

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

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- 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



## Output Specifications

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

## General Specifications

<b>Power ON delay</b>	< 2 s
<b>Reaction time</b>	T < 200 ms
<b>Indication for Power supply ON</b>	LED, green
<b>Environment</b>	
Degree of protection	IP 20
Pollution degree	3
Operating temperature	-20° to +50°C (-4° to +122°F)
<b>Housing</b>	
Dimensions	22.5 x 56 x 49 mm
Material	ABS
<b>Weight</b>	70 g
<b>Approval</b>	UL
<b>CE Marking</b>	Yes
<b>EMC</b>	
Immunity	Electromagnetic Compatibility 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

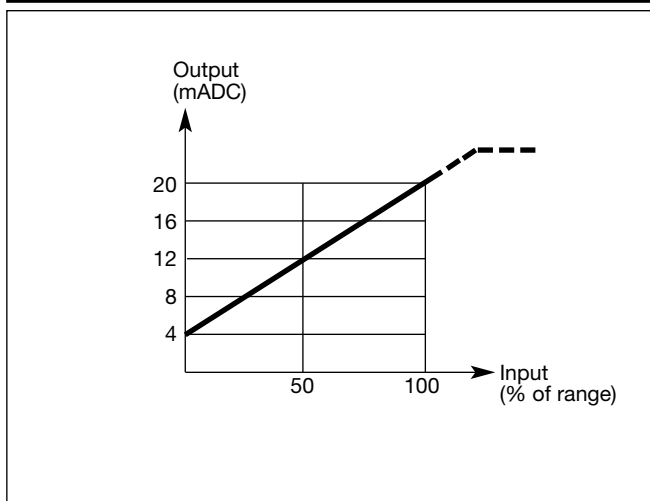
The E 83-20 is a small AC current metering transformer with standardized 4-20 mADC output. This makes it very useful as an AC current interface to a PLC with 4-20 mADC input. Used with relays DIB01, PIB01, DIC01 or PIC01, one

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

