Flexible, compact, interoperable:

MEC electronics mecMeter.

Easy to install, setup, connect and receive data.

Current electric metering devices are available in a wide range of models: from simple, inexpensive IoT-gadgets with reduced accuracy to complex, high-priced professional devices.

MEC electronics mecMeter provides advantages from both sides of this spectrum: Quick installation and great accessability paired with the accuracy to attain reliable data.

MEC electronics mecMeter solves key issues with electric metering:

- **Compact:** only 3-horizontal pitches
- **Future-proof**: software updateable
- **Easy communication:** Ethernet, Wi-Fi, Powerline
- **Local data access:** JSON, XML, Modbus, TCP / IP (Sun Spec based)
- **No rearranging of fuse panels:** current transformers
- **Different data requirements:** 40+ measurements available

Easy installation.
Requiring only 3 horizontal pitches on a top-hat rail, the MEC electronics mecMeter offers up to three hardware interfaces for data transmission. Using split-core transformers avoids the need to disassemble cables for measuring currents. Easily placed nearly everywhere in the fuse box, there is almost never the need to rearrange electrical equipment in most cases, saving time and money during the installation process.

Easy setup process.
The user interface provides a step-by-step guide on configuring the device. Optionally, the setup can be performed via setup can be performed via setup-API to easily integrate the MEC electronics mecMeter as part of existing ecosystems, e.g. Smart Home Gateways.

Easy connection.
In addition to an ethernet port, MEC electronics mecMeter also offers Wi-Fi and Powerline connectivity (supporting AV/AV2 – standards) making it the perfect solution, especially for retrofitting existing installations.

Easy data retrieval.
By providing different protocols and data formats (XML, JSON and Modbus TCP /IP), the MEC electronics mecMeter removes the common challenges of data gathering and greatly reduces implementation cost. Values are based on commonly used standard information models and, by default, updates every second.

Easy customization.
Customized software (UI, protocols, date formats etc.) and hardware can be provided according to special requirements.

The MEC electronics mecMeter is expected to be available as early as Q4/2018.

For further information on the MEC electronics mecMeter please feel free to contact
Mr. Robert Haidinger, Project Manager at MEC electronics EP GmbH
E-Mail: robert.haidinger@mec.at
Phone: +43 6648221785

Preliminary Tech – Specs at a glance:

General characteristics

Temperature	operating	0°C - 50°C
	storage	-20°C - 70°C
Weight (with Powerline)		150g
Protection rating		IP30
Dimensions		90 x 53 x 68mm

EMC compliance

Emissions	EN 61000-6-1:2007
	EN61000-6-3:2007+A1:2011
Immunity	EN61000-6-2:2005
	EN 61000-6-4:2007+A1:2011

Safety

Overvoltage Category	Cat. II
Standards	EN 62368-1:2014
EN610-1:2010 + A12:2011 + A2:2011	

Electrical characteristics for input supply (between L3 and N terminals)

Input voltage	Nominal	230V
	Range	207 - 253VAC
Frequency	Nominal	50Hz
	Range	45-55Hz
Power	Typical	2W
	Maximum	5W

Current clamp input (N, 3, 2, 1)

Input voltage range	Nominal	0 - 0.333V
	Absolute maximum	0 - 0.4V
Cable Length	Maximum	3m
Clamp error detection: detection if clamps are not attached to the meter for L1 / L2 / L3		

Voltage input (N, L3, L2, L1)

Input voltage range between N and L2 / L1 for measurement	Nominal: without PLC: 150V - 230V with PLC: 50V - 230 V Absolute Maximum: without PLC: 150V - 230V with PLC: 50V - 230 V
Input voltage range between N and L3	Nominal 230V; Absolute maximum 207V - 250V
* L3 will be used to power the device	

Ethernet

Datarate	Nominal	10/100Mbps

WIFI

Datarate	Nominal	300Mbps
Standard		802.11b/g/n (2.4 Ghz only)

Powerline

Datarate	Maximum	10 Mbps
Compliant with		Green PHY specification
Interoperable with		HomePlugAV

Network setup options

WiFi	Select SSID from Scan	YES
	Obtain IP from DHCP	YES
	Manually set IP	NO
LAN	Obtain IP from DHCP	YES
	Manually set IP	YES
PLC	Obtain IP from DHCP	YES
	Manually set IP	NO

Measurement Accuracy*

Frequency	Nominal value	50Hz
	Nominal accurancy	+/-0,01Hz
	Resulution	0.01Hz
Voltage	Nominal value	230V
	Nominal accurancy	+/-0,5%
	Resulution	0,01V
Current	Nominal value	30A≙0.333V
	Nominal accurancy	+/-0,5%
	Resulution	0.001A
Phase angle	Resulution	0,1°
Power factor	Resulution	0.001
Active power	Nominal accurancy	+ /-0,5%
	Resulution	0.0039W
Reaktive Power	Nominal accurancy	+/-0,5%
	Resulution	0.0039VAr
Apparent power	Nominal accurancy	+/- 0,5 %
	Resulution	0,0039VA
Active energy	Nominal accuracy	+ /- 0,5 %
	Resulution	0.03125Whr
Reaktive energy	Nominal accurancy	+/ -0,5%
	Resulution	0.03125VArhr
Sampling interval	Nominal	320 ms

* at 25°C within 1 year after calibration, between 5% and 100% of nominal current

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