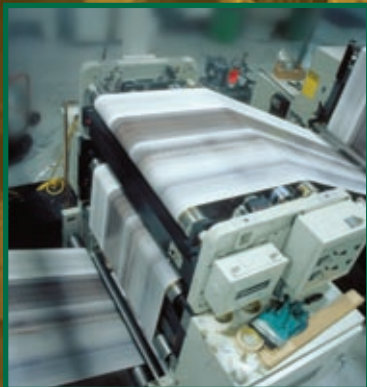


# Motor Controllers and Disconnects



***Bryant Manual Motor Controllers  
and Disconnects...***

***The Right Choice for  
Performance.***




# BRYANT®


## WIRING DEVICES

## Quick Reference Guide







### Toggle Switches (pages 3-4)

	Catalog Numbers	Amps	Description	Phase	Poles	Horse Power Ratings			
						120V AC	240V AC	480V AC	600V AC
	30002D	30	Toggle Switch	1	2	2	5	10	15
	30002DS	30	Short Toggle Switch	1	2	2	5	10	15
	30003D	30	Toggle Switch	3	3	3	7.5	15	20
	30003DS	30	Short Toggle Switch	3	3	3	7.5	15	20
	40002D	40	Toggle Switch	1	2	2	5	10	15
	40003D	40	Toggle Switch	3	3	3	7.5	15	20
	50002D	50	Toggle Switch	1	2	2	5	10	15
	50003D	50	Toggle Switch	3	3	3	7.5	15	25
	60002D	60	Toggle Switch	1	2	—	10	15	20
	60003D	60	Toggle Switch	3	3	—	10	25	30
	60002FWD	60	Toggle Switch - Front Wire	1	2	—	10	15	20
	60003FWD	60	Toggle Switch - Front Wire	3	3	—	10	25	30
	85002D	85	Toggle Switch	1	2	—	10	15	20
	85003D	85	Toggle Switch	3	3	—	10	25	40




### Rotary Switches (pages 3-4)

	Catalog Numbers	Amps	Description	Phase	Poles	Horse Power Rating			
						120V AC	240V AC	480V AC	600V AC
	66032D	30	Rotary Switch	1	2	2	5	10	15
	66033D	30	Rotary Switch	3	3	3	7.5	15	20
	66042D	40	Rotary Switch	1	2	2	5	10	15
	66043D	40	Rotary Switch	3	3	3	7.5	15	20
	66062D	60	Rotary Switch	1	2	—	10	15	20
	66063D	60	Rotary Switch	3	3	—	10	25	30

### Toggle Switches in Enclosures

	Catalog Numbers	Page(s)	Amps	Description	Phase	Poles	Horse Power Ratings			
							120V AC	240V AC	480V AC	600V AC
	30102D	5	30	NEMA 1 Aluminum - Toggle	1	2	2	5	10	15
	30103D	5	30	NEMA 1 Aluminum- Toggle	3	3	3	7.5	15	20
	661032D	5	30	NEMA 1 Aluminum- Rotary	1	2	2	5	10	15
	661033D	5	30	NEMA 1 Aluminum- Rotary	3	3	3	7.5	15	20
	30322D	6	30	NEMA 3/3R Non-Metallic	1	2	2	5	10	15
	30323D	6	30	NEMA 3/3R Non-Metallic	3	3	3	7.5	15	20
	30312D	6	30	NEMA 3R Die Cast Aluminum	1	2	2	5	10	15
	30313D	6	30	NEMA 3R Die Cast Aluminum	3	3	3	7.5	15	20
	30302D	7	30	NEMA 3R Aluminum	1	2	2	5	10	15
	30303D	7	30	NEMA 3R Aluminum	3	3	3	7.5	15	20
	60302D	7	60	NEMA 3R Aluminum	1	2	—	10	15	20
	60303D	7	60	NEMA 3R Aluminum	3	3	—	10	25	30
	664S33D	8	30	NEMA 4X Stainless Steel	3	3	3	7.5	15	20
	664S63D	8	60	NEMA 4X Stainless Steel	3	3	—	10	25	30
	664X33D	9-10	30	NEMA 4X Rotary Motor Controller	3	3	3	7.5	15	20
	664X43D	9-10	40	NEMA 4X Rotary Motor Controller	3	3	3	7.5	15	20
	664X63D	9-10	40	NEMA 4X Rotary Motor Controller	3	3	—	10	25	30

### Accessories

	Catalog Numbers	Page(s)	Description
	30003FG	3,8	Finger guard for 30, 40 and 50A Switches (set/2)
	6610MK	3-4	Handle Kit for Rotary Switch
	664XWP	3	Weatherproofing Kit for Rotary Switch
	660AC	3,8,9	Auxiliary Contact NO/NC
	664XFT	9	Mounting Feet for NEMA 4X Enclosure
	6603N	9	Neutral Buss Connector for NEMA 4X Enclosure



# BRYANT®

## Motor Controllers and Disconnects "Suitable as Motor Disconnects"

### Safety is our primary concern.



Bryant motor controllers are "suitable as motor disconnects," which means that every motor controller 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 enhance the convenience of your application with one device fulfilling two needs.

Bryant offers flexibility, strict compliance to UL standards and the high quality to advance productivity and safety to your particular application.

### All Bryant controllers can be used as disconnects.

In order to understand the benefits of the Bryant design, it is important to understand the difference between a motor controller and a motor disconnect. 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 2005 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 a controller and disconnect can be the same unit (article 430.109), Bryant has taken the opportunity to design a compact controller that will also meet the rigorous demands of a motor disconnect. Bryant's controllers are listed "Suitable as Motor Disconnect" under UL standard 508 - Industrial Control Equipment - qualifying them to perform both operations in one compact package.



### Bryant provides the products you need, with the quality you expect.

Exceeding quality and performance expectations is one of the things Bryant does best. Our line of controllers/disconnects is certainly no exception. Our patented technology has been crafted into a compact, efficient design which is available in pre-assembled NEMA enclosure types or as a component switch giving you the options needed to meet your specific application requirements.



# AC Manual Toggle and Rotary Controllers/Disconnects



30, 40, 50, 60 and 85A 600V AC



**#10 Brass terminal screw.**

Clamping plate for secure back or side wiring.

**Optional side guard.**

For close wall applications and finger safe environments.



**Steel screws and copper terminals.**

**Recessed wiring wells.**

Finger safe environments.

## FEATURES

**Strong on/off action with quick-make, slow break operation.**

- Provides long-life reliability.

**10,000 Amp high fault short circuit withstand rating.**

**Thermoset body.**

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

**Silver alloy contacts**

- Four large contacts per pole
- Excellent conductivity.
- Extended Life.



## 600V AC Manual Motor Toggle and Rotary Controllers

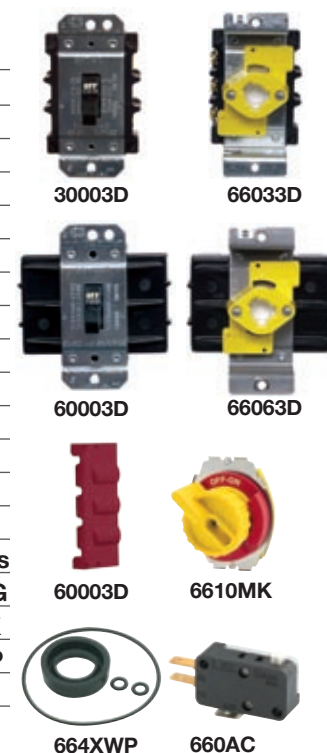
### Order Information

For use in any industrial environment. Ideal component switch for motor control and as a disconnect. Toggle controllers can be built into equipment and enclosures for either box or panel-mount installation.

Amp	Poles	Toggle Type	Wire	HP Rating				Catalog Numbers	
				120V AC	240V AC	480V AC	600V AC	Toggle	Rotary
30	2	Standard	—	2	5	10	15	30002D	66032D
30	2	Short	—	2	5	10	15	30002DS	—
30	3	Standard	—	3	7.5	15	20	30003D	66033D
30	3	Short	—	3	7.5	15	20	30003DS	—
40	2	Standard	—	2	5	10	15	40002D	66042D
40	3	Standard	—	3	7.5	15	20	40003D	66043D
50	2	Standard	—	2	5	10	15	50002D	—
50	3	Standard	—	3	7.5	15	25	50003D	—
60	2	Standard	—	—	10	15	20	60002D	66062D
60	3	Standard	—	—	10	25	30	60003D	66063D
60	2	Standard	Front	—	10	15	20	60002FWD	—
60	3	Standard	Front	—	10	25	30	60003FWD	—
85	2	Standard	—	—	10	15	20	85002D	—
85	3	Standard	—	—	10	25	40	85003D	—

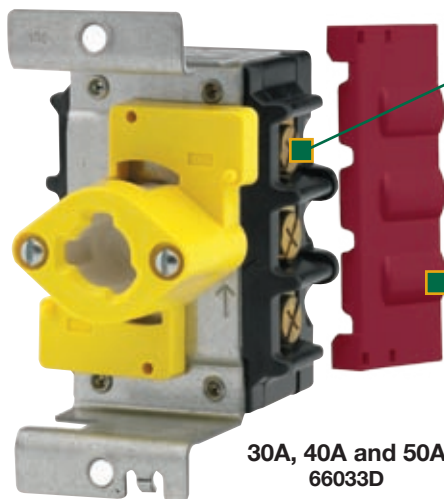
### Accessories - Description

Accessories - Description	Catalog Numbers
Finger Guards (red) for use with 30, 40 and 50A switches (set/2)	30003FG
Handle Kit for rotary: includes handle, shaft, mounting brackets and required screws	6610MK
Weatherproofing kit: includes 4 seals, neoprene bushing and 3 "O" rings	664XWP
Auxiliary Contact N.O./N.C.: includes 1 contact for use with push-on terminals	660AC



# AC Manual Toggle and Rotary Controllers/Disconnects

30, 40, 50, 60 and 85A 600V AC



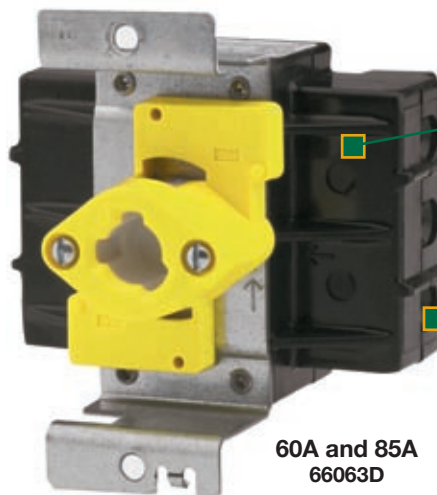
30A, 40A and 50A  
66033D

## #10 Brass terminal screw.

Clamping plate for secure back or side wiring.

## Optional side guard.

For close wall applications and finger safe environments.



60A and 85A  
66063D

## Steel screws and copper terminals.

## Recessed wiring wells.

Finger safe environments.

## 100% copper contact arm.

- High heat management.



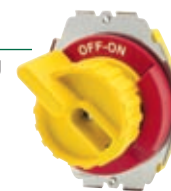
## Lubrication-free controller:

- Continued on/off cycling even in harsh, dust and high heat environments.



## Handle Kit for Rotary Devices

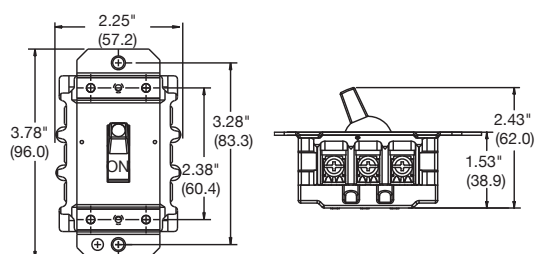
- One-way, keyed mounting assembly to facilitate installation.
- Impact and chemical resistant Valox® handle.



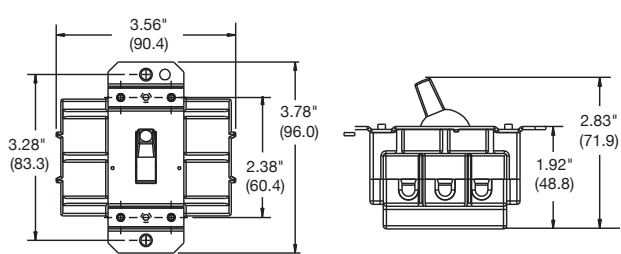
## Dimensional Drawings

### Toggles

#### 30, 40 and 50 Amp

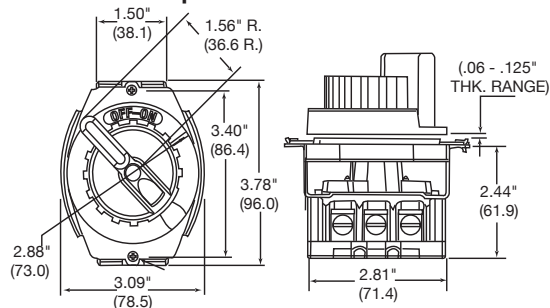


#### 60 and 85 Amp

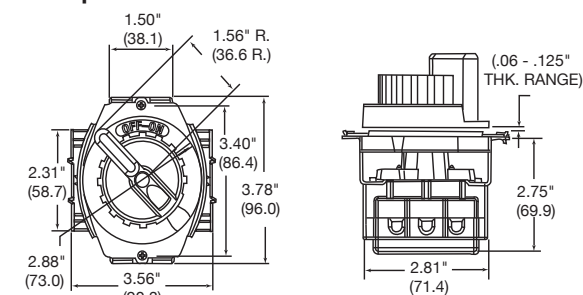


### Rotary

#### 30 and 40 Amp



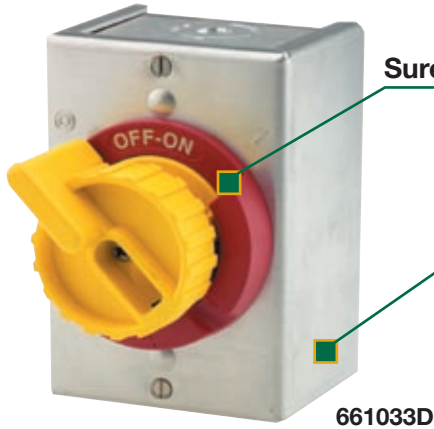
#### 60 Amp





# NEMA 1 Disconnect Switches

30A 600V AC



## Sure-Grip high visibility handle.

Impact and chemical-resistant Valox® assembly handle.

## Lightweight Aluminum.

Perfect for indoor use, protection against falling dirt.



30103D

## COMMON FEATURES

### Wiring conduit knockouts.

- 1/2" and 3/4" NPT.
- Top, bottom or back wire entry points.

### Surface mount control.

## All aluminum cover and base.

Base is pre-drilled for rear surface mounting.

## NEMA 1 Enclosed Switch Motor Controllers

### Order Information

Ideal for use in industrial environments, i.e. conveyer systems, industrial fans, etc.

Amp	Poles	HP Rating				Catalog Numbers
		20V AC	240V AC	480V AC	600V AC	
30	2	2	5	10	15	30102D
30	3	3	7.5	15	20	30103D
Description						Catalog Number
Enclosure without switch						30100

Note: For switch specifications refer to page 11.



30102D



30100

## NEMA 1 Enclosed Rotary Motor Controllers

### Order Information

Ideal for use in indoor industrial environments, i.e. industrial fans, machine tools etc.

Amp	Poles	HP Rating				Catalog Numbers
		20V AC	240V AC	480V AC	600V AC	
30	2	2	5	10	15	661032D
30	3	3	7.5	15	20	661033D

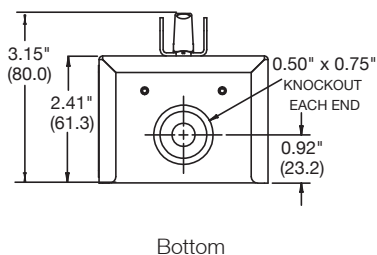
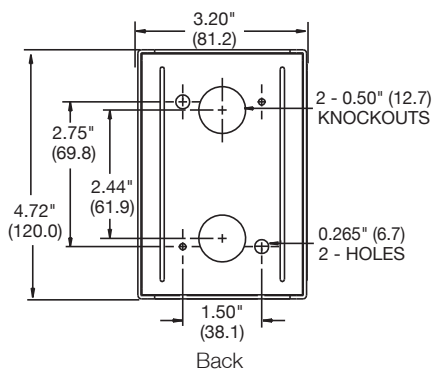
Note: For switch specifications refer to page 11.



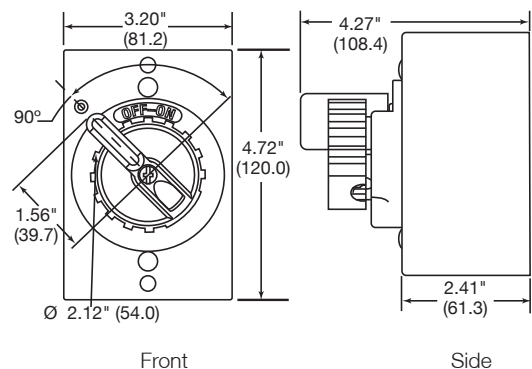
661032D

## Dimensional Drawings

### 30102D and 30103D



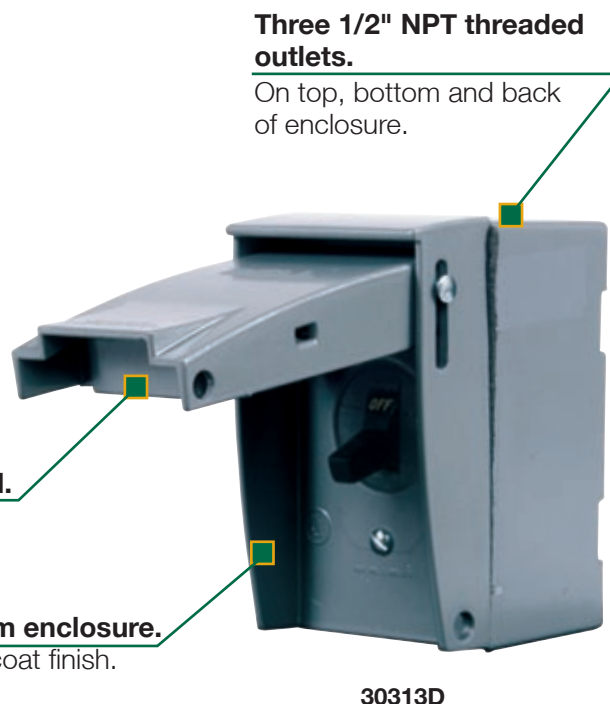
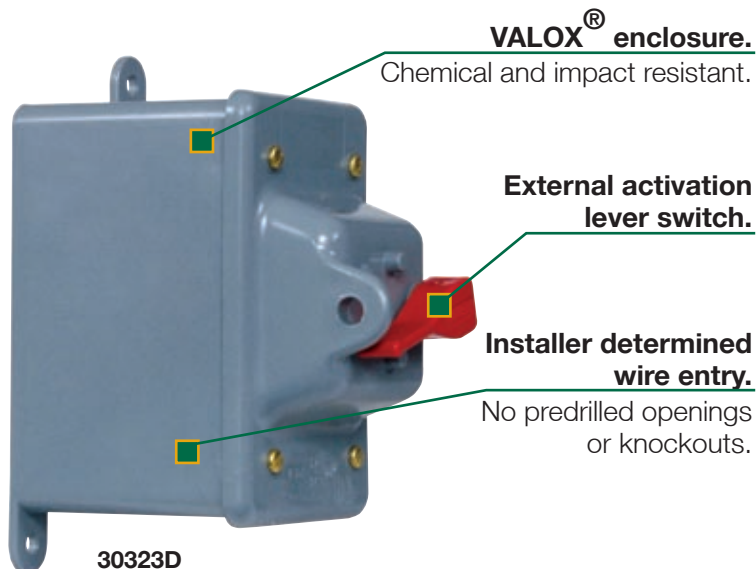
### 661032D and 661033D





# NEMA 3/3R Disconnect Switches

30A 600V AC



## COMMON FEATURES

Rain tight enclosures.  
Designed for surface mounting.

## NEMA 3/3R Enclosures with Switch

### Order Information

Ideal for use on outdoor equipment.

Amp	Poles	Enclosure Material	HP Rating				Catalog Numbers
			120V AC	240V AC	480V AC	600V AC	
30	2	Thermoplastic	2	5	10	15	<b>30322D*</b>
30	3	Thermoplastic	3	7.5	15	20	<b>30323D*</b>
30	2	Aluminum	2	5	10	15	<b>30312D</b>
30	3	Aluminum	3	7.5	15	20	<b>30313D</b>

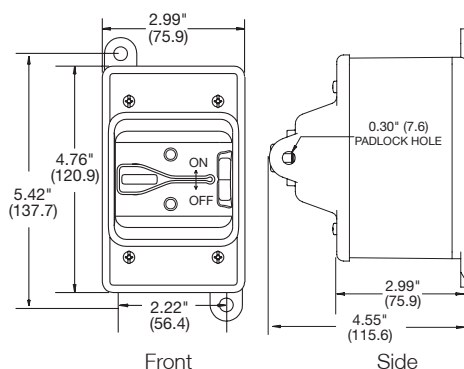
Note: For switch specifications refer to page 11.

\* Drill weephole to alter from NEMA 3 to NEMA 3R.

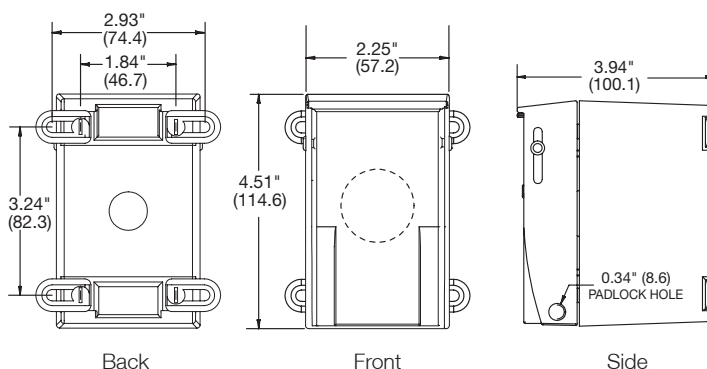


## Dimensional Drawings

### 30322D and 30323D



### 30312D and 30313D



# NEMA 3R Disconnect Switches

30A and 60A 600V AC



30303D

## COMMON FEATURES

### All aluminum cover and base.

- Base is pre-drilled for surface mounting.

### Rain tight drip shield top.

- Rolled seamless sides.

### Wiring conduit knockouts.

- 1/2" NPT K.O. for 30A.
- 3/4" -1" NPT K.O. for 60A.
- Top, bottom or back wire entry points.



60303D

## NEMA 3R Enclosures with Switch

### Order Information

Ideal for use in outdoor environments.

Amp	Poles	HP Rating				Catalog Numbers
		120V AC	240V AC	480V AC	600V AC	
30	2	2	5	10	15	30302D
30	3	3	7.5	15	20	30303D
60	2	-	10	15	20	60302D
60	3	-	10	25	30	60303D

Note: For switch specifications refer to page 11.



30303D

60303D

## Enclosures without Switch

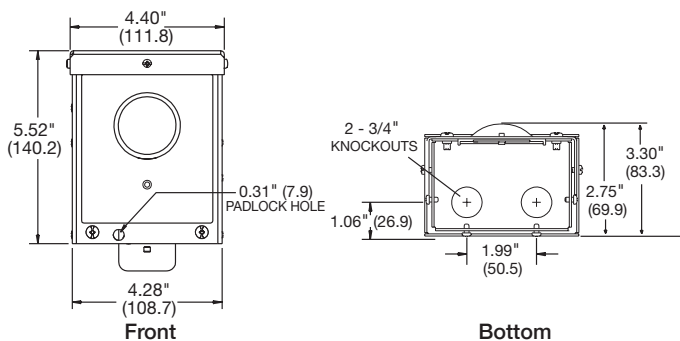
### Order Information

For use with switches shown on pages 3 and 4.

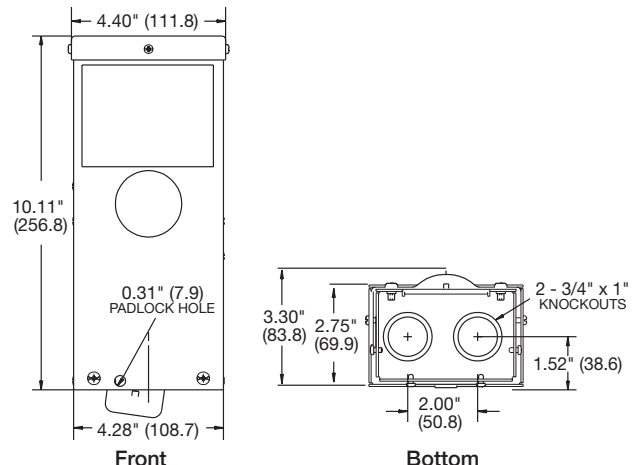
Description	Catalog Numbers
For use with 30A switch	30300
For use with 60A switch	60300

## Dimensional Drawings

30302D, 30303D and 30300



60302D, 60303D and 60300

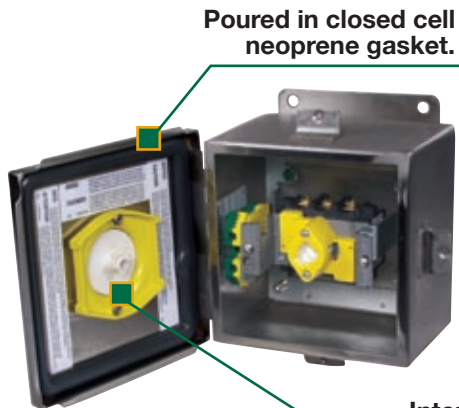






# NEMA 4X Disconnect Switches

30A and 60A 600V AC



Poured in closed cell neoprene gasket.

**Interlocking shaft and handle.**  
Prevents cover removal when switch is on.



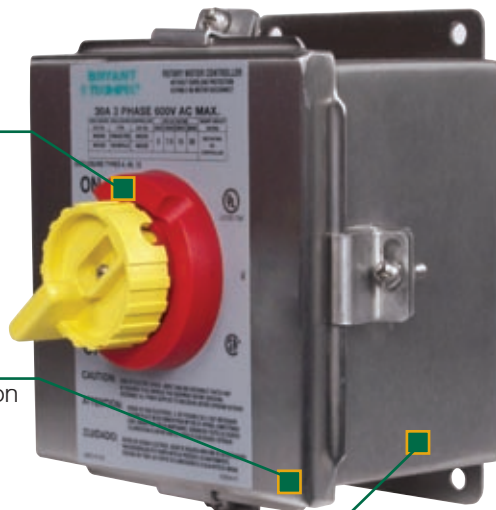
**Up to 2 Optional auxiliary contacts.**  
For PLCs and external indicators.

**VALOX® handle and collar.**

Chemical and impact resistant.

**304 Stainless steel enclosure.**

Chemical and corrosion resistant.



**Undrilled case.**

Allows custom placement of wire entry.

664S33D

## NEMA 4X Enclosures with Switch and Accessories

### Order Information

Ideal for use in environments where washdown is necessary, i.e. food processing, laboratories, etc.

Amp	Poles	HP Rating				Catalog Numbers
		120V AC	240V AC	480V AC	600V AC	
30	3	3	7.5	15	20	664S33D
60	3	-	10	25	30	664S63D
Finger Guard option for 30A switch (set/2)						30003FG
NO/NC auxiliary contact, 10A 120/250 V AC for 30 and 60 Amp switches						660AC

Note: For switch specifications refer to page 11.



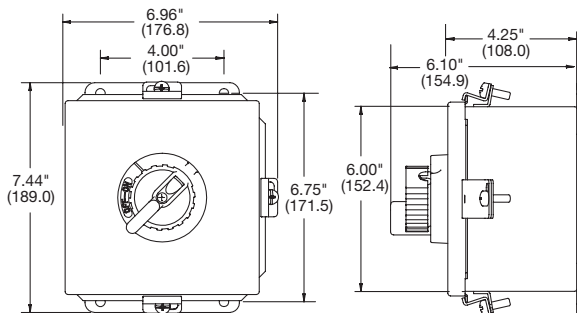
664S33D



664S63D

### Dimensional Drawings

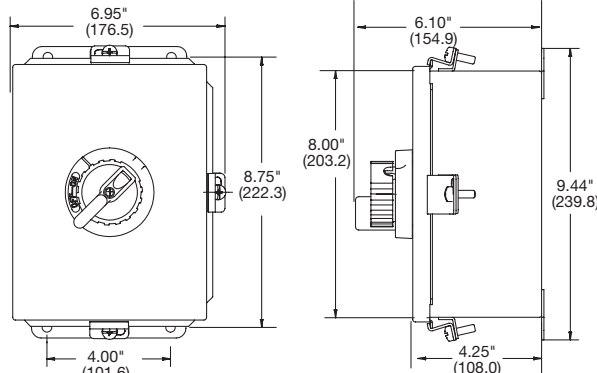
664S33D



Front

Side

664S63D



Front

Side

# NEMA 4X Enclosed Rotary Motor Disconnects

30A, 40A and 60A 600V AC



**Undrilled case.**

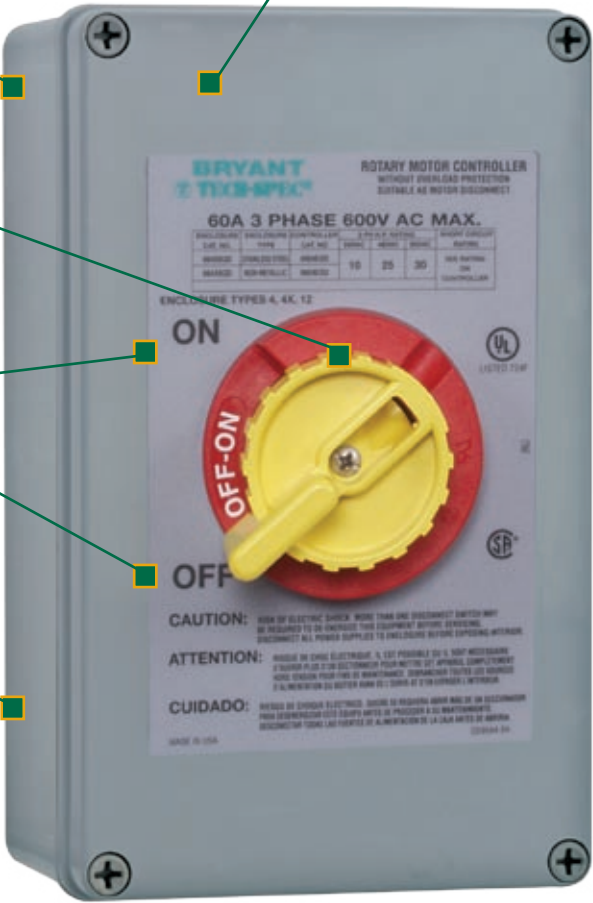
Allows custom placement of entry positions with normal tools and knockouts.

**High visibility Red/Yellow handle assembly for quick identification.**

**Clearly identified "ON/OFF" indicators.**

**All thermoplastic, non-corrosive, non-metallic enclosure.**

**NEMA 4X/IP65.**  
Enclosure provides water and dust protection.



664X63D

## NEMA 4X Switched Enclosure, Unfused

### Order Information

Used primarily in heavy wash-down and corrosive environments.

Description	HP Rating				Catalog Numbers
	120V AC	240V AC	480V AC	600V AC	
30A enclosed controller, 3-pole, 3 Ø	3	7.5	15	20	664X33D
40A enclosed controller, 3-pole, 3 Ø	3	7.5	15	20	664X43D
60A enclosed controller, 3-pole, 3 Ø	—	10	25	30	664X63D

### Accessories

Description	Catalog Numbers
Auxiliary Contact NO/NC: includes 1 contact for use with push-on terminals	660AC
Mounting feet kit: includes 4 mounting feet with screws	664XFT
Neutral buss connector: includes 1 neutral buss, mounting bracket and screw	6603N



664X63D



660AC



664XFT

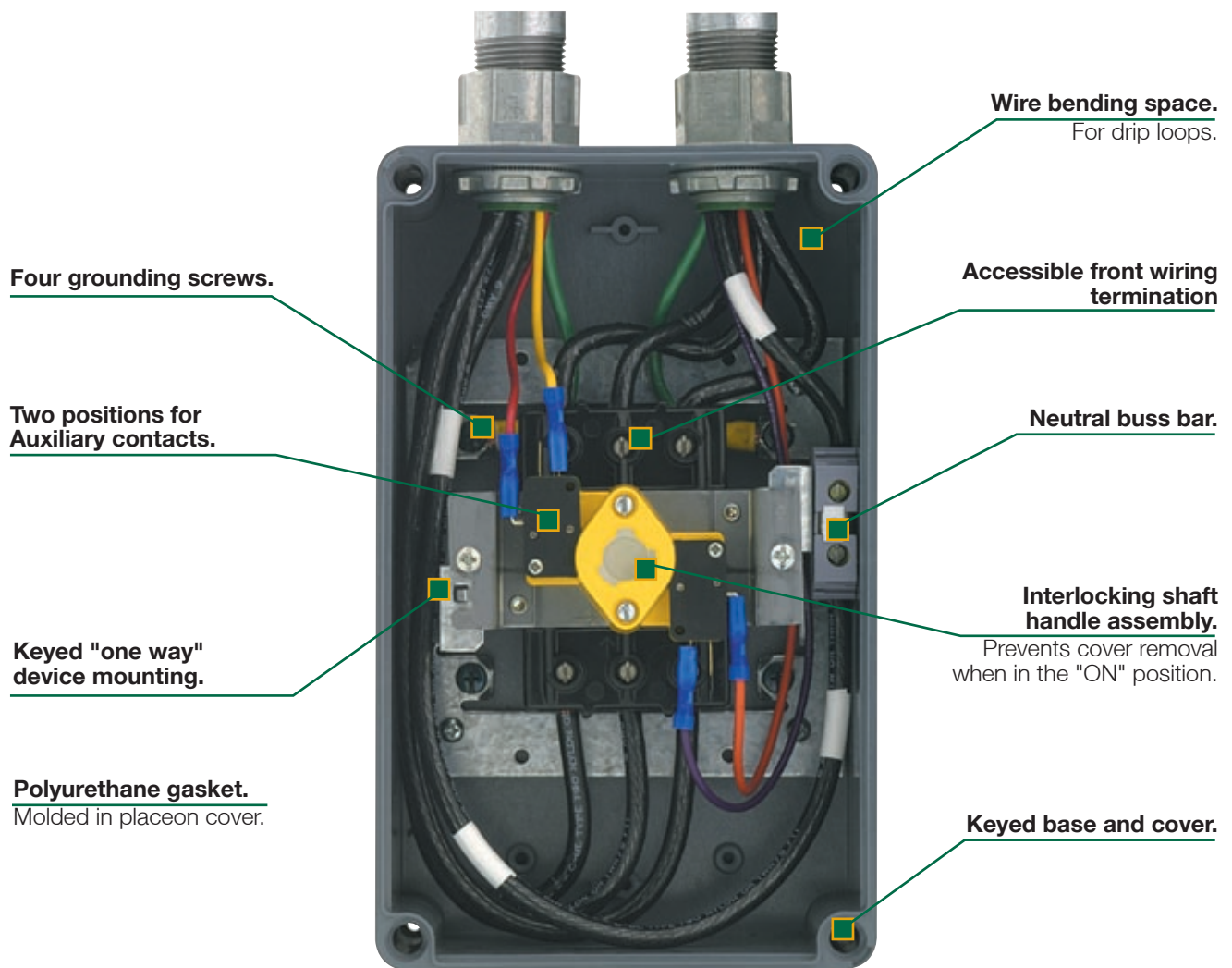


6603N



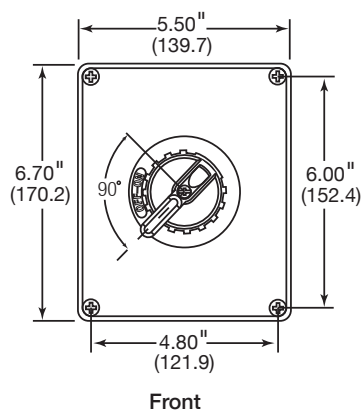
# NEMA 4X Enclosed Rotary Motor Disconnects

30A, 40A and 60A 600V AC

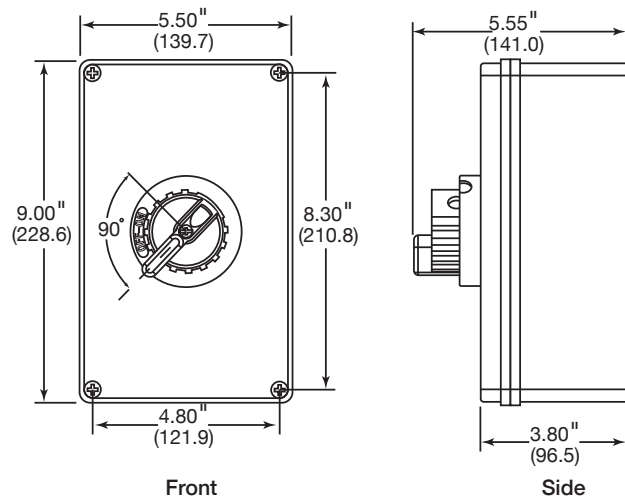


## Dimensional Drawings

664X33D, 664X43D



664X63D





# Specifications

## Switches and Enclosures

### Specifications AC Manual Toggle & Rotary Motor Controller/Disconnects

#### ■ Electrical Performance

Dielectric Voltage	2,200V AC minimum for 1 minute	
Electrical Life	6,000 Cycles at rated switch load	
Max Working Voltage	600V AC RMS	
	<b>Switches</b>	<b>10,000 RMS</b>
Short Circuit	30A & 40A	60A max J fuses
Withstand Rating	50A	50A max J fuses
as Motor Disconnect	60A & 85A	80A max J fuses
Short Circuit		
Withstand Rating	All Switches	125A max RK5 fuses
as Motor Controller		

#### ■ Mechanical

Mechanical Life	10,000 minimum cycles		
	<b>Amps</b>	<b>AWG Min.</b>	<b>AWG Max.</b>
Terminal	30	#14	#10
Accommodations	40 & 50	#14	# 8
	60 & 85	#14	# 4
Terminal Torque	30 - 50	20 inch pounds	
	60 - 85	25 inch pounds	

#### ■ Environmental

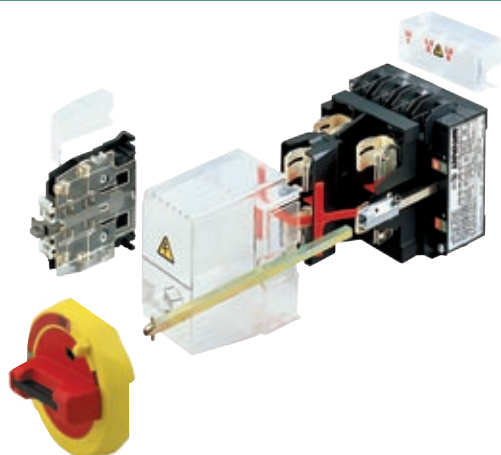
Flammability	UL94HB/VO		
Operating Temp.	Max. continuous 30,40 & 60A	60 °C	
	Max. continuous 50 & 85A	75 °C	
	Min. continuous w/out impact	-40 °C	

#### ■ Listings

UL 508	Industrial Control Equipment File #E70402
CSA-C22.2 No.14	Industrial Control Equipment File # LR-46186

## Also available from Bryant...

Bryant also offers a wide variety of Fused and Non-Fused Panel Mountable Disconnect Switches. The product line includes 30, 60, 100 and 200 Amp products rated up to 600V AC/250V DC. Also available is a full line of accessories to compliment the product offering.



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