

BRYANT®

Manual Motor Controllers / Disconnects



Overview

Bryant motor controllers are "suitable as motor disconnects," which means that a motor controller marked as such can also be used as a motor disconnect. From a safety perspective, this means a motor load can now be isolated and locked-out in one convenient location. By utilizing Bryant's compact motor controllers and disconnects, you benefit through the convenience of one device fulfilling two needs. A motor controller is simply used to activate a motor load "ON" or "OFF" and perform this function thousands of times. A motor disconnect, however, is designed and tested to withstand motor overloads and high short-circuit fault currents while maintaining the ability to disconnect the motor for service or maintenance.

According to the 2008 National Electric Code (NEC®) article 430.102, all motor controllers must have a disconnecting means located within the line of sight of the controller. Because the NEC® recognizes that a controller and disconnect can be the same unit (article 430.109), Bryant has designed a compact controller that will also meet the rigorous demands of a motor disconnect. Bryant's controllers are listed as "Suitable as Motor Disconnect" under UL Standard 508 – Industrial Control Equipment – qualifying them to perform both operations in one compact package.

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Features and Benefits

- Thermoset body provides high resistance to electrical arc tracking.
- Silver alloy contacts for excellent conductivity and extended life
- Available NEMA 1, 3/3R and 4X enclosures
- Undrilled enclosures available for custom placement of entry positions
- Lockout / Tagout capability
- Switch sizes in 30, 40 and 60 Amps up to 600 VAC
- 2-pole and 3-pole switch configurations
- Use in indoor and outdoor environments
- Quick make, slow break design
- UL Listed as "Suitable as Motor Disconnect" under UL 508
- Wiring conduit knockouts on NEMA 1 and 3R controllers / disconnects
- Compact design

Applications

- Can be used locally at the motor
- "Suitable as a motor disconnect"
- Across-the-line motor starting
- Industrial machines
- Automation
- Switch contacts AC rated only (not DC rated).

Listings

- UL Listed and Recognized Category NLRV, UL file #E70402
- CSA Certified File 46186
- Flammability - UL94HB/V
- Standards
 - UL508
 - UL60947-1
 - CSA C22.2 No 14



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Quick Selection Guide

Manual Motor Controllers / Disconnects

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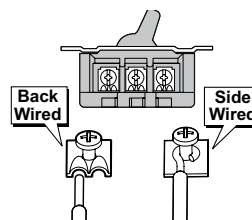
Toggle Switch AC Motor Controllers / Disconnects						
Part Number	Description	Amperage	Phase	Poles	Wired	Price
30002D	Switch only, 30A, 2-pole, 15 HP @ 600 VAC - Standard Toggle	30	1	2	Back and Side	\$0do2:
30003D	Switch only, 30A, 3-pole, 20 HP @ 600 VAC - Standard Toggle	30	3	3	Back and Side	\$0do3:
4002*	Switch only, 40A, 2-pole, 5 HP @ 600 VAC - Standard Toggle	40	1	2	Side	\$0do1:
40002D	Switch only, 40A, 2-pole, 15 HP @ 600 VAC - Standard Toggle	40	1	2	Side	\$0do4:
40003D	Switch only, 40A, 3-pole, 20 HP @ 600 VAC - Standard Toggle	40	3	3	Side	\$0do5:
60002D	Switch only, 60A, 2-pole, 20 HP @ 600 VAC - Standard Toggle	60	1	2	Back	\$0do6:
60003D	Switch only, 60A, 3-pole, 30 HP @ 600 VAC - Standard Toggle	60	3	3	Back	\$0do7:

*Motor controller only ("Not suitable as disconnect")

Toggle Switch AC Motor Controller Accessories		
Part Number	Description	Price
30003FG	Finger guards; red; for use with 30A and 40A Switches (Set of 2)	\$0dn_:
30100	NEMA 1 enclosure without switch, use with 30002D and 30003D	\$-0enj:



**Example
Back and Side
Wired**



Enclosed Toggle Switch AC Motor Controllers / Disconnects							
Part Number	Description	Included Switch	Amperage	Phase	Poles	Enclosure	Price
30102D	Enclosed, 30A, 2-pole, NEMA 1	30002D Standard Toggle	30	1	2	NEMA 1Metal	\$0dnq:
30103D	Enclosed, 30A, 3-pole, NEMA 1	30003D Standard Toggle	30	3	3		\$00dns:
30302D	Enclosed, 30A, 2-pole, Aluminum	30002D Standard Toggle	30	1	2	NEMA 3RMetal	\$;0dnt:
30303D	Enclosed, 30A, 3-pole, Aluminum	30003D Standard Toggle	30	3	3		\$00dnu:
30322D*	Enclosed, 30A, 2-pole, Plastic	30002DS Short Toggle	30	1	2	NEMA 3R Thermoplastic	\$0dnv:
30323D*	Enclosed, 30A, 3-pole, Plastic	30003DS Short Toggle	30	3	3		\$0dnx:
60302D*	Enclosed, 60A, 2-pole, Aluminum	60002FWD Standard Toggle	60	1	2	NEMA 3R Metal	\$00dny:
60303D*	Enclosed, 60A, 3-pole, Aluminum	60003FWD Standard Toggle	60	3	3		\$00dnz:

*Switch is not available as a separate item

NEMA 4X Enclosed Rotary Switch AC Motor Controllers / Disconnects							
Part Number	Description	Included Switch	Amperage	Phase	Poles	Enclosure	Price
664X33D*	Enclosed, 30A, 3-pole, NEMA 4X	66033D Rotary	30	3	3	NEMA 4X Thermoplastic	\$;00dn]:
664X63D*	Enclosed, 60A, 3-pole, NEMA 4X	66033D Rotary	60	3	3		\$;00dn]:

*Switch is not available as a separate item



NEMA 4X Enclosed Rotary Switch AC Motor Controller Accessories		
Part Number	Description	Price
30003FG	Finger Guards; red; for use with 30A and 40A Switches (Set of 2)	\$0dn_:
660AC*	SPDT Auxiliary contact NO / NC; includes one contact for use with push-on terminals; use with 664X33D and 664X63D	\$;0dn!:
6610MK	Rotary handle replacement kit, use with 664X33D and 664X63D. (Nema 1 rating) Must use gasket replacement kit 664XWP for NEMA 4X rating.	\$0dn?:
664XWP	NEMA 4X enclosure gasket replacement kit; includes 4 seals, neoprene bushing and 3 o-rings; use with 664X33D and 664X63D	\$0do0:
664XFT	NEMA 4X enclosure mounting feet	\$;0dn,::
6603N	NEMA 4X enclosure neutral buss connector	\$0dn#:

*660AC Terminal is a quick connect terminal #250

BRYANT® Manual Motor Controllers / Disconnects

Toggle Switch

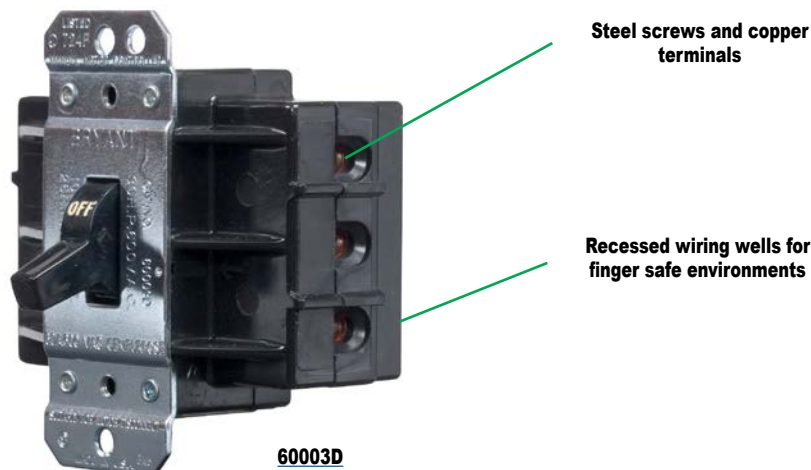
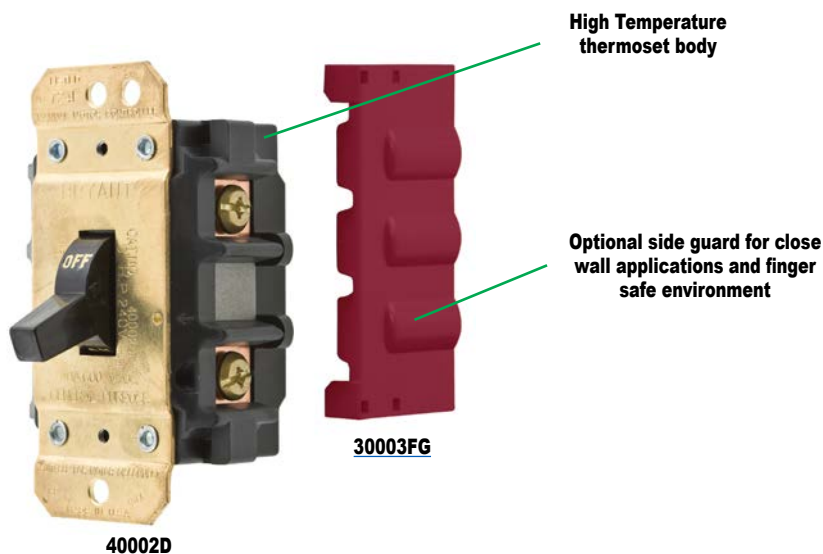
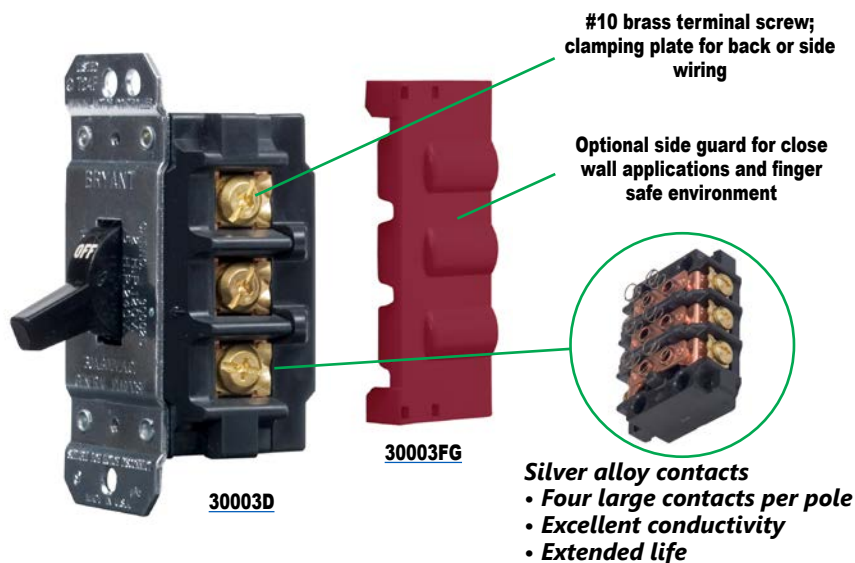
Toggle AC manual motor controllers can be integrated into your equipment design as a manual motor controller or as a motor disconnect. Quick-make and slow break operation provides reliability and long life. Each toggle switch controller has a 10,000 amp high fault short circuit withstand rating.

Toggle Switch Features

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Thermoset Body

- Provides high resistance to electrical arc tracking
- Withstands high temperatures
- Excellent dimensional stability
- Superior dielectric strength



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Manual Motor Controllers / Disconnects

Toggle Switch

Toggle Switch AC Motor Controllers / Disconnects									
Part Number	Amperage	Phase	Poles	HP Ratings				Wired	Price
				120 VAC	240 VAC	480 VAC	600 VAC		
30002D	30	1	2	2	5	10	15	Back and Side	\$0do2:
30003D	30	3	3	3	7.5	15	20	Back and Side	\$0do3:
4002*	40	1	2	2	5	10	15	Side	\$0do1:
40002D	40	1	2	2	5	10	15	Side	\$0do4:
40003D	40	3	3	3	7.5	15	20	Side	\$0do5:
60002D	60	1	2	–	10	15	20	Back	\$0do6:
60003D	60	3	3	–	10	25	30	Back	\$0do7:

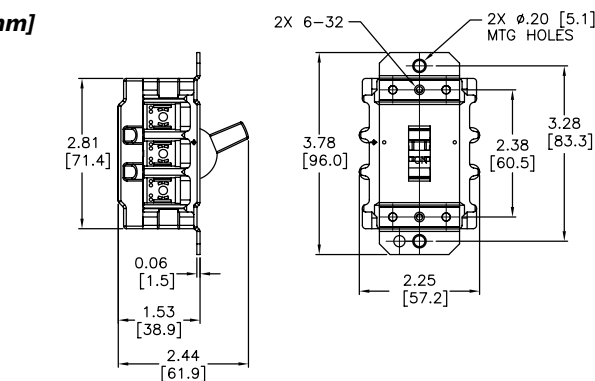
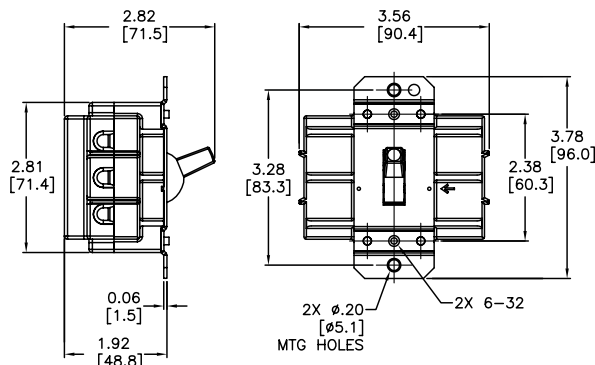
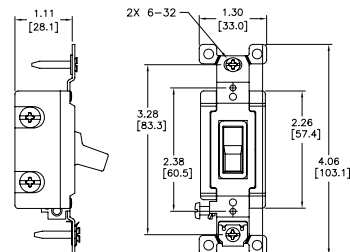
*Motor controller only ("Not suitable as disconnect")

Toggle Switch AC Motor Controller Accessories		
Part Number	Description	Price
30003FG	Finger guards; red; for use with 30A and 40A switches (Set of 2)	\$0dn_:
30100	NEMA 1 enclosure without switch, use with 30002D and 30003D	\$-0enj:

TECH·SPEC®**30003FG****30100****30002D****40003D****4002****60002D**

Dimensions

Inches [mm]

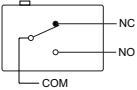
**30002D, 30003D, 40002D, 40003D****60002D, 60003D****4060003D02**

Dimensions are approximate
Not for construction purposes

Manual Motor Controllers / Disconnects

Specifications

General Specifications									
Type	Part Number	Weight	Short Circuit Withstand Rating	Dielectric Voltage	Electrical Life	Max Working Voltage	Mechanical Life	Operating Temperature	
Standard Toggle Switch	30002D	0.4 lb (181g)	10 kA 60A max J fuses or 125A max RK5 fuses	2,200V AC minimum for 1 minute	6,000 cycles at rated switch load	600 VAC RMS	10,000 minimum cycles	-40 °C (-40 °F) to 60 °C (140 °F)	
	30003D	0.5 lb (227g)							
	4002	0.1 lb (45g)							
	40002D	0.4 lb (181g)							
	40003D	0.5 lb (227g)							
	60002D	0.7 lb (318g)	10 kA 80A max J fuses or 125A max RK5 fuses						
	60003D								
Enclosed Toggle Switch	30102D	1.0 lb (454g)	10 kA 60A max J fuses or 125A max RK5 fuses						
	30103D								
	30302D	1.3 lb (590g)							
	30303D								
	30322D	2.2 lb (998g)							
	30323D								
	60302D	1.9 lb (861g)	10 kA 80A max J fuses or 125A max RK5 fuses						
60303D	2.0 lb (907g)								
Enclosed Rotary Switch	664X33D	2.5 lb (1,134g)							
	664X63D	3.0 lb (1,361g)							

NEMA 4X Enclosed Rotary Switch AC Motor Controller Accessory Specifications			
Part Number	Switch Type	Load	Contact Material
660AC	 SPDT	15A @ 250 VAC Resistive, 10A @ 250 VAC Inductive 10A @ 30VDC Resistive and Inductive	Silver Alloy

Wiring Specifications					
Type	Part Number	Cable Size		Tightening Torque	
Toggle Switch	30002D	14 to 10 AWG	2.5 to 6 mm ²	20 lb·in	2.3 N·m
	30003D				
	4002				
	40002D	14 to 8 AWG	2.5 to 10 mm ²	25 lb·in	2.8 N·m
	40003D				
	60002D				
	60003D	14 to 6 AWG	2.5 to 16 mm ²	25 lb·in	2.8 N·m
Enclosed Toggle Switch	30102D	14 to 10 AWG	2.5 to 6 mm ²	20 lb·in	2.3 N·m
	30103D				
	30302D				
	30303D				
	30322D				
	30323D				
	60302D	14 to 6 AWG	2.5 to 16 mm ²	25 lb·in	2.8 N·m
Enclose Rotary Switch	60303D				
	664X33D	14 to 6 AWG	2.5 to 16 mm ²	25 lb·in	2.8 N·m
	664X63D				

Note: Bryant does not recommend the use of wire ferrules or crimping terminals. The wire gauges are specified above and in the installation instructions included with each manual motor controller.