

Monitoring Relays AC Current Transformer Type E 82-20

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- 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.

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

Ordering Key

E 82-20 50

Type _____
Output _____
Input current (highest range) _____

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.

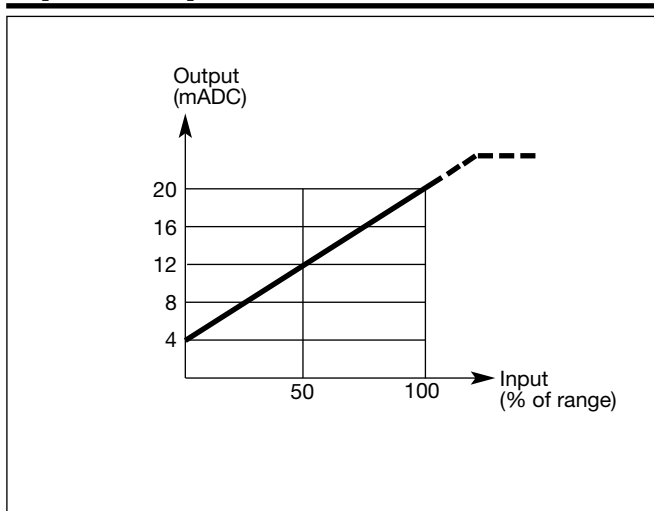
In the 5 A range the E 82-20 is often used as a 4-20 mADC signal converter for

larger standard AC current transformers with 5 AAC secondary output.

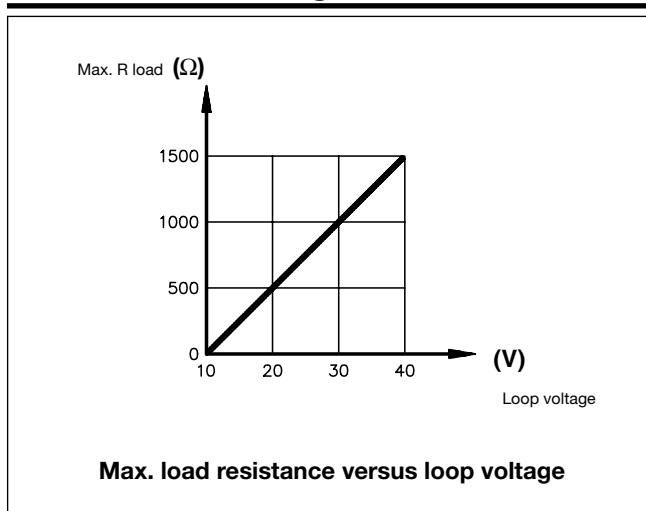
The metered conductor is drawn through the central hole of the current metering transformer. It is possible to measure currents below the

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.

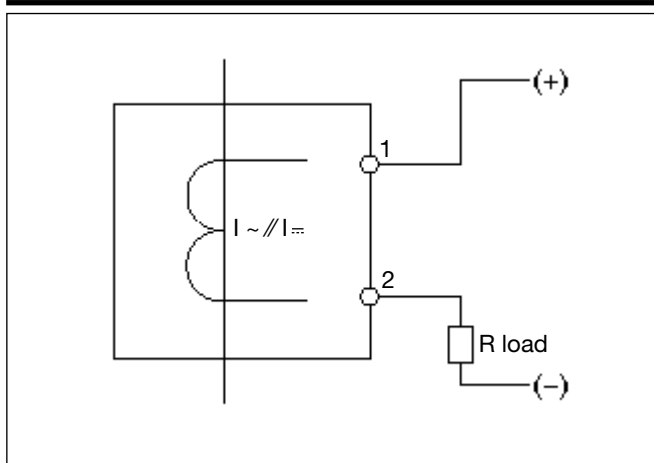
Input/Output Curve



Resistance/Voltage Curve



Wiring Diagram



Dimensions

