

ENERGY METER D650

Weidmüller Interface GmbH & Co. KG

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com

Product image



Energy meters

Many companies would like to save energy at source, use energy more efficiently and maximise the availability of energy networks. This not only shows responsibility, but is also recommended for economic reasons.

Weidmüller energy meters can do far more than just measure the consumption of electrical energy. For example, the basic parameters for energy quality can also be determined or the currents of all conductors can be analysed individually or differentially - e.g. with our Energy Meter. This allows you a quick status overview of the electrical energy in your production facility. This applies both in relation to efficient usage, as well as to quality, stability and availability.

General ordering data

Version	Supply voltage : 230 V
Order No.	2425490000
Type	ENERGY METER D650
GTIN (EAN)	4050118433326
Qty.	1 pc(s).

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Technical data

Dimensions and weights

Depth	82 mm	Depth (inches)	3.228 inch
Height	90 mm	Height (inches)	3.543 inch
Net weight	350 g	Width	107.5 mm
Width (inches)	4.232 inch		

Temperatures

Storage temperature	-20 °C...70 °C	Operating temperature	-10 °C...55 °C
Humidity at operating temperature	5...95 % RH		

Measuring current input

Current-measuring channels	4	Distortion factor THD-I in %	Yes
Harmonics, per order / current	1..40.	Measuring accuracy for current	0.25 %
Rated current	1 / 5 A	Residual current measuring	No

Measuring voltage input

Distortion factor THD-U in %	Yes	Four-wire system	Yes
Harmonics, per order / voltage	1..40.	Measurement range, voltage L-L, AC	480 V
Measurement range, voltage L-N, AC	277 V	Measuring accuracy for voltage	0.2 %
Quadrants	4	Three-wire system	Yes

Communication

Interface	RS232: 9.6 – 115.2 kbps, RS485: 9.6 – 921.6 kbps	Protocol	Modbus RTU
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Inputs/outputs

Number of digital inputs	2	Number of digital outputs	2
Number of pulse outputs	2	Display	LCD 3-digit
Temperature input	Yes		

Measurement data recording

Memory; minimum and maximum values	Yes	Memory size	4 MB
Number of memory values	156 k	Update interval register	200 ms
Min. memory recording interval	60 s	Software	ecoExplorer go®
Integrated logic	Yes		

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Input frequency	< 20 Hz	Protection degree	IP20
Rated current		Standards	DIN EN 61326-1, DIN EN 61000-4-2, DIN EN 61000-4-3, DIN EN 61000-4-4, DIN EN 61000-4-5, DIN EN 61000-4-6, DIN EN 61000-4-8, EN 61000-4-11, IEC 61010-1, IEC 61010-2-030, EN 55011
	1 / 5 A		
Measurement range, voltage L-N, AC	277 V	Measurement range, voltage L-L, AC	480 V
Surge voltage category		Voltage supply	95 - 240 V AC, 135 - 340 V DC
	300 V CAT III		
Supply voltage	230 V	Three-wire system	Yes
Four-wire system	Yes	Quadrants	4
Sampling frequency 50/60 Hz	20 kHz	Continuous measurements	Yes
Measurement result per second		Effective value from the period (50/60 Hz)	10 / 12
	5		
Residual current measuring	No	Current-measuring channels	4
Measuring accuracy for voltage	0.2 %	Measuring accuracy for current	0.25 %
Measurement accuracy for active energy (kWh, .../5 A)	Class 0.5S	Operating-hours counter	
Clock	Yes		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	Yes	Positive, negative and zero system	Yes
Brief interruptions	No	Sequence-of-events recorder function	No

Insulation coordination

Surge voltage category	300 V CAT III
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Classifications

ETIM 6.0	EC002301	ETIM 7.0	EC002301
ECLASS 9.0	27-14-23-30	ECLASS 9.1	27-21-03-01
ECLASS 10.0	27-14-23-30	ECLASS 11.0	27-14-23-30

Approvals

Approvals	
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ROHS	Conform
UL File Number Search	E469563

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Technical data

Downloads

Approval/Certificate/Document of
Conformity

[EU-Declaration of Conformity](#)

Software

[MODBUS Adressenliste](#)

[Win64 - ecoExplorer.go](#)

User Documentation

[Quick Guide German/English](#)

[Manual Energy Meter D650 German/English](#)

[Manual ECOEXPLORER GO English](#)

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Drawings

Dimensioned drawing

