MD35-VAb, MD35-VAb1, MD35-VAc, MD35-VAd

MULTIPHASE APPARENT POWER TRANSDUCER

Application:

The transducer is suitable to convert the multiphase apparent power input to an analog DC voltage/current or a digital RS485 output.

Important features:

- Full digital operation (Icom System).
- Preset delivery or connecting to external device can be set (monIcom option).
- True power metering with digital multiplication.
- Plug in terminal blocks with screw.
- DIN rail case.
- EMC compliance.

Illustration only.

Technical specifications:

Input: (at external power supply)

- Nominal input voltage range (CF < 1.2): ….. from 0…5 V to 0…600 V AC
- Current consumption: …..…… max. 0.35 mA (at nominal voltage)
- Nominal input current range (CF < 2): ..... 0…1 A or 0…5 A AC
- Drop out voltage: ……..…… max. 100 mV (5 A)
- Input measuring range: ……..... up to 120 %
- Input power factor range (cos φ): ..... -0.5…+0.5 (C: -60º … L: +60º)
- Input frequency range: ..... 50 ±1 Hz or 60 ±1 Hz
- Measuring types: …..... VAb: 3 wires balanced
  VAb1: 4 wires balanced
  VAc: 3 wires unbalanced
  VAd: 4 wires unbalanced
- Input insulation voltage: ..... Cat. III. 1 kV (Test: 4300 V_{eff} 1 min)

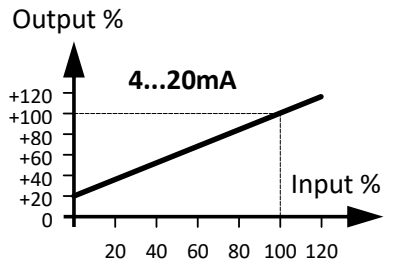
Output: (at external power supply)

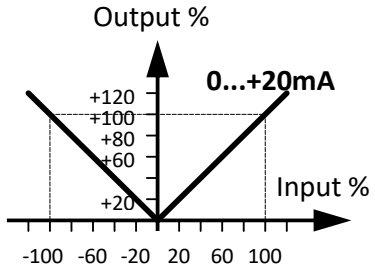
- Analog output range: .... 0..20 mA, ±20 mA, 4..20 mA, 0..10 V, ±10 V DC
- Output load: ..... for current: max. 500 ohm, for voltage: min. 2 kohm
- Output limits: ……..... max. 20 V, or 30 mA
- Output response time: ..... max. 300 ms
- Digital output: …….…….. RS485, Modbus-RTU, 9.6 / 19.2 kBaud
- Accuracy (EN 60688): Class 0.5 or Class 0.2 (20 %..120 % input range)
  For ±20 mA and ±10 V output only ±0.5 % accuracy can be ordered.
- Temperature coefficient: ..... max. 100 ppm/ºC

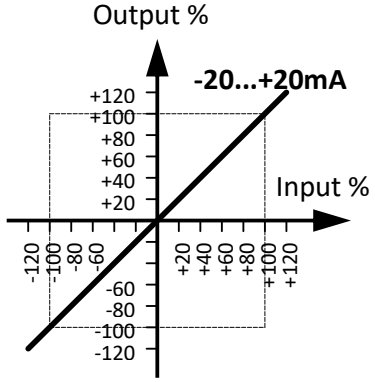
Other:

- Standards applied: ..... IEC/EN 61010-1, IEC/EN 61326, IEC/EN 60688
- Consumption: ..... max. 2 W
- Wire cross-section of terminals: ..... max. 2.5 mm^2
- Working temperature: ..... -10…+25…+60 ºC
- Storage temperature: ..... -40…+80 ºC
- Humidity: ..... max. 85 %
- Vibration (acceleration): ..... max. 2 g
- Dimension (HxWxD): ..... 101 mm x 35 mm x 119 mm
- Case protection: ..... IP 20
- Case material: ..... PC-GF
- Weight (with converter): ..... approx. 0.35 kg

Typical transfer characteristics:







C+D AUTOMATIKA Ltd., H-1191 Budapest, Földváry str. 2., Hungary
Phone: 282-9676, 282- 9896, Fax: 282- 3125, E-mail: info@meter.hu, Web: www.meter.hu

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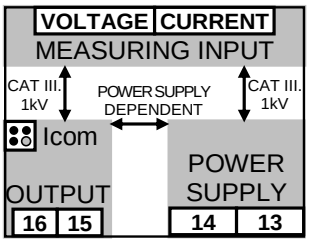
MULTIPHASE APPARENT POWER TRANSDUCER

Auxiliary Supply variations:

	(Voltage / Insulation)
5 V, 12 V, 24 V, 48 V DC ±50 %, **converter**	/ 1 kV
55…264 V, 47…440 Hz, and **72…370 V** DC, **converter**	/ 3 kV

At 55…264 V AC input voltage range, self powered version is also available.

Isolation scheme:

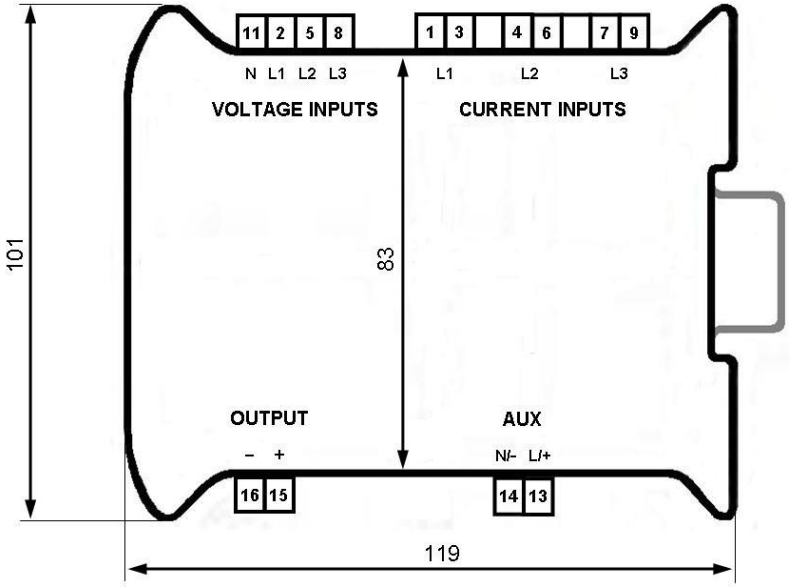


Ordering examples:

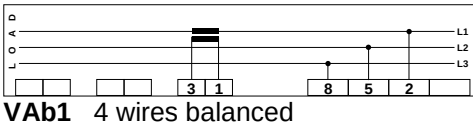
MD35-VAc _ **Input:** 3x 400/0.11 kV, 500/5 A, 0…300 MVA _ **Output:** 4..20 mA DC, ±0.2 % _ **Aux:** 72..370 V DC
MD35-VAd _ **Input:** 3x 400 V, 50 A, -20…+20 kVA _ **Output:** -20..+20 mA DC, ±0.5 % _ **Aux:** 55..264 V AC conv.
MD35-VAb _ **Input:** 3x 25/0.11 kV, 50/1 A, 0…2 MVA _ **Output:** RS485 Modbus _ **Aux:** 24 V DC converter

On request for extra charge special ranges (Input, Output, Auxiliary Supply) are possible.
To single-phase apparent power metering uses the M22-VA transducer.

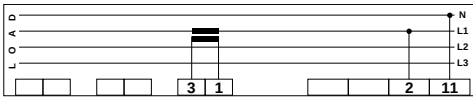
Outline dimensions and connection diagrams:



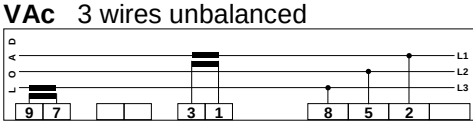
VAb 3 wires balanced



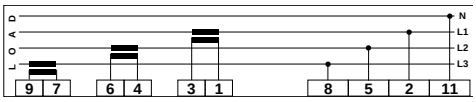
VAb1 4 wires balanced



VAc 3 wires unbalanced



VAd 4 wires unbalanced



The transducer can operate without external current transformers.

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