

AC VOLTAGE TO DC CURRENT

TRANSMITTER model UACT-1

Data Sheet and Operation Manual



DEVICE CHARACTERISTICS

Characteristic	Value(s)
Input signal range in V AC	standard 0 to 100 or 0 to 500 V AC or another on request (up to 600 V AC)
Input frequency	50/60 Hz
Input resistance	100 (500) kΩ
Input overload capacity	up to 800 V AC
Output signal range in mA DC	4-20 mA DC, 2-wire
Output overload limit	30 mA, consumption 1 W
Power supply	15 to 36 V DC, loop-powered
Galvanic Isolation	2-way (input<->output)
Accuracy acc. EN 60688	0.25% F.S.
Additional deviation due to temperature	0.05% / °C
Reference conditions	15-30 °C, 50 Hz, sine-wave, distortion factor <1%

Measuring principle	Rectifier and amplifier
Mounting	on standard DIN rail 35 mm
Housing protection	IP40 housing IP20 terminals
Connection Terminals	Screw-type with indirect wire pressure for: $\leq 4.0 \text{ mm}^2$ single wire or $2 \times 2.5 \text{ mm}^2$ fine wire
Dimensions	22.5 x 75 x 110 mm, 110 g
Environmental conditions	Operating temperature: -10 to $+55 \text{ }^\circ\text{C}$ Storage temperature: -40 to $+70 \text{ }^\circ\text{C}$ Relative humidity: $\leq 85\% \text{ RH}$ Altitude: 2000 m max. Only for indoor use!

APPLICATION

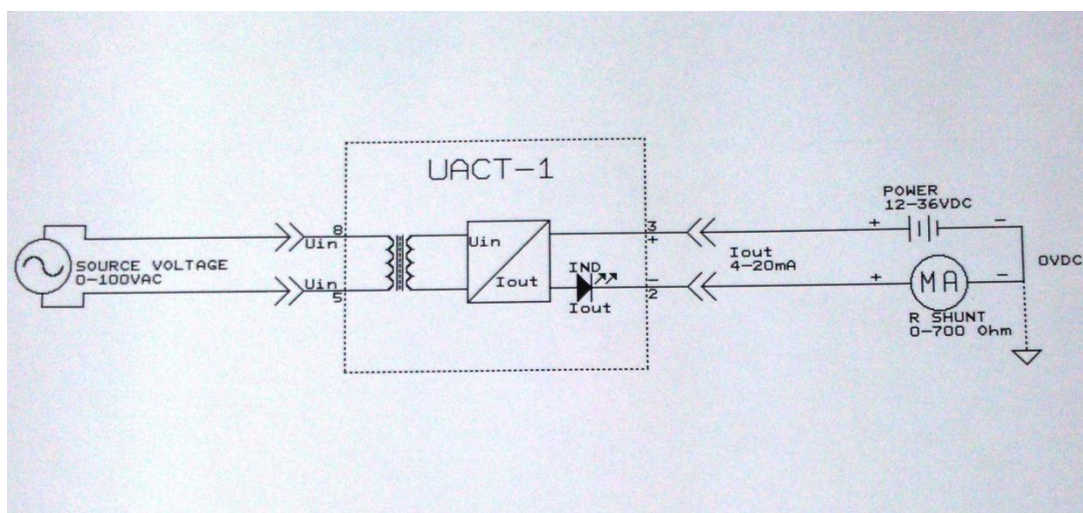
The AC voltage to DC current transmitter is a perfect solution to receive measurement data from voltage measuring transformers in the low and middle voltage energy systems.

UACT-1 converts sinusoidal AC voltage $0 \div 100$ ($0 \div 500$ or other up to 600) V AC / 50/60 Hz into load independent DC current 4-20 mA DC, 2-wire, proportional to the measured range. It also provides galvanic isolation input \leftrightarrow output. The transmitter needs to be loop-powered with $15 \div 36$ V DC from external supply through its passive output, as shown in the diagram below.

It's designed for mounting on standard 35mm DIN rail at the rear side, with its terminals at the top and bottom near the front side.

The transducer meets all important requirements and regulations concerning electromagnetic compatibility EMC and Safety (IEC 1010 resp. EN 61 010).

CONNECTION DIAGRAM



Terminal	Description
2, 3	DC output 4-20 mA - / +
5, 8	AC voltage input