

Bulletin 109, 105, 103C, 107C IEC Enclosed Compact Starters



Non-Reversing and Reversing
Non-Combination and Combination Starters

Compact Size with Robust Material

- Bulletin 109 Eco Class Starters
 - IP 66 and Type 4X, 12K (indoor use only)
- Bulletins 109 and 105 Automation Class Starters
 - IP 66 and Type 4, 4X, 12K
- Bulletins 103C and 107C Combination Starters
 - IP 66 and Type 1, 12K

Practical Design

- Reduces installation time and complexity
- Knockouts for 20 mm and 25 mm – metric cable glands
- Sealable cover screws
- Non-corrosive parts
- Easy to access terminals and molded connection kits
- Optional side-mount accessory modules to the Allen-Bradley® E1 Plus Electronic Overload Relay

Standards Compliance

- EN/IEC 60946-4-1 (Buls. 105, 109)
- EN/IEC 60946-4-2 (Buls. 103, 107)
- UL 50
- UL 508
- CSA 22.2, No. 14

Approvals

- CE Marked
- cULus Listed



The Allen-Bradley® Bulletins 109, 105, 103C and 107C IEC Enclosed Compact Starters are for indoor or outdoor use and are ideal for material handling, single drive OEM machinery, conveyor systems, fans, and refrigeration applications. These enclosed starters provide a compact, cost effective solution to help reduce machine space and expand product flexibility.

- The Eco Class Starters are ideal for simple starter applications providing an economical solution
- The Automation Class Starters are designed for more complex applications requiring protection, diagnostics and communications, including EtherNet/IP™ and DevicNet™ connectivity
- The Combination Starters provide the most compact motor protection

LISTEN.
THINK.
SOLVE.®



Bulletin 109 IEC Non-Reversing Starters

Bulletin 109 enclosed starters are designed using Bulletin 100 contactors and Bulletin 193 E-1 Plus electronic overload relays in a metal or molded plastic enclosure.

Ratings (AC3, AC4)	E1 Plus Overload Relay	Catalog Number	
Max. I_e [A]	Full Load Current Range [A]	With START (Green) and STOP (Raised Red) Push Buttons	With RESET (Blue) Push Button
Eco Class			
Type 4, 4X, 12K (IP66) Watertight, Dusttight, Corrosion-Resistant Small Molded Plastic Enclosure (For Type 1 enclosure, replace 109-C*K... with 109-C*V...)			
9	1.0...5.0	109-C09K⊗E1C-1	109-C09K⊗E1C-7
9	3.2...16	109-C09K⊗E1D-1	109-C09K⊗E1D-7
12	3.2...16	109-C12K⊗E1D-1	109-C12K⊗E1D-7
16	3.2...16	109-C16K⊗E1D-1	109-C16K⊗E1D-7
23	5.4...27	109-C23K⊗E1E-1	109-C23K⊗E1E-7
Automation Class			
Type 4, 4X, 12K (IP66) Watertight, Dusttight, Corrosion-Resistant Large Molded Plastic Enclosure			
9	1.0...5.0	109-C09L⊗E1C-1M-7	
9	3.2...16	109-C09L⊗E1D-1M-7	
12	3.2...16	109-C12L⊗E1D-1M-7	
16	3.2...16	109-C16L⊗E1D-1M-7	
23	5.4...27	109-C23L⊗E1E-1M-7	
30	9.0...45	109-C30L⊗E1F-1M-7	
37	9.0...45	109-C37L⊗E1F-1M-7	
43	9.0...45	109-C43L⊗E1F-1M-7	



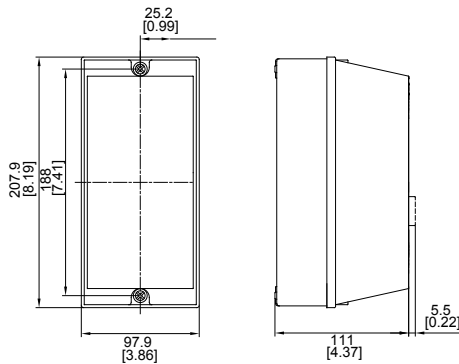
Bulletin 105 IEC Reversing Starters

Bulletin 105 enclosed starters use Bulletin 104 reversing contactors and Bulletin 193 E-1 Plus electronic overload relays. These reversing starters incorporate a "dual" interlock that provides both mechanical and electrical interlocking in a single unit. A normally open auxiliary contact is also included on each contactor.

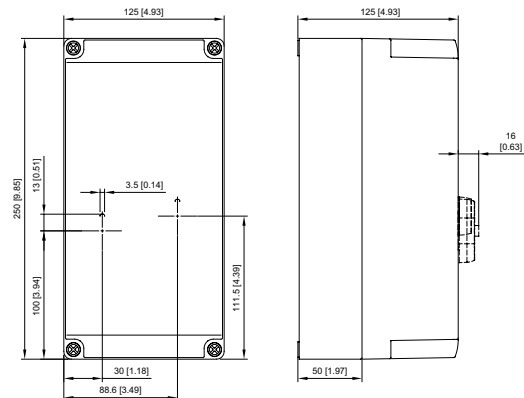


Ratings (AC4)	E1 Plus Overload Relay	Catalog Number
Max. I_e [A]	Full Load Current Range [A]	
Automation Class		
Type 4, 4X, 12K (IP66) Watertight, Dusttight, Corrosion-Resistant Large Molded Plastic Enclosure		
9	1.0...5.0	105-C09L⊗E1C-1M-7
9	3.2...16	105-C09L⊗E1D-1M-7
12	3.2...16	105-C12L⊗E1D-1M-7
16	3.2...16	105-C16L⊗E1D-1M-7
23	5.4...27	105-C23L⊗E1E-1M-7

Dimensions



Eco Class Starters



Automation Class and Combination Starters

Bulletin 103C/107C Enclosed Combination Starters



Bulletin 103C enclosed combination Direct-On-Line starters consist of a Bulletin 140M motor protection circuit breaker and a Bulletin 100-C contactor in an impact-resistant molded IP 66 (Type 3/3R/12K) enclosure.

Bulletin 107C enclosed combination Direct-On-Line starters consist of a Bulletin 140M motor protection circuit breaker and a Bulletin 104-C contactor in an impact-resistant molded IP 66 (Type 3/3R/12K) enclosure.



Setting Range [A]	UL 508 (Type F)		Catalog Number	
	480V [kA]	600V [kA]	Bulletin 103C	Bulletin 107C
Type 3/3R/12K (IP66) Raintight, Dusttight, Corrosion-Resistant Molded Plastic Enclosure. With START/STOP Multifunction Push Button (3 Functions).				
0.1...0.16	65	47	103C-09L⊗-CA16X-1M	107C-09L⊗-CA16X-1M
0.16...0.25	65	47	103C-09L⊗-CA25X-1M	107C-09L⊗-CA25X-1M
0.25...0.4	65	47	103C-09L⊗-CA40X-1M	107C-09L⊗-CA40X-1M
0.4...0.63	65	47	103C-09L⊗-CA63X-1M	107C-09L⊗-CA63X-1M
0.63...1.0	65	47	103C-09L⊗-CB10X-1M	107C-09L⊗-CB10X-1M
1.0...1.6	65	47	103C-09L⊗-CB16X-1M	107C-09L⊗-CB16X-1M
1.6...2.5	65	30	103C-09L⊗-CB25X-1M	107C-09L⊗-CB25X-1M
2.5...4.0	65	30	103C-09L⊗-CB40X-1M	107C-09L⊗-CB40X-1M
2.5...4.0	65	30	103C-09L⊗-DB40X-1M	107C-09L⊗-DB40X-1M
4.0...6.3	65	—	103C-09L⊗-CB63X-1M	107C-09L⊗-CB63X-1M
4.0...6.3	65	30	103C-09L⊗-DB63X-1M	107C-09L⊗-DB63X-1M
6.3...10	65	—	103C-09L⊗-CC10X-1M	107C-09L⊗-CC10X-1M
6.3...10	65	30	103C-09L⊗-DC10X-1M	107C-09L⊗-DC10X-1M
6.3...10	65	—	103C-12L⊗-CC10X-1M	107C-12L⊗-CC10X-1M
6.3...10	65	30	103C-12L⊗-DC10X-1M	107C-12L⊗-DC10X-1M
6.3...10	65	—	103C-16L⊗-CC10X-1M	107C-16L⊗-CC10X-1M
6.3...10	65	30	103C-16L⊗-DC10X-1M	107C-16L⊗-DC10X-1M
10...16	30	—	103C-12L⊗-CC16X-1M	107C-12L⊗-CC16X-1M
10...16	65	30	103C-12L⊗-DC16X-1M	107C-12L⊗-DC16X-1M
10...16	30	—	103C-16L⊗-CC16X-1M	107C-16L⊗-CC16X-1M
10...16	65	30	103C-16L⊗-DC16X-1M	107C-16L⊗-DC16X-1M

⊗ Coil Voltage Code

The Catalog Number as listed is incomplete. Select a Coil Voltage Code from the table below to complete the Catalog Number. Example: **Cat. No. 109-C12L⊗E1D-1M-7** becomes **109-C12LDE1D-1M-7**.

[V]	110	120	440	480	550	600
Hz						
50 Hz	D	—	B	—	C	—
60 Hz	—	D	—	B	—	C

Modular for Faster Availability

Allen-Bradley Enclosed Compact Starters provide faster delivery with modularity, as the Electronic Overload Relay or Motor Protector Circuit Breaker are included in a modular kit format.

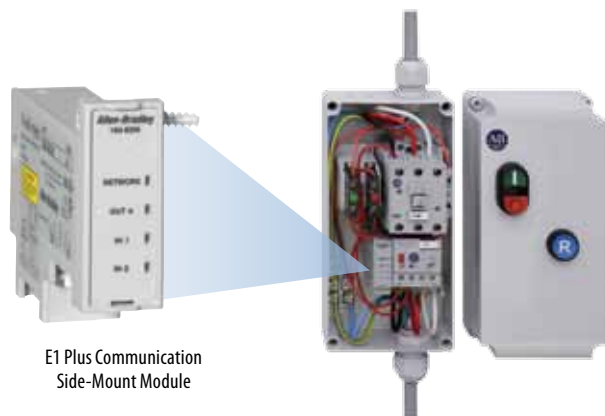


ECO Class Starters

Automation Class Starters and Combination Starters

Accessories for Bulletins 109 and 105 Automation Class

Description	Cat. No.
E1 Plus DeviceNet™ and Protection Module (for Bulletin 109 Automation Class only) Communicates motor diagnostic data via DeviceNet, includes additional I/O, and provides enhanced motor protection options.	193-EDN
E1 Plus EtherNet/IP™ and Protection Module (for Bulletin 109 Automation Class only) Communicates motor diagnostic data via EtherNet/IP, includes additional I/O, and provides enhanced motor protection options.	193-ETN
E1 Plus Jam Protection Module Provides Jam protection with adjustable trip level and trip delay setting. The module also provides an input to allow remote reset of a trip.	193-EJM
E1 Plus Ground Fault Module Provides adjustable 20 mA...5 A ground fault protection. The module also provides an input to allow remote reset of a trip.	193-EGF
E1 Plus Ground Fault/Jam Module Provides adjustable 20 mA...5 A ground fault and fixed jam protection. The module also provides an input to allow remote reset of a trip.	193-EGJ
E1 Plus PTC Module Provides terminals for connection up to six PTC thermistor sensors. Sensors react to actual temperature and therefore provide enhanced motor protection. Module also provides an input to allow remote reset of a trip.	193-EPT
E1 Plus Remote Reset Module Provides an input to allow remote reset of a trip.	193-ERR



E1 Plus Communication Side-Mount Module

E1 Plus Communication Modules For Bulletin 109 Automation Class only

The E1 Plus Communication Side-Mount Modules provide a cost-effective, seamless deployment of motor starters with your control architecture.

- DeviceNet
- EtherNet/IP™ (for 30-43 Amp versions only)

Advantages

- Includes integrated I/O
 - Provides convenient local termination of motor-related inputs (2) and outputs (1), simplifying the control architecture
- Provides operational and diagnostic data
 - Average motor current
 - Percentage of thermal capacity usage
 - Device status
 - Trip and warning identification
 - Trip history (5 previous trips)
- Expands protective functions
 - Overload warning
 - Jam protection
 - Underload warning

E1 Plus Protection Modules

The E1 Plus Protection Side-Mount Modules provide adjustable levels of protection, tailored to your application.

- Ground fault protection
- Jam protection
- PTC thermistor monitoring
- Remote Reset Module*

* No protection provided.

Advantages

- Simplified Control
 - The side-mount modules electronically interface with the overload relay so that all control circuit connections are made at the E1 Plus overload relay terminals

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