



Measuring transducer for alternating current (AC)

(sinusoidal)

at current transformer and direct measurement

1 A or 5 A or 10 A

Type:

MA-1.1s

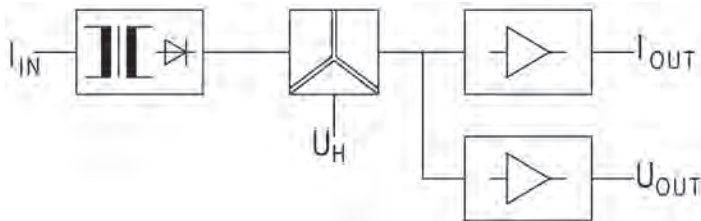
Application

The measuring transducer MA-1.1s is used for the direct transformation and isolation of a sinusoidal alternating current into an impressed direct current and/or direct voltage signal. For types with double output, these outputs are switchable between 0-20 mA and 0-10 V or 4-20 mA and 2-10 V.

Function

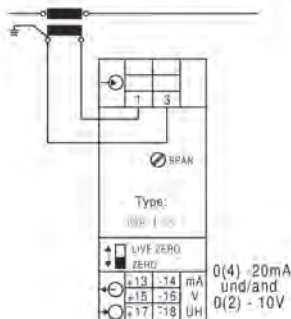
The alternating current to be measured is transmitted to the downstream rectifier circuit via an internal current transformer serving for galvanic isolation. The direct voltage generated there is amplified and transformed into an impressed direct current or in an impressed direct voltage. The output is no-load proof and short-circuit proof.

Only for „live zero“ or double output, an auxiliary voltage is required. Connecting the two outputs is not permissible.



Connection

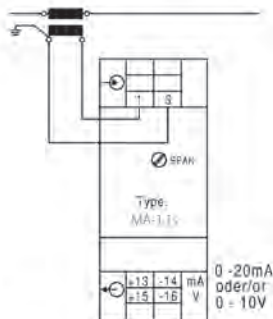
Strommessung (Sinus)
mit Versorgungsspannung
current measuring (sinusoidally)
with auxiliary voltage



Strommessung (Sinus)
mit Versorgungsspannung
current measuring (sinusoidally)
with auxiliary voltage



Strommessung (Sinus)
ohne Versorgungsspannung
current measuring (sinusoidally)
without auxiliary voltage



Technical data

Input	Input variable	sinusoidal alternating current
	Rated values	0-1 A or 0-5 A or 0-10 A
	Rated frequency	50 Hz, 60 Hz or 400 Hz
	Energy consumption	1 VA, with "live zero" 0.3 VA
	Overload permanent	2-fold
	High surge load	20-fold, 1 s
Output	Output variables	Single output or double output
	Rated values	0-20 mA / 500 μ load or 0-10 V / max. load 10 mA
	Option	<ul style="list-style-type: none"> ● "live zero" 4-20 mA / 500 μ load (auxiliary voltage required) ● 0-20 mA / 500 μ load and 0-10 V / max. load 10 mA as well as 4-20 mA / 500 μ load and 2-10 V / max. load 10 mA Switchable on the front side (auxiliary voltage required)
Transfer behavior	Accuracy	$\pm 0.5\%$ at 5-100 % of rated value (with auxiliary voltage 0-100 % of rated value)
	Frequency influence	< 0.05 % with 10 Hz frequency change
	Temperature range	- 15 °C to +20 °C to +30 °C to +55 °C
	Temperature influence	< 0.1 % at 10 K
	Auxiliary voltage influence	no
	Load influence	no
	External magnetic field influence	no (400 A/m)
	Residual ripple	< 40 mV _{ss}
	Response time	< 400 ms
	Open-circuit voltage	max. 24 V
	Current limiting	max. 2-fold in case of overload
	Test voltage	4 kV between input, output, auxiliary voltage
Auxiliary voltage (with „live zero“ and double output only)		230 V AC $\pm 20\%$, 45-65 Hz, 2.5 VA
	Options	<ul style="list-style-type: none"> ● 110 V AC $\pm 20\%$, 45 - 65 Hz, 2.5 VA ● 24 V DC - 15 % to + 25 %, 2 W ● 6-30 V AC + DC, 2 VA ● 36-265 V AC + DC, 2 VA
Dimensions	Housing	Housing A, (22.5 mm wide) Page A1
Weight		190 g
Installation	Fastening	Snap-on fastening on top hat rail 35 mm accord. to DIN EN 60 715
	Electrical connection	Screw terminal max. 4 mm ²