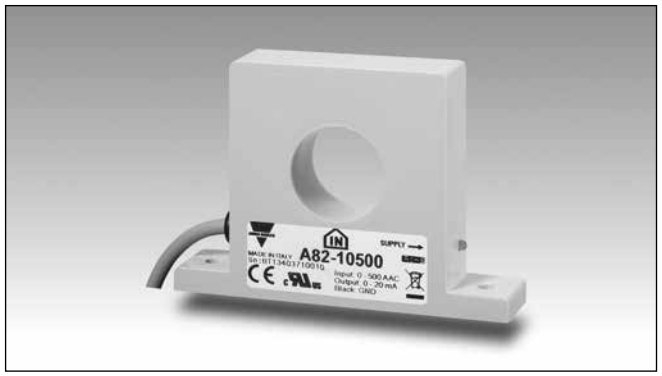
Monitoring Relays
True RMS AC Current Transformer
Types A 82-10, A 82-20, A 82-30



- **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)
  A 82-30: 0 - 10 VDC
- **Easy interface to PLC or setpoint relays**

Product Description

True RMS AC current metering transformer for 25, 50, 100, 250 or 500 AAC. Output current in accordance with IEC 60381-1 (A 82-10, A 82-20) or output voltage in accordance with IEC 60381-2 (A 82-30).
A 82-10 and A 82-20 can be used with relays DIB01, PIB01, DIC01 or PIC01.
A 82-30 can be used with DUB01, PUB01, DUB71, DUC01 or PUC01.
All units can be 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	Type no.
25 AAC	0 - 20 mA	**A 82-10 25**
50 AAC	0 - 20 mA	**A 82-10 50**
100 AAC	0 - 20 mA	**A 82-10 100**
250 AAC	0 - 20 mA	**A 82-10 250**
500 AAC	0 - 20 mA	**A 82-10 500**
25 AAC	4 - 20 mA	**A 82-20 25**
50 AAC	4 - 20 mA	**A 82-20 50**
100 AAC	4 - 20 mA	**A 82-20 100**
250 AAC	4 - 20 mA	**A 82-20 250**
500 AAC	4 - 20 mA	**A 82-20 500**
25 AAC	0 - 10 V	**A 82-30 25**
50 AAC	0 - 10 V	**A 82-30 50**
100 AAC	0 - 10 V	**A 82-30 100**
250 AAC	0 - 10 V	**A 82-30 250**
500 AAC	0 - 10 V	**A 82-30 500**

Input Specifications

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

CARLO GAVAZZI

Output Specifications

Rated insulation voltage (cable)	250 VAC_{rms}
Output	
A 82-10	0 - 20 mADC
A 82-20	4 - 20 mADC
A 82-30	0 - 10 VDC
Power supply (loop voltage)	
A 82-10, A 82-20	10 - 40 VDC
A 82-30	18 - 40 VDC
Tolerance of output current	
@ 50 Hz A 82-10	±2% on full scale
A 82-20	± 2% on full scale
Tolerance of output voltage	
@ 50 Hz A 82-30	±2% on full scale
Temperature variation	±400 ppm/°C
Frequency range	40 Hz -1 kHz
Frequency variation	10 ppm/Hz
Maximum output current	
A 82-10, A 82-20	30 mADC
Maximum output voltage	
A 82-30	15 VDC
Minimum output load	
A 82-30	10 kΩ

General Specifications

Power ON delay	< 2 s
Reaction time	T < 200 ms
Indication for	
Power supply ON	LED, green
Environment	
Degree of protection	IP 40
Pollution degree	3 (IEC 60664)
Operating temperature	-20° to 50°C (-4° to +122 °F)
Relative humidity	5 - 95% non condensing
Housing	
Dimensions	95 x 67.5 x 20 mm
Material	PC/ABS
Flammability rating	HB according to UL 94
Weight	
A 82-10, A 82-30	300 g
A 82-20	270 g
Connection cable	
A 82-10, A 82-30	2 m, 3 x 0.25 mm^2
A 82-20	2 m, 2 x 0.25 mm^2
Approval	cURus
CE marking	Yes
EMC	Electromagnetic Compatibility
Immunity	According to EN 61000-6-1 (tolerance of output current/voltage: ± 2%) According to EN 61000-6-2 (tolerance of output current/voltage: ± 5%)
Emission	According to EN 61000-6-3

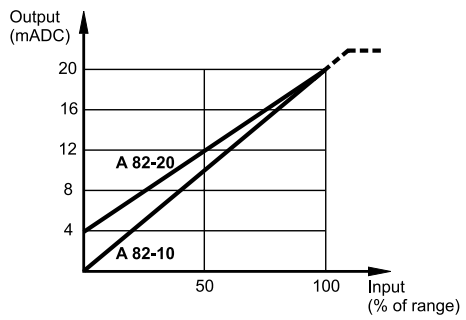
Mode of Operation

A 82-10 and A 82-20 are true RMS current metering transformers with standard source/sink output 0-20 mA / 4-20 mA, whereas A 82-30 is a metering tranformer with 0-10 VDC output voltage. This makes them very useful as an AC current interface to a PLC with mADC or VDC input. Used with relays DIB01, PIB01, DIC01, PIC01 (A 82-10, A 82-20) or DUB01, PUB01, DUB71, DUC01, PUC01 (A 82-30), one or more setpoints can monitor the current and signal alarm.

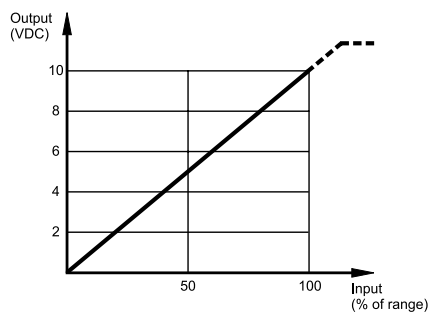
The metered conductor is drawn through the central hole of the current metering transformer. It is possible to meter currents below the nominal range by drawing the conductor through the hole several times. If the conductor is drawn through the central hole e.g. 5 times, the transformer will register 50 A when the current in the conductor is 10 A.

Input/Output Curve

A 82-10 ... , A 82-20

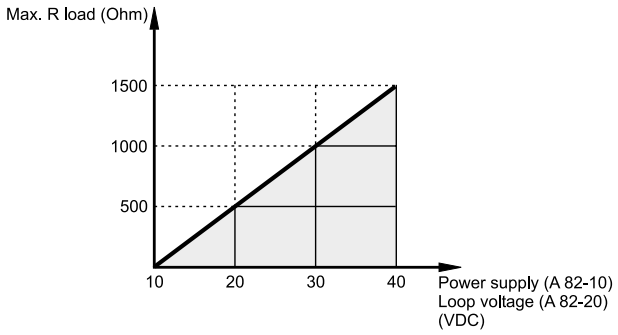


A 82-30 ...



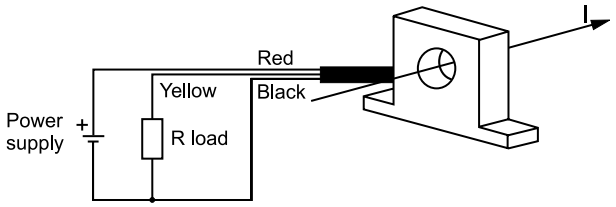
Resistance/Voltage Curve

A 82-10 ... , A 82-20
(max. load resistance vs Power suppy - Loop voltage)



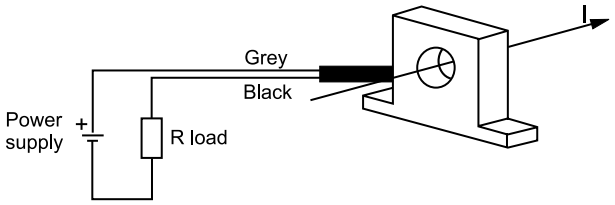
Wiring Diagrams

A 82-10 ... (source)

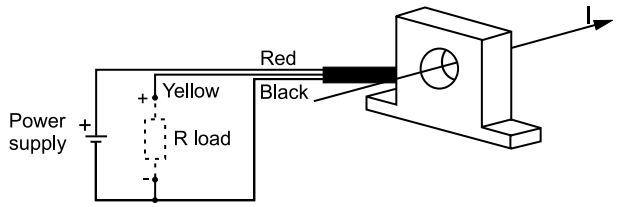


Wiring Diagrams (cont.)

A 82-20 ... (sink)



A 82-30 ...



Dimensions (mm)