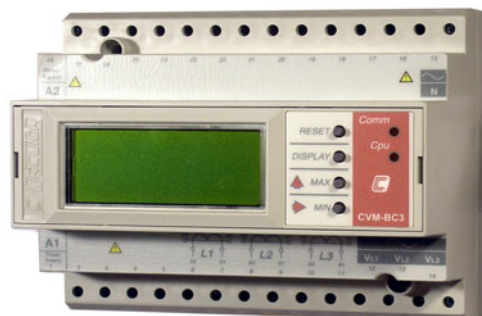


# CVM-BC3 SERIES

## DIN RAIL MOUNTED ELECTRICAL POWER MONITOR

### FEATURES

- DIN rail mounting
- Two Quadrant operation
- Integral LCD display
- True RMS measurements
- Relay outputs for Energy pulse or alarm status
- RS485 Modbus communications
- Maximum Demand calculated
- Voltage and Current %THD
- Neutral Current Calculation



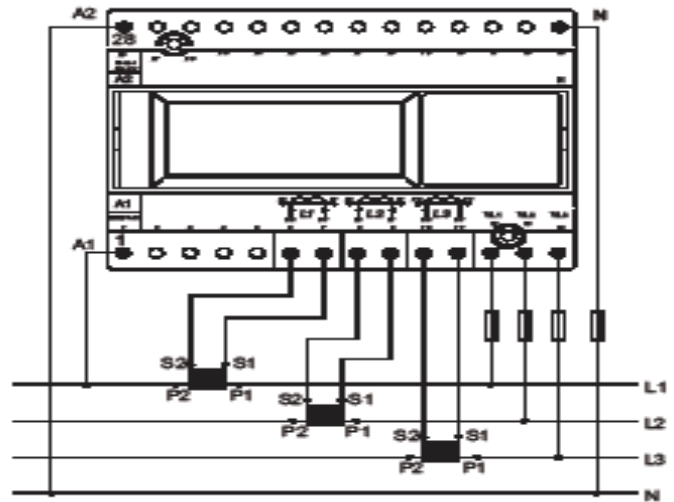
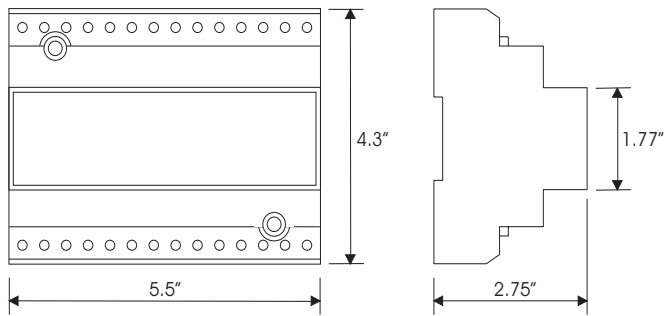
CVM-BC3 Power Monitor

The **CVM-BC3** family of DIN rail mountable, multi function power monitors offer industrial and commercial facilities a compact, cost effective and feature rich instrument that not only measures, calculates and displays all the main electrical parameters of any network (balanced or unbalanced) but also provides multiple options including configurable relay outputs and communication protocols.

### MEASUREMENT AND DISPLAYED PARAMETERS

	CVM BC3-ITF	CVM BC3-ITF-RS485-C2
<b>Measurements</b>		
AC Volts (phase-phase)	L1, L2, L3	L1, L2, L3
AC Volts (phase-neutral)	L1, L2, L3	L1, L2, L3
AC Current	L1, L2, L3 & III*	L1, L2, L3 & III*
Frequency (Hz)	L1	L1
Min/max values	✓	✓
Neutral Current (Calculated)	Opt	Opt
<b>Power</b>		
Active Power - kW	L1, L2, L3 & III	L1, L2, L3 & III
Inductive Power - kVar	L1, L2, L3 & III	L1, L2, L3 & III
Capacitive Power - kVar	L1, L2, L3 & III	L1, L2, L3 & III
Apparent Power - kVA	Opt	Total*
Power Factor	L1, L2, L3 & Total	L1, L2, L3 & Total
Maximum & Minimum values	✓	✓
2 Quadrant	✓	✓
<b>Demand</b>		
Amp Demand per phase* or total	✓	✓
Power Demand - total	✓	✓
kW Accumulated - Sliding Window	✓	✓
kVA Accumulated - Sliding window	✓	✓
<b>Energy</b>		
Active energy - kWh	✓	✓
Inductive energy - kvarh	✓	✓
Capacitive - kvarh	✓	✓
Pulse		✓
<b>Power Quality Harmonics</b>		
THD Volts	L1, L2, L3	L1, L2, L3
THD Amps	L1, L2, L3	L1, L2, L3
<b>Setpoints, Alarms, Control</b>		
Relays (alarms with delay or energy pulses)		2
<b>Communications</b>		
Serial Comms - Modbus RTU		✓

## DIMENSIONS & CONNECTIONS



## SPECIFICATIONS

### Measuring Circuits :

Voltage auto range:	120-600V ac , 3 or 4 wire
Rated voltage:	500 V ac Phase-to-Neutral / 866 V ac Phase-to-Phase
Frequency:	35 to 65 Hz
Rated current:	$I_n / 5$ A isolated
Permanent overload:	$1.2 \times I_n$
Current input burden:	0.6 VA

### Accuracy :

Voltage:	0.5 % of readout $\pm$ 2 digits
Current:	0.5 % of readout $\pm$ 2 digits
Power & Energy:	1.0 % of readout $\pm$ 2 digits

### Test conditions :

- Errors due to C.T. and direct voltage measurement not included
- Temperature between + 5 °C and + 45 °C
- Power factor between 0.5 and 1
- Measured values between 5 % ...100 %

### Power supply :

Voltage :	Single phase 120 V ac (Other AC and DC Voltage Options)
Voltage tolerance:	+10 % / -15%
Frequency:	50/60 Hz
Burden:	6VA
Operation temperature:	32 to 125 °F (0 to 50 °C)
Humidity:	5 to 95% R.H. non-condensing

### Mechanical Characteristics :

Connection:	screw terminals
Case material:	Self-extinguishable, V0 Plastic
Mounting:	DIN rail or screw mounting
Protection:	Module : IP41 Terminals : IP20
Dimensions:	5.5"x 4.3"x 2.75"

### Communications:

Type:	RS485
Protocol:	Modbus RTU

### Relays characteristics: (Field Programmable)

Maximum switching load:	2500 VA
Maximum switching voltage:	400 Vac
Maximum switching current:	10 A

Mechanical endurance:	3 x 10 <sup>7</sup> operations
Energy / alarms pulses:	max. 1 pulse / sec

At full load: (250 V ac / 10 A)

Electrical endurance:	1 x 10 <sup>5</sup> operations
Maximum operation cadence:	450 oper. / hour

### Standards & Safety:

UL 1010, IEC 601010-1, IEC 664, VDE 0110, UL94  
IEC 801, IEC 348, IEC 571-1, EN50081-1, EN50082-1

Safety: Category III - 300Vac / 520Vac as per EN-601010  
Protection against electric shock by Class II double insulation

## STANDARD MODELS (Others on request)

**CVM BC3-ITF**

CVM-BC3 with isolated 5A current inputs

**CVM BC3-ITF-RS485-C2**

CVM-BC3 with RS485 Modbus RTU communications and 2 relays

10235 S Progress Way, Unit 1, Parker, CO 80134  
Tel: 877-PQ-SOLNS (777-6567) Fax: 425-799-4780  
e-mail: [info@measurlogic.com](mailto:info@measurlogic.com)  
web: [www.measurlogic.com](http://www.measurlogic.com)

CVMBC3a

