



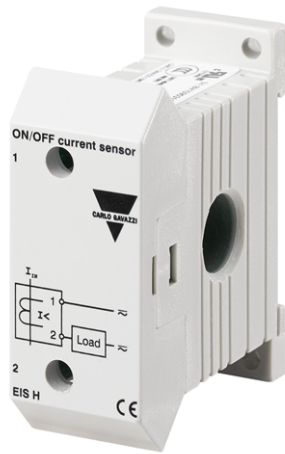
**THE DATASHEET OF  
EISH200MA024**



# EISH



## AC current monitoring relay



### Benefits

- **Low minimum current.** To sense the activity of small loads.
- **No auxiliary power supply needed.**
- **Solid state output.** For easy connection to PLCs or controllers.
- **Small size.** To fit panels without having to redesign them.

### Description

Small size current monitoring relay with built-in current transformer and integrated solid state output.

Self-powered from the input current with 2-wire connection for easy setup.

12 mm hole for insulated current wire to easily insert the metered cable (multiple times if needed).

For mounting on DIN-rail or back panel.

### Applications

EISH is used in several building automation solutions as ON/OFF relay for water circulation pumps, extractor fans and lights.

It allows to provide prompt reaction in case of failure of the load, as pump replacement, backup or other corrective actions.

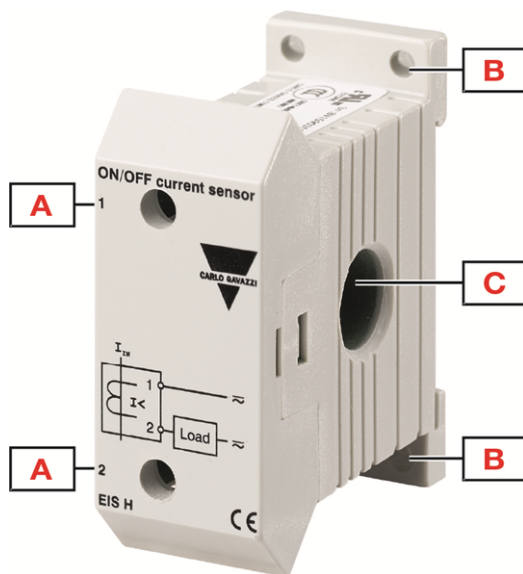
### Main features

- Detection of AC current from 200 mA up to 60 A.
- No setpoint adjustment required.

**Order code**

Mounting	Output capabilities	Current setpoint	Component name/part number
DIN-rail / wall	24 V AC/DC	200 mA	<b>EISH200MA024</b>
	230 V AC/DC	400 mA	<b>EISH400MA230</b>

**Structure**



Element	Component	Function
<b>A</b>	Terminals	Solid state output
<b>B</b>	Wall fixing holes	Wall mounting
<b>C</b>	Hole	For current insulated wire

## Features

### Inputs

<b>Measured variables</b>	Current level
<b>Current measuring</b>	Direct through built-in current transformer
<b>Minimum current</b>	EISH200MA024: 200 mA EISH400MA230: 400 mA
<b>Maximum current (continuous)</b>	60 A
<b>Maximum current for 3 s</b>	360 A
<b>Maximum current for 30 s</b>	180 A
<b>Frequency range</b>	50 to 60 Hz $\pm$ 10% sinusoidal waveform

**Note:** it is possible to measure currents below the nominal range by drawing the conductor through the hole several times. If the conductor is drawn through the central hole e.g. 5 times, the transformer will measure 5 A AC when the current in the conductor is 1 A AC.

### Outputs

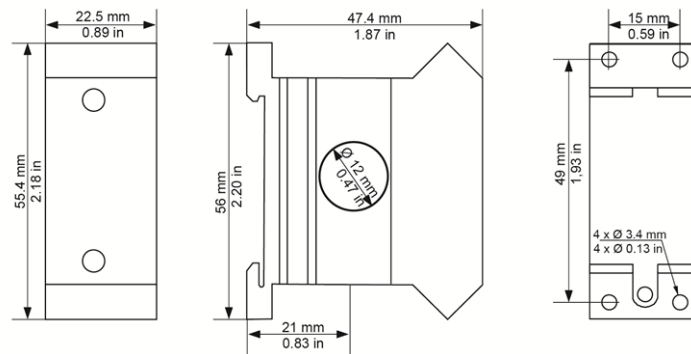
<b>Terminals</b>	1, 2		
<b>Number of outputs</b>	1		
<b>Type</b>	Solid state, NO		
<b>Logic</b>	When input current decreases below the minimum value the output opens, when the input current increases above the minimum value the output closes		
<b>Contact rating</b>		<b>EISH 024</b>	<b>EISH 230</b>
	Current	Max. 1 A	Max. 0.5 A
	Voltage range	0.5 to 30 V AC/DC	2 to 250 V AC/DC
	Leakage current	Max. 100 $\mu$ A	Max. 100 $\mu$ A
	Voltage drop	Max. 0.5 V @ 1 A	Max. 2 V @ 0.5 A
<b>Assignment</b>	Associated to undercurrent alarm		

### Insulation

<b>Terminals</b>	<b>Basic</b>
<b>Current cable to terminals</b>	2.5 kV <sub>rms</sub> , 4 kV impulse 1.2/50 $\mu$ s (required basic insulation of the cable)
<b>Overvoltage category</b>	III (IEC 60664)

## General








<b>Material</b>	Polycarbonate (PC) or Polycarbonate/ABS Alloy (PC+ABS)
	Flammability rating: HB according to UL 94
<b>Colour</b>	RAL7035 (light grey)
<b>Dimensions (W x H x D)</b>	22.5 x 55.4 x 47.4 mm (0.89 x 2.18 x 1.87 in)
<b>Weight</b>	Approx. 70 g (2.47 oz)
<b>Terminals</b>	Cable size from 0.82 to 1.30 mm <sup>2</sup> (AWG18 to AWG16), stranded or solid
<b>Tightening torque</b>	Max. 0.5 Nm (4.425 lbin)
<b>Terminal type</b>	Screw terminals



## Environmental

<b>Operating temperature</b>	-20 to 50 °C (-4 to 122 °F)
<b>Storage temperature</b>	-30 to 70 °C (-22 to 158 °F)
<b>Relative humidity</b>	5 - 95% non condensing
<b>Protection degree</b>	IP20
<b>Pollution degree</b>	2
<b>Operating max altitude</b>	2000 m amsl (6560 ft)
<b>Salinity</b>	Non saline environment
<b>UV resistance</b>	No

**Compatibility and conformity**

<b>Marking</b>	  
<b>Directives</b>	2014/35/EU (LVD - Low voltage) 2014/30/EU (EMC - Electromagnetic compatibility) 2011/65/EU, 2015/863/EU (RoHS)
<b>Standards</b>	EN 60947-5-1 Immunity: EN 61000-6-2 Emission: EN 61000-6-3 EN 63000
<b>Approvals</b>	   

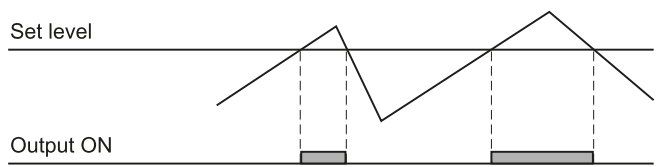
**Operating description**

**Alarms**

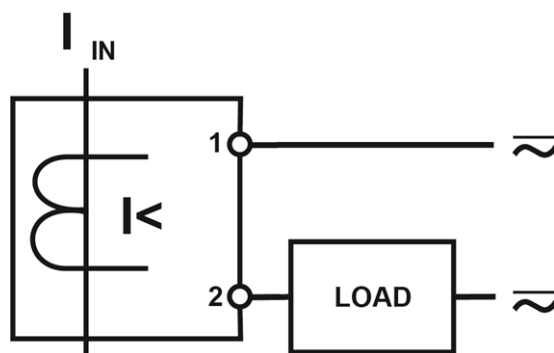
EISH alarm trips when the current drops below 200 mA (for EISH200MA024) or below 400 mA (for EISH400MA230).

Current level alarm	
<b>Input variables</b>	Up to 60 A AC
<b>Reaction time</b>	<b>EISH200MA024:</b> <250 ms from 200 to 0 mA <b>EISH400MA230:</b> <250 ms from 400 to 0 mA
<b>Logic</b>	<b>EISH200MA024:</b> closed state $\geq$ 200 mA; open state $\leq$ 40 mA <b>EISH400MA230:</b> closed state $\geq$ 400 mA; open state $\leq$ 80 mA <i>NOTE: between "closed state" and "open state" the output status is not defined.</i>

**Operating diagram**





## Connection diagram



## References

### Further reading

Information	Where to find it	QR code
Installation manual	<a href="https://www.gavazziautomation.com/images/PIM/MANUALS/ENG/EISH_IM.pdf">https://www.gavazziautomation.com/images/PIM/MANUALS/ENG/EISH_IM.pdf</a>	
PSS selection tool	<a href="https://carlogavazzi-pss.com/">https://carlogavazzi-pss.com/</a>	





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