



Powering Innovation



PROTECTION + AUTOMATION + CONTROL

MOTOR PROTECTION RELAY

JRC 113

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FEATURES

- ◆ Software based design
- ◆ Block on Start feature provides very accurate time
- ◆ Definite time over load protection
- ◆ Locked rotor current protection
- ◆ Single phasing / Unbalance protection
- ◆ Wide setting ranges
- ◆ Draw-out case

APPLICATION

The relay provides Over load protection of AC motors driving conveyors, crushers, machine tools, compressors, fans etc.



PRINCIPLE OF OPERATION

This is a Microprocessor based relay which has been designed to sense the load currents in all the three phases of an AC motor. It monitors the levels of these currents continuously, giving output signals for relay and LED driver circuits

TECHNICAL DATA

RATINGS

Primary current rating	: 1A / 5A
Auxiliary Supply	: 1) 20-60V DC : 2) 75 to 150V DC / AC : 3) 175 to 300V DC / 185 to 250V AC

SETTINGS

Current setting ranges	: O/C - 50 to 200% in steps of 10% : EF - 5-80% in steps of 5%
Locked rotor current	: 50 to 800% of rated current in steps of 50%
Block on Start time setting range (T1)	: 5 to 35 seconds in steps of 2 sec.
O/C withstand time setting range (T2)	: 1 to 16 seconds in steps of 1 sec.
Locked rotor withstand time setting range (T3)	: 0.5 to 4 seconds in steps of 0.25 sec.

ACCURACY

Accuracy of time setting	: ± 5 with a minimum error of ± 50 m secs.
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OVER LOAD RATINGS

Over load capacity	: 2 times rated continuously : 20 times rated for 3s
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BURDEN

Current input	: 0.2VA per phase (at Rated 5A) : 0.05VA per Phase (at Rated 1A)
Aux. Supply	: Less than 8W (Non Operated) : Less than 10W (Operated)

CONTACT RATINGS

TRIP/ALARM

Rating : 10A at 24V DC/230V AC

CONTACTS DURABILITY

Unloaded contact : 10,000 Operations

Loaded contact : 100,000 Operations

INSULATION

1. 2KV RMS, 50 Hz for 1 minute / 2.5 KV for 1 sec. between all terminals and earth.

2. 1 KV RMS, 50 Hz for 1 minute across open contacts.

MECHANICAL DESIGN

Weight : Approx. 2500 gms

Case size : 144 sq mm with depth of 232 mm

Installation : Flush mounting

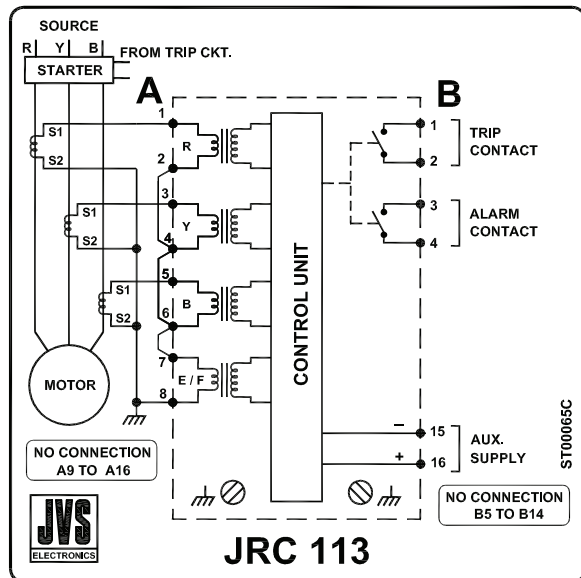
Panel cutout : 138 X 138 mm

STANDARD COMPLIANCE

Accuracy Test : IEC 60255-3

Insulation Test : IEC 60255-5

TERMINAL DIAGRAM



ORDERING INFORMATION

Relay type : JRC 113

Current rating : 1A or 5A

Aux Supply : 20-60V DC

: 75 – 150V AC / DC or

: 175 – 300V DC / 185 – 250V AC