



Measuring transducer for frequency

Type:
F-MU

from 01.03.2022
plus 6,8 %
surcharge



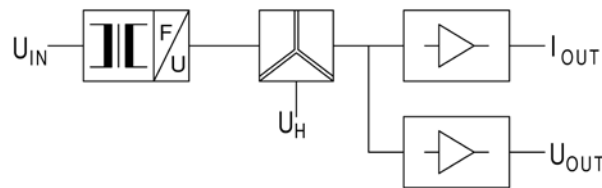
Application

The measuring transducer F-MU 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.

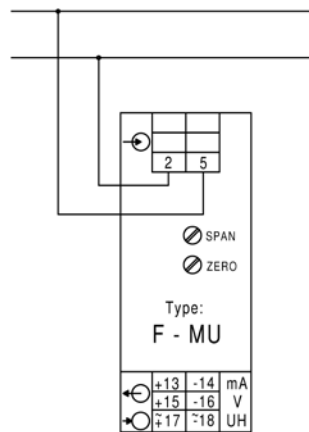


Function

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



Price

Input	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 auxiliary voltage only) Other values (measuring ranges) on request!	
Output	0-20 mA and 0-10 V (without auxiliary voltage)	€ 178,00
	4-20 mA and 2-10 V (with auxiliary voltage)	€ 188,60
	Please specify rated voltage (see page 23)!	
Surcharges	Auxiliary voltage other than 230 V AC:	
	24 V DC	€ 33,00
	6-30 V AC + DC	€ 56,00
	36-265 V AC + DC	€ 48,00
	110 V AC	€ --,--
	Other measuring ranges	€ 35,00
Frequency module	Type FM (frequency output 0-5 Hz up to 0-10 kHz) - (description page 10)	€ 29,30
Relay module	for limit monitoring Type GWM - (description page 11)	€ 72,50



Technical data

Input	Input variables	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 separate auxiliary voltage only)
	Rated voltage	100 V, 110 V, 230 V, 400 V or 500 V ± 20 % 2-50 V, 25-250 V, 50-500 V or 75-690 V (with separate auxiliary voltage only)
	Energy consumption	2,5-5 VA, 0,5-1 VA with separate auxiliary voltage
	Overload permanent	1,2-fold
	High surge load	2-fold 1 s
Output	Output variables	double output
	Rated values Option	0-20 mA / 500 Ω load and 0-10 V / max. load 10 mA ● "live zero" 4-20 mA / 500 Ω load and 2-10 V / max. load 10 mA (auxiliary voltage required)
Transfer behavior	Accuracy	± 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 ± 20 %, 45-65 Hz, 2,5 VA
	Option	● 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