Allen-Bradley Service Manual

150-F108NBD

1. Description

The Allen-Bradley 150-F108NBD is a SMC Flex Smart Motor Controller. This motor controller has a line Voltage of 200-460VAC, 3-Phase, 50 and 60 Hz and control Voltage of 100-240V AC (5-480 A units). It delivers maximum continuous output current of 108 Amperes and output power of 75 HP at 460VAC rated voltage with an open type enclosure. This motor controller has an integrated LCD backlit display which is used for programming and monitoring of the controller's operation.

2. Specifications

Specification	Value
Manufacturer	**Allen Bradley**
Category	**Drives**
Product	**Line SMC-Flex**
Part	**Number 150-F108NBD**
UPC	**662073059912**
Weight	**33.56 lbs (15.22 kg)**
Operating	**Modes Soft Start, Full Voltage Start, Smart Motor Braking, Current Limit Start, Dual Ramp Start, Accu-Stop, Selectable Kickstart, Pump Start, Slow Speed with Braking, Coast-to-rest, Preset Slow Speed, Linear Speed Acceleration (Tachometer required), Soft Stop and Pump Stop**
Bulletin	**Number 150**
Control	**Voltage 100...240V AC (5...480 A units)**
Product	**Family SMC Flex Smart Motor Controller**
Line	**Voltage 200...460V AC, 3-Phase, 50 and 60 Hz**
Maximum	**output Current 108 A**
Maximum	**output Power 75HP**
Communications	**One DPI provided for connection to optional human interface and one DPI provided for connection to communication**
Auxiliary	**Contacts Four fully programmable contacts as normal/up-to- speed/fault/alarm/network (N.O./N.C.), or external bypass (N.O. only)**
Metering	**Amps, volts, kW, kWh, MW, MWH, elapsed time, power factor, motor thermal capacity usage**
Prot	

3. Product Information

The Allen-Bradley 150-F108NBD is a SMC Flex Smart Motor Controller. This motor controller has a line Voltage of 200-460VAC, 3-Phase, 50 and 60 Hz and control Voltage of 100-240V AC (5-480 A units). It delivers maximum continuous output current of 108 Amperes and output power of 75 HP at 460VAC rated voltage with an open type enclosure. This motor controller has an integrated LCD backlit display which is used for programming and monitoring of the controller's operation.

Technical specifications for 150-F108NBD

Manufacturer Allen Bradley

Category Drives

Product Line SMC-Flex

Part Number 150-F108NBD

UPC 662073059912

Weight 33.56 lbs (15.22 kg)

Operating Modes Soft Start, Full Voltage Start, Smart Motor Braking, Current Limit Start, Dual Ramp Start, Accu-Stop, Selectable Kickstart, Pump Start, Slow Speed with Braking, Coast-to-rest, Preset Slow Speed, Linear Speed Acceleration (Tachometer required), Soft Stop and Pump Stop

Bulletin Number 150

Control Voltage 100…240V AC (5…480 A units)

Product Family SMC Flex Smart Motor Controller

Line Voltage 200…460V AC, 3-Phase, 50 and 60 Hz

Maximum output Current 108 A

Maximum output Power 75HP

Communications One DPI provided for connection to optional human interface and one DPI provided for connection to communication

Auxiliary Contacts Four fully programmable contacts as normal/up-to- speed/fault/alarm/network (N.O./N.C.), or external bypass (N.O. only)

Metering Amps, volts, kW, kWh, MW, MWH, elapsed time, power factor, motor thermal capacity usage

Protection and Diagnostics Power loss, line fault, voltage unbalance, excessive starts/hour, phase reversal, undervoltage, overvoltage, controller temp, stall, jam, open gate, overload, underload, communication fault.

Enclosure Type Open Type Enclosure

Controller Rating 108 A, 75 Horsepower(HP) at 460 VAC

Input Line Voltage 200-460 VAC, 3-Phase, 50/60 Hz

Description

The 150-F108NBD is a SMC Flex Smart Motor Controller that is manufactured by Allen-Bradley. This device comes with line input voltage requirements of 200-460VAC, 3-Phase, 50 / 60 Hz and control Voltage range of 100-240V AC (5-480 A units). This drive provides a maximum continuous output current of 108 Amperes power of 75 HP at 460VAC rated voltage. The 150-F108NBD comes with an open-type enclosure. It is also provided with built-in LCD backlight with front panel buttons, allowing local controller configuration and operation. This Human Interface Module (HIM) also permits monitoring of the drive's operations status as well as aid in troubleshooting in the event of device malfunction.

It provides visual and configuration and convenient means of configuring the drive. Communication is established using the built-in DPI interface of the smart motor controller.

The 150-F108NBD may also be called as a Soft-Starter. This soft starter are popularly used to implement energy saving measures as well as motor protection device from the stress brought by starting and shutdown sequence of a motor. It provides a variety of starting and stopping modes as well as a certain level of speed control to minimize generation of inrush current and reduce effect of mechanical stress to the motor. Control methods supported by the 150-F108NBD are Soft Start, Full Voltage Start, Smart Motor Braking, Current Limit Start, Dual Ramp Start, Accu-Stop, Selectable Kickstart, Pump Start, Slow Speed with Braking, Coast-to-rest, Preset Slow Speed, Linear Speed Acceleration (Tachometer required), Soft Stop and Pump Stop.

This controller has a 200 to 460 Volts AC input voltage, 50 and 60 Hertz, and control voltage of 100 to 240 Volts AC. The Allen-Bradley 150-F108NBD SMC-Flex is a solid-state controller used in the operation of a standard three-phase squirrel cage induction as well as the Wye-Delta (6-lead) motors. These soft-starter's series comprises of both combination as well as non-combination models. Every controller comes with seven different standard start modes while it is also used in controlling resistive loads. The 150-F108NBD controller is equipped with an LCD and a programmable keyboard which makes it easy for use in any industrial environment. It also comes with inbuilt Electronic Motor Overload Protection and the SCR/Run Bypass feature. The 150-F108NBD and the whole of the Allen Bradley SMC-Flex Controller series offer advanced features and have a compact style. They have the capability to start and stop AC motors rated at up to 6000 Horsepower. While the Allen-Bradley 150-F108NBD SMC-Flex Solid-State Controller meets the international industrial requirements, and this solid-state controller is designed and intended for straightforward initial installation as well as simple modifications, making it even easier to work with the current electromechanical starters. These controllers are designed and intended for ease of use with features like multiple power monitoring parameters, an LCD to enhance easy setup and operation, a keypad for programming convenience, and a serial interface port that allows for communication with several modules.