

# E83-2050

## AC current transducer



### Benefits

- **7 selectable input ranges.**
- **LED indication for power supply.**
- **Analogue output.** For easy interface to PLC.
- **Small size.** To fit panels without having to redesign them.

### Description

E83-2050 is a small size AC current transducer with built-in current transformer and 4-20 mADC analogue output.

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.

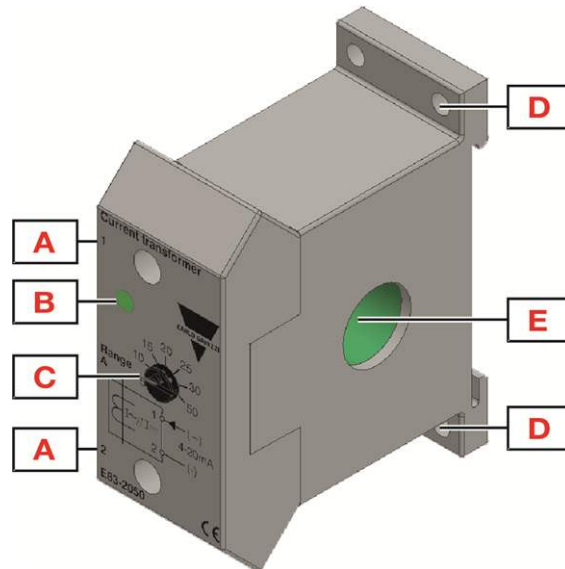
### Applications

E83-2050 is used in a wide range of applications for HVAC, smart building, machine tools and material handling markets, where a dedicated supervisory control unit manages the system. It allows to transmit motor current for PLC analysis.

### Main features

- Input range up to 50 A.
- 4-20 mADC output.
- Powered by loop voltage.

## Structure

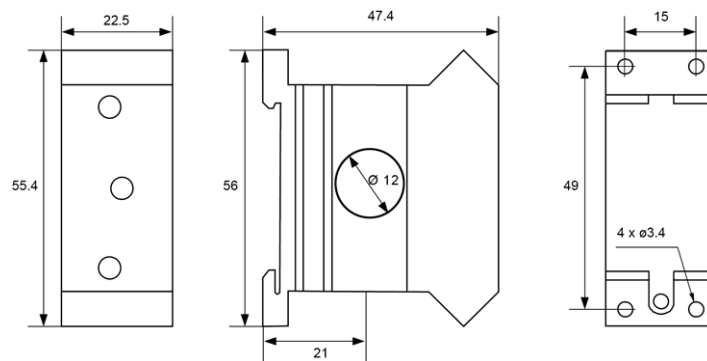


Element	Component	Function
A	Terminals	Analogue output: 1, 2
B	Information LED	Green for device ON
C	Front dial	Input range selection
D	Wall fixing holes	Wall mounting
E	Hole	For current insulated wire

## Features

### General




<b>Material</b>	Polycarbonate or Polycarbonate/ABS Alloy (UL94HB)
<b>Colour</b>	RAL7035 (light grey)
<b>Dimensions (W x H x D)</b>	22.5mm x 55.4mm x 47.4mm
<b>Protection degree</b>	IP20
<b>Weight</b>	70 g
<b>Terminals</b>	Cable size from 1 mm <sup>2</sup> to 1.5 mm <sup>2</sup> (AWG18 to AWG16), stranded or solid
<b>Tightening torque</b>	Max. 0.5 Nm (4.425 lb.in)
<b>Terminal type</b>	Screw terminals



### Environmental

<b>Operating temperature</b>	-20°C to 50°C (-4°F to 122°F)
<b>Storage temperature</b>	-30°C to 70°C (-22°F to 158°F)
<b>Relative humidity</b>	5-95% non condensing
<b>Pollution degree</b>	3
<b>Operating max altitude</b>	2000 m amsl (6560ft)
<b>Salinity</b>	Non saline environment
<b>UV resistance</b>	No

## Compatibility and conformity

CE-marking	 Complies to the European LV directive 2014/35/EU (insulation coordination according to EN 60664-1) and EMC directive 2014/30/EU (immunity according to EN61000-6-2, emissions according to EN61000-6-3)
Approvals	
Standards	 EN 50581

## Inputs

Current ranges	0-5 A 0-10 A 0-15 A 0-20 A 0-25 A 0-30 A 0-50 A
Current measuring	Direct through built-in current transformer
Maximum current (continuous)	100 A
Maximum overload current (t=30s)	300 A
Overvoltage category	III (IEC 60664)
Frequency range	40 Hz - 1 kHz

**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 AAC when the current in the conductor is 1 AAC.

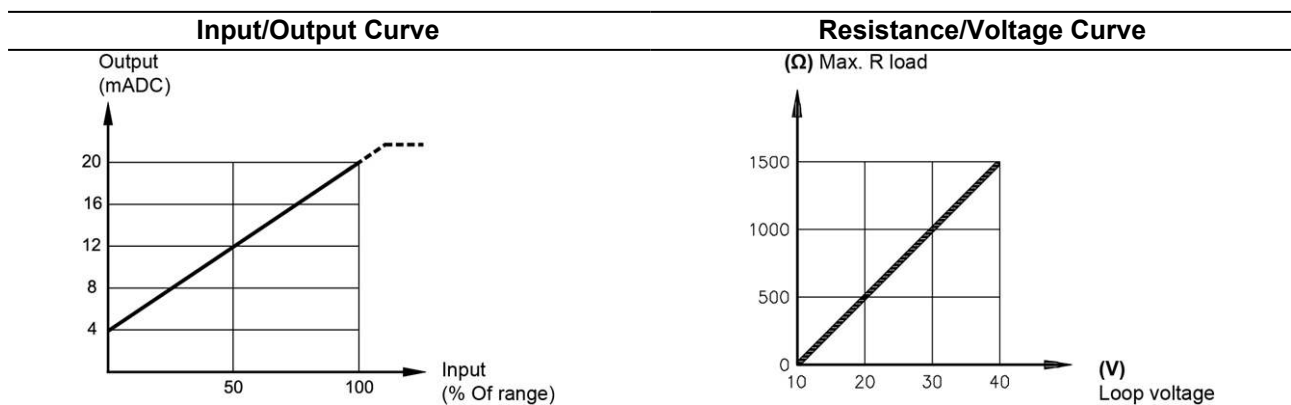
## Outputs

Output current (sink)	4-20 mADC
Maximum output current	30 mADC
Tolerance of output current	± 2% @ 50 Hz
Temperature variation	± 400 ppm/°C
Frequency variation	10 ppm/Hz
Power supply (loop voltage)	10-40 VDC

## Operating description

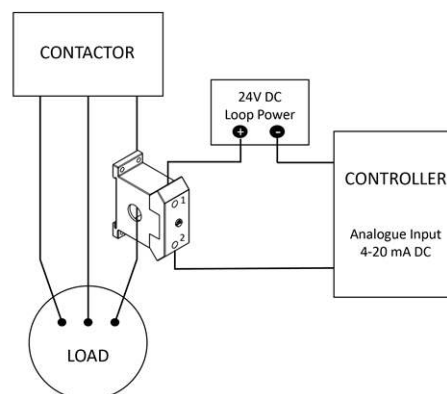
### Device configuration

The standardized 4-20 mADC output makes E83-2050 very useful as an AC current interface to a PLC with 4-20 mADC input. Used with relays DIB01, PIB01, DIC01 or PIC01, one or more setpoints can monitor the current and signal alarm. In the 5 A range the E83-2050 is often used as a 4-20 mADC signal converter for larger standard AC current transformers with 5 AAC secondary output.



**Fig. 1** Max. load resistance versus loop voltage

## Connection diagram





## References

 Order code

 E83-2050



COPYRIGHT ©2022

Content subject to change. Download the PDF: [www.productselection.net](http://www.productselection.net)