



Powering Innovation



PROTECTION + AUTOMATION + CONTROL

PF METER & LEAD POWER FACTOR RELAY

JRR 011

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FEATURES

- ◆ Software based design
- ◆ Display of Power factor, Phase angle and frequency
- ◆ Dust proof enclosure
- ◆ Draw out type

APPLICATION

JRR 011 is used to trip (dis-connect) capacitor bank from the line during lead power factor in the system.



PRINCIPLE OF OPERATION

The R-Phase line current input to relay is derived from the line CT. The R - B line voltage scaled to relay rated voltage using transformers. The relay measures the phase angle between R-Current and R-B voltage, the output contact operates when PF reaches lead condition after fixed operating time of 60s. The output contact release when PF reaches lag condition after fixed operating delay of 60s.

The aux supply required for the operation of relay is derived from the voltage input hence no need of dedicated power source.

The relay displays power factor, line frequency, phase angle between line current and voltage.

TECHNICAL DATA

RATING

Voltage	: 110V or 415V AC
Current	: 1A or 5A
Frequency	: 50Hz \pm 5Hz

OVER LOAD RATINGS

Current input	: 2 times rated continuous 20 times rated for 3s. 40 times rated for 1s
Voltage input	: 2 times rated continuous

BURDEN

Current input	: Less than 0.05VA at rated 1A Less than 0.2VA at Rated 5A
Voltage input	: Less than 10 VA

DISPLAY

PF	: 0.2 Lead - Unity-0.2 lag
Frequency	: in Hertz
Phase Angle	: in Degrees

ACCURACY

PF	: ± 0.02 or $\pm 2^\circ$
Frequency	: ± 0.05 Hz

CONTACT RATINGS

Relay rating	: 5A at 24V DC/230V AC
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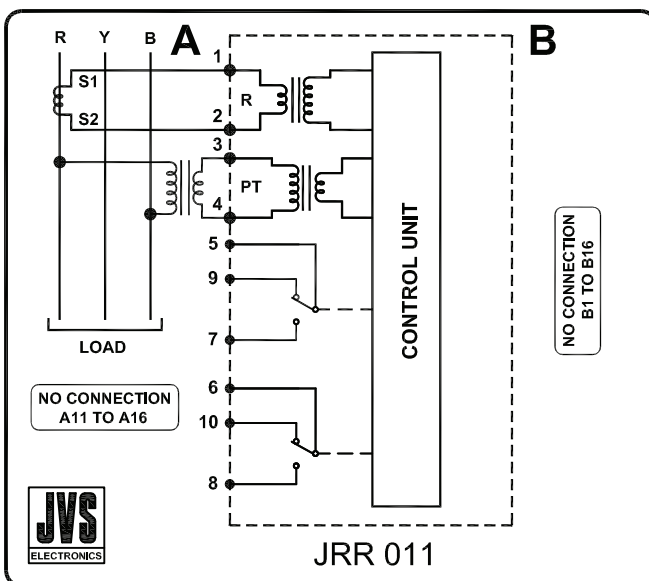
CONTACT DURABILITY

Loaded contact	: 1,000,000 operations
Unloaded contact	: 100,000 operations

MECHANICAL DESIGN

Weight	: 2 kg. (approx)
Case Size	: 144sq mm, depth 232mm
Installation	: Flush mounting
Panel cutout	: 138mm x 138mm

TERMINAL DIAGRAM:



ORDERING INFORMATION

Current rating	: 1A / 5A
Rated voltage	: 110V AC or 415V, 50Hz., AC
Relay type	: JRR 011