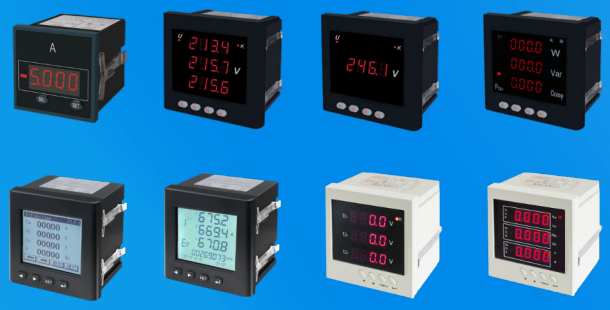
DIGTAL PANEL METER



Introduction

Blue Jay digital panel meter is a digital alternative to analog display instrument,which has lower cost for installation and can make full use of panel space. It is suitable for indication and monitoring of single-phase or three-phase circuits,accepts various inputs (such as voltage,current,frequency,etc.),provides alarm relay, analog signal transmission and optional pulse output.

We supply high-quality,high-precision BPM series standard digital panel meters and APM series multi-function digital panel meters, which can be used to measure various electrical parameters, including voltage,current,frenquency, etc. The large LCD screen helps you easily read the digital results displayed on it.

Measurement Parameter

Voltage	Va, Vb, Vc / Vab, Vbc, Vca
Current	Ia, Ib, Ic
Power	Pa, Pb, Pc, Psum
Reactive power	Qa, Qb, Qc, Qsum
Apparent power	Sa, Sb, Sc, Ssum
Frequency	Fra, Frb, Frc, Fr
Power factor	PFa, PFb, PFc, PF
Active energy	Ep_imp, Ep_exp, Ep_total
Reactive energy	Q_imp, Q_exp, Q_total
Voltage THD *	THD_U%, THD_I%
Harmonic	2~15th / 2~31th / 2~63th
Multi- tariffs	3 Month, 4 Tariffs, 12 Segment
Max demand	Um, Im, Pm, Qm
Power quality	Voltage Drop / Flicker / Unbalance

Reference Standards

Measurement standard

Active energy	IEC 62053-22:2003
Reactive energy	IEC 62053-23:2003
Basic electricity	IEC 61557-12:2007

LVD test standard

IEC/EN 61010-1	2017, CATIII-300V

EMC test

Discharge immunity	IEC 61557-12:2007
Fast transient burst immunity	IEC 62053-22:2003
Surge (Shock) immunity	IEC 62053-23:2003

Application

- Remote data reading.
- Power quality analysis.
- Harmonic measurement.
- Commercial, industrial, utility.
- Medium and low voltage systems.
- Alarm station with voltage-free digital inputs.
- Metering of distribution feeders, transformers, generators, capacitor banks and motors.

BPM SERIES STANDARD DIGITAL PANEL METER

Introduction

BPM series standard digital panel meter especially developed for indication and supervision of the three-phase circuit, replaces an analogical display meter, reducing installation procedure and optimizing utilization of panel space.

It's ideal for protection of single phase or three- phase networks, it is monitored and usually have superior and subordinate alarms. Protection of the parameters of programming by password.

Main Features

- Measurement functions include:current, voltage, three-phase total power, power factor, frequency.
- 0.5 class (BPM basic series) / 0.5s class (BPM3 economic series) high-precision measurement.
- Large HD LED screen display.
- Password protected programming parameters.
- Protection for single-phase and three-phase networks.
- ITF technology:input and output current insulation protection.
- RS-485 communication, optional expandable I/O modules.
- Various installation sizes, excellent panel space utilization.
- Universal series power supply (85-265VAC/DC), 20-60VDC optional.

Ordering Information

BPM [1]-[2][3]-[4][5]

- [1] Series type
- [2][3] Panel size
- [4] Function code
- [5] Communication
- Phase number

Num.	Code	Description
[1]	2	Basic type
	3	Economic type
[2]	96	96(W)x96(H)x71(D)mm
	72	72(W)x72(H)x71(D)mm
	80	80(W)x80(H)x71(D)mm
[3]	U	Voltage meter
	I	Current meter
	P	Active power meter
	Q	Reactive power meter
	H	Power factor meter
	F	Frequency meter
	UI	Voltage & current combine meter
	UIF	Voltage & current& frequency combine meter
	PQH	Power & power factor combine meter
	E	Economic multifunction meter
[4]	Blank	Without this function
	R	With RS485 interface, Modbus-RTU
[5]	1	Single-phase
	3	Three-phases

Note: BPM2 series only can select from num.2-4.

Measurement Function

Model	BPM2/3 -96U	BPM2/3 -96I	BPM2/3 -96P	BPM2/3 -96Q	BPM2/3 -96H	BPM2/3 -96F	BPM3 -96UI	BPM3 -96UIF	BPM3 -96PQH	BPM3 -96E
Parameter										
Voltage	●	-	-	-	-	-	●	●	-	●
Current	-	●	-	-	-	-	●	●	-	●
Active power	-	-	●	-	-	-	-	-	●	●
Reactive power	-	-	-	●	-	-	-	-	●	●
Power factor	-	-	-	-	●	-	-	-	-	●
Frequency	-	-	-	-	-	●	-	●	●	●
Active energy	-	-	-	-	-	-	-	-	-	●
Reactive energy	-	-	-	-	-	-	-	-	-	●
Expansion module										
Analogue output	-	-	-	-	-	○	○	○	○	○
Digital output	-	-	-	-	-	○	○	○	○	○
Energy pulse output	-	-	-	-	-	○	○	○	○	●

●With this function ○Optional function -Without this function

Technical Characteristics

Model	BPM2	BPM3
Current measurement (TRMS)		
CT secondary	1 or 5 A Ture RMS	
Measurement range	0 ... 11 kA	
Input consumption	<0.1 VA	
Voltage measurement (TRMS)		
Measurement range	18 ... 400 VAC Ture RMS	
PT secondary	100VAC or 400VAC	
Frequency	50 / 60 Hz	
Input consumption	<0.1 VA	
Frequency measurement		
Measurement range	45 ... 65 Hz	
Accuracy	±0.02Hz	
Measurement accuracy		
Voltage, current	0.50%	
Active power, reactive power	0.50%	
Active energy	Class 1.0 (IEC 62053-21)	
Reactive energy	Class 2.0 (IEC 62053-23)	
Power supply		
AC voltage	220VAC	AC/DC 90~240 ± 10 %,Optional DC20-60V
Consumption	< 10 VA	
I/O ports		
Pulse outputs (PO)	NONE	Equipped on meter with energy metering
Quantities of port	/	1 or 2
Pulse constant	/	5000imp/kWh 20000imp/kVarh
Optocoupler isolation capability	/	2kVac r.m.s
Relay outputs (DO)	/	Optional
Load capacity	/	5A@250Vac or 5A@30Vdc
Digital inputs (DI)	/	Optional
Quantities of port	/	96mm size meter max 6*DI 80mm and 72mm size meter max 4* DI
Load capacity	/	Ri<500Ω ON, Ri>100kΩ OFF
Analog output (AO)	/	1* 4~20mA, load <390Ω, or 0~10V, load >100KΩ
Quantities of port	/	96mm size meter max 3*AO 80mm and 72mm size meter max 1* AO
Communication		
Protocol	/	Modbus RTU
MODBUS speed	/	4800 / 9600 / 19200 bauds
Others		
Calibration environment	27°C ± 5°C	
Operation environment	0 to 50°C,RH < 70%	
Storage environment	-10 to 60°C,RH < 70%	
Weight	Appx.300-400g	Appx.300g
Dielectric strength (AUX terminal)	2 kV at 50Hz for 1 min	