# Power metering, monitoring and diagnostics products for OEMs

Eaton's meters and relays reliably deliver data from all parts of the machine. With data able to be provided to cloud infrastructures for further analysis and smart access, these intelligent devices also provide functionalities that help to save energy on electrical applications. Eaton's unmatched circuit protection portfolio gives OEMs the right choice of possibilities, especially for applications that require global acceptance.

In our constant search for cost-effective solutions for the OEM market, Eaton has released the following products in an effort to help simplify retrofit installations while tackling the challenge of meeting stringent energy codes.

Connecting our hardware devices with our easy to use and innovative IoT software rounds out Eaton's offering, fulfilling the need for a secure, cloud-based solution that helps meet energy efficiency and sustainability initiatives.

#### Power metering, power monitoring equipment and software



## Power Xpert Meter 350 (PXM 350)

- Revenue grade energy meter delivering a cost-effective solution for energy and submetering applications
- Intuitive LCD display ideal for building energy management, energy monitoring, and metering systems
- DIN rail mounted, three-phase energy meter provides high accuracy in a small form factor
- Standard with Modbus® RTU, BACnet MSTP, and pulse output
- Multiple current sensors options are available -5A/1A, 333mV & Rogowski coil



## Power Xpert Meter 1000 (PXM 1000)

- Delivers a cost-effective solution for energy and submetering applications
- Provides high-accuracy and advanced features in a standard 4" form factor
- Can be expanded with multiple modular I/O options
- Multiple current sensors options are available -5A/1A, 333mV & Rogowski coil
- Multiple protocols including Modbus® TCP, BACnet/IP, and HTTP push allows data to be sent to the cloud to help meet energy code data storage requirements



## Power Xpert Meter 3000 (PXM 3000)

- Cloud-enabled meter supporting new energy code requirements delivering a costeffective solution for energy and submetering applications
- Available in 1/5A CT type inputs for ease of use in traditional installations
- Combines state-of-the-art technology with harmonic viewing, data trending, performance benchmarking and waveform recording through an embedded Web server accessible from any location via a standard Web browser



## Power Xpert Meter 4000/6000/8000

- Embedded web server allows users to monitor and analyze waveforms, trends, and harmonics directly in web browser or LCD meter display
- Automatic power quality analysis and trigger setting with built-in ITIC (Information Technology Industry Council) performance curve detects and captures sags, swells, transients, and flickers
- Industry standard communication protocols support a multitude of configurations and third-party software
- 24x7 support with a permanently installed meter makes power quality monitoring affordable



#### Power metering, power monitoring equipment and software (continued)



### **Power Xpert Dashboard Lite**

- Allows users to monitor. diagnose, and control devices from a safe location outside the arc flash boundary
- Alerts and notifications dramatically decreases time to find and repair electrical system problems
- · Factory configuration into your power distribution system provides ease of installation. use, and maintenance



#### Power Xpert Energy Visualization and Analytics (PX-EVA)

- · Stores metering data such as energy, power factor, and demand in 5-minute intervals
- Integrates with building management, tenant billing and accounts payable systems
- · Provides the ability to download historical metering data for in-depth data analysis
- · View trends, energy and demand analysis, meter comparisons, time periods, and temperature to help reduce energy consumption



#### **Power Xpert Multi-Point Meter**

- · Meets rigid ANSI C12.20 and IEC 62053-22 accuracy specifications for revenue meters
- 256 MB of standard memory for up to two years of 15-minute interval data
- Monitors power and energy for up to 60 current sensors scalable from 6 to 60 circuits
- Automatically detects rating of each current sensor



#### **Power Xpert Branch Circuit Monitor (PXBCM)**

- · Intuitive web interface provides the ability to access live energy readings remotely and facilities integration
- Data logging capability of 15-minute intervals for up to three years
- On-board load grouping to meet ASHRAE 90.1
- Provides the ability to monitor down to the plug level, meeting or exceeding building codes and regulations

#### Protective relays and predictive diagnostics



#### Eaton distribution relay (EDR)

- · Metering, protection, and control in a single compact case reduces panel space, wiring, and costs
- · Intuitive programming substantially reduces operator training time and provides unmatched operability and flexibility
- Integral test function reduces maintenance time and expense
- Zone selective interlocking improves coordination and tripping time, and saves money compared to a traditional bus differential scheme



#### Eaton generator relay (EGR)

- Microprocessor-based protection with monitoring and control for medium to largesized generators
- · Complete metering of voltage, currents, power, energy, minimum/maximum, and demand functions
- · Complete metering, protection, and control in a single compact case to reduce panel space, wiring and costs
- Integral test function reduces maintenance time and expense



#### Eaton motor relay (EMR)

- Use basic motor nameplate data to create a custom overload curve to accurately protect the motor
- · Zone selective interlocking improves coordination and tripping time, and saves money compared to a traditional bus differential scheme
- Programmable logic control functions to accommodate different control schemes, simplify the wiring of the starter
- · Automatically detects direction of the motor and eliminates the need of switching current inputs into the relay



#### Eaton transformer relay (ETR)

- · An unrestrained differential element provides fast tripping on heavy internal faults minimizing risk of damage to the remainder of the power system
- Instantaneous overcurrent elements allow quick clearing of internal or external faults
- Front panel backlit LCD display allows for wide-angle viewing in all light conditions, and easy visual display of power on, mode of operation, alarm, and trip indication
- Maintenance Mode improves safety by providing a simple and reliable method to reduce fault clearing time and lower incident energy levels at energized panels.

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