

ENERGY METER 520-24

Weidmüller Interface GmbH & Co. KG
 Klingenbergstraße 26
 D-32758 Detmold
 Germany

www.weidmueller.com



Advanced functionality of energy data capture
 The scope of performance of the ValueLine energy meters goes beyond the core functions of energy measurement.
 They are also suitable for determining, storing and visualising further energy quality parameters.
 The free "ecoExplorer go" software is available for most types of the product group,
 on the one hand for device configuration / commissioning / visualisation of the measured values and on the other hand for analysing the power quality.

General ordering data

| | |
|------------|---|
| Version | Power measurement/display for 1-, 3-phase mains |
| Order No. | 2500860000 |
| Type | ENERGY METER 520-24 |
| GTIN (EAN) | 4050118514056 |
| Qty. | 1 items |

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Technical data

Approvals

| | |
|-------------------------|---|
| Approvals | CE; CULUS |
| Approvals | CE |
| Approvals |  |
| ROHS | Conform |
| UL File Number Search | UL Website |
| Certificate no. (cULus) | E469563 |

Dimensions and weights

| | | | |
|------------|-------|-----------------|-------------|
| Depth | 48 mm | Depth (inches) | 1.8898 inch |
| Height | 96 mm | Height (inches) | 3.7795 inch |
| Width | 96 mm | Width (inches) | 3.7795 inch |
| Net weight | 265 g | | |

Temperatures

| | | | |
|-----------------------|----------------|-----------------------------------|-------------|
| Storage temperature | -25 °C...70 °C | Humidity at storage temperature | 0...90 % RH |
| Operating temperature | -10 °C...55 °C | Humidity at operating temperature | 0 - 75% RH |

Environmental Product Compliance

| | |
|------------------------|-----------------------------|
| RoHS Compliance Status | Compliant without exemption |
| REACH SVHC | No SVHC above 0.1 wt% |

Measuring current input

| | | | |
|------------------------------|---------|--------------------------------|---------|
| Housing main material | Plastic | Rated current | 1 / 5 A |
| Current-measuring channels | 3 | Measuring accuracy for current | 0.2 % |
| Residual current measuring | No | Harmonics, per order / current | 1.-40. |
| Distortion factor THD-I in % | Yes | Max. current | 5000 A |

Measuring voltage input

| | | | |
|------------------------------------|--|------------------------------------|-------|
| Low voltage network | 3 phase 4 wire (L1 + L2 + L3 + N), 3 phase 3 wire (L1 + L2 + L3) | Measuring accuracy for voltage | 0.2 % |
| Three-wire system | Yes | Quadrants | 4 |
| Harmonics, per order / voltage | 1.-40. | Distortion factor THD-U in % | Yes |
| Measurement range, voltage L-L, AC | 480 V | Measurement range, voltage L-N, AC | 277 V |
| Four-wire system | Yes | | |

Communication

| | | | |
|-----------|-------------------------|----------|------------|
| Interface | RS485: 9,6 – 115,2 kbps | Protocol | Modbus RTU |
|-----------|-------------------------|----------|------------|

Inputs/outputs

| | | | |
|--------------------------|---|---------------------------|----|
| Number of digital inputs | 0 | Number of digital outputs | 2 |
| Number of pulse outputs | 2 | Temperature input | No |

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Measurement data recording

| | | | |
|------------------------------------|-----------------|--------------------------|--------|
| Memory; minimum and maximum values | Yes | Update interval register | 200 ms |
| Software | ecoExplorer go® | Integrated logic | Yes |

Technical data

| | | | |
|--|---|--|---------------------|
| Version | Power measurement/display for 1-, 3-phase mains | Type of mounting | Frontpanel mounting |
| Protection degree | IP40, IP20 | Rated current | 1 / 5 A |
| Max. current | 5000 A | Display monitoring (monitor) | LCD |
| Standards | EN 61326-1, IEC 61010-1, IEC 61010-2-030 | Measurement range, voltage L-N, AC | 277 V |
| Measurement range, voltage L-L, AC | 480 V | Surge voltage category | 300 V CAT III |
| Supply voltage | 24 - 90 V AC (50/60 Hz), 24 - 90 V DC | Supply voltage | 24 V |
| Three-wire system | Yes | Four-wire system | Yes |
| Quadrants | 4 | Sampling frequency 50/60 Hz | 25.6 kHz |
| Continuous measurements | Yes | Measurement result per second | 5 ms |
| Effective value from the period (50/60 Hz) | 10 / 12 | Residual current measuring | No |
| Current-measuring channels | 3 | Measuring accuracy for voltage | 0.2 % |
| Measuring accuracy for current | 0.2 % | Measurement accuracy for active energy Class 0.5S (kWh, .../5 A) | |
| Operating-hours counter | Yes | Bimetal function | Yes |

Voltage quality measurement

| | | | |
|--------------------------------|--------|--------------------------------------|--------|
| Harmonics, per order / voltage | 1.-40. | Harmonics, per order / current | 1.-40. |
| Distortion factor THD-U in % | Yes | Distortion factor THD-I in % | Yes |
| Unbalanced | No | Positive, negative and zero system | Yes |
| Brief interruptions | No | Sequence-of-events recorder function | No |

Insulation coordination

| | |
|------------------------|---------------|
| Surge voltage category | 300 V CAT III |
|------------------------|---------------|

Classifications

| | | | |
|-------------|-------------|-------------|-------------|
| ETIM 8.0 | EC002301 | ETIM 9.0 | EC002301 |
| ETIM 10.0 | EC002301 | ECLASS 14.0 | 27-14-23-30 |
| ECLASS 15.0 | 27-14-23-30 | | |

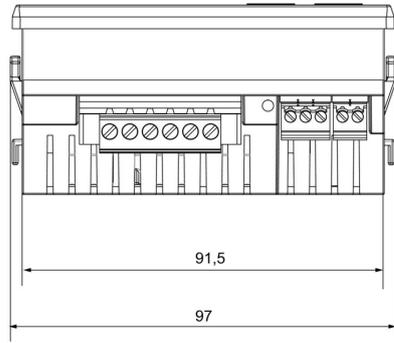
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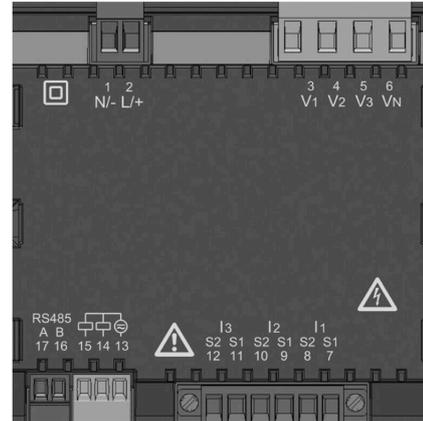
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Drawings

Dimensioned drawing



Dimensioned drawing



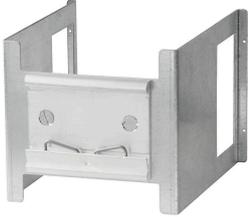
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Accessories

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Accessories



General ordering data

| | | |
|------------|----------------------------|---------|
| Type | ENERGY METER BRACKET S2 | Version |
| Order No. | 2433070000 | |
| GTIN (EAN) | 4050118446395 | |
| Qty. | 1 ST | |
| Type | ENERGY METER SEAL L96-2 | Version |
| Order No. | 2495610000 | |
| GTIN (EAN) | 4050118505931 | |
| Qty. | 1 ST | |
| Type | ENERGY METER FIXING SET | Version |
| Order No. | 2433030000 | |
| GTIN (EAN) | 4050118446401 | |
| Qty. | 1 ST | |