



KW320B

3 Channel Power Meter, 0.2 Class Accuracy, BACnet IP Only

The KW320B meter combines high performance with ease of integration via BACnet-IP (BTL-Listed) to provide a power and energy monitoring solution. Over 100 metering parameters can be monitored in real-time from a built-in web interface and encryption ensures that communication is secure. The mobile-friendly web interface allows users to remotely monitor and configure meter on mobile devices. KW320B meters support all electrical system configurations from single phase to three phase and their tamper-proof design is approved for revenue applications (ANSI C12.20 Class 0.2 and IEC 62053-22 0.2s). The meter comes standard to be mounted in a 4" Round or an IEC 92mm DIN Square form or has the flexibility to be mounted to 35mm DIN rail with the AXM-DIN adapter (See Accessories Ordering). This product provides demand measurement of Current, Active Power, Reactive Power and Apparent Power – see table 1 for all parameters monitored and

metered. Current input are compatible with any ACI 333mV and Flexible Rogowski Coil CT. Meters come standard with a three channel CT input to accurately measure neutral current. CTs are sold separately as shown on the ACI Split-Core, Solid-Core and Rogowski Current Transformer product data sheets.

Applications: Tenant Billing, Data Centers, Sub-Metering Electrical Panel, Equipment Load Monitoring, Industrial Applications, Predictive Maintenance, Renewable Energy, Overhead Cost Reduction, "NET ZERO" Buildings, LEED Buildings, Green Buildings, and Refrigeration

The KW320B Power Meters are covered by ACI's Five (5) Year Limited Warranty. The warranty can be found in the front of ACI's Sensors & Transmitters catalog, as well as on ACI's web site, workaci.com.

PRODUCT SPECIFICATIONS

Service Type:	Single Phase, 3 Phase – Four Wire (WYE), Three Phase – Three Wire (Delta)
Power¹:	100 - 415Vac, 50/60Hz, 100 - 300Vdc on terminals L and N
Burden:	5W
Withstand:	3250Vac, 50/60Hz for 1 minute
Power Supply Wiring:	AWG22-16 (0.6-1.5mm ²)
AC Fuse Protection:	External 1A/250VAC Fuse (Recommended)
Rated Voltage:	100-400VAC Line to Neutral (L-N) or 100-690VAC Line to Line (L-L) RMS for three phase or 100-400VAC RMS for single phase; 100-300 VDC
Number of CT Inputs:	3
Revenue Grade Accuracy:	Active Energy: Class 0.2s (According to IEC 62053-22) and Class 0.2s (According to ANSI C12.20) Reactive Energy: Class 2 (According to IEC 62053-23) – See Table 2 for parameter accuracy, resolution, and range
Voltage Channels:	400 Volts AC (L-N), 690 VAC (L-L), 45Hz - 65Hz, 300Hz - 500Hz
Withstand Voltage:	1500Vac Continuous, 2500Vac, 50/60Hz for 1 Minute
Input Impedance:	2M ohm per Phase
Pickup Voltage:	10VAC
Current Channels:	3 Channels, 0.525 VAC max, 333 mV CT's or 0 to 6000 Amps with Rogowski Coils
Maximum Current Input:	150% of current sensor rating (mV CT's) to maintain accuracy. Up to 6000 Amps w/ Rogowski Coils
Harmonic Resolution:	63rd Harmonic (50Hz or 60Hz type) or 15th Harmonic (400Hz type)
Measurement Type:	Real-time, True RMS measurement of instantaneous Voltage, Current, Power, Frequency, Harmonics, Phase Angle, Demand, Unbalance Factor, Running Time, and Power Factor
Line Frequency:	50/60 Hz
Measurement Data Parameters:	See Table 1
Real Time Parameter Update Rate:	100 mS
Accumulated Parameter Update Rate:	1 Sec
LCD Display:	Multiple Display Modes (Important Parameter's, All Parameter's, Settings Display Modes)
Communication Protocol:	Ethernet: BACnet Over IP Only
Enclosure Material / Flammability Rating:	Polycarbonate / UL 94V-0
Operating Temperature Range:	-13 to 158oF (-25 to 70oC)
Storage Temperature Range:	-40 to 185oF (-40 to 85oC)
Operating / Storage Humidity Range:	5 to 95%, non-condensing
Wiring Connections:	Screw Connections
Wire Size:	14-22 AWG (2.5 to 0.34 mm ²)
Mounting:	ANSI C39.1 (4" Round) or an IEC 92mm DIN (Square) form.
Utility Software:	Acuview Utility Software, Windows Based;
Agency Approvals:	BTL Certified, CE, UKCA, RoHS2, cULus Listed (File # E359521)



PRODUCT SPECIFICATIONS

Standard Compliance:	Measurement Standard: IEC 62053-22; ANSI C12.20
	Environmental Standard: IEC 60068-2
	Safety Standard: IEC 61010-1, UL 61010-1, IEC 61557-12
	EMC Standard: IEC 61000-4/-2-3-4-5-6-8-11, CISPR 22, IEC 61000-3-2, IEC 61000-6-2/4
	Outlines Standard: DIN 43700, ANSI C39.1
Face Dimensions (L x W x H):	3.80" (96 mm) x 3.80" (96 mm) x 1.99" (50.7 mm)
Power Meter Weight:	0.77 lbs. (350g)

Note 1: A power supply can be an independent power supply and a fuse (typical 1A/250Vac) is suggested to be used when connecting the power supply to the meter.

TABLE # 1

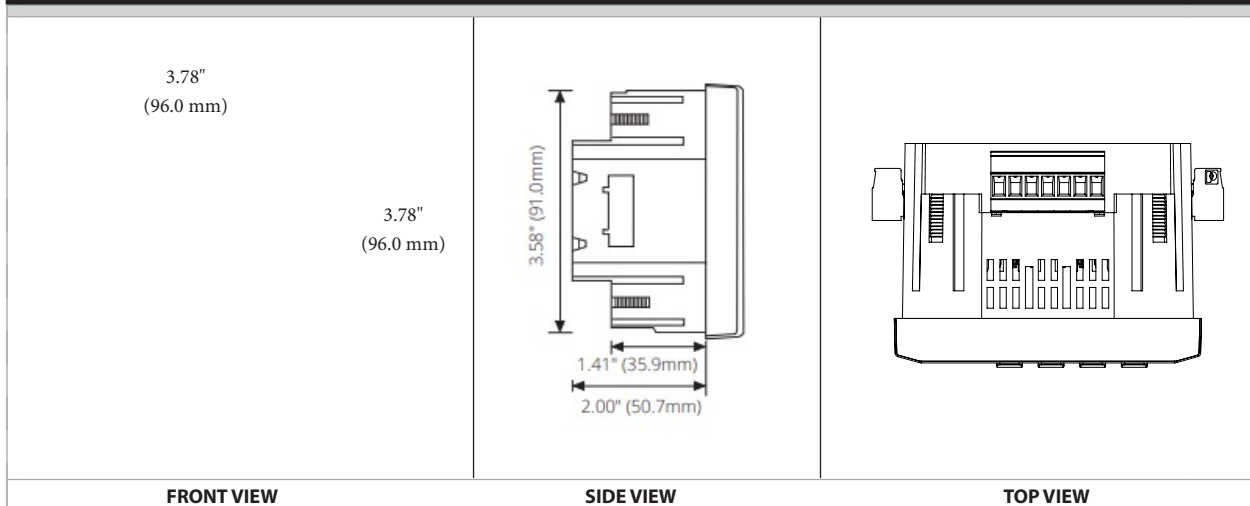
CATEGORY		ITEM	Parameters	
Metering	Real time metering	Phase Voltage	V1, V2, V3, Vlnavg	
		Line Voltage	V12, V23, V31, Vllavg	
		Current	I1, I2, I3, In, Iavg	
		Power	P1, P2, P3, Psum	
		Reactive Power	Q1, Q2, Q3, Qsum	
		Apparent Power	S1, S2, S3, Ssum	
		Power Factor	PF1, PF2, PF3, PF	
		Frequency	F	
	Energy & demand	Energy	Ep_imp, Ep_exp, Ep_total, Ep_net, Epa_imp, Epa_exp, Epb_imp, Epb_exp, Epc_imp, Epc_exp	
		Reactive Energy	Eq_imp, Eq_exp, Eq_total, Eq_net, Eq_a_imp, Eq_a_exp, Eqb_imp, Eqb_exp, Eqc_imp, Eqc_exp	
		Apparent Energy	Es, Esa, Esb, Esc	
		Demand	Dmd_P, Dmd_Q, Dmd_S, Dmd_I1, Dmd_I2, Dmd_I3	
	Monitoring	Power quality	Voltage Unbalance Factor	U_unbl
			Current Unbalance Factor	I_unbl
Voltage THD			THD_V1, THD_V2, THD_V3, THD_Vavg	
Current THD			THD_I1, THD_I2, THD_I, THD_Iavg	



TABLE #2

METERING				
Parameters		Accuracy	Resolution	Range
Voltage		0.2%	0.1V	10V~1000kV
Current		0.2%	0.001A	5mA~50000A
Power		0.2%	1W	-9999MW~9999MW
Reactive Power		0.2%	1var	-9999Mvar~9999Mvar
Apparent Power		0.2%	1VA	0~9999MVA
Power Demand		0.2%	1W	-9999MW~9999MW
Reactive Power Demand		0.2%	1var	-9999Mvar~9999Mvar
Apparent Power Demand		0.2%	1VA	0~9999MVA
Power Factor		0.2%	0.001	-1.000~1.000
Frequency		0.02%	0.01Hz	45.00~65.00Hz (50 or 60Hz type) 300.00Hz~500.00Hz (400Hz type)
Energy	Primary	0.2%	0.1kWh	0-99999999.9kWh
	Secondary	0.2%	0.001kWh	0-999999.999kWh
Reactive Energy	Primary	0.2%	0.1kvarh	0-99999999.9kvarh
	Secondary	0.2%	0.001kvarh	0-999999.999kvarh
Apparent Energy	Primary	0.2%	0.1kVAh	0-99999999.9kVAh
	Secondary	0.2%	0.001kVAh	0-999999.999kVAh

DIMENSIONAL DRAWING





STANDARD ORDERING

Model #	Item #	Description
KW320B-P1-D-IP	151262	3 Circuit, Ethernet BACnet IP Only, 0.2 Class Accuracy, Power Meter 333mV and Rogowski Coil CT Input, Panel Mount

ACCESSORIES ORDERING

Model #	Item #	Description
AXM-DIN	148248	KW320 DIN Rail Adapter
AK-03	150827	Three Fuse Pack; Inline Fuse Kit; 600V, 2A; Slow Blow

