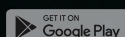
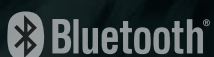


A SHARP EYE ON EVERYTHING THAT COUNTS

Energy meters with smart monitoring

E-Mon[®]
BLACK



Honeywell

OPTIMISED PERFORMANCE AT EVERY STAGE



CYBERSECURITY

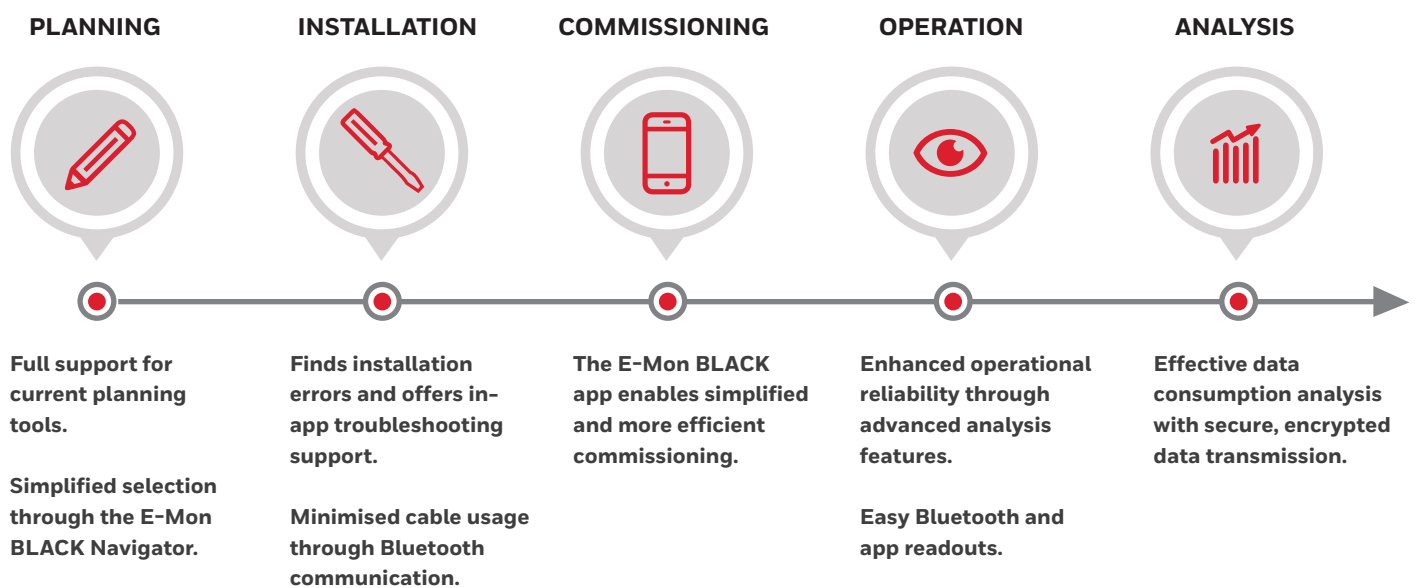


Comprehensive data security provided by separate crypto chip.






PRODUCT FEATURES

- ✓ **First energy meter with effective cybersecurity.**
- ✓ **Full customer support ensures an enhanced user experience.**
- ✓ **Dedicated app for setup, troubleshooting, readouts, and meter monitoring.**
- ✓ **Improved reliability and security throughout the whole operational process.**
- ✓ **Global billing.**

Meet the E-Mon BLACK Series, a new generation of multi-protocol, smart meters. Optimise your building's energy usage and reduce associated costs with a solution that combines comprehensive monitoring options with progressive data security.



SMART METERS PORTFOLIO

 PULSE METER SERIES	 SERIAL METER SERIES	 LPWAN METER SERIES	 ETHERNET METER SERIES	 CELLULAR METER SERIES
<p>Readable with Bluetooth.</p> <p>Cost-efficient device for installations without remote reading.</p>	<p>Bluetooth minimises the wiring effort for enhanced communication.</p> <p>Ideal for larger installations with remote reading.</p>	<p>Wireless design eliminates communication wiring.</p> <p>Optimal for remote readouts of large areas.</p>	<p>Usable as a Bluetooth gateway for pulse meters.</p> <p>For facilities with ethernet-cabling.</p>	<p>Energy meter with mobile phone link.</p> <p>Ideally suited for decentral installations.</p>
2019		2020		



EFFICIENT, BIM-SUPPORTED PLANNING



ONE EASY WAY TO PLAN AHEAD

The E-Mon BLACK Series includes pre-written engineering specifications in various formats and a broad range of engineering design icons for AutoCAD, E-Plan, and more. Building information modeling (BIM) support includes

3D data models for Autodesk Revit and CREO. Easily import design data into your E-Mon BLACK App for seamless commissioning and quickly select devices with the help of the E-Mon BLACK Navigator.



Strong BIM support
3D data and objects for BIM integration.



E-Mon BLACK Navigator
Quick and simple product selection, along with central provision of online data.



TEST THE ONLINE CONFIGURATOR TODAY
SCAN THE QR CODE



ERROR-FREE INSTALLATION

The E-Mon BLACK Series comes with a significant installation upgrade that combines automatic error detection and in-app suggested solutions to

simplify the entire process. Bluetooth enables meter communication and virtually eliminates BUS wiring – making setup easier than ever.



E-Mon BLACK app

App-supported installation, commissioning, and troubleshooting.



Automatic error detection

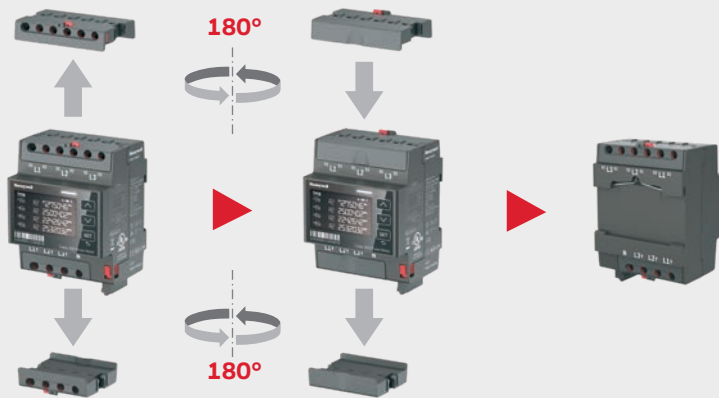
Installation error identification with easy to follow, recommended solutions.



E-Mon BLACK BluMesh

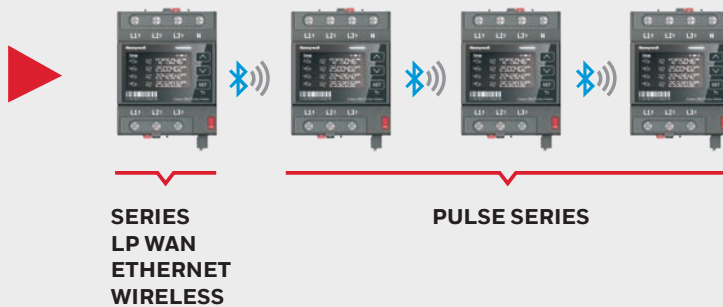
BluMesh reduces wiring and improves communication.

ROTATABLE TERMINALS FOR FLEXIBLE INSTALLATION



Transformer terminals that can be rotated 180° – offering maximum flexibility for installing meters on rails or in control cabinets.

WIRELESS TECHNOLOGY WITH E-MON BLACK BLUMESH



All you need to get started is a meter with a serial connection, LP WAN, ethernet, or wireless capability. And if you want to expand, you can connect via Bluetooth up to 11 other meters to alternative devices.



FAST AND COST-EFFECTIVE COMMISSIONING



THE APP THAT SETS COMMISSIONING APART








The E-Mon BLACK app provides automatic, accurate commissioning reports, templates for configurations and for emulation of third-party meters – enabling a swifter integration during replacement projects. With E-Mon BLACK ExaCT, the calibration data of a CT can be loaded into the

meter during commissioning. This eliminates the CT measurement error and thus increases the measurement accuracy of the system. Honeywell meters are supporting multiple protocols – simply select the required communication protocol during the commissioning process.

UNLIMITED COMMUNICATION OPTIONS



I/O BOARD
Pulse output
SO output
Digital input
Digital output

- 
- 
- 
- 
- 
- 
- 
- 
- 
- 
- 



Emulation of external meters
Easy integration into existing installations.



E-Mon BLACK app
For easier and faster commissioning.



Multi-protocol capability
Increased flexibility thanks to easy protocol selection on the device during commissioning.



Critical alarm BLE connection Non-critical alarm

ACCURATE STATUS DISPLAY

An integrated, multi-colored LED shows the operation status and possible errors.



E-Mon BLACK ExaCT is not done until commissioning has commenced
Enhanced System accuracy as the measurement error of the CT is eliminated.



POWER UP STEADY OPERATION

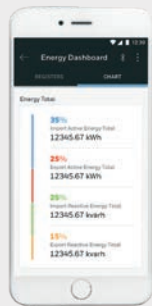
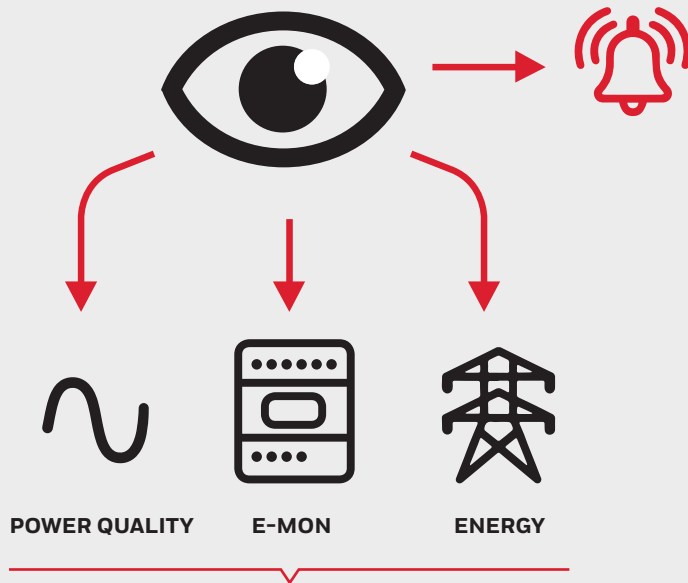


MONITORING AND ALARMING FOR SECURE OPERATIONS

E-Mon BLACK Series meters secure your equipment through a comprehensive monitoring system, as the power quality is continuously monitored, in terms of waveforms and interruptions. The meters use an advanced self-diagnosis system to ensure trouble-free

operations – recording events, anomalies, and load profiles and an alarm is triggered when an error occurs. The E-Mon BLACK Series can be read via the E-Mon BLACK app and Bluetooth, and can support up to eight time-based rates.

MONITORING OPERATION PARAMETERS



SMARTPHONE APP

Comprehensive power analysis that includes power quality monitoring, the self-diagnosis feature, and an in-app alarming that reports errors.



Electronic readout

Simple and secure meter readouts via Bluetooth.



Power quality analysis

Monitoring of power quality in terms of both waveforms and interruptions.



Self-analysis

Possible defects are immediately and clearly displayed on the device's LED screen and in the app.



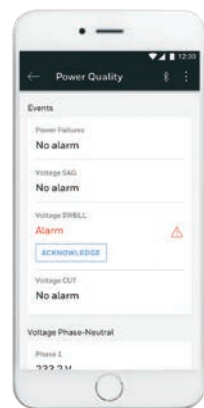
Cybersecurity

The standalone crypto chip along with diverse security features deliver a high-level of cyber protection.

BLUETOOTH ELECTRONIC READOUTS



In-app, easy, error-free electronic meter readouts via Bluetooth.



E-MON BLACK APP

Intuitive app for commissioning, troubleshooting, readouts, and meter monitoring.



ANALYSIS DOWN TO THE LAST DETAIL

With the help of the E-Mon BLACK app and Honeywell Cloud Services, you can centrally control a number of different buildings and efficiently monitor energy-saving programs. With

numerous interfaces and protocols, devices can easily be integrated into all analysis systems – while also benefiting from a quick and seamless integration into Honeywell Systems.



OBS

Predictive maintenance & energy performance

Early identification of potential problems

Automatic generation of service and maintenance jobs

Real-time performance KPI dashboard and reports

ENACTO

Energy management system

Real-time energy waste alarms

Analysis to track energy savings and to support your ISO50001 certification

Unique energy basis function for precise targeting and load demand forecasting

SUPERVISOR

Integrated building monitoring

Monitoring and analysis of all building information in a single application

Support of energy management systems based on ISO50001

Assistance in reaching efficiency class A on the basis of EN15232 for GLT systems



Central management

Central control and management through cloud services and the app.



Automated billing process

Fully automated and error-free data and billing processes.



Quick access

Numerous interfaces for energy management and SCADA systems.



Communication options

Bluetooth, RS-485, wireless gateway, ethernet, or mobile network.



PROGRESSIVE CYBERSECURITY WITH CRYPTO CHIP



Crypto chip

Separate crypto processor for strong protection of sensitive data.



Secure authentication

Communicating parties are authorised through a secure assignment of access rights.



Encrypted communication

Secure communication between devices and between meters and cloud services, and the app.



Event logs

Recording of attacks, anomalies, and manipulation attempts in a specially protected, non-deletable, and non-editable area.

COMPREHENSIVE CYBERSECURITY

The E-Mon BLACK Series energy meters are the only meters that offer overarching cybersecurity. The encrypted communication serves as a basis for a secure communication from meter to meter, and from meter to app and cloud service functions – along with authentication of communicating

parties, for approved access. The access key and event logs are secured by individual crypto processors and cannot be manipulated. Attacks, anomalies, and manipulation attempts are recorded and stored in a protected area that doesn't allow data deleting or editing.



TECHNICAL OVERVIEW HIGH-QUALITY METERS



TECHNICAL DATA OF THE E-MON BLACK FAMILY

TYPE		EM3S-80-P-D	EM3S-80-RS-D	EM3S-80-M-D	EM3S-V-P-D	EM3S-V-RS-D	EM3S-V-P-R	EM3S-V-RS-R
Number of Phases		3	3	3	3	3	3	3
Measurement	Direct	•	•	•				
	Indirect				•	•	•	•
Supply System	Single Phase	•	•	•	•	•	•	•
	Single Phase 3 wire	•	•	•	•	•	•	•
	Delta	•	•	•	•	•	•	•
	Wye	•	•	•	•	•	•	•
Operation Voltage	100...240 VAC							
	100...480 VAC	•	•	•	•	•	•	•
	100...690 VAC							
Frequency				50/60 Hz				
Direct Current	40 A							
	80 A	•	•	•				
	125 A							
Current Transformer	Primary				•	•	•	•
	Secondary				•	•	•	•
		0...9999 A						
		333 mV			•	•	•	•
		2 V			•	•	•	•
Accuracy Class	Active energy	EN50470-3			Class C			
		ANSI C12.20			Class .5			
		IEC62053-21			Class 0.5S			
	Reactive energy	IEC62053-22			Class 2			
		IEC62053-24			Class 1			
Mechanical	Dimensions in mm (W × H × D)				72 × 90 × 62		249 × 207 × 102	
	Weight in g				350		1500	
	Units width (TE)				4			
Environment	Operating Temperature				-20...+70 °C			
	Storage Temperature				-40...+85 °C			
	Indoor	•	•	•	•	•	•	•
	Outdoor						•	•
Measurement	4-Quadrant Measurement	•	•	•	•	•	•	•
	Demand	•	•	•	•	•	•	•
	Load Profile	•	•	•	•	•	•	•
	Monitoring Values (U,I,P,F,...)	•	•	•	•	•	•	•
	Power Quality	•	•	•	•	•	•	•
Tariffs		8	8	8	8	8	8	8
Communication Interface	Bluetooth	•	•	•	•	•	•	•
	S0 Pulse Output	2	1	1	2	1	2	1
	RS-485		•			•		•
	M-Bus			•				
	IpWan							
	Ethernet							
Certification	MID	•	•	•	•	•	•	•
	UL Listed	•	•		•	•	•	•
	California Title 24	•	•		•	•	•	•
	NYCRR-16 Part 96 Approval	•	•		•	•	•	•
	Measurement Canada LMB-EG-07	•	•		•	•	•	•



ORDER INFORMATION

Guideline for decoding the article number





ENGINEERED TO THE LAST DETAIL



**Fast and simple app-supported
commissioning**



**Bluetooth feature for E-Mon BLACK BluMesh,
meter readouts and commissioning**



**Advanced cybersecurity with
crypto chip**



**Integrated analysis functions
for power quality and self-diagnosis**

For more information

www.emon.black

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