

# CIRCUIT-LOCK®



## Manual Motor Controllers & Disconnects

### A Safety First Priority!



Wiring Device-Kellems

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# Hubbell's CIRCUIT-LOCK®<sup>®</sup>

## Manual Motor Controllers

### "Suitable as Motor Disconnects"



#### Safety-First Priority

Enhance your safety and increase your confidence with Hubbell's Circuit-Lock motor controllers and disconnects. Because our Circuit-Lock motor controllers are also disconnects, you get the maximum safety, flexibility, compliance and productivity you need for industrial applications and motor controls.



#### Doubles as a Disconnect

The 2005 NEC requires each motor controller to have a disconnect within line of sight (article 430.102). The code also recognizes that a controller and disconnect can be the same unit (article 430.109). Hubbell has designed the operating performance of a controller and disconnect into one switch. Every Circuit-Lock motor controller is a UL 508 listed motor controller **"Suitable as Motor Disconnect"** to comply with both the controller and disconnect requirements of the NEC.

Motor controllers activate motor loads on and off and isolate equipment from other loads as needed. Disconnects safely terminate circuit power to equipment for servicing, and they are tested to withstand high fault short circuits to remain operational following overloads.



#### Clear Choice for Performance

Hubbell's innovative Circuit-Lock product line meets or exceeds all industry requirements to ensure premium performance. Available as a component switch or pre-assembled into a variety of NEMA-rated enclosures, Circuit-Lock motor controllers/disconnects provide both the size and fit for maximum flexibility and efficiency.

So whether your goal is to add more disconnects for NEC "line of sight" requirements, or to implement controllers with enhanced short-circuit performance, the choice is clear with Hubbell's Circuit-Lock line of motor controllers/disconnects – **it's a safety first priority.**



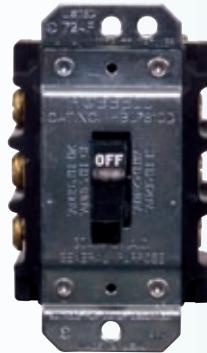


## Hubbell Safety

Install one switch at the controller location and another at the disconnect location. Hubbell's disconnects are rated to withstand 10,000-amp high fault short circuits for maximum safety. Because every Circuit-Lock® controller is a disconnect, more disconnect safety locations can be added across the factory floor.

## Hubbell Flexibility

Electrical designs must take into account the disconnect location to ensure line of sight placement. Line of sight can now be easily achieved at the equipment or on the wall by installing a Hubbell Circuit-Lock controller/disconnect. Safe, strategic disconnect placement is more flexible than ever with smaller-sized switches and a variety of NEMA type enclosures.



## Hubbell Productivity

No longer is the entire circuit powered down to repair just one piece of equipment. By adding the disconnect rating to the Circuit-Lock motor controller, Hubbell lets you safely terminate power at any point in the circuit. Maintenance can now be done on a motor without the inconvenience of shutting down the entire line and sacrificing productivity.



## Each Controller that Hubbell Builds is also a Disconnect



# AC Manual Toggle Controllers/Disconnects

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



**Circuit-Lock®** controllers are rated "Suitable as Motor Disconnect". No other manufacturer offers controllers with top horsepower and high amperage ratings in such a compact device.

## SHARED 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.



**Four large silver alloy contacts per pole.**

- Excellent conductivity.
- Maximum longevity.

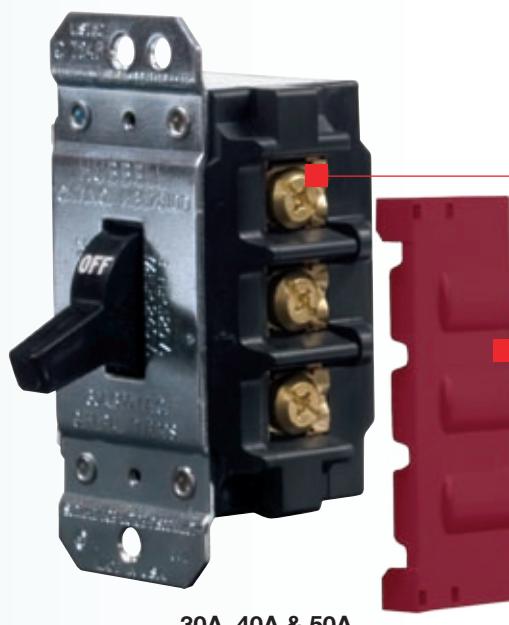
## 100% Copper contact arm.

- High heat management.
- Reliability.



## Lubrication-free controller.

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



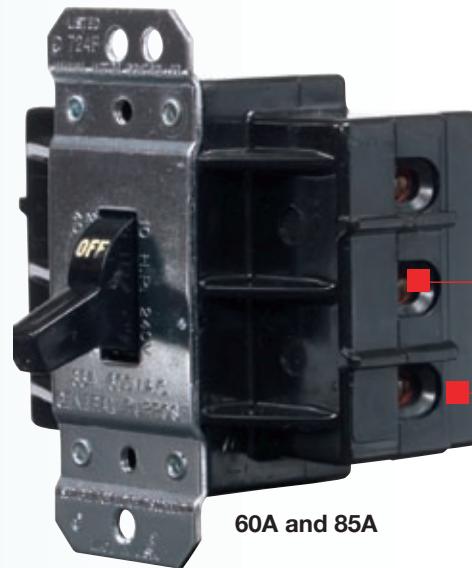
30A, 40A & 50A

### #10 Brass terminal screw.

Clamping plate for secure back or side wiring.

### Optional side guard.

For close wall applications and finger safe environments.



## HUBBELL Advantage

- Safely Terminate Power at any Point in the Circuit.
- Flexible Disconnect Placement.
- The Industry's Broadest Offering.



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# AC Manual Toggle Controllers/Disconnects

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



## 600V AC Manual Motor 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	
30 2	Standard	—	2	5	10	15	<b>HBL7832D</b>
30 2	Short	—	2	5	10	15	<b>HBL7832DS</b>
30 3	Standard	—	3	7.5	15	20	<b>HBL7810D</b>
30 3	Short	—	3	7.5	15	20	<b>HBL7810DS</b>
40 2	Standard	—	2	5	10	15	<b>HBL7842D</b>
40 3	Standard	—	3	7.5	15	20	<b>HBL7843D</b>
50 2	Standard	—	2	5	10	15	<b>HBL7852D</b>
50 3	Standard	—	3	7.5	15	25	<b>HBL7853D</b>
60 2	Standard	—	—	10	15	20	<b>HBL7862D</b>
60 3	Standard	—	—	10	25	30	<b>HBL7863D</b>
60 2	Standard	Front	—	10	15	20	<b>HBL7862FWD</b>
60 3	Standard	Front	—	10	25	30	<b>HBL7863FWD</b>
85 2	Standard	—	—	10	15	20	<b>HBL7882D</b>
85 3	Standard	—	—	10	25	40	<b>HBL7883D</b>
Finger Guards (red) for use with 30, 40 and 50A switches (set).							
<b>HBLFG30</b>							



### Specifications

#### 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 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

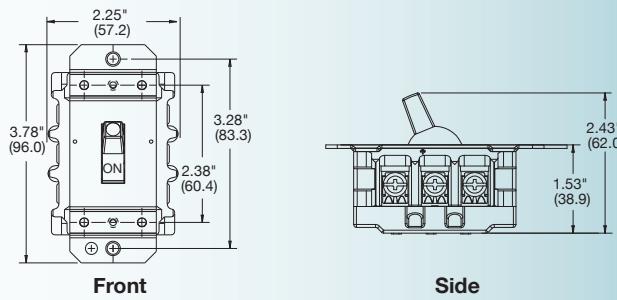
Flammability	UL94HB/VO		
Operating Temp.	Max. continuous 30, 40 & 60A	60 °C	
	Max. continuous 50 & 85A	75 °C	
	Min. continuous w/out impact	-40 °C	

#### Listings

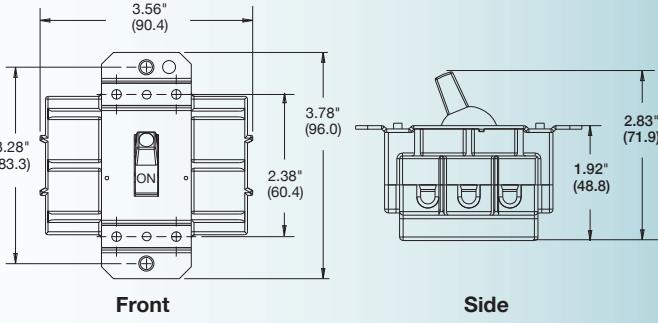
UL 508	Industrial Control Equipment File #E70402
CSA-C22.2 No.14	Industrial Control Equipment File # LR-46186

### Dimensional Drawings

#### 30, 40 and 50 Amp Toggles



#### 60 and 85 Amp Toggles



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# NEMA 1 Disconnect Switches

"Suitable as Motor Disconnects"



## SHARED FEATURES

### Wiring conduit knockouts.

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

### Surface mount control.



HBL1389D

**Thermoplastic cover on a plated steel base.**

Durable, non-conductive cover.



HBL1379D

**All aluminum cover and base.**

Base is pre-drilled for rear surface mounting.



- Circuit-Lock® NEMA type 1 enclosures are "Suitable as Disconnect" when used with the 30 Amp controller/disconnect.
- Extra wiring room facilitates termination.
- Compact size allows for strategic placement.

## CIRCUIT-LOCK® NEMA 1 Enclosures with Switch

### Order Information

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

Amp	Poles	Enclosure Material	HP Rating				Catalog Numbers
			120V AC	240V AC	480V AC	600V AC	
30	2	Thermoplastic	2	5	10	15	HBL1392D
30	3	Thermoplastic	3	7.5	15	20	HBL1389D
30	2	Aluminum	2	5	10	15	HBL1372D
30	3	Aluminum	3	7.5	15	20	HBL1379D

Note: For switch specifications refer to pages 3 and 4.



HBL1389D



HBL1379D

## CIRCUIT-LOCK® NEMA 1 Enclosures without Switch

### Order Information

For use with switches shown on pages 3 and 4.

Cover Material	Base Material	No. Equipment Grounds	Catalog Numbers
Thermoplastic	Steel	1	HBL1390
Aluminum	Aluminum	2	HBL1370



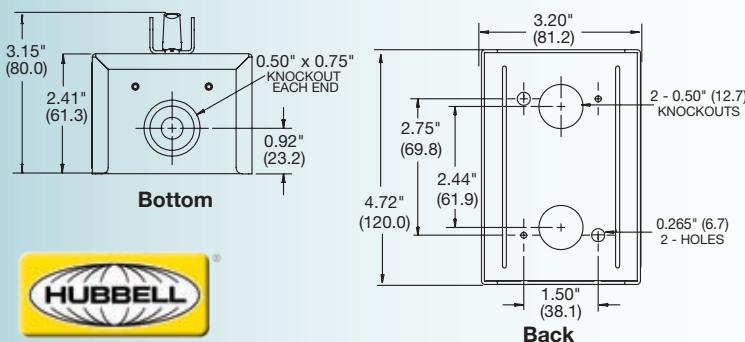
HBL1390



HBL1370

## Dimensional Drawings

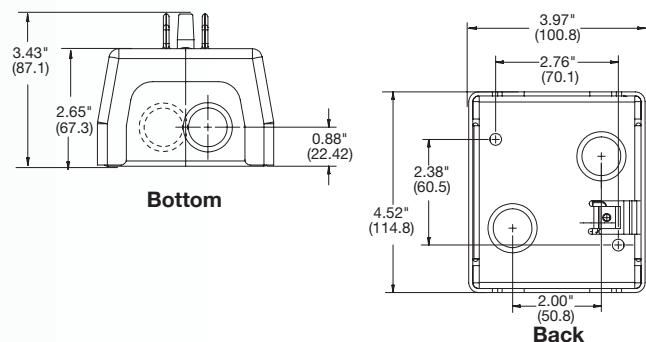
HBL1370, HBL1372D and HBL1379D



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HBL1390, HBL1389D and HBL1392D





# NEMA 3/3R Disconnect Switches

"Suitable as Motor Disconnects"

## SHARED FEATURES

Rain tight enclosures.

Designed for surface mounting.

**Heavy duty flip lid.**

3-sided protection.

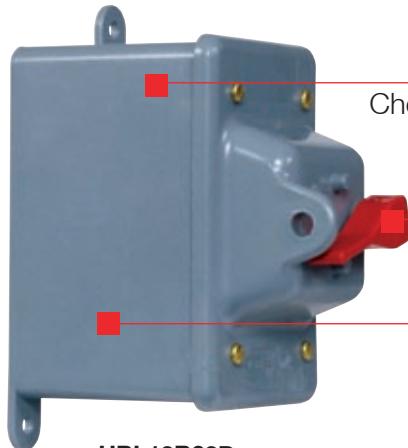


**Die cast aluminum enclosure.**

Gray zinc powder coat finish.

**Three 1/2" NPT threaded outlets.**

On top, bottom and back of enclosure.



**VALOX® enclosure.**

Chemical and impact resistant.

**External activation lever switch.**

**Installer determined wire entry.**

No predrilled openings or knockouts.



- CIRCUIT-LOCK® NEMA type 3/3R enclosures are "Suitable as Disconnect" when used with the 30 amp controller/disconnect.
- Compact size allows for strategic placement.

## CIRCUIT-LOCK® 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	HBL13R22D*
30	3	Thermoplastic	3	7.5	15	20	HBL13R23D*
30	2	Aluminum	2	5	10	15	HBL13R12D†
30	3	Aluminum	3	7.5	15	20	HBL13R13D†

Note: For switch specifications refer to page 4.

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

† Equipped with HBLFG30 sidewall insulation barriers.

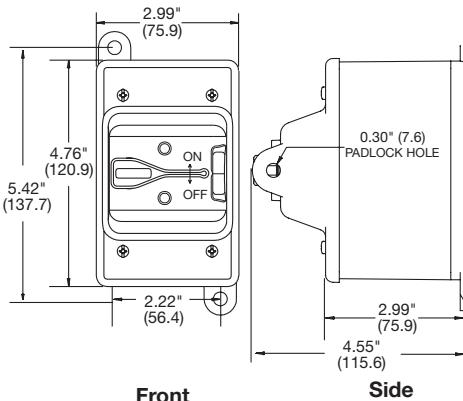


HBL13R23D

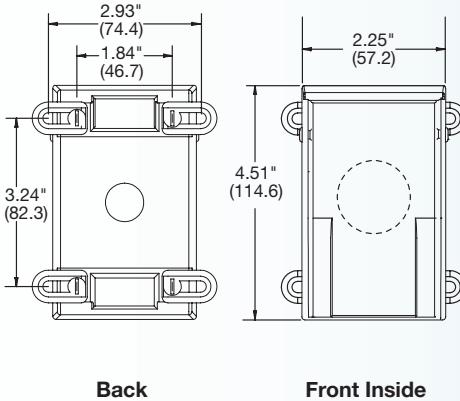
HBL13R13D

### Dimensional Drawings

HBL13R22D and HBL13R23D



HBL13R12D and HBL13R13D



# NEMA 3R Disconnect Switches

"Suitable as Motor Disconnects"



## SHARED FEATURES

All aluminum cover and base.

- Base is pre-drilled for rear 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.



- CIRCUIT-LOCK® NEMA Type 3R enclosures are "Suitable as Disconnect" when used with the 30 or 60 amp controller/disconnect.
- Front activated lever allows mounting in tight spaces.



HBL16R93D



HBL13R89D

## CIRCUIT-LOCK® NEMA 3R Enclosures with Switch

### Order Information

Ideal for use in outdoor environments.

#### HP Rating

Amp	Poles	120V AC	240V AC	480V AC	600V AC	Catalog Numbers
30	2	2	5	10	15	HBL13R92D
30	3	3	7.5	15	20	HBL13R89D
60	2	—	10	15	20	HBL16R92D
60	3	—	10	25	30	HBL16R93D

Note: For switch specifications refer to pages 2 and 3.



HBL13R89D



HBL16R93D

## CIRCUIT-LOCK® NEMA 3R Enclosures without Switch

### Order Information

For use with switches shown on pages 3 and 4.

#### Description

For use with 30A switch.

For use with 60A switch.

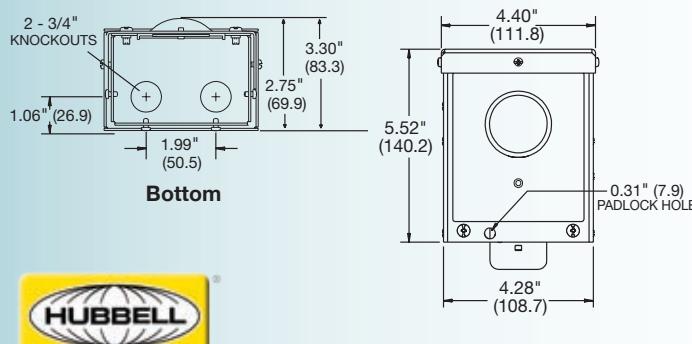
#### Catalog Numbers

HBL13R90

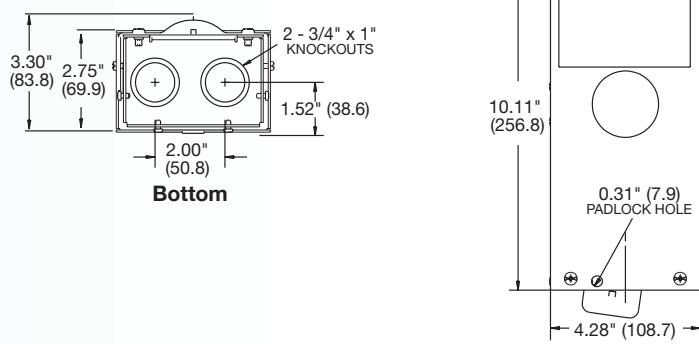
HBL16R90

#### Dimensional Drawings

HBL13R90, HBL13R89D and HBL13R92D



HBL16R90, HBL16R92D and HBL16R93D



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# NEMA 4X Disconnect Switches

"Suitable as Motor Disconnects"

## SHARED FEATURES

### Undrilled case.

- Allows custom placement of wire entry.



### Up to 2 optional auxiliary contacts.

For PLCs and external indicators.

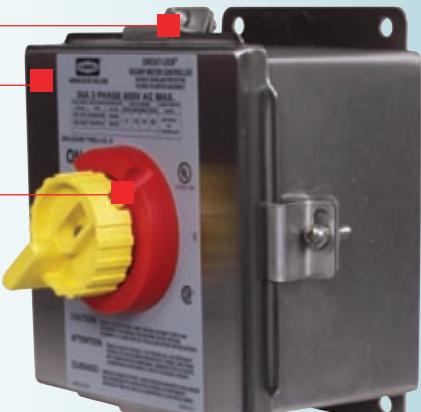
**Hinged cover with removable continuous pin.**

### 304 stainless steel enclosure.

Chemical and corrosion resistant.

### VALOX® handle and collar.

Chemical and impact resistant.



HBL13S33D

**Poured in closed cell neoprene gasket.**

### Interlocking shaft and handle.

Prevents cover removal when switch is on.



## HUBBELL Advantage

- CIRCUIT-LOCK® NEMA Type 4X enclosures are "Suitable as Disconnect" when used with the 30 or 60 amp controller/disconnect.
- High impact, chemical and corrosion resistant.
- Neutral and ground bus included for wiring ease (60A product).
- Up to two optional auxiliary contacts for PLC's and external indicators.

## CIRCUIT-LOCK® 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	HBL13S33D
60	3	—	10	25	30	HBL16S63D

Finger Guard option for 30A switch

HBLFG30

NO/NC auxiliary contact, 10A 120/250 V AC  
for 30 and 60 Amp switches

HBLAUX

Note: For switch specifications refer to page 4.

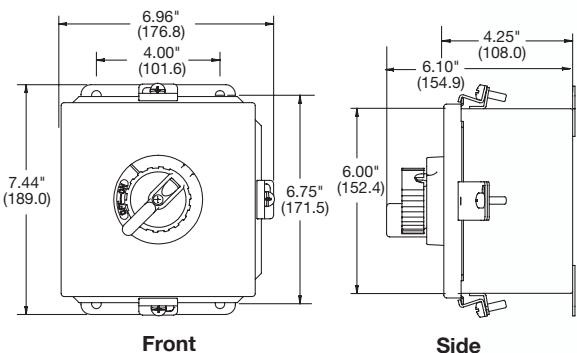


HBL13S33D

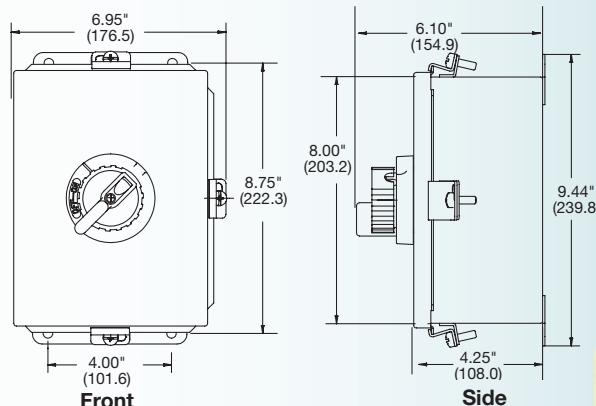
HBL16S63D

### Dimensional Drawings

HBL13S33D



HBL16S63D



# NEMA 4X Disconnect Switches

"Suitable as Motor Disconnects"



## SHARED FEATURES

### VALOX® enclosure.

- For impact and chemical resistance.

### Identified drill locations.

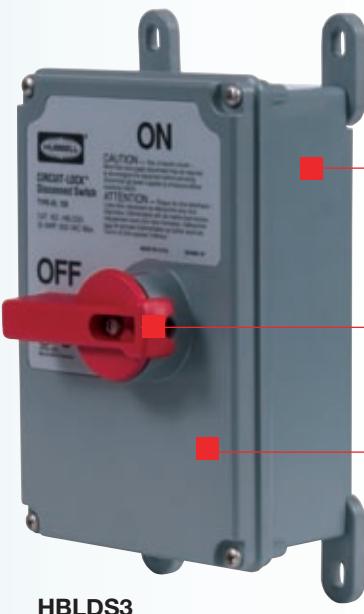
- Enables custom placement of wire entry.

### Up to two optional auxiliary contacts.

- For PLCs and external indicators.

### Ample wiring room for drip loops.

### Adjustable external mounting feet.



HBLDS3

### Internal frame bonds all grounds.

For use with plastic or metallic conduit.

### Front activated pistol handle grip.

Minimizes side space clearance.

### Interlocking shaft and handle.

Prevents cover removal in "ON" position.

### Safety interlocked fuse access door.

Quick, easy access to fuses.

### Compact fused disconnect switch.

Accepts Class "J" fuses.

### Safety features.

Switch can only be turned "ON" with cover closed.

Fuses can only be accessed with switch in the off position.

### Side activated highly visible red handle.



## HUBBELL Advantage

- Safely Terminate Power at any Point in the Circuit.
- Flexible Disconnect Placement.



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# NEMA 4X Disconnect Switches

"Suitable as Motor Disconnects"



## 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 Disconnect switch	1	7.5	15	15	HBLDS3
30A Disconnect switch w/aux. contact	1	7.5	15	15	HBLDS3AC
60A Disconnect Switch	7.5	30	50	50	HBLDS6
60A Disconnect switch w/aux. contact	7.5	30	50	50	HBLDS6AC
100A Disconnect Switch	7.5	30	50	50	HBLDS10
100A Disconnect switch w/aux. contact	7.5	30	50	50	HBLDS10AC
Aux. contact, break after break	—	—	—	—	HBLAC1
Aux. contact, break before break	—	—	—	—	HBLAC2
Ground block (30A switch)	—	—	—	—	HBL30RGB
Ground block (60A and 100A switch)	—	—	—	—	HBL60100RGB
Neutral block (30A switch)	—	—	—	—	HBL30RNB
Neutral block (60A switch)	—	—	—	—	HBL60RNB
Neutral block (100A switch)	—	—	—	—	HBL100RNB
Replacement 30A switch	—	—	—	—	HBLDS3RS
Replacement 60A and 100A switch	—	—	—	—	HBLDS60100RS



## NEMA 4X Switched Enclosure, Fused Disconnect

### 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 Disconnect switch	2	7.5	15	20	FDS30
60A Disconnect switch	3	15	30	40	FDS60
Aux. contact, norm. open, A600 pilot duty	—	—	—	—	ACFSNO
Aux. contact, norm. closed, A600 pilot duty	—	—	—	—	ACFSNC



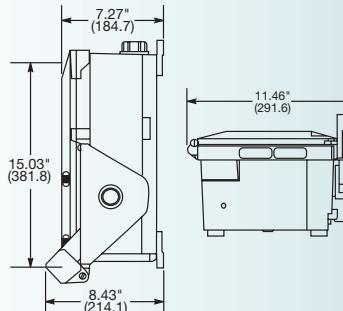
### Specifications

#### Electrical Performance

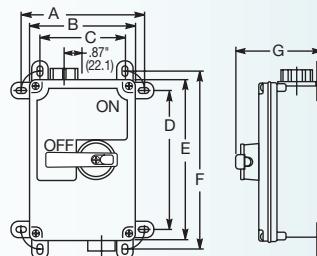
Dielectric Voltage	3,000V AC minimum
Electrical Life	6,000 Cycles at rated switch parameters
Max Working Voltage	600V AC RMS
Short Circuit Withstand Rating as Motor Disconnect	Use on a circuit capable of delivering not more than 10,000 symmetrical amperes (for HBL series 600V AC max) (for FDS and ACFSN series - at a voltage rating when protected by Class "J" fuses)

#### Dimensional Drawings

##### Fused



##### Unfused



Key	30A		60A/100A	
	inch (mm)	inch (mm)	inch (mm)	inch (mm)
A	6.00	152	7.75	197
B	5.12	130	6.87	175
C	4.12	105	4.75	121
D	6.62	168	8.00	203
E	7.62	194	9.95	253
F	8.50	216	11.00	279
G	4.12	105	5.94	151

#### Mechanical

Mechanical Life	10,000 minimum cycles
<b>Amps</b>	<b>AWG Min.</b>
Terminal	#14
Accommodations	#14
	# 4
Terminal Torque	20 inch pounds
60A	25 inch pounds
100A	25 inch pounds
Impact Resistance	UL746C

#### Environmental

Flammability	UL94-5VA and V0 Classification
Operating Temp.	Max. continuous 75 °C Min. continuous -40 °C

#### Listings

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



# Hubbell's CIRCUIT-LOCK®

## Manual Motor Controllers "Suitable as Motor Disconnects"



### QUICK REFERENCE

#### Toggle Switches

	Catalog Numbers	Amps	Description	Phase	Poles	HP			
						120	240	480	600
 <b>HBL7810D</b>	<b>HBL7832D</b>	30	Toggle Switch	1	2	2	5	10	15
	<b>HBL7832DS</b>	30	Short Toggle Switch	1	2	2	5	10	15
	<b>HBL7810D</b>	30	Toggle Switch	3	3	3	7.5	15	20
	<b>HBL7810DS</b>	30	Short Toggle Switch	3	3	3	7.5	15	20
	<b>HBL7842D</b>	40	Toggle Switch	1	2	2	5	10	15
 <b>HBL7853D</b>	<b>HBL7843D</b>	40	Toggle Switch	3	3	3	7.5	15	20
	<b>HBL7852D</b>	50	Toggle Switch	1	2	2	5	10	15
	<b>HBL7853D</b>	50	Toggle Switch	3	3	3	7.5	15	25
	<b>HBLFG30</b>	—	Finger guard (30-50A Switches)						
	<b>HBL7862D</b>	60	Toggle Switch	1	2	—	10	15	20
 <b>HBL7863D</b>	<b>HBL7863D</b>	60	Toggle Switch	3	3	—	10	25	30
	<b>HBL7862FWD</b>	60	Toggle Switch - Front Wire	1	2	—	10	15	20
	<b>HBL7863FWD</b>	60	Toggle Switch - Front Wire	3	3	—	10	25	30
	<b>HBL7882D</b>	85	Toggle Switch	1	2	—	10	15	20
	<b>HBL7883D</b>	85	Toggle Switch	3	3	—	10	25	40

#### Toggle Switches in Enclosures

	Catalog Numbers	Amps	Description	Phase	Poles	HP			
						120	240	480	600
 <b>HBL1379D</b>	<b>HBL1372D</b>	30	NEMA 1 Aluminum	1	2	2	5	10	15
	<b>HBL1379D</b>	30	NEMA 1 Aluminum	3	3	3	7.5	15	20
	<b>HBL1392D</b>	30	NEMA 1 Plastic	1	2	2	5	10	15
	<b>HBL1389D</b>	30	NEMA 1 Plastic	3	3	3	7.5	15	20
	<b>HBL13R22D</b>	30	NEMA 3/3R Plastic	1	2	2	5	10	15
 <b>HBL13R92D</b>	<b>HBL13R23D</b>	30	NEMA 3/3R Plastic	3	3	3	7.5	15	20
	<b>HBL13R12D</b>	30	NEMA 3R Die Cast Aluminum	1	2	2	5	10	15
	<b>HBL13R13D</b>	30	NEMA 3R Die Cast Aluminum	3	3	3	7.5	15	20
	<b>HBL13R92D</b>	30	NEMA 3R Aluminum	1	2	2	5	10	15
	<b>HBL13R89D</b>	30	NEMA 3R Aluminum	3	3	3	7.5	15	20
 <b>HBL13S33D</b>	<b>HBL16R92D</b>	60	NEMA 3R Aluminum	1	2	—	10	15	20
	<b>HBL16R93D</b>	60	NEMA 3R Aluminum	3	3	—	10	25	30
	<b>HBLDS3</b>	30	NEMA 4X Non-Metallic	3	3	1	7.5	15	15
	<b>HBLDS6</b>	60	NEMA 4X Non-Metallic	3	3	7.5	30	50	50
	<b>HBLDS10</b>	100	NEMA 4X Non-Metallic	3	3	7.5	30	50	50
 <b>HBLDS3</b>	<b>HBL13S33D</b>	30	NEMA 4X Stainless Steel	3	3	3	7.5	15	20
	<b>HBL16S63D</b>	60	NEMA 4X Stainless Steel	3	3	—	10	25	30
	<b>FDS30</b>	30	NEMA 4X Non-Metallic Fused Disconnect	3	3	2	7.5	15	20
	<b>FDS60</b>	60	NEMA 4X Non-Metallic Fused Disconnect	3	3	3	15	30	40

**FDS30**

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