Programmable multifunctional measuring transducer

Measuring transducers MT4xx

FEATURES

- Real time measurements of more than 50 quantities
- Power accuracy class 0.5
- 16 adjustable alarms
- Input frequency: 50/60 Hz, 400 Hz
- Serial communication (RS232 or RS485 up to 115,200 bit/s)
- MODBUS communication protocol
- Up to 4 I/O (analogue out, alarm out, pulse out, general purpose relay out, general purpose solid-state out)
- Wide aux. power supply 24 - 300 V DC, 40 - 276 V AC
- Auto range of current and voltage (max. 12.5 A and 600 V_{L-N})
- Simple USB setting without auxiliary power supply
- User-friendly PC setting software, MiQen
- Housing for DIN rail mounting

FOR WHOM

For electricity distribution and energy production companies, utilities, dwellings, energy management solution providers, industry, business buildings, designers of small power stations, panel builders, etc.

Iskra
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MEASUREMENTS & ALARMS

Measured parameters
- True RMS measurements of more than 50 parameters (U, I, P, Q, S, PF, PA, f, φ, etc.)
- 128 samples per cycle
- Maximum Demands (without timestamps)
- THD
- Energy

Alarms
- 2 alarm groups
- Each group up to 8 alarms
- Delay time setting, hysteresis setting
- Electromechanic or solid state relay alarm output
- Programmable output signal (cont. pulsed, inversed, etc.)

ENERGY & COMMUNICATION

Energy
- Four energy counters
- Energy measurement in all quadrants
- Up to 4 programmable pulse outputs (option)

Communication
- Serial RS485 / RS232 Communication
- Up to 115.200 bit/s
- Modbus protocol
- USB 2.0 for fast set-up*

* USB communication is not galvanic isolated and can be only used when instrument is not connected to supply and aux. supply

OUTPUT MODULES

Analogue output:
- Isolated, fully programmable, DC current or voltage output
- Up to 5 breakpoints; non-linear charcteristics
- Standard response time (100 ms) and optionally fast response time (50 ms)

Electromechanic relay output:
- Support for alarms, pulse outputs or as general purpose digital output

Solid-state relay output:
- Support for alarms, pulse outputs or as general purpose digital output

PROGRAMMABLE AC VOLTAGE TRANSDUCER MT416

- RMS AC voltage measurements
- Voltage auto range measurements up to 600 V_{L-N}
- Frequency measurement range 16 - 400 Hz
- AC or wide auxiliary power supply range
  24 - 300 V DC, 40 - 276 V AC
- Accuracy class 0.5 (EN 60688)
- Serial (RS232 or RS485) communication
- Sophisticated analogue output; 2 voltage and 4 current ranges,
  non-linear characteristics …
- Simple USB setting without auxiliary power supply

PROGRAMMABLE AC CURRENT TRANSDUCER MT418

- RMS AC current measurements
- Voltage auto range measurements up to 12 A
- Frequency measurement range 16 - 400 Hz
- AC or wide auxiliary power supply range
  24 - 300 V DC, 40 - 276 V AC
- Accuracy class 0.5 (EN 60688)
- Serial (RS232 or RS485) communication
- Sophisticated analogue output; 2 voltage and 4 current ranges,
  non-linear characteristics …
- Simple USB setting without auxiliary power supply

AC VOLTAGE SELF POWERED MEASURING TRANSDUCER MT406

- Sinusoidal AC voltage measurements
- Voltage range measurements up to 500 V_{L-N}
- Galvanic insulation between input and output
- Accuracy class 0.5 (EN 60688)
- Self powered

AC CURRENT SELF POWERED MEASURING TRANSDUCER MT408

- Sinusoidal AC current measurements
- Current range measurements up to 6A
- Galvanic insulation between input and output
- Accuracy class 0.5 (EN 60688)
- Self powered

Example:
MT440 transducer is connected to a secondary phase voltage (50 Hz) up to 500 V$_{L-N}$ and 5 A secondary current. RS 232 communication, two analogue outputs, one electro-mechanical relay alarm output and one solid-state pulse output are applied.
Ordering code: **MT440 – 1 1 1 1 4 3**

1. Transducer type:

MT440

2. Input frequency
1	50/60 Hz
2	400 Hz

3. Communication type (COM)
0	Without
1	RS232
2	RS485

4. I/O 1
0	Without
1	Analogue output
2	Fast analogue output
3	Solid-state relay output
4	Electromechanical relay output

5. I/O 2
0	Without
1	Analogue output
2	Fast analogue output
3	Solid-state relay output
4	Electromechanical relay output

6. I/O 3
0	Without
1	Analogue output
2	Fast analogue output
3	Solid-state relay output
4	Electromechanical relay output

7. I/O 4
0	Without
1	Analogue output
2	Fast analogue output
3	Solid-state relay output
4	Electromechanical relay output

Example:
MT416 transducer with frequency range 50/60 Hz, RS485 communication, normal analogue output and an universal supply.
Ordering code: **MT416 - 1 2 1 1**

1. Transducer type:
MT416, MT 418

1. Input frequency
1	50/60 Hz
2	400 Hz

2. Communication type
0	Without
1	RS232
2	RS485

3. Analogue output
1	Normal
2	Fast

4. Power supply
1	Universal - switching power supply
2	230 V - transformer power supply
3	110 V - transformer power supply

Example:
Measuring transducer MT406, with measuring range 0 … 57.74 V and output range 0 … 10 mA.
Ordering code: **MT406 - 13**

MT406		Value	Code
a	Measuring range:	0 … 57.74 V	1
		0 … 63.5 V	2
		0 … 69.3 V	3
		0 … 100 V	4
		0 … 110 V	5
		0 … 115 V	6
		0 … 120 V	7
		0 … 127 V	8
		0 … 220 V	9
		0 … 230 V	A
		0 … 240 V	B
		0 … 250 V	C
		0 … 380 V	D
		0 … 400V	E
		0 … 415 V	F
		0 … 440 V	G
		0 … 500 V	H
	Non - standard versions	0 … X V	X
b	Output signal:	0 … 1 mA	1
		0 … 5 mA	2
		0 … 10 mA	3
		0 … 20 mA	4

Non-standard ratings are available on request.

Example:
Measuring transducer MT408, with measuring range 0 … 5 A and output range 0 … 5 mA.
Ordering code: **MT408 - 32**

MT 408		Value	Code
a	Measuring range:	0 … 1 A	1
		0 … 1.2 A	2
		0 … 5 A	3
		0 … 6 A	4
	Non - standard versions	0 … X A	X
b	Output signal:	0 … 1 mA	1
		0 … 5 mA	2
		0 … 10 mA	3
		0 … 20 mA	4

Non-standard ratings are available on request.

Specifications of outputs are detailed in technical documentations.