



Manual Motor Low Voltage Starters 600, 609, 609U, 609TU

- Compact design
- Undervoltage protection
- Manual operation with overload protection
- Ideal for low HP applications, up to 10 HP three phase

Manual motor starters are specifically designed for full voltage motor starting applications where remote push button control is not necessary. They are ideally suited for starting and protecting smaller motors frequently used for fans and blowers.

600 Manual Starting Switches



- Single phase
- Starting and overload protection of small AC/DC motors up to 1 Hp

609 Manual Starting Switches



- Single and three phase
- Contact position indicator
- Locking feature
- Reversing and 2-speed
- Wide range of enclosures, including hazardous location



609U & 609TU Manual Starting Switches

- Undervoltage protection
- Single and three phase
- Contact position indicator
- Locking feature
- Wide range of enclosures
- Push button or toggle switch

Product Selection

600 Manual Motor Starters

Type	No. of Poles	Open Type Without Enclosure Includes Legend Plate	Type 1 General Purpose Enclosure Surface Mount	Type 1 General Purpose Enclosure Flush Mount Includes Flush Plate Only
Switch Only				
Toggle	1	600-TOX4	600-TAX4	600-TQX4
	2	600-TOX5	600-TAX5	600-TQX5
Key	2	600-TOX49	600-TAX49	600-TQX49
Lever	1	600-TOX149	600-TAX149	–
Switch with Neon Pilot Light (115 or 230V)				
Toggle	1	600-TOX216	600-TAX216	600-TQX216
	2	600-TOX109	600-TAX109	600-TQX109
Key	2	600-TOX110	600-TAX110	600-TQX110
Switch and Hand-Off-Auto Selector Switch (for use on AC only)				
Toggle	2	–	600-TAX9	600-TQX9
Switch with Neon Pilot Light and Hand-Off-Auto Selector Switch (115 or 230V, AC only)				
Toggle	2	–	600-TAX142	600-TQX142
Key	2	–	600-TAX145	–

609 Manual Motor Starters

Type	Phase	Size	Max. Hp Rating				Open Type without Enclosure	Type 1 General Purpose Enclosure Surface Mount
			Motor Voltage, 60 Hz					
			115V	200V	230V	460...575V	Cat. No.	Cat. No.
Push Button	1	0	1	–	2	–	609-AOX	609-AAX
		1	2	–	3	–	609-BOX	609-BAX
		1P	3	–	5	–	609-XOX	609-XAX
	3	0	–	3	3	5	609-AOW	609-AAW
		1	–	7-1/2	7-1/2	10	609-BOW	609-BAW
		1P	–	–	–	–	–	–
Toggle Lever	1	0	1	–	2	–	609T-AOX	609T-AAX
		1	2	–	3	–	609T-BOX	609T-BAX
		1P	3	–	5	–	609T-XOX	609T-XAX
	3	0	–	3	3	5	609T-AOW	609T-AAW
		1	–	7-1/2	7-1/2	10	609T-BOW	609T-BAW
		1P	–	–	–	–	–	–

Heater Elements – All single-phase starters require one heater element and three-phase starters require three heater elements.

Product selection for 609U & 609TU is available at
<http://ab.rockwellautomation.com/Motor-Control/NEMA-Manual-Motor-Starter>



IEC Eco Starters 190E/191E

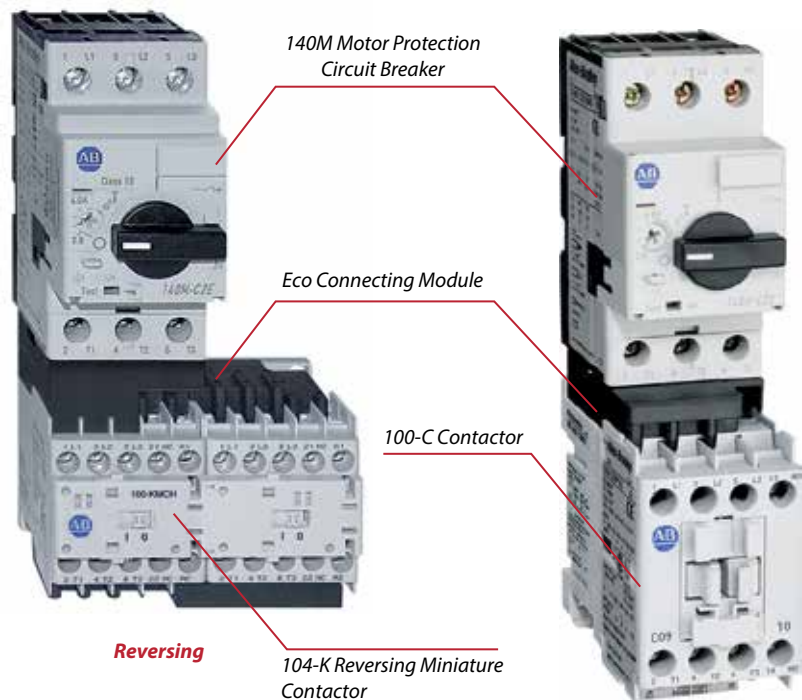
- Meets UL/CSA IEC standards
- 5...23 A
- Type 1 and 2 coordination
- AC or DC coils available
- Shares common accessories with 100-C/100-K contactors and 140M motor protection circuit breakers

The 190E/191E motor controllers can be used in a variety of applications. These starters can be used in a group motor application or as a stand-alone product without any additional short-circuit protection in the motor branch circuits. Rated Type F combination motor controllers (UL/CSA).

Options for Field Assembly

190/191-E starters can be field assembled. Simply select the following:

- 100-K/104-K miniature contactor (page 1-28 or 100-C/104-C contactor (page 1-29)
- 140M motor protection circuit breaker (page 1-3)
- Eco connecting module (catalog number 140M-C-PEK12, 140M-C-PEC23)



Direct on Line

Product Selection

IEC Eco Starters with AC and DC-Operated Contactors

Motor Current Adjustment Range [A]	3-Phase kW (50 Hz)	3-Phase Hp (60 Hz)	Max. Short-Circuit Current Type 1 Coordination [kA]	With 100-K IEC Miniature Contactors		With 100-C IEC Contactors	
				Direct on Line Cat. No.	Reversing Cat. No.	Direct on Line Cat. No.	Reversing Cat. No.
				400/415V	460V	480Y/277V	
0.10...0.16	0.02	–	65	190E-KMN⊗2-CA16X	191E-KMN⊗1-CA16X	190E-AN⊗2-CA16X	191E-AN⊗3-CA16X
0.16...0.25	0.06	–	65	190E-KMN⊗2-CA25X	191E-KMN⊗1-CA25X	190E-AN⊗2-CA25X	191E-AN⊗3-CA25X
0.25...0.40	0.09	–	65	190E-KMN⊗2-CA40X	191E-KMN⊗1-CA40X	190E-AN⊗2-CA40X	191E-AN⊗3-CA40X
0.40...0.63	0.12...0.18	–	65	190E-KMN⊗2-CA63X	191E-KMN⊗1-CA63X	190E-AN⊗2-CA63X	191E-AN⊗3-CA63X
0.63...1.00	0.25	0.5	65	190E-KMN⊗2-CB10X	191E-KMN⊗1-CB10X	190E-AN⊗2-CB10X	191E-AN⊗3-CB10X
1.00...1.60	0.37...0.55	0.5...1	65	190E-KMN⊗2-CB16X	191E-KMN⊗1-CB16X	190E-AN⊗2-CB16X	191E-AN⊗3-CB16X
1.60...2.50	0.75	0.75...1.5	65	190E-KMN⊗2-CB25X	191E-KMN⊗1-CB25X	190E-AN⊗2-CB25X	191E-AN⊗3-CB25X
2.50...4.00	1.1...1.5	1.5...3	65	190E-KMN⊗2-CB40X	191E-KMN⊗1-CB40X	190E-AN⊗2-CB40X	191E-AN⊗3-CB40X
4.00...6.30	2.2	3...5	65	190E-KNN⊗2-CB63X	191E-KNN⊗1-CB63X	190E-AN⊗2-CB63X	191E-AN⊗3-CB63X
6.30...10.0	3.0...4.0	5...7.5	65	190E-KPN⊗2-CC10X	191E-KPN⊗1-CC10X	190E-BN⊗2-CC10X	191E-BN⊗3-CC10X
10.0...11.0	5.5	7.5	30	190E-KPN⊗2-CC16X	191E-KPN⊗1-CC16X	–	–
10.0...12.0	4.0...5.5	7.5	30	–	–	190E-BN⊗2-CC16X	191E-BN⊗3-CC16X
10.0...16.0	5.5...6.3	7.5...10.0	30	–	–	190E-CN⊗2-CC16X	191E-CN⊗3-CC16X

⊗ The catalog number as listed is incomplete. Select a coil voltage code from the table below.

⊗ Coil Voltage Codes for AC and DC Control

AC Control		24V DC Control	
Code	Description	Code	Description
KJ	24V, 50/60 Hz	ZJ	Standard (190E/191E-K)
D	110V, 50 Hz/120V, 60 Hz	DJ	Integrated diode (190E/191E-K)
KF	230V, 50/60 Hz	EJ	Electronic with integrated diode (190/191E-A...D)
KA	240V, 50/60 Hz		



Product Selection Tools

Available online or for download, our tools help you access info while in the office or on the go.

www.rockwellautomation.com/support/selection.page



Enclosed Starters, IEC 109-C/105-C

- 109-C Direct On-line, Non-combination Starters
 - 100-C Contactor
 - Electronic motor protection
 - Disconnecting means to be provided separately
 - Factory modifications available
- 105-C Reversing, Non-combination Starters
 - 104-C reversing contactor
 - Electronic motor protection
 - Disconnecting means provided separately
 - Factory modifications available

Compact Installation

Plastic enclosures provide a compact, cost effective solution to help reduce machine space and expand product flexibility.

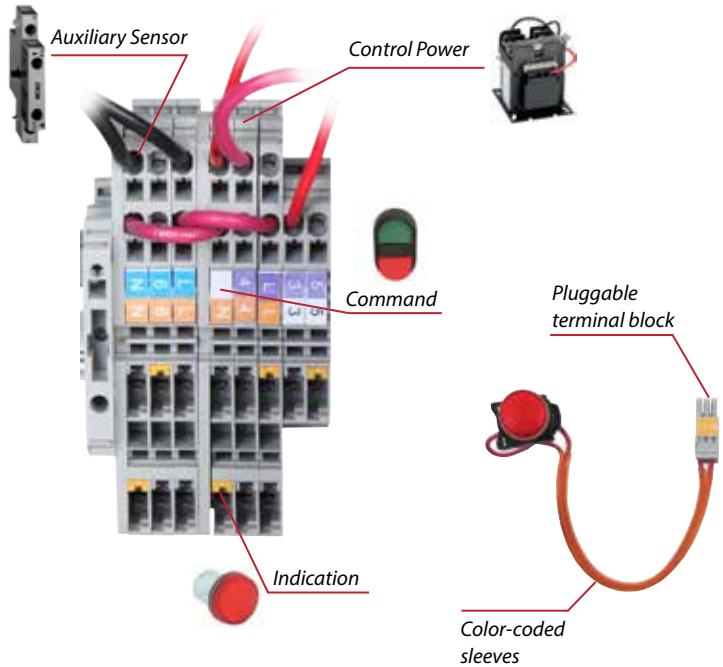
100-C Contactor



E1 Plus Electronic Overload Relay

Wiring Made Easy

Metal enclosures now feature component wiring color-coded by function. The wiring sleeve-cover corresponds to a colored label on the terminal block, reducing wiring errors and allowing for quicker installation times.



Product Selection

IEC Enclosed Starters

Type			Direct on Line Starter 109-C		Reversing 105-C	
Ratings AC-3		E1 Plus Overload Relay	IP66, Large Molded Plastic	IP42, Type 1 Metal	IP66, Large Molded Plastic	IP42, Type 1 Metal
Max I _e	Standard Motors	Motor Current Setting Range	With START/STOP Multifunction Push Button (2 Functions) and Reset	With QC Wiring Technology	With FORWARD/OFF/REVERSE Multifunction Push Button (3 Functions) and Reset	With QC Wiring Technology
	AC-3, 3	[A]	Cat. No.	Cat. No.	Cat. No.	Cat. No.
[A]	[kW]	[A]				
9	4	1.0...5.0	109-C09L(X)E1C-1M-7	109-C09AD-XXX	105-C09L(X)E1C-1M-7	105-C09AD-XXX
9	4	3.2...16.0	109-C09L(X)E1D-1M-7	109-C09AD-XXX	105-C09L(X)E1D-1M-7	105-C09AD-XXX
12	5.5	3.2...16.0	109-C12L(X)E1D-1M-7	109-C12AD-XXX	105-C12L(X)E1D-1M-7	105-C12AD-XXX
16	7.5	3.2...16.0	109-C16L(X)E1D-1M-7	109-C16AD-XXX	105-C16L(X)E1D-1M-7	105-C16AD-XXX
23	11	5.4...27.0	109-C23L(X)E1E-1M-7	109-C23AD-XXX	105-C23L(X)E1E-1M-7	105-C23AD-XXX
30	15	9.0...45.0	109-C30L(X)E1F-1M-7	109-C30AD-XXX	–	105-C30AD-XXX
37	18.5	9.0...45.0	109-C37L(X)E1F-1M-7	109-C37AD-XXX	–	105-C37AD-XXX
43	22	9.0...45.0	109-C43L(X)E1F-1M-7	109-C43AD-XXX	–	105-C43AD-XXX

Accessories

Description	Cat. No.
E1 Plus DeviceNet and protection module	193-EDN
E1 Plus EtherNet/IP and protection module	193-ETN
E1 Plus jam protection module	193-EJM
E1 Plus ground fault module	193-EGF
E1 Plus ground fault/jam module	193-EGJ
E1 Plus PTC module	193-EPT
E1 Plus remote reset module	193-ERR



Need Help?

The Rockwell Automation Support Center is your 24/7 support for the answers you need now.

www.rockwellautomation.com/support/overview.page

⊗ Coil Voltage Codes for AC and DC Control

AC Control	
Code	Description
KJ	24V, 50/60 Hz
D	110V, 50 Hz/120V, 60 Hz
KF	230V, 50/60 Hz
KA	240V, 50/60 Hz

DC Control with Integrated Surge Suppression	
Code	Description
DJ	24V (60...97 A only)
EJ	24V, Electronic (9...55 A only)
ED	110V, Electronic (9...55 A only)