

Data sheet
SM 031 - Analog Input (031-1PA10)
Technical data

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| Order no. | 031-1PA10 |
| Type | SM 031 - Analog Input |
| Module ID | 0884 2880 |
| General information | |
| Note | - |
| Features | AI1x 3Ph 230/400V 1/5A Remanent storage of the energy values diagnostic function Resolution measurement 24 Bit 3-phase and N-conductor Electrical efficiency elektrical work Harmonic harmonics Phase delay cos Frequency |
| Current consumption/power loss | |
| Current consumption from backplane bus | 60 mA |
| Power loss | 0.9 W |
| Rated load voltage | - |
| Status information, alarms, diagnostics | |
| Status display | yes |
| Interrupts | yes, parameterizable |
| Process alarm | no |
| Diagnostic interrupt | no |
| Diagnostic functions | yes, parameterizable |
| Diagnostics information read-out | possible |
| Module state | green LED |
| Module error display | red LED |
| Channel error display | - |
| Isolation | |
| Between channels | - |
| Insulation tested with | AC 2200 V |
| Energy measurement | |
| Number of channels for measuring | 1* 1..3 phases U/I |
| Voltage measuring range | 0..300 V each phase |
| Coupling voltage measurement | direct or Transformer |
| Current range | 0.5 A each phase |
| Coupling current measurement | Transformer |
| Frequency range | 46..64 Hz |
| Measurement accuracy | 1 % |

Available measurement

Active energy
 Temperature
 Frequency
 Voltage RMS
 Current RMS
 Active power
 Reactive power
 Apparent power
 Cos phi
 Harmonic voltage RMS
 Harmonic current RMS

Adjustable limits

Voltage RMS min/max
 Current RMS min/max
 Cos phi min
 Temperature max.
 Frequency min/max

Datasizes

| | |
|------------------|----|
| Input bytes | 16 |
| Output bytes | 16 |
| Parameter bytes | 30 |
| Diagnostic bytes | 20 |

Housing

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|----------|--------------------|
| Material | PPE / PPE GF10 |
| Mounting | Profile rail 35 mm |

Mechanical data

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|------------------------------|----------------------------|
| Dimensions (WxHxD) | 12.9 mm x 109 mm x 76.5 mm |
| Net weight | 57 g |
| Weight including accessories | 57 g |
| Gross weight | 71 g |

Environmental conditions

| | |
|-----------------------|-----------------|
| Operating temperature | 0 °C to 60 °C |
| Storage temperature | -25 °C to 70 °C |

Certifications

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|------------------|---|
| UL certification | - |
| KC certification | - |