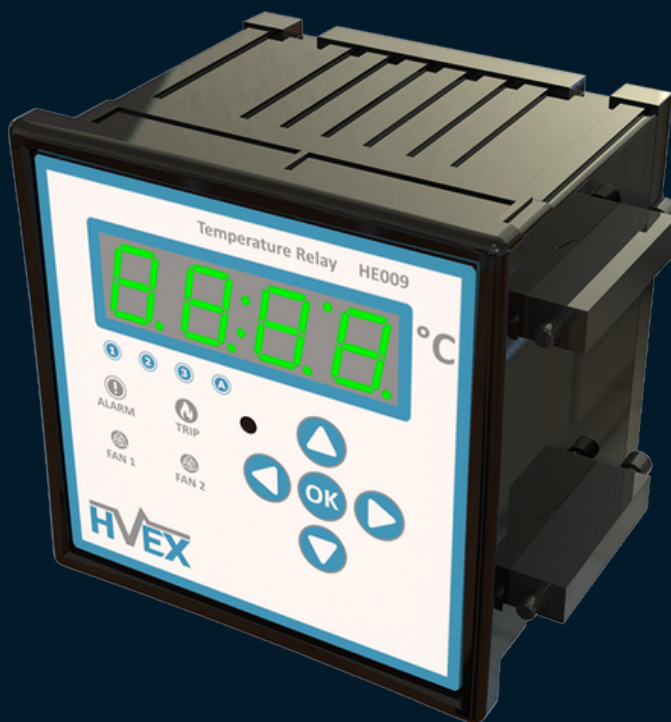


RELAYS

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**THERMAL IMAGING RELAY**



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# THERMAL IMAGING RELAY

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## Description

HVEX Thermal Imaging Relay has up to 8 measurement channels and up to 10 programmable relay output contacts dedicated to monitoring and protecting dry transformers, panels and other applicable electrical equipment.

Each reading channel has configurations of alarm and device trip values. All configurations can be carried out remotely with the communication Modbus TCP/IP, which also allows remote supervision. And a memory card records user-configured events.

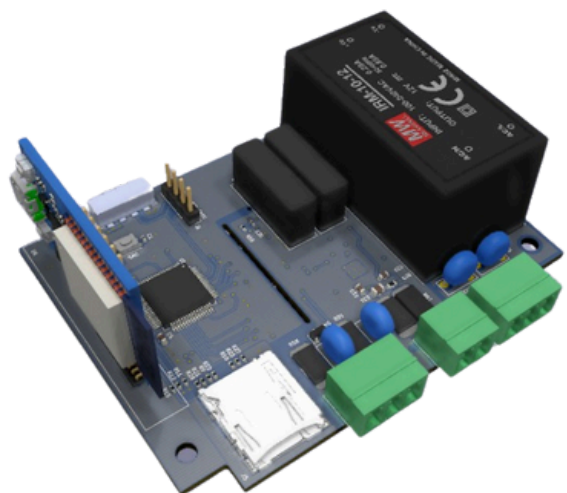
## CPU

Data processing center with isolated source of 70 to 265 VDC or VCA

- Proprietary communication module MODBUS TCP/IP and DNP 3.0.
- Non-volatile memory card with log, programming and measurement history records.
- Bluetooth module communication for parametrization by application.
- Communication board Wi-fi, LTE or NB (optional).

## Benefits

- Suitable for measurement integrated to portable devices.
- Available in different sizes, adaptable to the project.
- Extremely reliable solution for current measuring, can be used in several cases where the traditional current transducer is not suitable, such as high voltage bushings, feed-through terminals and shielded cables.
- It is shielded against the influence of external magnetic fields, therefore ensuring stable measurement for a high range of currents.
- Not damageable by large overloads.
- No increase of the main circuit, that carries the measured current, energy consumption .
- Light enough to be suspended, in most situations, by its own monitoring cable.



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# THERMAL IMAGING RELAY

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## Modular Connection

Choose the boards and make a plug and play connection, or contact our experts team to help you.

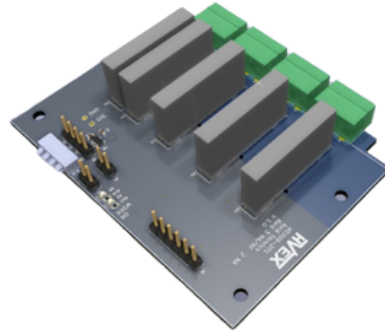
## Interface

- Board and local interface for parametrization and monitoring real time values of measured quantities.



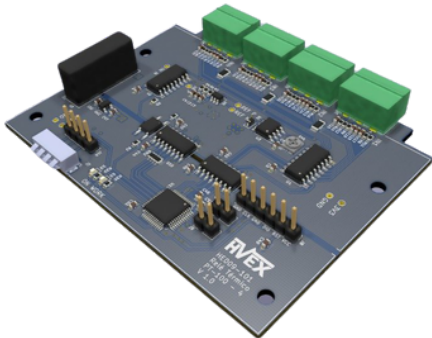
## Relay

- Board for parameterizing protection or activation relays, voltage up to 220 VCA and 5A.



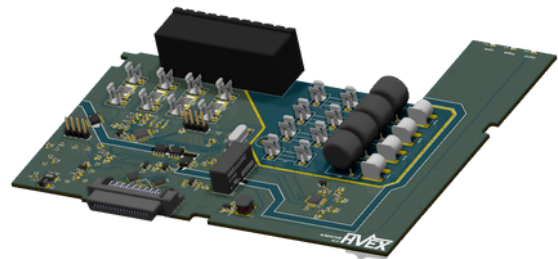
## Measurement

- Measurement of quantities that can be: voltage, current, temperature, among others with standardized outputs from 4 to 24 mA, or from 0 to 10 VDC.



## Acquisition

- Module for measuring electrical quantities, such as current up to 10A and voltage up to 380 VAC. Both with protection and isolation channel.



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## Technical Specifications

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Power Supply	24 VDC / 240 VAC; 45 mA; 50 Hz / 60 Hz
Input	380 VCA or 400 VDC
Output	0 to 10 VDC 0 to 20 mA; 4 to 20 mA
Uncertainty	< 0,2% Voltage; < 0,5% Current
Operating range	5% to 100%
Acquisition ratio	2 kSa/s
Resolution	12 bits
Connection	DIN Rail 35 mm
IP code	IP20
Operating temperature	-10°C to 60°C
Humidity	up to 95% without condensation

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**Modular Connection - Rogowski Sensor**

<b>Model</b>	<b>NRC-100</b>	<b>NRC-150</b>	<b>NRC-200</b>
Coil length	395 mm	525 mm	665 mm
Window size	100 mm	150 mm	200 mm
Rated current reference	1000 A	3000 A	6000 A
Coil resistance	260 $\pm$ 10 $\Omega$	320 $\pm$ 10 $\Omega$	390 $\pm$ 10 $\Omega$
Weight	~140 g	~150 g	~170 g
Current inputs	Calibrated: 85 mV / kA @ 50 Hz 102 mV / kA @ 60 Hz	Calibrated: 85 mV / kA @ 50 Hz 102 mV / kA @ 60 Hz	Calibrated: 50 mV / kA @ 50 Hz 60 mV / kA @ 60 Hz
	Not Calibrated: 110 mV / kA @ 50 Hz 132 mV / kA @ 60 Hz	Not Calibrated: 110 mV / kA @ 50 Hz 132 mV / kA @ 60 Hz	Not Calibrated: 110 mV / kA @ 50 Hz 132 mV / kA @ 60 Hz
Reading accuracy	Calibrated: < 0,5% (centralized @ 25°C) Not calibrated: < 5% (centralized @ 25°C)		
Maximum measurable current	20 kA		
Coil diameter	8 mm		
Cable length	2 meters		
Temperature	Calibrated: 200 ppm / C Not calibrated: 200 ppm / C		
Maximum error	$\pm$ 1%		
Output in 0 A	$\leq$ 0,05 mV		
Phase error	$\leq$ 0,5°		
Linearity	$\pm$ 0,2% of the reading		
Band width	1 Hz to 1000 kHz (-3 dB)		

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## Modular Connection - Rogowski Sensor

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Operating temperature	-30°C to 80°C
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Storage temperature	-40°C to 90°C
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We provide solutions for improvement of electrical energy generation, transmission and distribution efficiency, quality and reliability. With a highly specialized and experienced team in research, development and innovation, HVEX develops suitable solutions for Brazilian and foreign markets. Wide range of products with solutions focused on signal transduction, measurement, monitoring and protection.



Boosting the Innovation



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