

Monitoring Relays AC Current Transformer Type E 82-20

CARLO GAVAZZI



- 3 input ranges in one unit: 0 - 5 AAC
0 - 10 AAC
0 - 25 AAC
or
0 - 20 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 3 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, PIC01 or S183 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 82-20 50

Type _____
Output _____
Input current (highest range) _____

Type Selection

| Input current | Output current | Switch position | Type no. |
|---------------|----------------|-----------------|------------------|
| 0- 5 AAC | 4 - 20 mA | 5 | E82-20 25 |
| 0-10 AAC | 4 - 20 mA | 10 | E82-20 25 |
| 0-25 AAC | 4 - 20 mA | 25 | E82-20 25 |
| 0-20 AAC | 4 - 20 mA | 20 | E82-20 50 |
| 0-30 AAC | 4 - 20 mA | 30 | E82-20 50 |
| 0-50 AAC | 4 - 20 mA | 50 | E82-20 50 |

Input Specifications

| Current range | 0 - 5 AAC | 0 - 10 AAC | 0 - 20 AAC | 0 - 25 AAC | 0 - 30 AAC | 0 - 50 AAC |
|---|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Max. current (continuously) | 50 AAC | 50 AAC | 100 AAC | 50 AAC | 100 AAC | 100 AAC |
| Max. overload current (t = 30 s) | 150 AAC | 150 AAC | 300 AAC | 150 AAC | 300 AAC | 300 AAC |
| Overvoltage category | III (IEC 60664) | III (IEC 60664) | 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 | 40 Hz - 1 kHz | 40 Hz - 1 kHz |

Output Specifications

| | |
|---|--------------|
| Output current (sink) | 4-20 mADC |
| Maximum output current | 35 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 | < 1 s |
| Reaction time | $\tau < 100$ ms worst case reaction time may be up to $5 \times \tau$ |
| Indication for Power supply ON | LED, green |

General Specifications (cont.)

| | |
|-----------------------|---|
| 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 | |
| Immunity | Electromagnetic Compatibility Acc. to EN 61000-6-1 (tolerance of output current: ± 2%) Acc. to EN 61000-6-2 (tolerance of output current: ± 5%) |
| Emission | Acc. to EN 61000-6-3 |

Mode of Operation

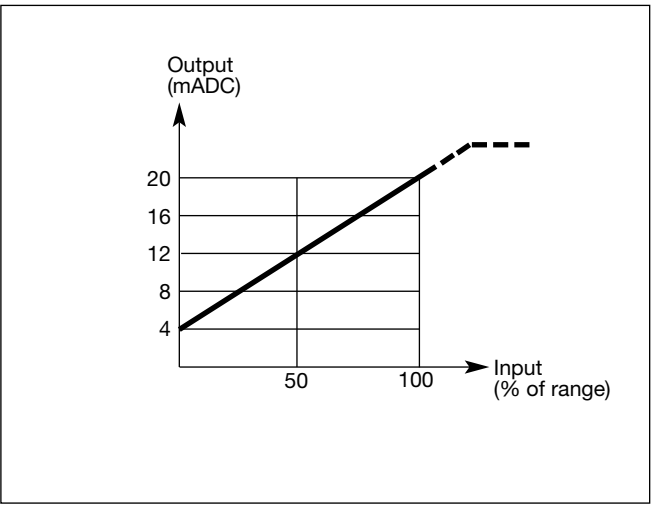
The E 82-20 is a small AC current metering transformer with standardized 4-20 mADC output. This makes it very useful as an AC current interface to a PLC with 4-20 mADC input. Used with relays DIB01, PIB01, DIC01, PIC01 or

S 183, one or more set-points can monitor the current and signal alarm. S 183 also provides the DC voltage supply for the E 82-20. In the 5 A range the E 82-20 is often used as a 4-20 mADC signal converter for

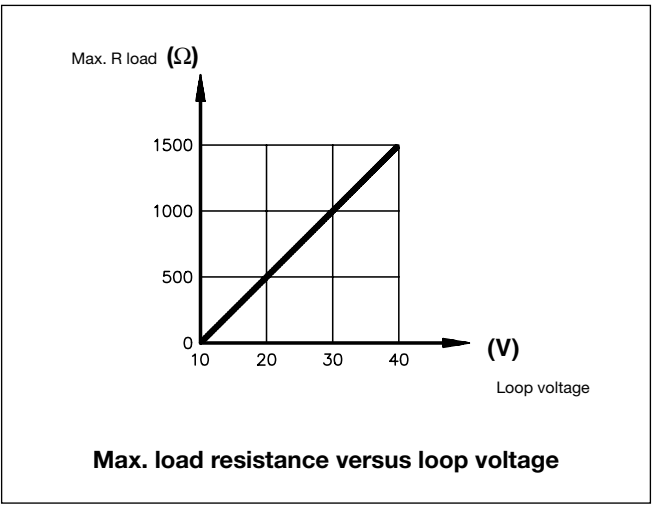
larger standard AC current transformers with 5 AAC secondary output. The metered conductor is drawn through the central hole of the current metering transformer. It is possible to measure currents below the

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.

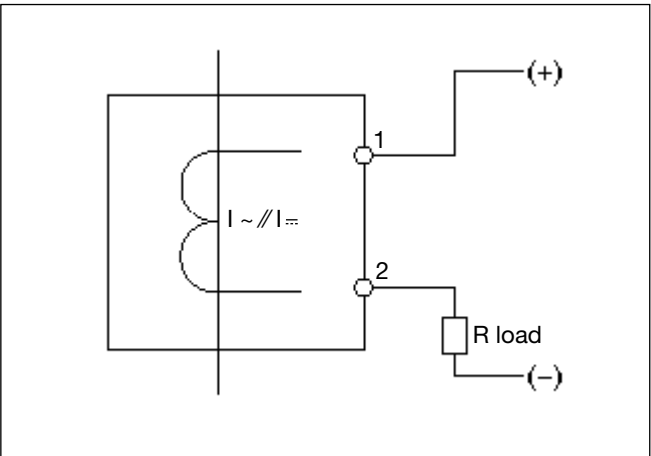
Input/Output Curve



Resistance/Voltage Curve



Wiring Diagram



Dimensions

