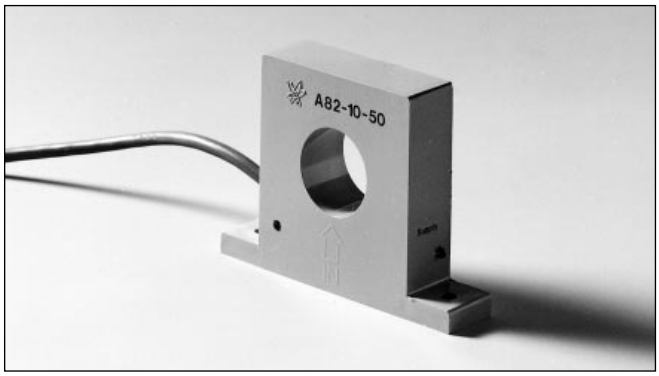
Current and Voltage Controls
AC Current Transformer
Types A 82-10, A 82-20



- **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 381. Can be used with relay EID, EII 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	**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**

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**
Current range	0 - 25 AAC	0 - 50 AAC	0 - 100 AAC	0 - 250 AAC	0 - 500 AAC
Max. current (continuously)	30 AAC	60 AAC	120 AAC	300 AAC	600 AAC
Max. overload current (t = 30 s)	250 AAC	300 AAC	700 AAC	1500 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 (IEC 60664)	IV	IV	IV	IV	IV
Pollution degree (IEC 60664)	3	3	3	3	3
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)

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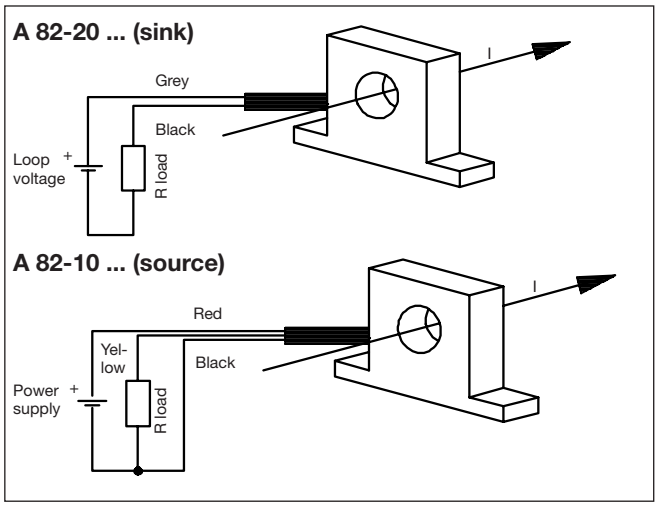
Output Specifications

Output current		**10:** 0 - 20 mADC **20:** 4 - 20 mADC
Power supply (loop voltage)		10 - 40 VDC
Tolerance of output current		
@ 50 Hz	A 82-10	±2% ±0.08 mA
	A 82-20	± 2%
Temperature variation		±400 ppm/°C
Frequency range		40 Hz -1 kHz
Frequency variation		10 ppm/Hz
Maximum output current		35 mADC

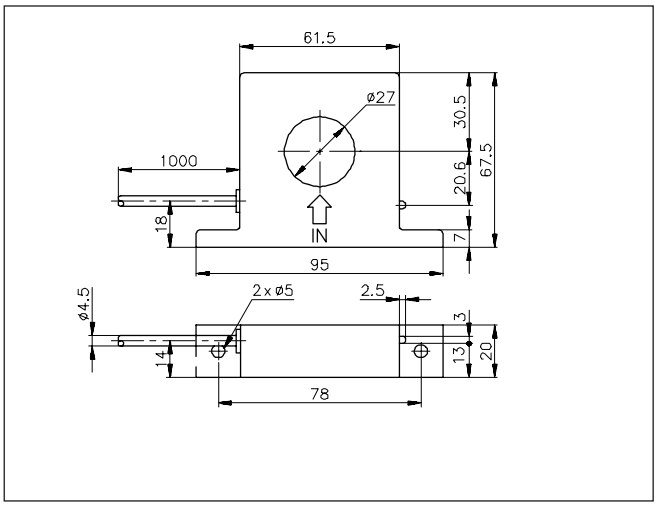
General Specifications

EMC	Electromagnetic Compatibility
Immunity	Acc. to EN50082-1 (tolerance of output current: ± 2%) Acc. to EN50082-2 (tolerance of output current: ± 5%)
Emission	Acc. to EN50081-1
Environment	
Degree of protection	IP 20
Pollution degree	3
Operating temperature	-20° to 50°C (-4° to +122 °F)
Reaction time	τ < 100 ms worst case reaction time may be up to 5 x τ
Power ON delay	< 1 s
Connection cable	**A 82-10** 2 m, 3 x 0.25 mm² **A 82-20** 2 m, 2 x 0.25 mm²
Rated insulation voltage (cable)	250 VAC_{rms}
Indication for	
Power supply ON	LED, green
Weight	**A 82-10** 300 g **A 82-20** 270 g
Material/colour	ABS, light grey

Wiring Diagrams



Dimensions



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 relay EID, EIL or S 183 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 cur-rent 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.

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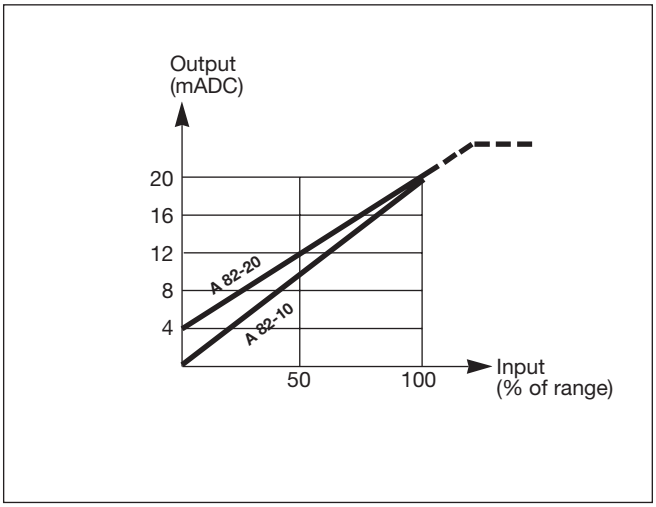
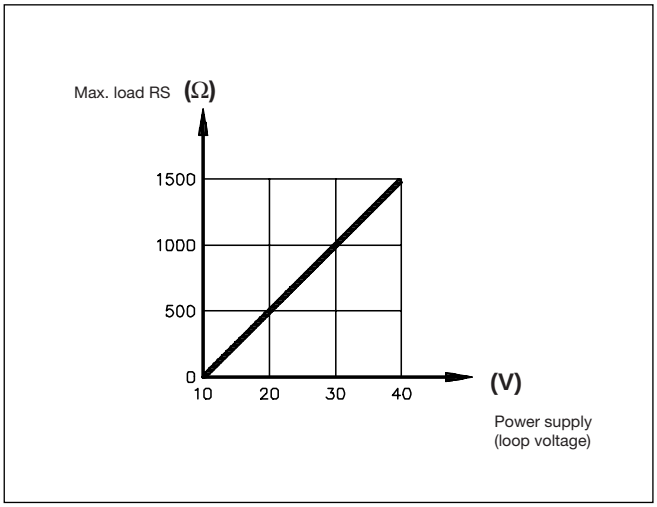
Input/Output Curve



Resistance/Voltage Curve



Max. load resistance versus loop voltage
Max. load RS. Power supply (loop voltage)