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# Motor Control Products

## Toggle AC Manual Motor Controllers/Disconnects



**TECH·SPEC®**



- Ideal motor controller suitable as a disconnect
- High temperature thermoset body
- Provides high resistance to electrical arc tracking
- Strong ON/OFF action with quick-make, slow break operation provides long-life and reliability
- Superior dielectric strength
- Optional side guard, for close wall applications and finger safe environments
- Can be built into equipment and enclosures with either box or panel-mount installation

## Toggle AC Manual Motor Controllers/Disconnects



30003D



40002D



60003D

Poles	HP Rating				30A		40A	50A	60A		85A
	120V AC	240V AC	480V AC	600V AC	Back and Side Wired		Side Wired	Side Wired	Front Wired	Back Wired	Back Wired
					Standard Toggle	Short Toggle	Standard Toggle	Standard Toggle	Standard Toggle	Standard Toggle	Standard Toggle
2	2	5	10	15	<b>30002D</b>	<b>30002DS</b>	<b>40002D</b>	<b>50002D</b>	—	—	—
2	2	5	10	15	—	—	<b>4002*</b>	—	—	—	—
3	3	7.5	15	20	<b>30003D</b>	<b>30003DS</b>	<b>40003D</b>	<b>50003D</b>	—	—	—
2	—	10	15	20	—	—	—	—	<b>60002FWD</b>	<b>60002D</b>	<b>85002D</b>
3	—	10	25	30	—	—	—	—	<b>60003FWD</b>	<b>60003D</b>	—
3	—	10	25	40	—	—	—	—	—	—	<b>85003D</b>

Note: \*Motor controller only.

## Accessories

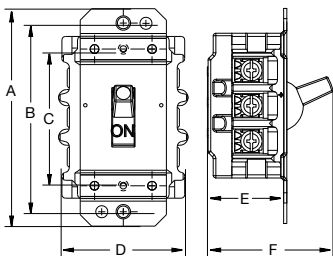
Description	Catalog Number
Finger guards, red, for use with 30, 40 and 50 amp switches (set of 2)	<b>30003FG</b>



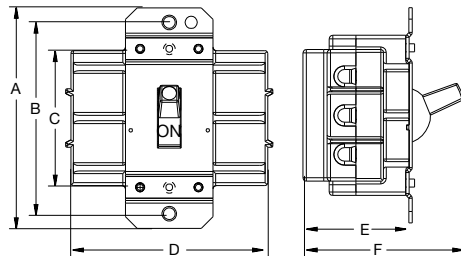
30003FG

## Product Dimensions Inches (mm)

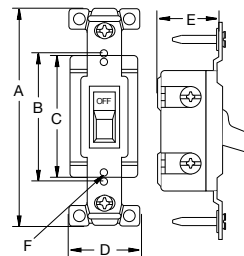
	30002D, 30003D, 40002D, 40003D, 50002D, 50003D	60002D, 60003D, 85002D, 85003D	4002
A	3.78" (96.0)	3.78" (96.0)	4.06" (103.1)
B	3.28" (83.3)	3.28" (83.3)	2.38" (60.5)
C	2.38" (60.4)	2.38" (60.4)	2.26" (57.4)
D	3.56" (90.4)	2.25" (57.2)	1.30" (33.0)
E	1.92" (48.8)	1.53" (38.9)	1.11" (28.2)
F	2.83" (71.9)	2.43" (62.0)	(2) #6-32 TAP



30002D, 30003D, 40002D, 40003D, 50002D, 50003D



60002D, 60003D, 85002D, 85003D



4002

# Motor Control Products



## NEMA 1 and 3/3R Enclosed AC Manual Motor Controllers/Disconnects



30313D

### 30313D

- Die cast aluminum enclosure, gray zinc powder coat finish
- Heavy duty flip lid, 3-sided protection
- Lockout/tagout capability

### 30303D

- All aluminum cover and base, base is pre-drilled for rear surface mounting
- Raintight enclosures
- Lockout/tagout capability



30303D

## Enclosed AC Manual Motor Controllers/Disconnects



Enclosed Switch Motor Controllers/Disconnects						NEMA 1		NEMA 3/3R		NEMA 3R	
Ideal for use in:						Indoor Environments		Outdoor Equipment		Outdoor Environments	
Poles	HP Rating					30A	30A		30A	60A	
	120V AC	240V AC	480V AC	600V AC	Thermoplastic		Aluminum Cast				
2	2	5	10	15	<b>30102D</b>	<b>30322D*</b>	<b>30312D</b>	<b>30302D</b>	—		
3	3	7.5	15	20	<b>30103D</b>	<b>30323D*</b>	<b>30313D</b>	<b>30303D</b>	—		
2	—	10	15	20	—	—	—	—	<b>60302D</b>		
3	—	10	25	30	—	—	—	—	<b>60303D</b>		

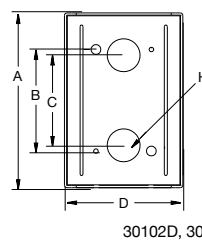
Note: \*Drill weephole to alter from NEMA 3 to NEMA 3R.

## Enclosures Without Controller/Disconnect

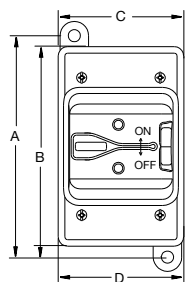
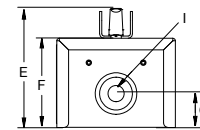
NEMA 1		NEMA 3R	
Use with 30002D and 30003D		For 30A, use with 30002D and 30003D	
<b>30100</b>		<b>30300</b>	
		For 60A, use with 60003FWD	
		<b>60300</b>	

## Product Dimensions Inches (mm)

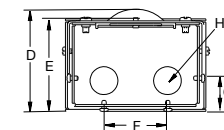
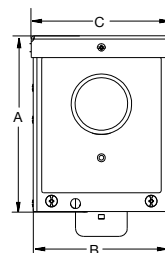
	30102D, 30103D, 3100	30322D, 30323D	30302D, 30303D, 30300	60302D, 60303D, 60300
A	4.72" (120.0)	5.42" (137.7)	5.52" (140.2)	10.11" (256.8)
B	2.75" (69.8)	4.76" (120.9)	4.28" (108.7)	4.28" (108.7)
C	2.44" (61.9)	2.99" (75.9)	4.40" (111.8)	4.40" (111.8)
D	3.20" (81.2)	2.22" (56.4)	3.30" (83.3)	3.30" (83.8)
E	3.15" (80.0)	4.55" (115.6)	2.75" (69.9)	2.75" (69.9)
F	2.41" (61.3)	2.99" (75.9)	1.99" (50.5)	2.00" (50.8)
G	0.92" (23.2)	—	1.06" (26.9)	1.52" (38.6)
H	(2) ½" (12.7)	—	(2) ¾"	(2) ¾" X 1"
I	Knockouts	—	Knockouts	Knockouts
	½ x ¾ Knockout each end	—	—	—



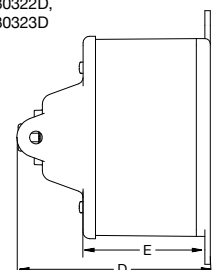
30102D, 30103D



30322D,  
30323D



30302D, 30303D, 30300,  
60302D, 60303D, 60300





66033D

30003FG

- Ideal motor controller suitable as a disconnect
- Rotary controllers can be built into equipment and enclosures for either box or panel-mount installation
- Provides high resistance to electrical arc tracking
- Thermoset body withstands high temperatures
- Superior dielectric strength
- #10 brass terminal screw and clamping plate for secure back or side wiring
- Optional side guard, for close wall applications and finger safe environments

### Rotary AC Manual Motor Controllers/Disconnects



66032D



66042D



66062D

Poles	HP Rating				30A	40A	60A
	120V AC	240V AC	480V AC	600V AC	Back and Side Wired	Side Wired	Back Wired
2	2	5	10	15	<b>66032D</b>	<b>66042D</b>	—
3	3	7.5	15	20	<b>66033D</b>	<b>66043D</b>	—
2	—	10	15	20	—	—	<b>66062D</b>
3	—	10	25	30	—	—	<b>66063D</b>

### Accessories



30003FG



6610MK



664XWP

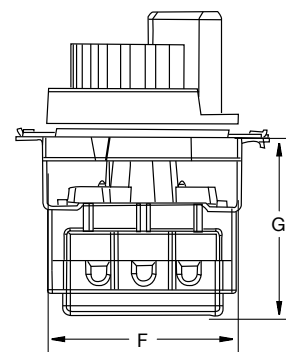
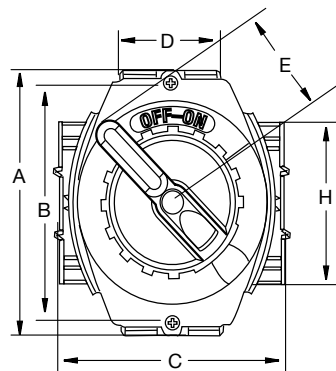


660AC

Accessory	Finger Guards	Handle Kit	Weatherproofing Kit	Auxiliary Contact
Description	For use with 30-50A switches (set of 2)	For rotary switch, includes handle, shaft, mounting brackets and required screws	For rotary switch, includes 4 seals, neoprene bushing and 3 "O" rings	NO/NC, includes 1 contact for use with push-on terminals
Catalog Number	<b>30003FG</b>	<b>6610MK</b>	<b>664XWP</b>	<b>660AC</b>

### Product Dimensions Inches (mm)

	66032D, 66033D, 66042D, 66043D with Handle Kit 6610MK	66062D, 66063D with Handle Kit 6610MK
A	3.78" (96.0)	3.78" (96.0)
B	3.40" (86.4)	3.40" (86.4)
C	3.09" (78.5)	3.56" (90.3)
D	1.50" (38.1)	1.50" (38.1)
E	1.56" R. (36.6 R.)	1.56" R. (36.6 R.)
F	2.81" (71.4)	2.81" (71.4)
G	2.44" (61.9)	2.96" (75.2)
H	—	2.31" (58.7)



# Motor Control Products

## NEMA 4X Enclosed Rotary Motor Controllers/Disconnects



664S33D

### 664S33D

- 304 stainless steel enclosure, chemical and corrosion-resistant
- PBT handle and collar, chemical and impact resistant
- Lockout/tagout capability

### 664X63D

- Undrilled case allows custom placement of entry positions with normal tools and knockouts
- All thermoplastic, non-corrosive, non-metallic enclosure
- Clearly identified "ON/OFF" indicators



664X63D

## Enclosed Rotary Motor Controllers/Disconnects



664S33D



664S63D



664X33D



664X63D

					NEMA 4X				
					Stainless steel enclosures ideal for use in environments where washdown is necessary (i.e., food processing, laboratories, etc.)		Non-metallic enclosures used primarily in heavy wash-down and corrosive environments		
Poles	HP Rating				30A	60A	30A	40A	60A
	120V AC	240V AC	480V AC	600V AC					
2	2	5	10	15	—	—	—	—	—
3	3	7.5	15	20	<b>664S33D</b>	—	<b>664X33D</b>	<b>664X43D</b>	—
3	—	10	25	30	—	<b>664S63D</b>	—	—	<b>664X63D</b>

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

## Accessories



30003FG



660AC



664XFT

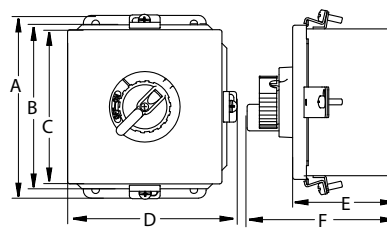


6603N

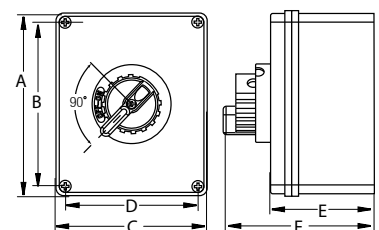
Accessory	Finger Guards	Auxiliary Contact	Mounting Feet	Neutral Buss Connector
Description	For Use with 30-50A Switches (set of 2)	NO/NC, Pilot Duty	For NEMA 4X Enclosure	For NEMA 4X Enclosure
Catalog Number	<b>30003FG</b>	<b>660AC</b>	<b>664XFT</b>	<b>6603N</b>

## Product Dimensions Inches (mm)

	664S33D	664S63D	66X33D, 66X43D	66X63D
A	7.44" (189.0)	9.44" (239.8)	6.70" (170.2)	9.00" (228.6)
B	6.75" (171.5)	8.75" (222.3)	6.00" (152.4)	8.30" (210.8)
C	6.00" (152.4)	8.00" (203.4)	5.50" (139.7)	5.50" (139.7)
D	6.96" (176.8)	6.95" (176.5)	4.80" (121.9)	4.80" (121.9)
E	4.00" (101.6)	4.00" (101.6)	5.55" (141.0)	5.55" (141.0)
F	6.10" (154.9)	6.10" (154.9)	3.80" (96.5)	3.80" (96.5)
G	4.25" (108.0)	4.25" (108.0)	—	—



664S33D, 664S63D



664X33D, 664X63D

Valox® is a registered trademark of SABIC Innovative Plastics, acquired from General Electric Company.



30003D



50003D



60003D



66033D



30102D



30302D



664S33D



664X33D



30003FG



660AC

### Toggle AC Motor Controllers Suitable as Disconnects

Description	Amp	Phase	Poles	HP Ratings				Catalog Number
				120V AC	240V AC	480V AC	600V AC	
Toggle switch	30	1	2	2	5	10	15	<b>30002D</b>
Short toggle switch	30	1	2	2	5	10	15	<b>30002DS</b>
Toggle switch	30	3	3	3	7.5	15	20	<b>30003D</b>
Short toggle switch	30	3	3	3	7.5	15	20	<b>30003DS</b>
Toggle switch	40	1	2	2	5	10	15	<b>40002D*</b>
Toggle switch	40	3	3	3	7.5	15	25	<b>40003D</b>
Toggle switch	50	1	2	2	5	10	15	<b>50002D</b>
Toggle switch	50	3	3	3	7.5	15	25	<b>50003D</b>
Toggle switch	60	1	2	—	10	15	20	<b>60002D</b>
Toggle switch	60	3	3	—	10	25	30	<b>60003D</b>
Toggle switch – front wire	60	1	2	—	10	15	20	<b>60002FWD</b>
Toggle switch – front wire	60	3	3	—	10	25	30	<b>60003FWD</b>
Toggle switch	85	1	2	—	10	15	20	<b>85002D</b>
Toggle switch	85	3	3	—	10	25	40	<b>85003D</b>

Note: \*For motor controller only, use catalog number 4002.

### Rotary AC Manual Motor Controllers Suitable as Disconnects

Description	Amp	Phase	Poles	HP Ratings				Catalog Number
				120V AC	240V AC	480V AC	600V AC	
Rotary switch	30	1	2	2	5	10	15	<b>66032D</b>
Rotary switch	30	3	3	3	7.5	15	20	<b>66033D</b>
Rotary switch	40	1	2	2	5	10	15	<b>66042D</b>
Rotary switch	40	3	3	3	7.5	15	25	<b>66043D</b>
Rotary switch	60	1	2	—	10	15	20	<b>66062D</b>
Rotary switch	60	3	3	—	10	25	30	<b>66063D</b>

### Toggle And Rotary Enclosed Switches Suitable as Disconnects

Description	Amp	Phase	Poles	HP Ratings				Catalog Number
				120V AC	240V AC	480V AC	600V AC	
NEMA 1 aluminum – toggle	30	1	2	2	5	10	15	<b>30102D</b>
NEMA 1 aluminum – toggle	30	3	3	3	7.5	15	20	<b>30103D</b>
NEMA 3/3R non-metallic	30	1	2	2	5	10	15	<b>30322D</b>
NEMA 3/3R non-metallic	30	3	3	3	7.5	15	20	<b>30323D</b>
NEMA 3R die cast aluminum	30	1	2	2	5	10	15	<b>30312D</b>
NEMA 3R die cast aluminum	30	3	3	3	7.5	15	20	<b>30313D</b>
NEMA 3R aluminum	30	1	2	2	5	10	15	<b>30302D</b>
NEMA 3R aluminum	30	3	3	3	7.5	15	20	<b>30303D</b>
NEMA 3R aluminum	60	1	2	—	10	15	20	<b>60302D</b>
NEMA 3R aluminum	60	3	3	—	10	25	30	<b>60303D</b>
NEMA 4X stainless steel	30	3	3	3	7.5	15	20	<b>664S33D</b>
NEMA 4X stainless steel	60	3	3	—	10	25	30	<b>664S63D</b>
NEMA 4X rotary motor controller	30	3	3	3	7.5	15	20	<b>664X33D</b>
NEMA 4X rotary motor controller	40	3	3	3	7.5	15	20	<b>664X43D</b>
NEMA 4X rotary motor controller	60	3	3	—	10	25	30	<b>664X63D</b>

### Accessories

Description	Catalog Number
Finger guards, red, for use with 30, 40 and 50 amp switches (set of 2)	<b>30003FG</b>
Handle kit for rotary switch, includes handle, shaft, mounting brackets and required screws	<b>6610MK</b>
Weatherproofing kit for rotary switch, includes 4 seals, neoprene bushing and 3 "O" rings	<b>664XWP</b>
Auxiliary contact NO/NC, includes 1 contact for use with push-on terminals	<b>660AC</b>
Mounting feet for NEMA 4X enclosure	<b>664XFT</b>
Neutral buss connector for NEMA 4X enclosure	<b>6603N</b>



## Pendant Control Stations



PCS002

- Compact size, designed for comfort fit
- Raised button guards
- Safety-yellow "Super-Tuff" polymer enclosure
- Heavy duty nickel-plated copper contacts
- Mechanical interlock on single- and two-speed stations
- "Saddle" type wire terminations
- Excellent strain relief

**IP55**  
SUITABILITY

## Pendant Control Stations, Two Button, NEMA 4X



PCS002



PCS102

Ideal for use on outdoor equipment.	With Mechanical Interlock Between Push Buttons		Normally Open-Normally Closed Without Mechanical Interlock
	Single-Speed	Two-Speed	Single-Speed
	<b>PCS002</b>	<b>PCS202</b>	<b>PCS102</b>

Note: Included with product: nylon cord grip and sealing washer (must be installed to achieve NEMA 4X rating).  
 Indication label pack. Cord dia. range .375–.625 in. (9.5–15.9).  
 Ambient temperatures: 25°F to 140°F (32°C to 60°C).  
 Typical applications: Package electric motor hoists. Remote control of machinery.

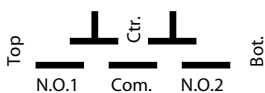
## Contact Ratings - Compact Pendant Push Button Stations, PCS Series

	Single-Speed		Two-Speed	
	Voltage	Current	Voltage	Current
AC	120V	6.0 Amp	120V	3.0 Amp
35% power factor	240V	3.0 Amp	240V	1.5 Amp
DC	125V	1.1 Amp	—	—
Inductive	250V	0.55 Amp	—	—

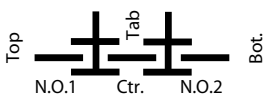
Note: Contacts will carry the above currents on a continuous basis and have the same interrupting ratings.

## Wiring Diagram

Single-Speed\* **PCS002**

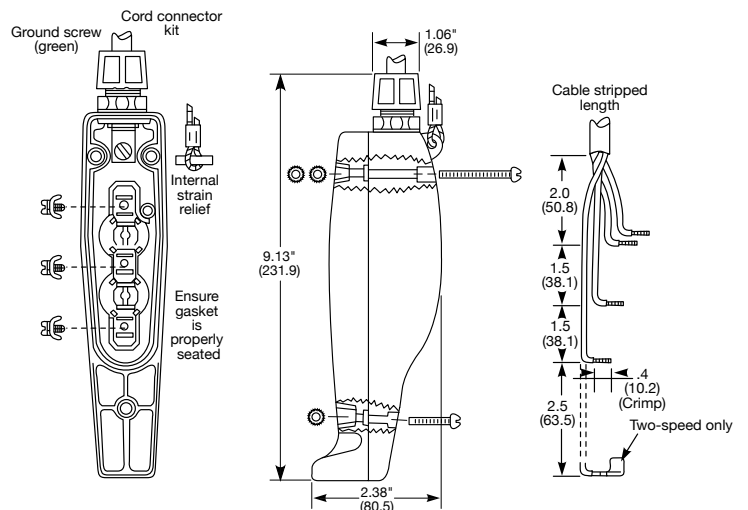


Two-Speed\* **PCS202**



Note: \*Mechanical "floating ball" interlock prevents actuating both push buttons simultaneously.

Momentary (Start/Stop) **PCS102**





### AC Manual Toggle and Rotary Motor Controllers/Disconnects

#### Certification

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

#### Performance

##### Electrical

Dielectric voltage	2,200V AC minimum for 1 minute	
Electrical life	6,000 cycles at general rating load	
Max working voltage	600V AC RMS	
	Controllers	10,000 Rms
Short circuit	30A and 40A	60A max J fuses
Withstand rating	50A	50A max J fuses
As motor disconnect	60A and 85A	80A max J fuses
Short circuit withstand rating as motor controller	All controllers	125A max RK5 fuses

#### Mechanical

Mechanical life	10,000 cyc min.		
Terminal accommodations	Amps	AWG Minimum	AWG Maximum
	30	#14	#10
	40 and 50	#14	# 8 - with UL listed ring terminal
	60 and 85	#14	# 4
Terminal torque	30 - 50	20 inch pounds	
	60 - 85	25 inch pounds	

#### Environmental

Flammability	UL94HB/V
Operating temperature	Maximum continuous 30, 40 and 60A, 60°C
	Maximum continuous 50 and 85A, 75°C
	Minimum continuous without impact, -40°C