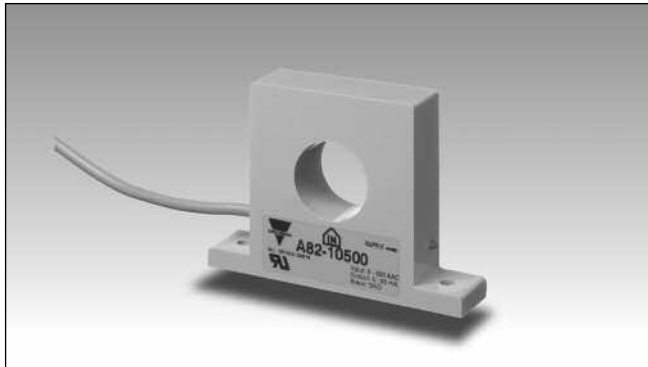


# Monitoring Relays AC Current Transformer Types A 82-10, A 82-20

CARLO GAVAZZI



- 5 types of input: 0 - 25 AAC  
0 - 50 AAC  
0 - 100 AAC  
0 - 250 AAC  
0 - 500 AAC
- Output: A 82-10: 0 - 20 mADC (source)  
A 82-20: 4 - 20 mADC (sink)
- Easy interface to PLC or setpoint relays

## Product Description

AC current metering transformer for 25, 50, 100, 250 or 500 AAC. Output current from the transformer is 0-20 mADC or 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 on the side of the housing.

## Ordering Key

**A 82-10 50**

Type \_\_\_\_\_  
Output \_\_\_\_\_  
Input current \_\_\_\_\_

## Type Selection

Input current	Output current	Type no.
25 AAC	0 - 20 mA	<b>A 82-10 25</b>
50 AAC	0 - 20 mA	<b>A 82-10 50</b>
100 AAC	0 - 20 mA	<b>A 82-10 100</b>
250 AAC	0 - 20 mA	<b>A 82-10 250</b>
500 AAC	0 - 20 mA	<b>A 82-10 500</b>
25 AAC	4 - 20 mA	<b>A 82-20 25</b>
50 AAC	4 - 20 mA	<b>A 82-20 50</b>
100 AAC	4 - 20 mA	<b>A 82-20 100</b>
250 AAC	4 - 20 mA	<b>A 82-20 250</b>
500 AAC	4 - 20 mA	<b>A 82-20 500</b>

## Input Specifications

	A 82-10/20 25	A 82-10/20 50	A 82-10/20 100	A 82-10/20 250	A 82-10/20 500
<b>Current range</b>	0 - 25 AAC	0 - 50 AAC	0 - 100 AAC	0 - 250 AAC	0 - 500 AAC
<b>Max. current</b> (continuously)	30 AAC	60 AAC	120 AAC	300 AAC	600 AAC
<b>Max. overload current</b> (t = 30 s)	250 AAC	300 AAC	700 AAC	1500 AAC	3000 AAC
<b>Rated insulation voltage</b> Input - output	1000 VAC <sub>rms</sub>	1000 VAC <sub>rms</sub>	1000 VAC <sub>rms</sub>	1000 VAC <sub>rms</sub>	1000 VAC <sub>rms</sub>
<b>Overvoltage category</b>	IV (IEC 60664)	IV (IEC 60664)	IV (IEC 60664)	IV (IEC 60664)	IV (IEC 60664)
<b>Dielectric strength</b> Dielectric voltage Rated impulse withstand volt.	6 kVAC <sub>rms</sub> 12 kV (1.2/50 μs)	6 kVAC <sub>rms</sub> 12 kV (1.2/50 μs)	6 kVAC <sub>rms</sub> 12 kV (1.2/50 μs)	6 kVAC <sub>rms</sub> 12 kV (1.2/50 μs)	6 kVAC <sub>rms</sub> 12 kV (1.2/50 μs)



## Output Specifications

<b>Rated insulation voltage (cable)</b>	250 VAC <sub>rms</sub>
<b>Output current</b>	10: 0 - 20 mADC 20: 4 - 20 mADC
<b>Power supply (loop voltage)</b>	10 - 40 VDC
<b>Tolerance of output current @ 50 Hz</b>	A 82-10 ±2% ±0.08 mA A 82-20 ± 2%
<b>Temperature variation</b>	±400 ppm/°C
<b>Frequency range</b>	40 Hz -1 kHz
<b>Frequency variation</b>	10 ppm/Hz
<b>Maximum output current</b>	35 mADC

## General Specifications

<b>Power ON delay</b>	< 1 s
<b>Reaction time</b>	τ < 100 ms worst case reaction time may be up to 5 x τ
<b>Indication for Power supply ON</b>	LED, green
<b>Environment</b>	Degree of protection IP 20 Pollution degree 3 (IEC 60664) Operating temperature -20° to 50°C (-4° to +122 °F)
<b>Housing</b>	Dimensions 95 x 67.5 x 20 mm Material ABS
<b>Weight</b>	A 82-10 300 g A 82-20 270 g
<b>Connection cable</b>	A 82-10 2 m, 3 x 0.25 mm <sup>2</sup> A 82-20 2 m, 2 x 0.25 mm <sup>2</sup>
<b>Approval</b>	UL
<b>CE marking</b>	Yes
<b>EMC</b>	Electromagnetic Compatibility
Immunity	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

A 82-10, A 82-20 are current metering transformers with standard source/sink output 0 - 20 mA/4 - 20 mA. This makes it very useful as an AC current interface to a PLC with mADC input. Used with relays DIB01, PIB01, DIC01, PIC01 or

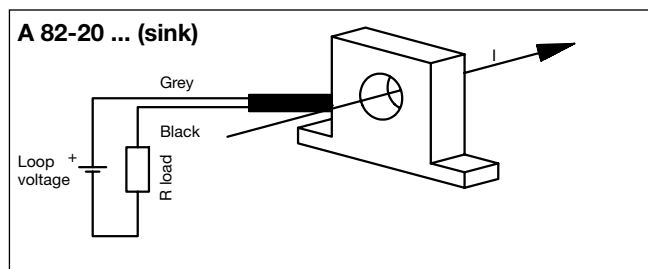
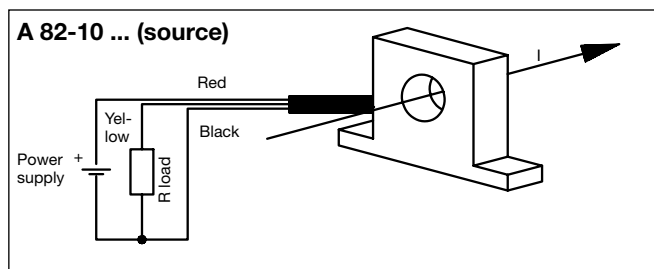
S183 one or more setpoints can monitor the current and signal alarm. S 183 also provides the DC voltage supply for the A 82-10, A 82-20. The metered conductor is drawn through the central hole of the current metering transformer. It is possible to

meter 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 50 A when the current in the conductor is 10 A.

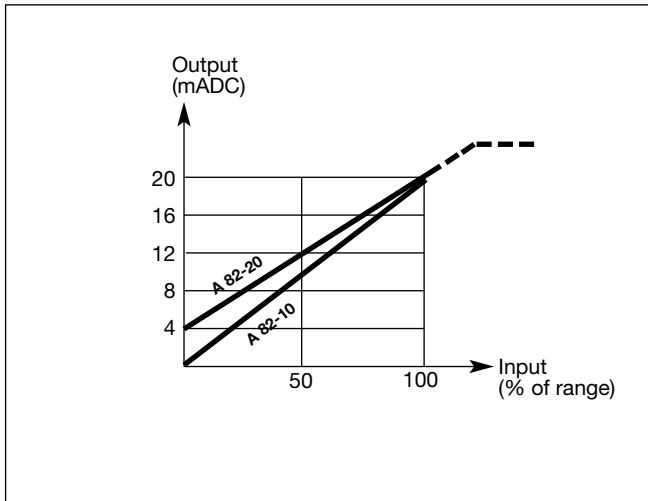
A 82-10 has factory-set gain (span) adjustment, whereas A 82-20 has zero as well as gain (span) adjustment, both factory-set.

**Note:** Do not change the set values.

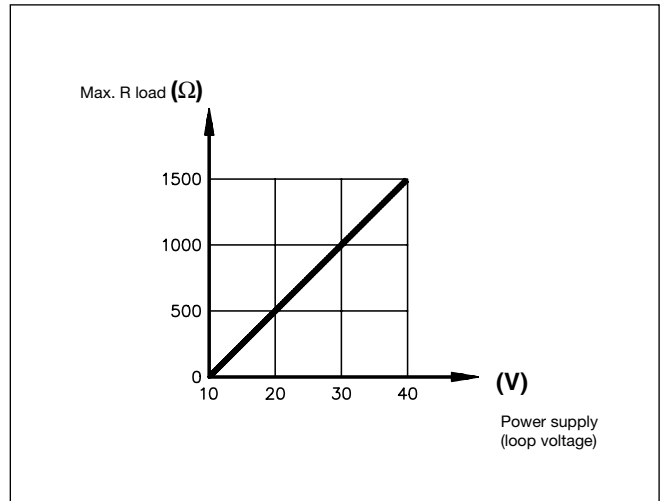
## Wiring Diagrams



### Input/Output Curve



### Resistance/Voltage Curve



Max. load resistance versus Power supply (loop voltage)

### Dimensions

