

Phasefale MP15/ MP15D Automatic Motor Protector

Installation and Commissioning

The MP15 is a solid state three phase motor protector with adjustable start delay, anti short cycle timer and fault memory. It is suitable for all sizes and types of 3 phase motors. The MP15 is manufactured under strict quality control and testing procedures, which along with its advanced electronics means superior precision and reliability.

The MP15 indicates the condition of the motor control circuit as follows;

- Green** : Motor Running
- Green/Amber** : Motor running + previous memory fault
- Red** : Motor not running
- Red/Amber** : Motor not running + previous memory fault

Once set, the memory condition remains until reset by turning off power to the MP15 (active- pin 7).

When power is initially applied to active (pin 7), the MP15 has a start delay which can be set from approximately 1 to 60 seconds. Where more than one motor is supplied from a single supply, a staggered start at regular intervals is possible.

A fusible link protects the MP15 relay from external electrical faults such as contactor coil failures. The internal link is repairable at the factory.

The MP15 protects against these common causes of motor failure :

- Voltage imbalances of more than 25% between phases.
- Blown fuses causing single phasing.



- Chattering or poor making motor starting contacts.
- Faulty 415V isolating switchgear
- Loose or poor connections simulating a phase loss.
- Overloading. Motor starters which automatically reset can cause windings failure. The MP15's 15 minute delay prevents this.
- Power failure caused by multiple motors starting at the same time. The MP15 Start Delay prevents this.
- Under voltage. If the voltage drops to approximately 180 volts to neutral on any phase, the MP15 automatically trips and actuates a 15 minute delay.

The MP15 plugs into a standard octal base. (The MP15D is DIN Rail mount and uses the same pin designations). The eight connections are :

- Pin 1** : Line 1 of the motor supply. For maximum protection the connection should be made on the load side of the motor starter close to the motor.
- Pin 2** : Line 2 , as for line 1.
- Pin 3** : Line 3 , as for line 1.
- Pin 4** : Neutral.
- Pin 5** : Fault/Memory input. A 240 VAC signal applied to this pin will open the internal control relay for 15 minutes and illuminate the Memory indicator. Typical connections to this pin are to overload trip, high pressure cutout, oil level and water temperature sensors.
- Pin 6** : Control Out. this is a 240 VAC signal which is switched by the internal control relay. The Control Out signal can be connected to further control devices and on to the motor starter.
- Pin 7** : Active. The Start Delay starts timing when power is applied to this pin. This active is switched through to pin 6 (Control Out) via the internal control relay.
- Pin 8** : Off Time. A 240 VAC signal applied to this pin will trigger a 15 minute Off Time. This similar to the function of pin 5 except the Memory indicator is not affected. Typical connections to this pin are the normally open side of pressure, temperature or level controls to ensure a minimum 15 minute Off Time each time the control operates, thus eliminating the possibility of motor damage caused by short cycling.

NOTE : Pins 1, 2, 3, 5 and 8 are protected against induced voltage such as that induced as the motor field collapses.

The MP15 is a versatile control with many uses. Notes are available on specific applications of the MP15 - please ask.

*Other Models Available;
MP15E -economy with Octal Base
MP15D/E - economy Din Rail mnt
MP15P1-Single Phase Octal Base
MP15D1-SinglePhaseDin Rail mnt.*

