



PowerBullet™ Power/Energy Transducers

Line Powered 100/115/208/230V or 277/347/480/600V AC Demand and Consumption Measurement

The PowerBullet™ is a power and energy transducer designed for monitoring demand and consumption in residential, commercial and industrial applications. It is a line-powered, phase-to-phase unit with outputs compatible with the Voltage and Pulse inputs of most measurement systems. The transducer outputs directly proportional to kW/kVA for demand and kW/kWh for consumption. It takes into account Power Factor and True RMS Values. The PowerBullet uses a miniature Rogowski flexible split-core current transducer which makes it small enough to fit inside disconnect enclosures, breaker panels or distribution boxes. Wide Mouth Alligator clips make it easy to connect to the line voltage terminals without tools.

Power Demand and Energy Consumption differ in measurement modes in order to give the best accuracy. Peak demand is determined from instantaneous values, while total consumption is the accumulation of Power over time. The two product configurations take this into account, providing a clear choice for approaching Measurement and Verification (M&V) for the best inherent accuracy.

Highlights:

- Measures Phase-to-Phase or Phase-to-Neutral - no phase wiring errors
- Power Factor and kVAR can be determined using kVA demand version
- Accurate Consumption can be determined from kWh version
- Measure as low as 90VAC and as high as 630VAC
- Protects investment by interfacing with legacy ACR Data Loggers
- Compatible with the analog and digital inputs of other monitoring systems
- Indicator lamp for live power applied

Features & Benefits:

- Innovative Approach - half the cost for delta loads
- Supports Long Term Recording - seasonal loads
- Line Powered - no dead batteries
- Built to conform to world safety standards
- ARC Flash protection built in
- Rated for 600V Cat III and 300V Cat IV in Pollution Degree 2 environment (can be connected to live circuits in conditions that are free of condensation and conductive dust, the PowerBullet must be housed in an appropriate water and dust tight enclosure when necessary)
- Alligator clips can latch onto (0000AWG) wire of 12.5mm (1/2in) lugs/bolts
- Transducer fits inside most electrical panels where it is convenient to pick up AC Voltage and Current signals
- Miniature Rogowski current clamp makes it easy to attach around conductors up to 38mm (1.5in) outside diameter
- Electronics housed inside an electrically insulated plastic enclosure (requires no ground connection unless required by code)





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GENERAL SPECIFICATIONS

Probes: 0.5m (20in) Output: 1.4m (4.5ft)

Real Power (PB-16x):	300kW 1Φ / 520kW 3Φ FS (PF=1.0)
Apparent Power (PB-16x):	300kVA 1Φ / 520kVA 3Φ FS
Real Power (PB-13x):	150kW 1Φ / 260kW 3Φ FS (PF=1.0)
Apparent Power (PB-13x):	150kVA 1Φ / 260kVA 3Φ FS
Power Factor:	0.5-1.0 Lead or Lag
Frequency:	50/60Hz (NOT FOR VFD OUTPUT)
Dimensions L x W x H:	(140 x 57 x 57mm) 5.5 x 2.3 x 2.3in
Weight:	0.3kg (0.7lb)
Case Material:	ABS Plastic UL94V-0
Fuse:	0.5A Fast-Acting 100kAAC
Resolution:	20W, 20VA or 1pulse/Wh
Safety Rating:	300V Cat IV or 600V Cat III
Voltage Range:	90-300VAC or 250-630VAC
Current Range:	2-500A (at 600VAC)
Probe OD:	51mm (2.0in) Nominal
Measurement Mode:	Delta Sigma / True RMS
Operating Limits:	10 to 55°C (14 to 131°F)
Power Consumption:	2.5W 40VA
Software Version:	TrendReader 2.3 or Later
Environmental:	10 to 90% RH Non-condensing
Maximum Altitude:	2000m (6560ft)
Pollution Degree:	2 (Non-conductive Dust)



Loose,
DIN-Rail or
Flange Mount

CHANNEL ACCURACY

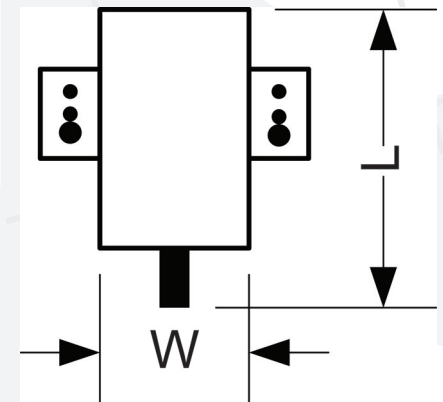
Measurement:	±0.1% (Before & After Ratio)
Transducer:	±0.5% (±3% Position)
System:	±1% (±4.5% Position)
Demand Output:	98mV FS into 400Ω load 4.99V FS into 10MΩ load
Consumption Output:	5V 6mS Pulse (14% Demand Ripple)

Power Demand Models

kW and kVA – proportional voltage outputs
PF for Energy Audits – compound line
Three Phase Balanced Loads – motors/compressors
Compatible with SmartReader 3 or SmartReader Plus 3 data loggers

Energy Consumption Models

kW and kWh - voltage & pulse outputs
Single Phase Branch Circuits - lighting loads
Revenue Grade - pulse accumulation
Compatible with SmartReader 9 or SmartReader Plus 9 data loggers



ORDERING INFORMATION

Model Description

PB-133 300V Power Transducer	Cat#: 01-0418
PB-163 600V Power Transducer	01-0419
PB-139 300V Energy Transducer	01-0420
PB-169 600V Energy Transducer	01-0421
AC- BLK Alligator Clip, Black	31-0074
AC- RED Alligator Clip, Red	31-0073

Outputs:

Power:	kW and kVA Demand
Energy:	kWh and kVAh Consumption
Complies with:	CSA 22.2 No. 61010-1
Conforms to:	EN / IEC / UL 61010-1
WIRING:	SHLD-Com, BLK-kW/kWh, WHT-kVA/kVAh

TR2-USB TrendReader 2 SW*

01-0226

*Requires Equations Included w/Transducer