Monitoring Relays
AC Current Transformer
Type E 83-20-50



- **7 input ranges in one unit: 0 - 5 AAC**
  0 - 10 AAC
  0 - 15 AAC
  0 - 20 AAC
  0 - 25 AAC
  0 - 30 AAC
  0 - 50 AAC
- **Output 4-20 mADC**
- **Easy interface to PLC or setpoint relays**
- **For mounting on DIN-rail in accordance with DIN/EN 50 022**
- **22.5 mm small Euronorm housing**

Product Description

Small AC current metering transformer with 7 knob selectable ranges. Output from the transformer is 4-20 mADC in accordance with IEC 60381-1. Can be used with relays DIB01, PIB01, DIC01 or PIC01 or directly connected to a PLC.

Power supply ON is indicated by a green LED.
12 mm hole for isolated current carrying wire makes it suitable for most applications. For mounting on DIN-rail or directly on surface by screws.

Ordering Key

E 83-20 50

Type
Output
Input current (highest range)

Type Selection

Input current	Output current	Switch position	Type no.
0- 5 AAC	4 - 20 mA	5	**E83-20 50**
0-10 AAC	4 - 20 mA	10	**E83-20 50**
0-15 AAC	4 - 20 mA	15	**E83-20 50**
0-20 AAC	4 - 20 mA	20	**E83-20 50**
0-25 AAC	4 - 20 mA	25	**E83-20 50**
0-30 AAC	4 - 20 mA	30	**E83-20 50**
0-50 AAC	4 - 20 mA	50	**E83-20 50**

Input Specifications

Current range	0 - 5 AAC	0 - 10 AAC	0 - 15 AAC	0 - 20 AAC
Max. current (continuously)	100 AAC	100 AAC	100 AAC	100 AAC
Max. overload current (t = 30 s)	300 AAC	300 AAC	300 AAC	300 AAC
Overvoltage category	III (IEC 60664)	III (IEC 60664)	III (IEC 60664)	III (IEC 60664)
Frequency range	40 Hz - 1 kHz	40 Hz - 1 kHz	40 Hz - 1 kHz	40 Hz - 1 kHz

Current range	0 - 25 AAC	0 - 30 AAC	0 - 50 AAC
Max. current (continuously)	100 AAC	100 AAC	100 AAC
Max. overload current (t = 30 s)	300 AAC	300 AAC	300 AAC
Overvoltage category	III (IEC 60664)	III (IEC 60664)	III (IEC 60664)
Frequency range	40 Hz - 1 kHz	40 Hz - 1 kHz	40 Hz - 1 kHz

CARLO GAVAZZI

Output Specifications

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

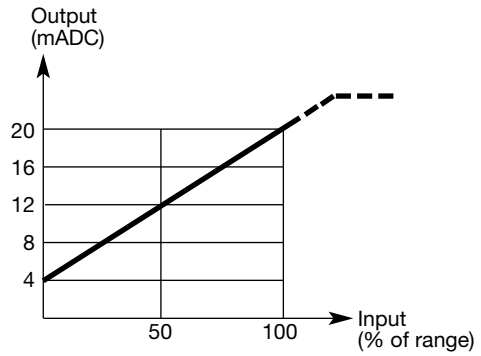
General Specifications

Power ON delay	< 2 s
Reaction time	T < 200 ms
Indication for Power supply ON	LED, green
Environment	
Degree of protection	IP 20
Pollution degree	3
Operating temperature	-20° to +50°C (-4° to +122°F)
Housing	
Dimensions	22.5 x 56 x 49 mm
Material	ABS
Weight	70 g
Approval	UL
CE Marking	Yes
EMC	Electromagnetic Compatibility
Immunity	According to EN 61000-6-1 (tolerance of output current: ± 2%) According to EN 61000-6-2 (tolerance of output current: ± 5%)
Emission	According to EN 61000-6-3

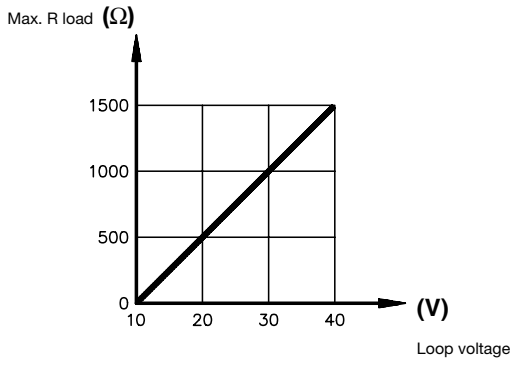
Mode of Operation

The E 83-20 is a small AC current metering transformer with standardized 4-20 mADC output. This makes it 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 E 83-20 is often used as a 4-20 mADC signal converter for larger standard AC current transformers with 5 AAC secondary output.
The metered conductor is drawn through the central hole of the current metering transformer. 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 register 5 AAC when the current in the conductor is 1 AAC.

Input/Output Curve



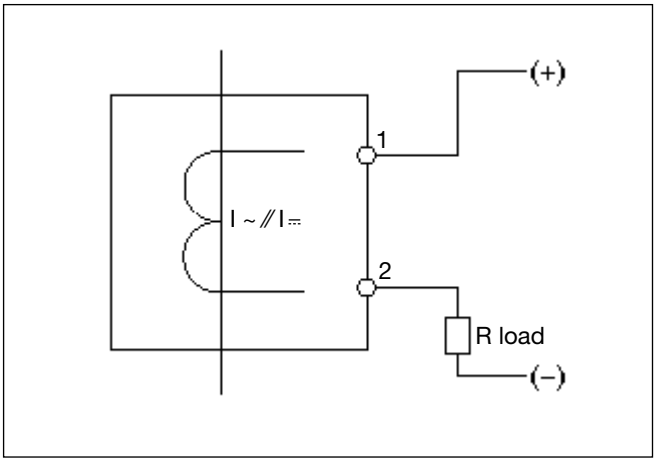
Resistance/Voltage Curve



Max. load resistance versus loop voltage

CARLO GAVAZZI

Wiring Diagram



Dimensions

