



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.



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

TECH·SPEC®

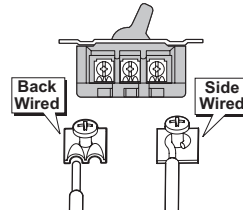


| Toggle Switch AC Motor Controllers / Disconnects | | | | | | |
|--|---|----------|-------|-------|---------------|---------|
| Part Number | Description | Amperage | Phase | Poles | Wired | Price |
| 30002D | Switch only, 30A, 2-pole, 15 HP @ 600 VAC - Standard Toggle | 30 | 1 | 2 | Back and Side | \$23.50 |
| 30003D | Switch only, 30A, 3-pole, 20 HP @ 600 VAC - Standard Toggle | 30 | 3 | 3 | Back and Side | \$50.00 |
| 4002* | Switch only, 40A, 2-pole, 5 HP @ 600 VAC - Standard Toggle | 40 | 1 | 2 | Side | \$27.00 |
| 40002D | Switch only, 40A, 2-pole, 15 HP @ 600 VAC - Standard Toggle | 40 | 1 | 2 | Side | \$41.00 |
| 40003D | Switch only, 40A, 3-pole, 20 HP @ 600 VAC - Standard Toggle | 40 | 3 | 3 | Side | \$66.00 |
| 60002D | Switch only, 60A, 2-pole, 20 HP @ 600 VAC - Standard Toggle | 60 | 1 | 2 | Back | \$71.00 |
| 60003D | Switch only, 60A, 3-pole, 30 HP @ 600 VAC - Standard Toggle | 60 | 3 | 3 | Back | \$87.00 |

*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) | \$6.00 |
| 30100 | NEMA 1 Enclosure without switch, use with 30002D and 30003D | \$16.50 |

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 1 Metal | \$30.50 |
| 30103D | Enclosed, 30A, 3-pole, NEMA 1 | 30003D Standard Toggle | 30 | 3 | 3 | | \$65.00 |
| 30302D | Enclosed, 30A, 2-pole, Aluminum | 30002D Standard Toggle | 30 | 1 | 2 | NEMA 3R Metal | \$44.50 |
| 30303D | Enclosed, 30A, 3-pole, Aluminum | 30003D Standard Toggle | 30 | 3 | 3 | | \$81.00 |
| 30322D* | Enclosed, 30A, 2-pole, Plastic | 30002DS Short Toggle | 30 | 1 | 2 | NEMA 3R Thermoplastic | \$53.00 |
| 30323D* | Enclosed, 30A, 3-pole, Plastic | 30003DS Short Toggle | 30 | 3 | 3 | | \$56.00 |
| 60302D* | Enclosed, 60A, 2-pole, Aluminum | 60002FWD Standard Toggle | 60 | 1 | 2 | NEMA 3R Metal | \$104.00 |
| 60303D* | Enclosed, 60A, 3-pole, Aluminum | 60003FWD Standard Toggle | 60 | 3 | 3 | | \$122.00 |

*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 | \$110.00 |
| 664X63D* | Enclosed, 60A, 3-pole, NEMA 4X | 66033D Rotary | 60 | 3 | 3 | | \$137.00 |

*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) | \$6.00 |
| 660AC* | SPDT Auxiliary contact NO / NC; includes one contact for use with push-on terminals; use with 664X33D and 664X63D | \$15.50 |
| 6610MK | Rotary handle replacement kit, use with 664X33D and 664X63D. (Nema 1 rating) Must use gasket replacement kit 664XWP for NEMA 4X rating. | \$12.00 |
| 664XWP | NEMA 4X enclosure gasket replacement kit; includes 4 seals, neoprene bushing and 3 o-rings; use with 664X33D and 664X63D | \$8.25 |
| 664XFT | NEMA 4X enclosure mounting feet | \$7.25 |
| 6603N | NEMA 4X enclosure neutral buss connector | \$37.00 |

*660AC Terminal is a quick connect terminal #250

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Manual Motor Controllers / Disconnects

Toggle Switch

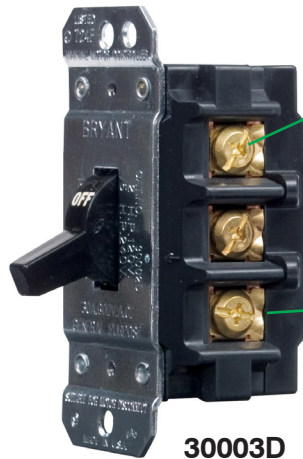
Toggle AC manual motor controllers can be integrated into your equipment design as a manual motor controller or as a motor disconnect. Quick-make and slow break operation provides reliability and long life. Each toggle switch controller has a 10,000 amp high fault short circuit withstand rating.

Toggle Switch Features

TECH-SPEC®

Thermoset Body

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



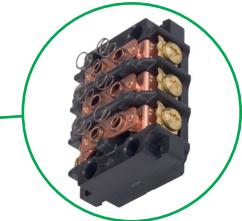
30003D



30003FG

#10 brass terminal screw; clamping plate for back or side wiring

Optional side guard for close wall applications and finger safe environment



Silver alloy contacts

- Four large contacts per pole
- Excellent conductivity
- Extended life



40002D



30003FG

High Temperature thermoset body

Optional side guard for close wall applications and finger safe environment



60003D

Steel screws and copper terminals

Recessed wiring wells for finger safe environments

BRYANT® 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 | \$23.50 |
| 30003D | 30 | 3 | 3 | 3 | 7.5 | 15 | 20 | Back and Side | \$50.00 |
| 4002* | 40 | 1 | 2 | 2 | 5 | 10 | 15 | Side | \$27.00 |
| 40002D | 40 | 1 | 2 | 2 | 5 | 10 | 15 | Side | \$41.00 |
| 40003D | 40 | 3 | 3 | 3 | 7.5 | 15 | 20 | Side | \$66.00 |
| 60002D | 60 | 1 | 2 | - | 10 | 15 | 20 | Back | \$71.00 |
| 60003D | 60 | 3 | 3 | - | 10 | 25 | 30 | Back | \$87.00 |

**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) | \$6.00 |
| 30100 | NEMA 1 Enclosure without switch, use with 30002D and 30003D | \$16.50 |



30002D



40003D

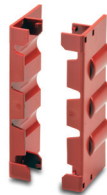


4002



60002D

TECH-SPEC®



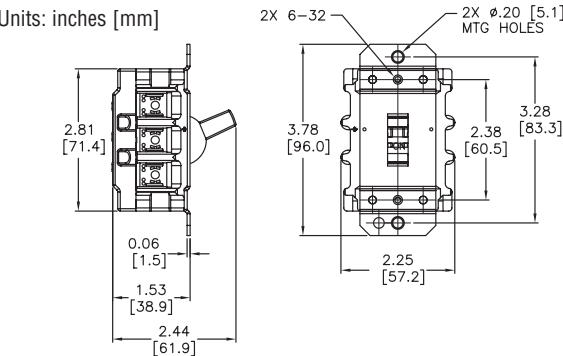
30003FG



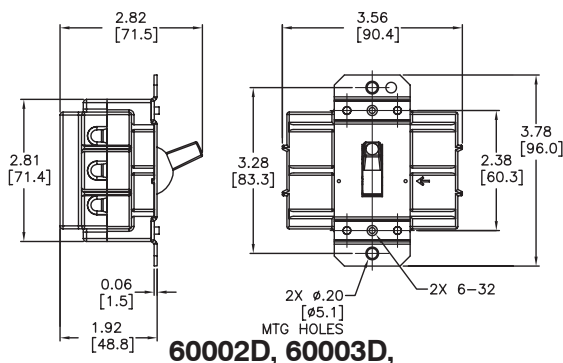
30100

Dimensions

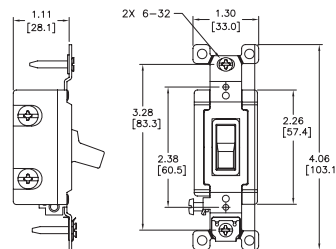
Units: inches [mm]



30002D, 30003D, 40002D, 40003D



60002D, 60003D,



4002

Dimensions are approximate
- Not for construction purposes

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 lbs (181 g) | 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 lbs (227 g) | | | | | | |
| | 4002 | 0.1 lbs (45 g) | | | | | | |
| | 40002D | 0.4 lbs (181 g) | | | | | | |
| | 40003D | 0.5 lbs (227 g) | | | | | | |
| | 60002D | 0.7 lbs (318 g) | | | | | | |
| 60003D | 0.7 lbs (318 g) | | | | | | | |
| Enclosed Toggle Switch | 30102D | 1.0 lbs (454 g) | 10 kA 60A max J fuses or 125A max RK5 fuses | | | | | |
| | 30103D | 1.0 lbs (454 g) | | | | | | |
| | 30302D | 1.3 lbs (590 g) | | | | | | |
| | 30303D | 1.3 lbs (590 g) | | | | | | |
| | 30322D | 2.2 lbs (998 g) | | | | | | |
| | 30323D | 2.2 lbs (998 g) | | | | | | |
| Enclosed Rotary Switch | 60302D | 1.9 lbs (861 g) | 10 kA 80A max J fuses or 125A max RK5 fuses | | | | | |
| | 60303D | 2.0 lbs (907 g) | | | | | | |
| | 664X33D | 2.5 lbs (1,134 g) | | | | | | |
| | 664X63D | 3.0 lbs (1,361 g) | | | | | | |

| 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 Nm |
| | 30003D | | | | |
| | 4002 | | | | |
| | 40002D | 14 to 8 AWG | 2.5 to 10 mm ² | | |
| | 40003D | | | | |
| | 60002D | 14 to 6 AWG | 2.5 to 16 mm ² | | |
| 60003D | | | | | |
| Enclosed Toggle Switch | 30102D | 14 to 10 AWG | 2.5 to 6 mm ² | 20 lb-in | 2.3 Nm |
| | 30103D | | | | |
| | 30302D | | | | |
| | 30303D | | | | |
| | 30322D | | | | |
| | 30323D | | | | |
| Enclose Rotary Switch | 60302D | 14 to 6 AWG | 2.5 to 16 mm ² | 25 lb-in | 2.8 Nm |
| | 60303D | | | | |
| | 664X33D | | | | |
| | 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.

Company Information

Drives

Soft Starters

Motors

Power Transmission

Motor: Servos and Steppers

Motor Controls

Sensors: Proximity

Sensors: Photoelectric

Sensors: Encoders

Sensors: Limit Switches

Sensors: Current

Sensors: Pressure

Sensors: Temperature

Sensors: Level

Sensors: Flow

Pushbuttons and Lights

Stacklights

Signal Devices

Process

Relays and Timers

Pneumatics: Air Prep

Pneumatics: Directional Control Valves

Pneumatics: Cylinders

Pneumatics: Tubing

Pneumatics: Air Fittings

Appendix Book 2

Terms and Conditions