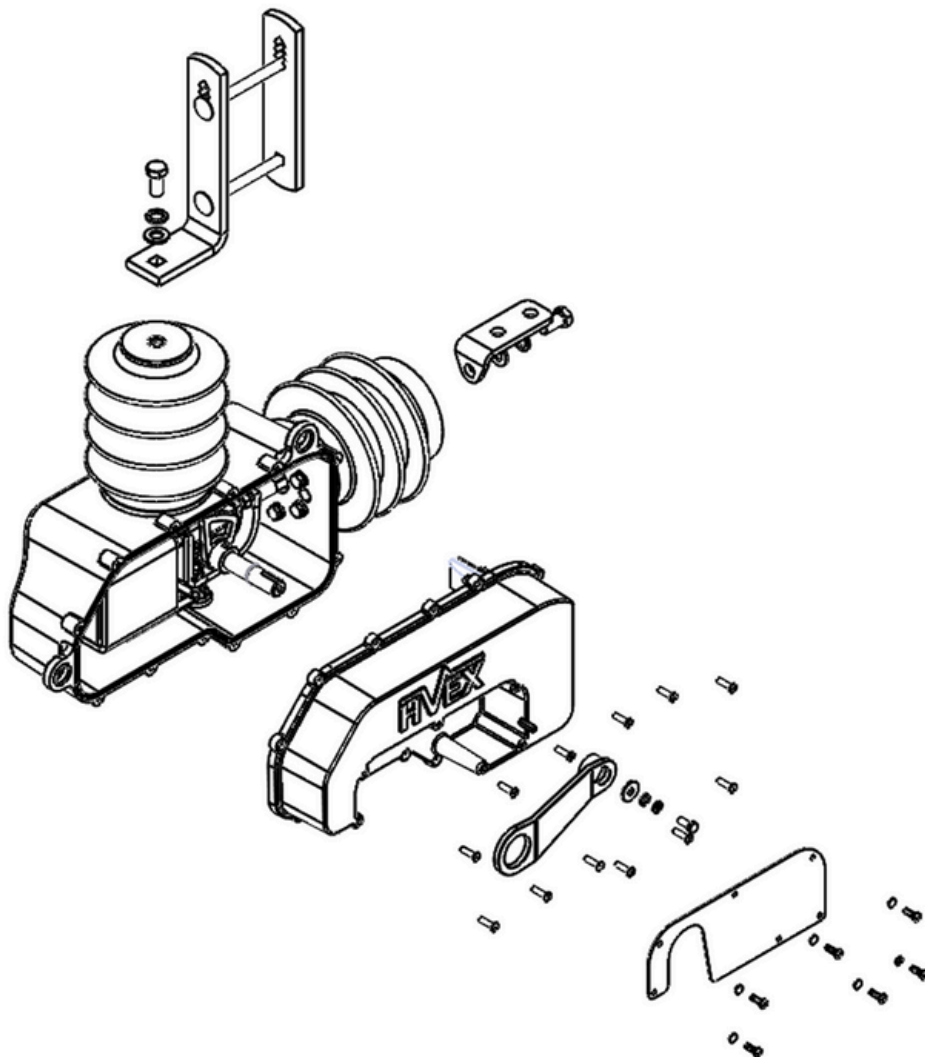
## Features

- For the consumer: Reduction of FEC and DEC, as the recloser will have the ability to restore power for transient faults.
- For the utility: Improvement of its power quality indicators and reduction in acquisition, operation, and maintenance costs.

## Operation

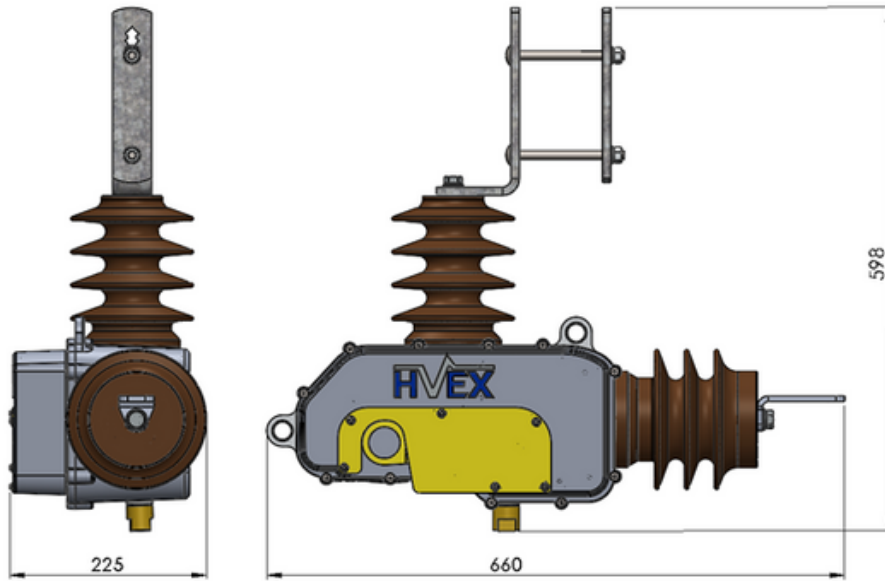
The single-pole recloser is a load-switching device capable of operating under load and fault conditions, with customizable parameters. It is controlled to protect and restore individual phases of the electrical system in the event of a fault, as most issues in the power grid are transient, and a brief interruption followed by re-energization is sufficient to address this type of problem.

The recloser has a range of settings for its opening conditions; if any of these conditions are met, the recloser opens and initiates a re-closing attempt cycle. If the re-closing is successful, the phase is restored. If the system encounters issues during the re-closing process, the device locks open, preventing fault propagation and safeguarding the rest of the electrical network.

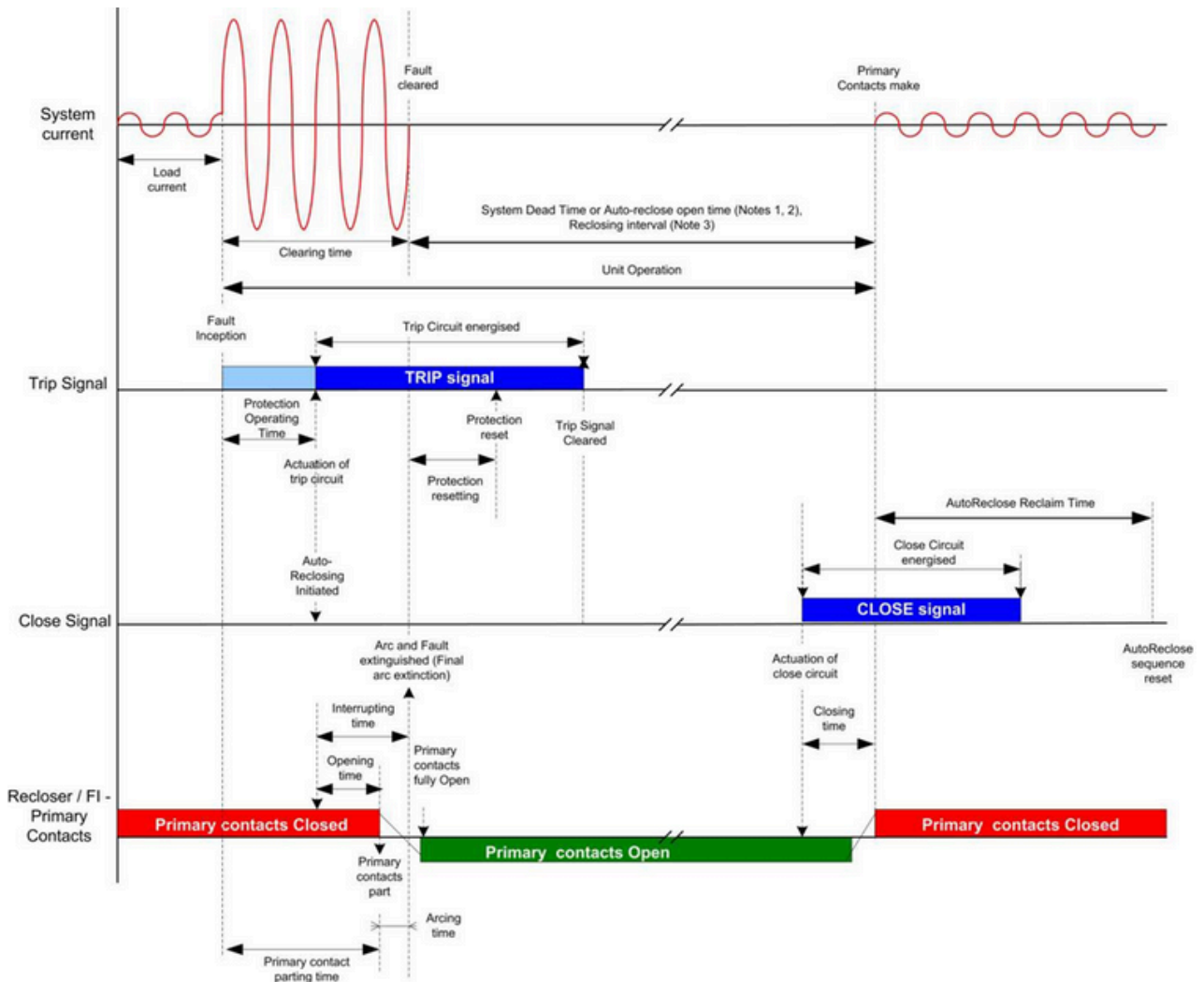


# RECLOSER

## Dimensions



## Functional Diagram



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## Technical Specifications

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Maximum rated voltage	15 kV
Withstand voltage for 1 min at industrial frequency	50 kV
Rated frequency	50 Hz / 60 Hz
Rated current	400 A
Short-time withstand current	12,5 kA
Peak withstand current	25 kA
Short-circuit duration	4 s
Cable Charging Interrupt Current	400 A
Actuation mechanism	Magnetic Actuator
Electric Arc Interruption Method	Vacuum
Basic Insulation Level (BIL)	110 kV
Insulation Level (Dry / Wet heat)	50 kV
Number of operations	10000
Protection degree	IP-54
Weight	35 kg (77,1618 Lbs)

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## Technical Specifications

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Self power supply	127 VAC with internal rectification for 24 VDC (20 to 29 VDC)
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Maximum power consumption	10 W
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CT Input Ratio	333 mV / kA
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Fault clearing time	< 50 ms
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Tank dimensions	660 x 598 x 225 mm
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Temperature	<ul style="list-style-type: none"><li>• Operation: -25°C to 70°C (-13 to 158 °F)</li><li>• Storage: -40°C to 85°C (-40 to 185 °F)</li></ul>
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Records	<ul style="list-style-type: none"><li>• Faults</li><li>• Disturbances</li><li>• SOE (Sequence of events)</li></ul>
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Protection	<ul style="list-style-type: none"><li>• Alarm</li><li>• Trip</li></ul>
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Control	<ul style="list-style-type: none"><li>• Opening</li><li>• Closing</li><li>• Battery test</li></ul>
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LED's	<ul style="list-style-type: none"><li>• 2 programmable</li><li>• Fault indicators</li><li>• Self-check, Pick-up, Trip</li></ul>
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Control board communication	NB-IoT	GPRS/EDGE 850/900/1800/1900 MHz
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Communication protocol	MQTT (native)
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Parameterization	Via Web Browser (IP)
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**Protection Functions (ANSI)**

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50 P	Phase instantaneous overcurrent
51 P	Phase time overcurrent
67 P	Phase directional overcurrent
59	Overvoltage
27	Undervoltage
79	Reclosing
25	Synchronism-Check
81 O U R	Frequency protection (Overfrequency, Underfrequency, Frequency rate of change)
IR	Inrush Restraint function
CLP	Cold Load Pick-up
HLT	Hot Line Tag
LGC	Protection settings group

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## Measurement and Monitoring

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I	Phase current
U	Phase voltage (Source side / Load side)
VDC	Battery voltage
P/Q/S	Power (Active, Reactive, Apparent) (Single-phase)
EP/EQ/ES	Energy (Active, Reactive, Apparent) (Single-phase)
PF	Power Factor (Single-phase)
f	Frequency
PQM1I	Phase Current Harmonic Distortion (THD) (2nd to 11th)
PQM1U	Phase Voltage Harmonic Distortion (THD) (2nd to 11th)
Sincronismo	Amplitude, Frequency
True RMS	Voltages / Currents
Demand	Currents, Voltages, Power, Energy, PF, Frequency, Harmonics
Additional	Power Quality, Load profile, Disturbance records, Graphs

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