

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.

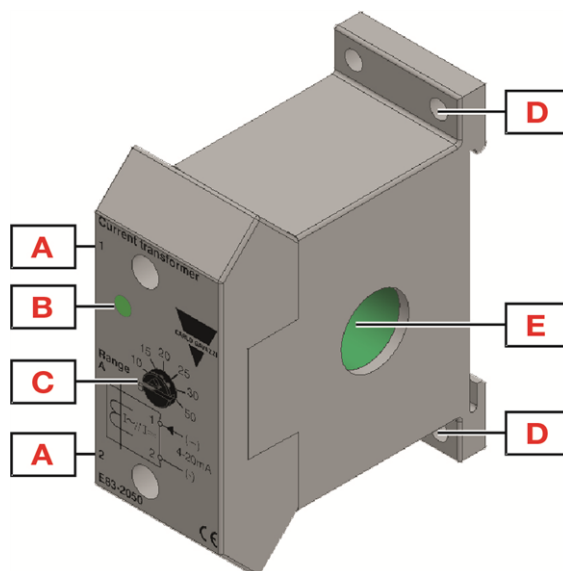
Applications

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

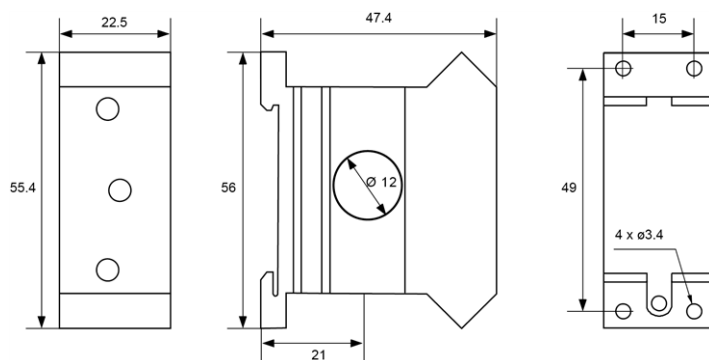


Element	Component	Function
A	Terminals	Analogue output: 1, 2
B	Information LED	Green for device ON
C	Front dial	Input range selection
D	Wall fixing holes	Wall mounting
E	Hole	For current insulated wire

Features

General

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



Environmental

Operating temperature	-20°C to 50°C (-4°F to 122°F)
Storage temperature	-30°C to 70°C (-22°F to 158°F)
Relative humidity	5-95% non condensing
Pollution degree	3
Operating max altitude	2000 m amsl (6560ft)
Salinity	Non saline environment
UV resistance	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 COMPLIANT

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.

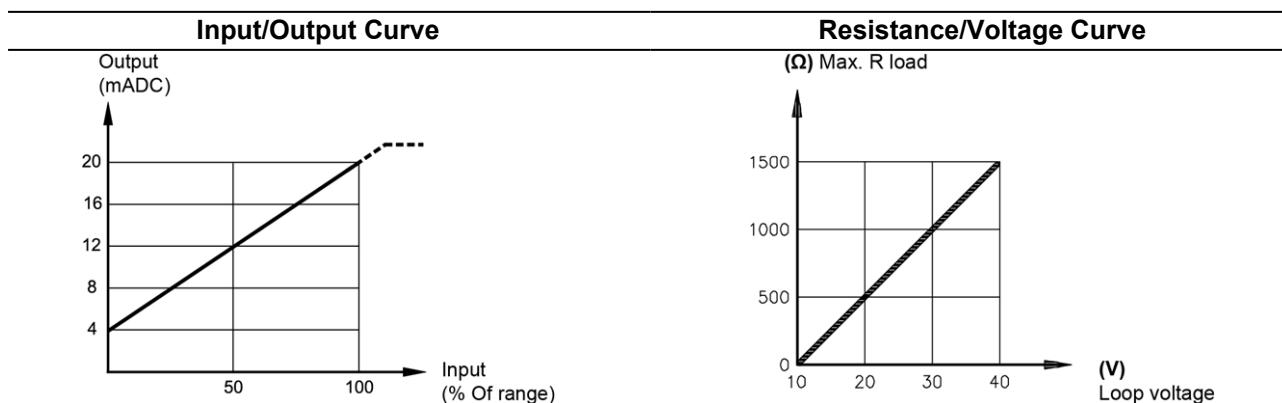
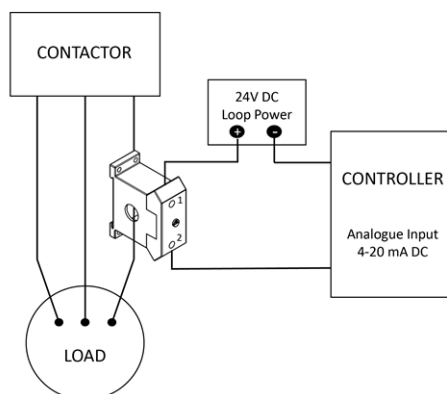


Fig. 1 Max. load resistance versus loop voltage

Connection diagram





References

Order code

 E83-2050



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