



Measuring transducer for frequency

Type:
F-MU



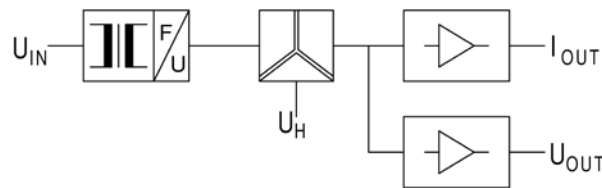
Application

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.

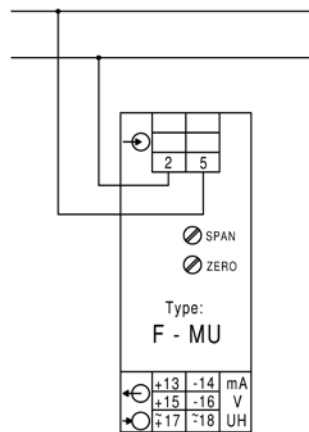


Function

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



Pr Types and variants ice

| | |
|-------------------------|---|
| 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) 4-20 mA and 2-10 V (with auxiliary voltage) Please specify rated voltage (see page 23)! |
| Surcharges | Auxiliary voltage other than 230 V AC: 24 V DC 6-30 V AC + DC 36-265 V AC + DC 110 V AC Other measuring ranges |
| Frequency module | Type FM (frequency output 0-5 Hz up to 0-10 kHz) - (description page 10) |
| Relay module | for limit monitoring Type GWM - (description page 11) |



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 \pm 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 | \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 acc. to DIN EN 60 715 |
| | Electrical connection | Screw terminal max. 4 mm ² |