



Measuring transducer for alternating voltage

(sinusoidal)

Type:
Uw-MU



Application

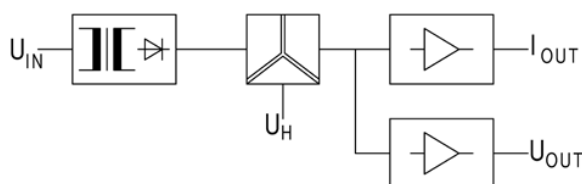
The measuring transducer Uw-MU is used for the transformation and isolation of a sinusoidal alternating voltage into an impressed direct current and/or direct voltage signal. For types with double output, these outputs are switchable between 0-20 mA and 0-10 V or 4-20 mA and 2-10 V.



Function

The alternating voltage to be measured is transmitted to the downstream rectifier circuit via an internal voltage 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.

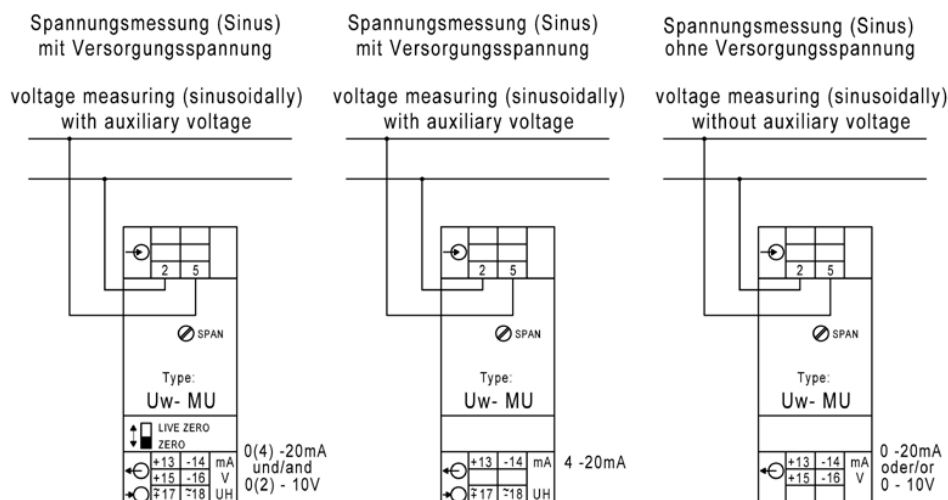


Types and variants

Input	100 V, 250 V, 500 V and 600 V (for voltages above 500 V an auxiliary voltage is requested)
Output	0-20 mA (without auxiliary voltage) 0-10 V (without auxiliary voltage) 4-20 mA (with auxiliary voltage) 0-20 mA and 0-10 V as well as 4-20 mA and 2-10 V switchable on front side (with auxiliary voltage)
Surcharges	Auxiliary voltages other than 230 V AC: 24 V DC 6-30 V AC + DC 36-265 V AC + DC 110 V AC
Frequency module	Type FM (frequency output 0-5 Hz up to 0-10 kHz) (Description page 10) can only be realized based on Uw-MU and double output
Relay module	For limit monitoring type GWM (Description page 11) can only be realized based on Uw-MU and double output



Connection



Technical data

Input	Input variables	sinusoidal alternating voltage
	Rated values	0-100 V, 0-250 V, 0-500 V and 0-600 V
	Rated frequency	50 Hz, 60 Hz or 400 Hz, 16 2/3 Hz (only with auxiliary voltage)
	Energy consumption	2-5 VA, with „live zero“ 0,3-2 VA
	Overload permanent	1,2-fold
	High surge load	2-fold, 1 s
Output	Output variables	Single output or double output
	Rated values	0-20 mA / 500 Ω load or 0-10 V / max. load 10 mA
	Options	● „live zero“ 4-20 mA / 500 Ω load (auxiliary voltage required) ● 0-20 mA / 500 Ω load and 0-10 V / max. load 10 mA as well as 4-20 mA / 500 Ω load and 2-10 V / max. load 10 mA switchable on front side (auxiliary voltage required)
Transfer behavior	Accuracy	± 0,5 % at 5-100 % 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 mVss
	Response time	< 400 ms
	Open circuit voltage	max. 24 V
	Current limiting	max. 2-fold in case of overload
	Test voltage	≤ 500 V: 4 kV between input, output, auxiliary voltage > 500 V: 5,2 kV between input and output 4 kV input / output to auxiliary voltage
Auxiliary voltage (with „live zero“ and double output and voltages > 500 V only)		230 V AC ± 20 %, 45-65 Hz, 2,5 VA
	Options	● 110 V AC ± 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 acc. to DIN EN 60 715
	Electrical connection	Screw terminal max. 4 mm ²