

PowerWave 2 branch circuit monitoring



PowerWave® 2 branch circuit monitoring is a busway metering system that provides revenue-grade metering accuracy and real-time insights from connected power equipment. PowerWave 2 branch circuit monitoring provides a quick plug-and-play installation, intuitive integration with building management system (BMS), and is scalable to accommodate facilities' reconfigurations or expansions.

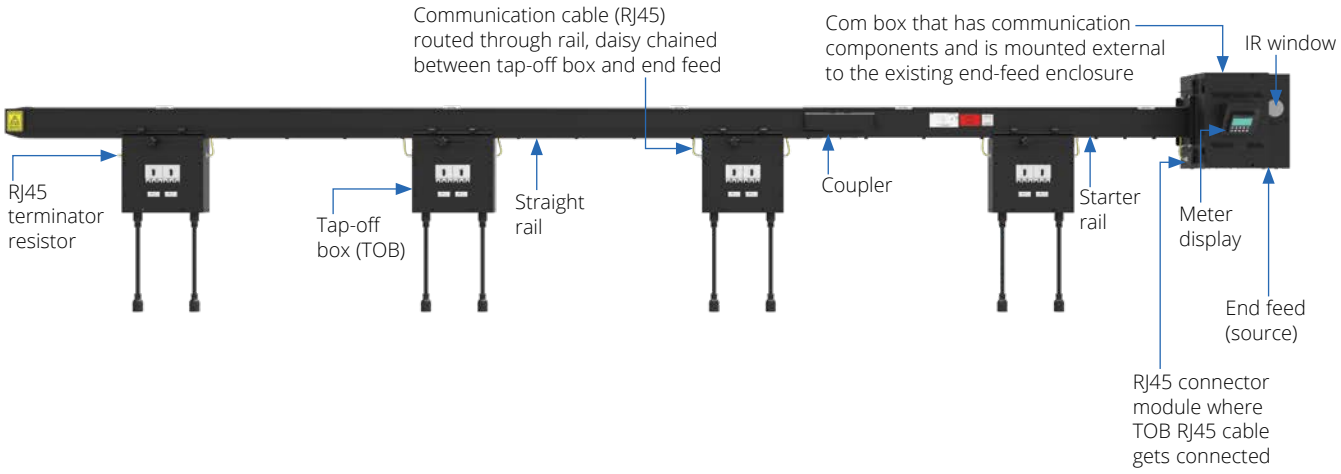
Features and benefits

The monitoring system ships complete and ready for installation from the manufacturing facility. Each tap-off box ships complete with current transformers (CTs) and meters pre-installed and calibrated. Each end feed ships complete with meters, voltage sensing and CTs ready to be installed on the landing cables.

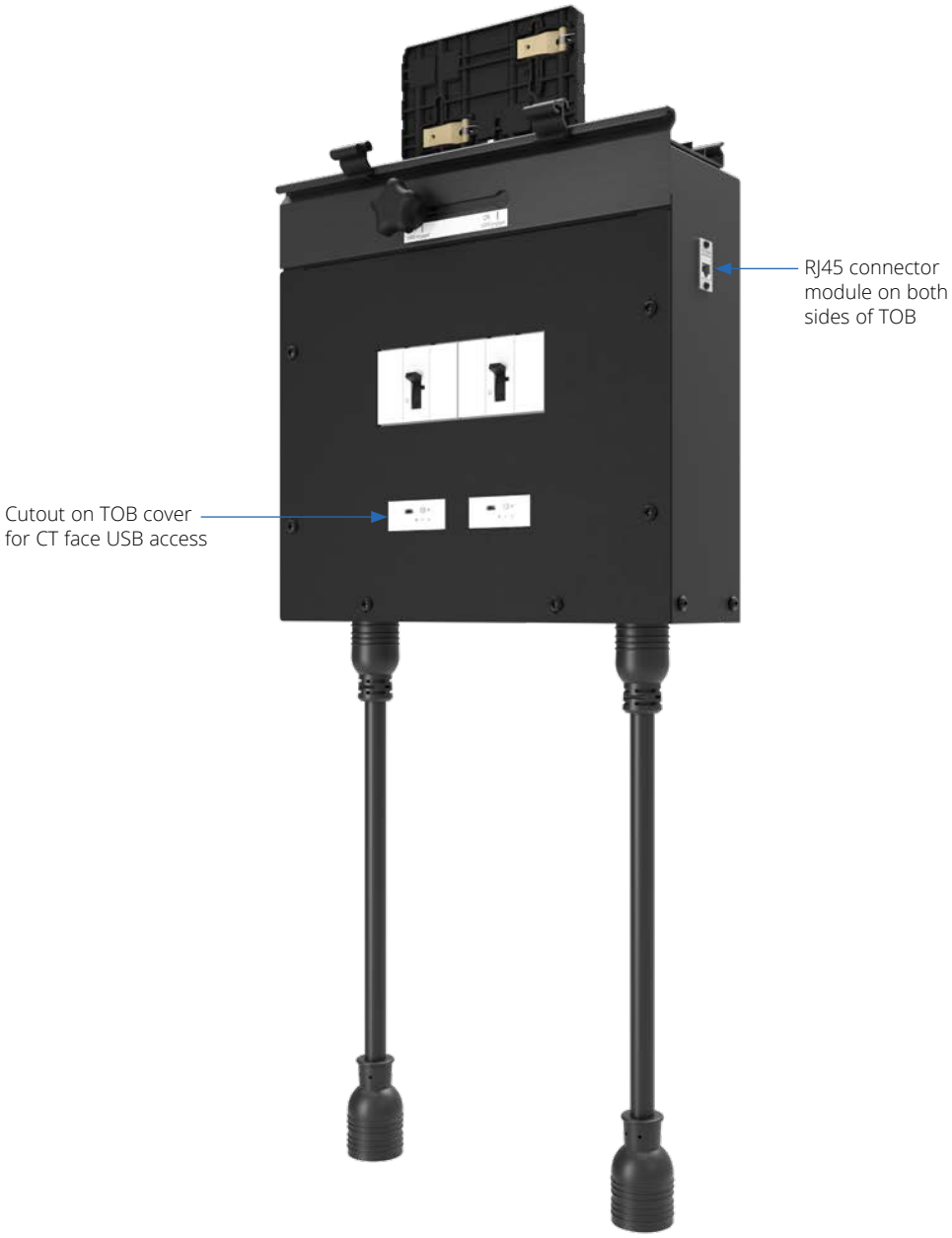
- Revenue-grade accuracy
- Class 0.5 system accuracy (ANSI C12.20 and IEC 61557-12)
- RJ45 daisy chain plug-and-play installation
- Breaker status monitor (on/off)
- Robust (no exposed PCBs)
- Engineered-to-order with fast market lead time
- Seamless BMS Integration with multiple communication protocols: Modbus® RTU/TCP, BACnet/IP and SNMPv1, v2, v3

Powering Business Worldwide

Meter components

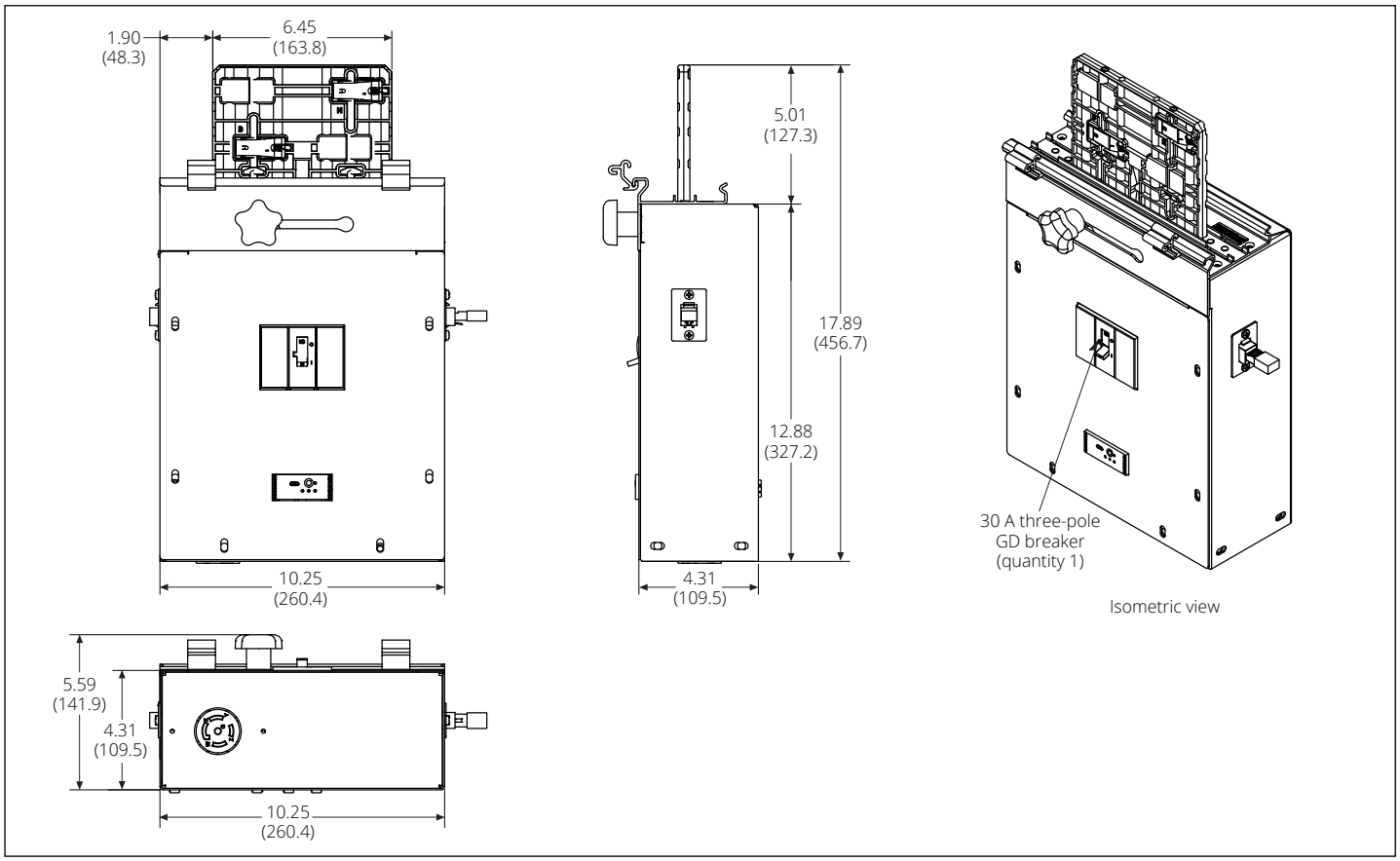


Front view

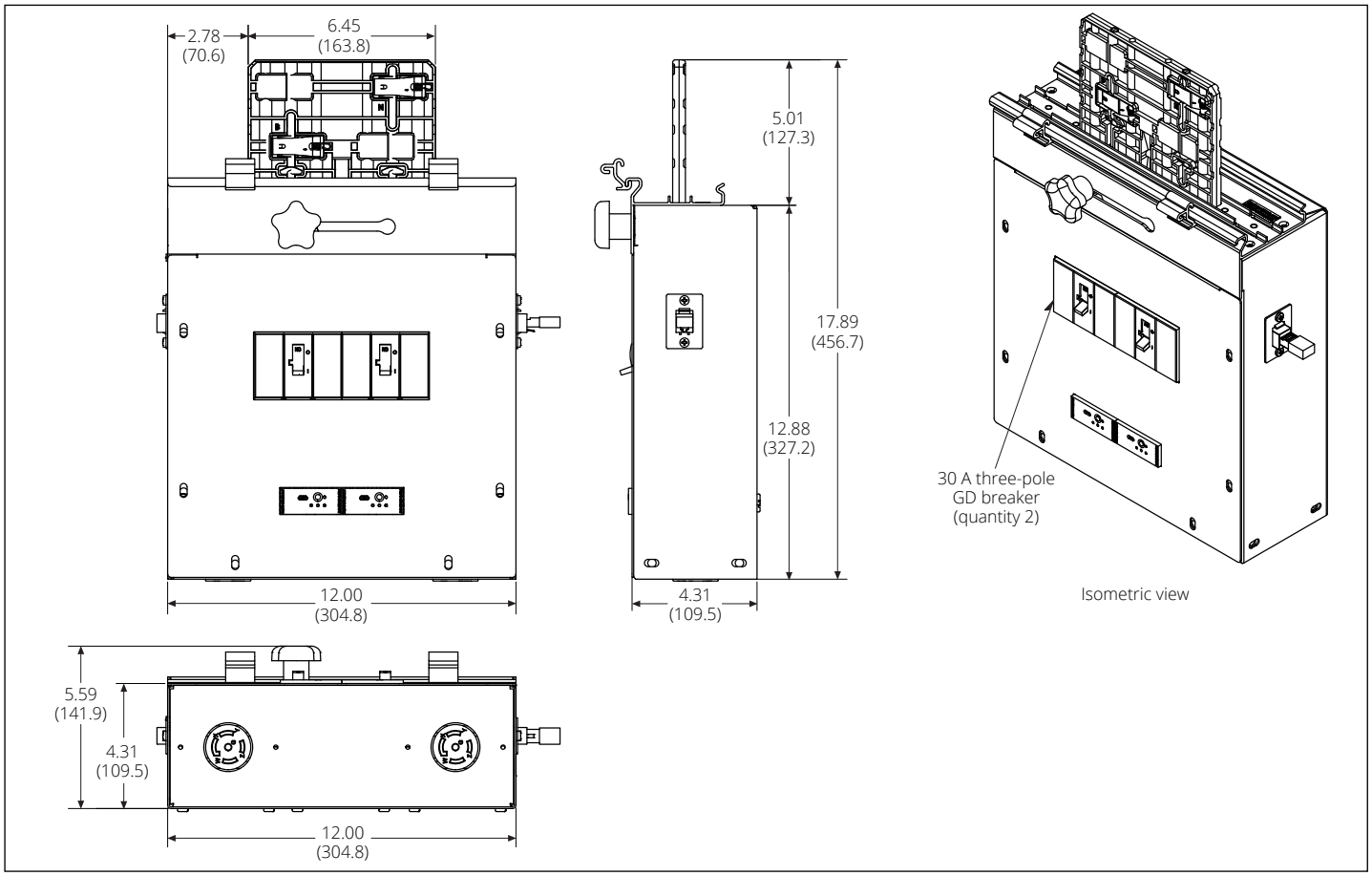


Product dimensions

Dimensions in inches (mm)



10.25-inch TOB design with single GD breaker (GD3030)



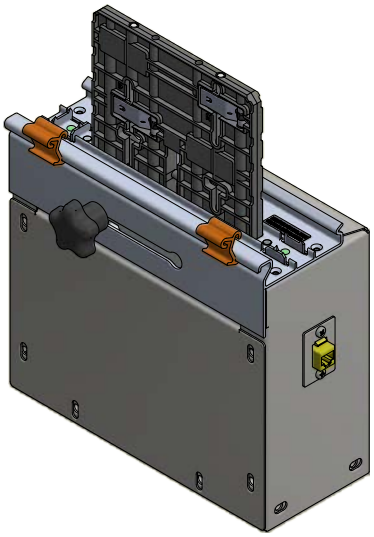
12-inch TOB design with dual GD breaker (GD3030)

Repeater box

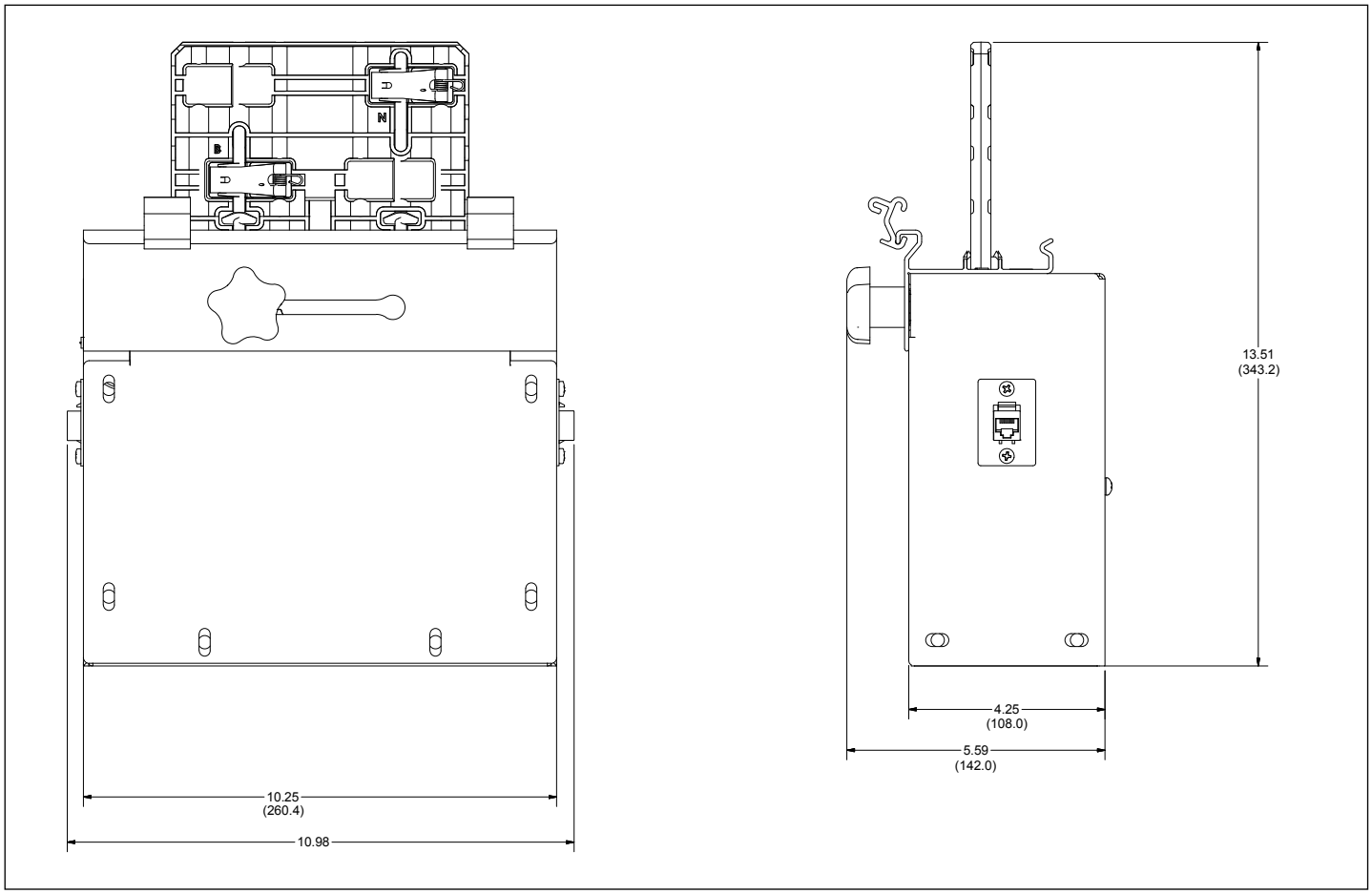
A repeater box is used whenever the total power consumption exceeds the maximum consumption of the 24 Vdc auxiliary power supply used (20 W). This equates to needing a repeater box when exceeding 28 daisy-chained CTs in a run (there is one three-pole CT per cord drop/receptacle). For example, if your application requires 15 tap-off boxes, each with two three-pole breakers yielding 30 CTs, you will need a repeater box. Repeater box tap-off boxes come equipped with fusible overcurrent protection and a 24 Vdc input.

A repeater box is also required whenever the RJ45 communication cable (daisy-chained) exceeds more than 328 ft (100 m).

Each repeater box provides an additional 20 W and 328 ft (100 m) to the communication cable length potential. A maximum of two repeater boxes can be used per busway run.



Dimensions in inches (mm)



Repeater box assembly

Technical specifications

Ratings	Specification
Input/output	Three-phase, four-wire plus housing ground; optional isolated or dedicated ground
Ampacity	250 A, 400 A, 600 A, 800 A, 1000 A
Voltage	600 Vac maximum
Frequency	50 Hz / 60 Hz
Neutral	100% or 150% (150% only for 250–400 A)
Tap-off box	128 A maximum per phase
Protection	IP2X finger-safe
Short circuit ratings	250 A and 400 A: 42 kA at 120/208 Vac, 35 kA at 277/480 Vac, 22 kA at 347/600 Vac 600 A, 800 A and 1000 A: 42 kA up to 600 Vac
Voltage drop	2 V per 100 ft (30.5 m)
Safety and mounting option standards	
ETL classified to UL 857, CSA C22.2 No. 27 and IEC 60439-2 standards	
UL/CSA standards limit ratings to 225 A for the United States and 400 A for Canada for continuous plug-in busway	
Operating conditions	
Storage temperature	+40 to +158 °F (+4 to +70 °C)
Operating temperature	+32 to +104 °F (0 to +40 °C)
Relative humidity	0% to 95% noncondensing
Operating altitude	Up to 6600 ft (2000 m)
Branch circuit monitoring system (BCMS)	
Monitor	Connect up to 30 source or branch modules to monitor current and voltage
Communications	Modbus TCP, BACnet/IP and SNMP V1, V2 and V3
Indicator	Breaker status indicator lights
Testing	
PowerWave 2 busway system shall be factory tested before shipment. Testing includes:	
Hi-pot test at 2X the unit's rated voltage plus 1000 V per UL 857	
Receptacle or connector and breaker configuration	
Phase wiring/connectivity test	
Ground fault path test	
System weight	
250 A busway	6.8 lb/ft
400 A busway	9.6 lb/ft
600 A busway	12.6 lb/ft
800 A busway	19.4 lb/ft
1000 A busway	24.2 lb/ft

Service and support

With decades of mission-critical power experience and seasoned factory-trained service staff, Eaton can maximize the benefit of your equipment investment. For more information and for 24/7 support, contact the Eaton service team at 1-800-225-4838.

For more information, visit **Eaton.com/powerwave2**

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