

Product Details and Certifications

Cross Reference RA Part Number: PN-71480



Product: **150-SM2**

Description: SMC-50 PTC, Ground Fault, & Current Feedback
Option Module



Representative Photo Only (actual product may vary based on configuration sections)

ACCESSORY SELECTION

Bulletin Number	150-S Smart Motor Controllers Accessories
Accessory Selection	Individual Accessory Selection

SELECTION

Option Module (3 Maximum/Controller)	SMC-50 PTC, Ground Fault, & Current Feedback Option Module
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SMC™-50 Smart Motor Controllers

Accessories

Option Modules

Option modules can be used to add or expand the functionality of the SMC-50 Control Module. Option modules are installed into the control module's three expansion ports, 7 through 9.

NOTE: If network communication is required, a Cat. No. 20-COMM-X communication adapter must be inserted in expansion port 9.


Description	Compatible Control Module Ports	Maximum # of Option Modules of this Type Per Controller	Cat. No.
 PTC, Ground Fault, & Current Feedback Option Module	7 & 8	1	★ 150-SM2
 Analog I/O Option Module: 2 analog inputs (voltage or current) and 2 analog outputs (voltage or current)	7, 8, 9	3	§ 150-SM3
 Digital I/O Option Module: 4 100...240V AC inputs and 3 relay outputs	7, 8, 9	3	§ 150-SM4
 Parameter Configuration Module — DIP and rotary dial	7, 8, 9	1	‡ 150-SM6

★ See page 13 for additional information.

§ See page 13 for additional information.

‡ See page 12 for additional information.


Converter Modules

Description	Rated Current	Cat. No.
 Three-Phase Current Monitoring Module	30...180 A	★ 825-MCM180
	181...520 A	★ ‡ 825-MCM20
	825-MCA	

Connection Cable (Replacement) Cat. No. 150-SM2 to Bul. 825-MCM Connection

★ Used with a Cat. No. 150-SM2 to provide current feedback to the SMC-50 when in external bypass configuration.

‡ Requires user-supplied current transformers with 5 A secondary.

Description	Turns Ratio	Cat. No.
 Core Balance Ground Fault Sensor	100:1	§ 825-CBCT

§ Used with a Cat. No. 150-SM2 to provide ground current feedback.

NOTE: The ground fault sensing feature of the SMC-50 is intended for monitoring purposes only. It is **not** to be used as a ground fault circuit interrupter for personnel protection as defined by Article 100 of the NEC. The sensing feature has **not** been evaluated to UL 1053.

Protective Modules★‡

Current Rating	Description	Cat. No.
90...520	480V Protective Module	150-F84L
90...520	600V Protective Module	150-F86L

★ The same protective module mounts on the line or load side of the SMC-50. Use of protective modules is highly recommended. For applications requiring both line and load side protection, two protective modules must be ordered.

‡ Protective modules must not be placed on the load (motor) side of an SMC-50 when using an inside-the-delta connection or with pump, braking, or linear speed acceleration/deceleration control.

Control Inputs & Outputs

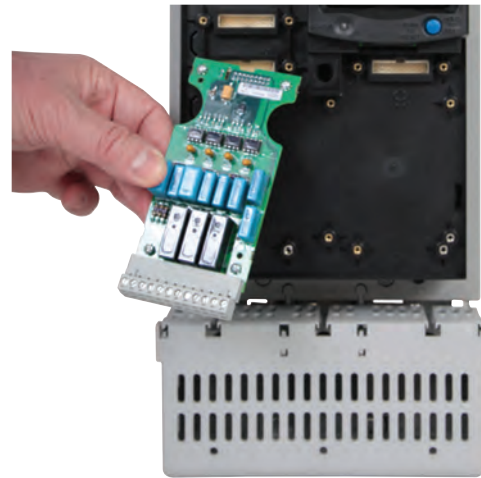
Standard Inputs ★

The SMC-50 comes standard with two 24V DC inputs. The control functionality of each input is user-configurable as follows: Start, Coast, Stop Option (e.g., Soft Stop, Pump Stop), Start/Coast, Start/Stop, Slow Speed, Overload Select, Fault Input (N.O.), Fault Input (N.C.), Clear Fault, Emergency Run, Dual Ramp Profile Select, and Start Motor Heater function. The status of any input is readable via communications.

Optional Inputs ★

A Cat. No. 150-SM4 Digital I/O option module contains four 120/240V AC inputs and can be inserted into any of the three control module option ports (three modules maximum per control module). The control functionality of each input is user configurable and identical to the standard inputs. The status of any input is readable via communications.

A Cat. No. 150-SM3 Analog I/O option module provides two analog inputs (voltage or current) and can be inserted into any of the three control module option ports (three modules maximum per control module). The control functionality of each input is user configurable. The status of any input is readable via communications.



SMC-50 Smart Motor Controller with 150-SM4

Standard and Optional Outputs ★

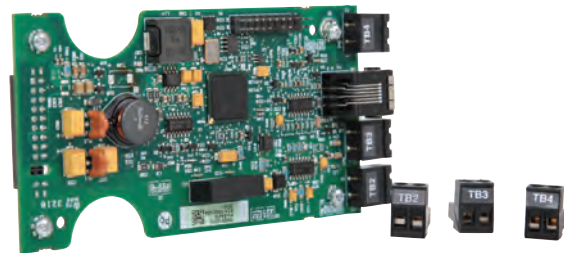
The SMC-50 comes standard with two relay outputs. By adding a Cat. No. 150-SM4 Digital I/O Option Module, three additional relay outputs are provided (three option modules maximum per control module). The control functionality of each relay output is user-configurable as follows: Normal (Start Enabled), Up-To-Speed, Fault, Alarm, External Bypass, External brake, Auxillary Control, and Network 1-4. Each output also includes a user-configurable on and off delay timer (10.0 seconds maximum) and the ability to invert the state of the contact. Network control of each output is also provided.

By adding a Cat. No. 150-SM3 Analog I/O module, two analog outputs (voltage or current) are provided.

Optional PTC, Ground Fault, & Current Transformer Interface Capability ★

The Cat. No. 150-SM2 Option Module features PTC, ground fault, and external current transformer interface capability. The PTC feature enables connection to external PTC temperature sensors to monitor motor winding temperature and feedback data to the SMC-50. A SMC-50 Alarm and/or Fault can be configured to trip if the PTC setpoint is exceeded. The ground fault feature enables controller detection and enunciation of a possible system ground fault which could indicate a pending motor winding failure (e.g., insulation breakdown). A Bulletin 825-CBCT External Ground Fault (Core Balance) Sensor is also required to interface with the 150-SM2 to fully enable this feature.

When the SMC-50 is used in the external bypass mode with the contacts of the external bypass contactor closed, the user has the option of using the SMC-50's internal or external current sensing capabilities. If using external current sensing so that metering, alarm/fault, etc. conditions are reported to the controller during run operation, an external Bulletin 825-MCM Converter Module is required to interface with the 150-SM2 Option Module.



150-SM2 Option Module

★ All standard and optional I/O Terminal Blocks are removable

‡ The ground fault sensing feature of the SMC-50 is intended for monitoring purposes only. It is **not** to be used as a ground fault circuit interrupter for personnel protection as defined by Article 100 of the NEC. The sensing feature has not been evaluated to UL 1053.