

Measuring transducer for frequency

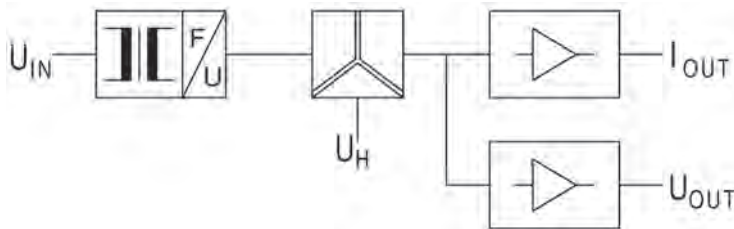
Type:
MF-1.1

Application

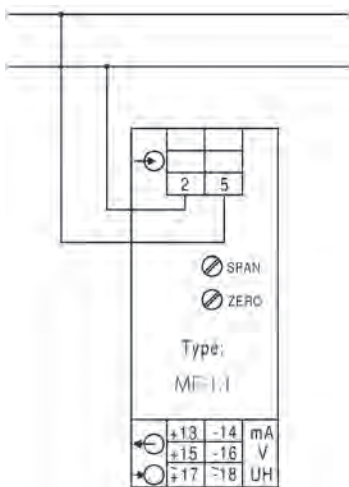
The measuring transducer MF-1.1 is used for the transformation and isolation of a frequency into an impressed direct current and direct voltage signal. Alternating voltages and pulsed direct voltages may be processed.

Function

The frequency to be measured is sent to a filter via an internal voltage transformer serving for galvanic isolation and from there to a microcontroller for evaluation. The direct voltage generated there is transformed into an impressed direct current and in an impressed direct voltage. Both outputs are no-load proof and short-circuit proof. Connecting the two outputs is not permissible. An auxiliary voltage is required in case of "live zero" as well as in case of significantly fluctuating rated voltage and frequency ranges with reference to zero.



Connection



Technical data

Input	Input variable	Frequency	
	Rated values	45-55 Hz, 48-52 Hz, 55-65 Hz, 58-62 Hz, 360-440 Hz, 380-420 Hz, 0-100 Hz, 0-500 Hz or 0-1000 Hz (with separated auxiliary voltage only)	
	Rated voltage	100 V, 110 V, 230 V, 400 V or 500 V \pm 20 % 2-50 V, 25-250 V, 50-500 V or 75-690 V (with separated auxiliary voltage only)	
	Energy consumption	2.5-5 VA, 1-1.5 VA with separated auxiliary voltage	
	Overload permanent	1.2-fold	
	High surge load	2-fold, 1 s	
	Output	Output variables	Double output
Rated values		0-20 mA / 500 Ω load and 0-10 V / max. load 10 mA	
Option		● "live zero" 4-20 mA / 500 Ω load and 2-10 V / max. load 10 mA (auxiliary voltage required)	
Transmission behavior	Accuracy	\pm 0.5 %	
	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	< 30 mV _{ss}	
	Response time	< 300 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“ only, nominal values from 0 - ... Hz and voltage ranges)		230 V AC \pm 20 %, 45-65 Hz, 2.5 VA
		Option	● 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	