

# CIRCUIT-LOCK®



## Manual Motor Controllers & Disconnects

A Safety First Priority!



Wiring Device-Kellems  
[www.hubbell-wiring.com](http://www.hubbell-wiring.com)





# 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 Compliance

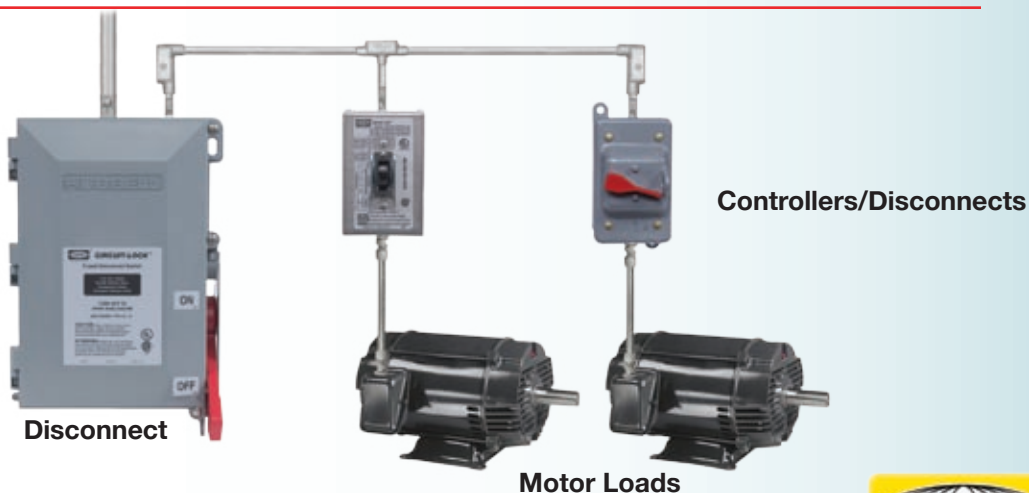
NEC conformance is the requirement for industrial motor applications as inspected by OSHA. Because one Circuit-Lock motor controller meets both the disconnect and controller specifications, confusion is minimized about where and how each switch is used. The switch is always a disconnect, so it's always compliant.

## 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.



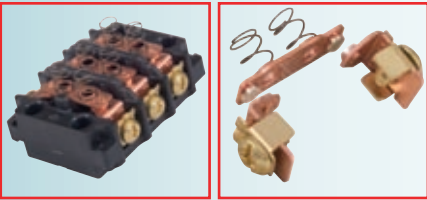
30A, 40A & 50A

### #10 Brass terminal screw.

Clamping plate for secure back or side wiring.

### Optional side guard.

For close wall applications and finger safe environments.

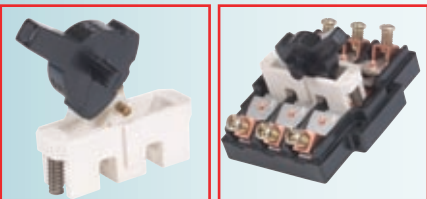


**Four large silver alloy contacts per pole.**

- Excellent conductivity.
- Maximum longevity.

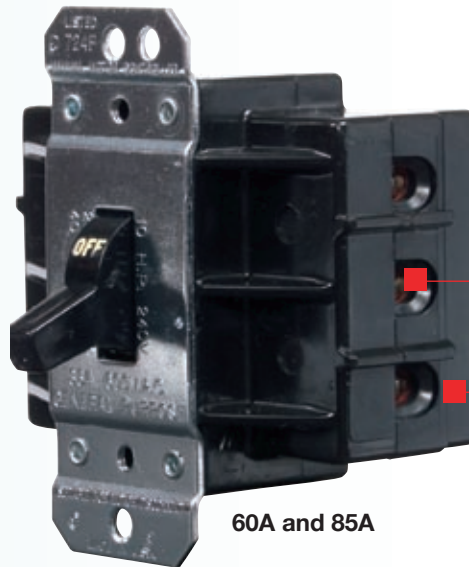
**100% Copper contact arm.**

- High heat management.
- Reliability.



**Lubrication-free controller.**

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



60A and 85A

**Steel screws and copper terminals.**

### Recessed wiring wells.

Finger safe environments.

## HUBBELL Advantage

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



Wiring Device-Kellems





# AC Manual Toggle Controllers/Disconnects

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

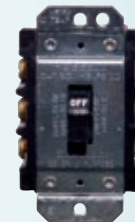


## 600V AC Manual Motor Controllers

### 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>



HBL7810D



HBL7853D



HBL7863D



HBLFG30

### 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</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

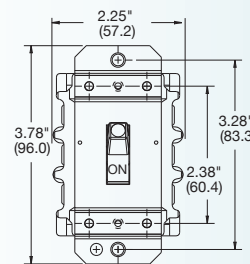
Flammability	UL94HB/VO	
Operating Temp.	Max. continuous 30, 40 & 60A	60 °C
	Max. continuous 50 & 85A	75 °C
	Min. continuous w/out impact	-40 °C

#### Listings

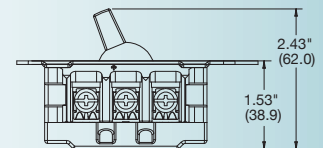
UL 508	Industrial Control Equipment File #E70402
CSA-C22.2 No.14	Industrial Control Equipment File # LR-46186

### Dimensional Drawings

#### 30, 40 and 50 Amp Toggles

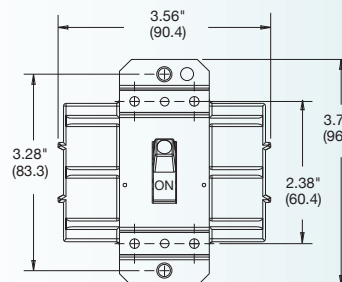


Front

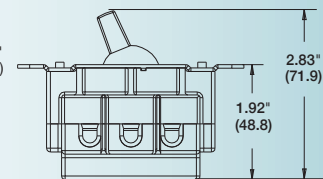


Side

#### 60 and 85 Amp Toggles



Front



Side



# 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



- 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.

All aluminum cover and base.

Base is pre-drilled for rear surface mounting.

## 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



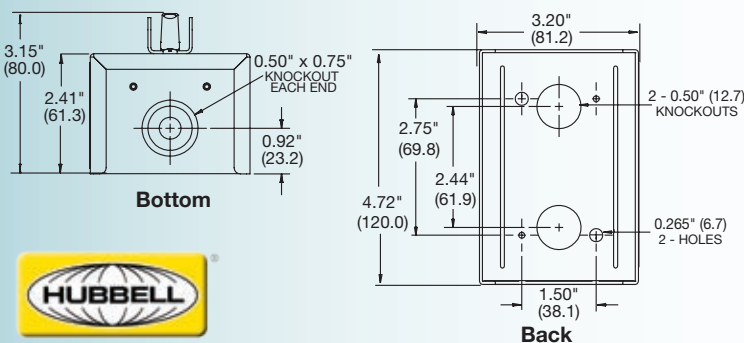
HBL1390



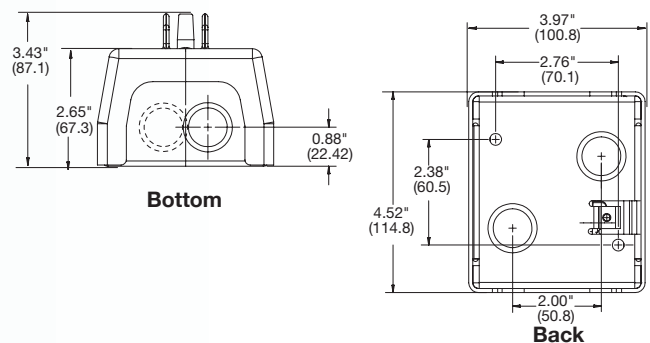
HBL1370

## Dimensional Drawings

### HBL1370, HBL1372D and HBL1379D



### 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.

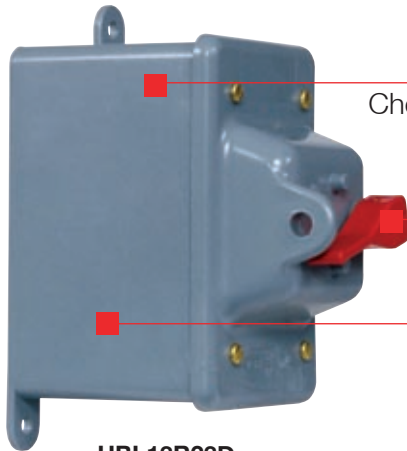
Gray zinc powder coat finish.

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

On top, bottom and back of enclosure.



HBL13R13D



HBL13R23D

### VALOX® enclosure.

Chemical and impact resistant.

### External activation lever switch.

### Installer determined wire entry.

No predrilled openings or knockouts.

## HUBBELL Advantage

- 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.



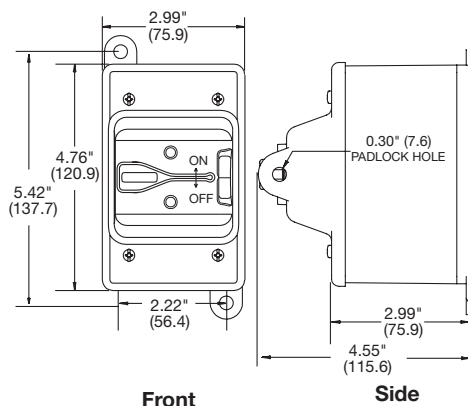
HBL13R23D



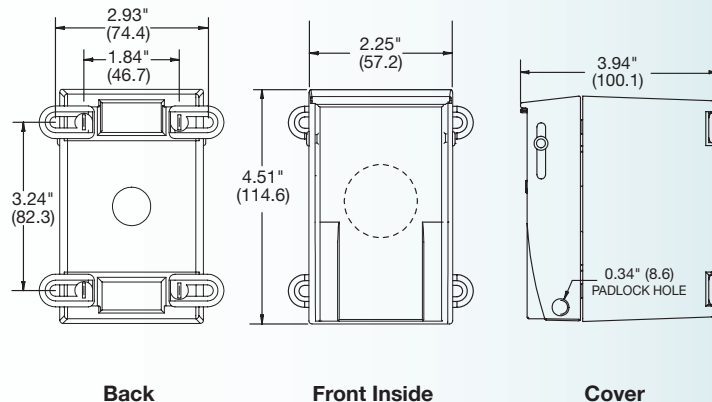
HBL13R13D

### Dimensional Drawings

#### HBL13R22D and HBL13R23D



#### HBL13R12D and HBL13R13D



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# 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<sup>®</sup>** 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<sup>®</sup> 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<sup>®</sup> NEMA 3R Enclosures without Switch

### Order Information

For use with switches shown on pages 3 and 4.

#### Description

For use with 30A switch.

#### Catalog Numbers

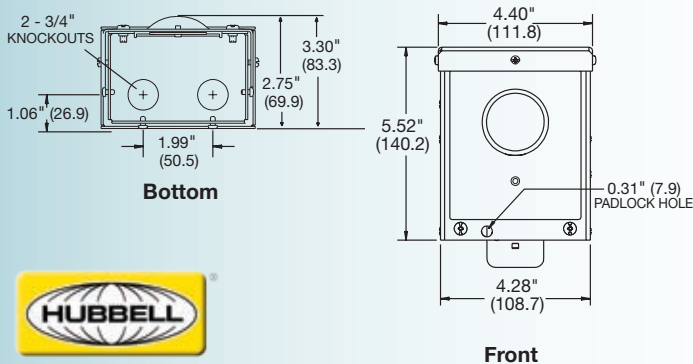
HBL13R90

For use with 60A switch.

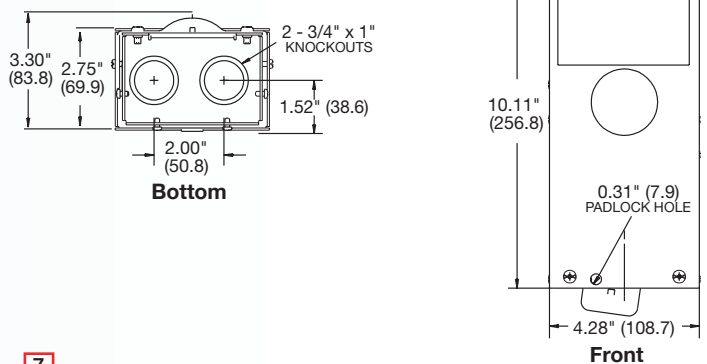
HBL16R90

### Dimensional Drawings

HBL13R90, HBL13R89D and HBL13R92D



HBL16R90, HBL16R92D and HBL16R93D







# NEMA 4X Disconnect Switches

"Suitable as Motor Disconnects"

## SHARED FEATURES

### Undrilled case.

- Allows custom placement of wire entry.

Hinged cover with removable continuous pin.

### 304 stainless steel enclosure.

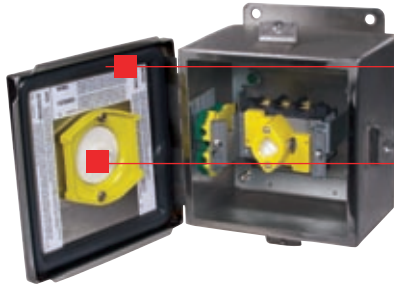
Chemical and corrosion resistant.

### 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.

### Up to 2 optional auxiliary contacts.

For PLCs and external indicators.



## 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.



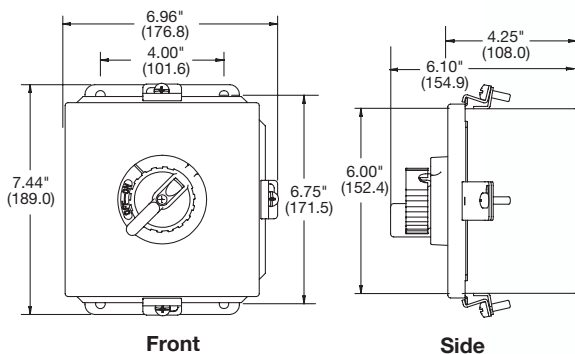
HBL13S33D



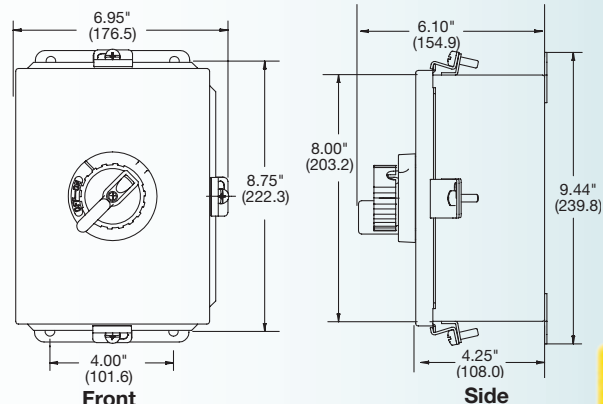
HBL16S63D

### Dimensional Drawings

#### HBL13S33D



#### HBL16S63D



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# 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.

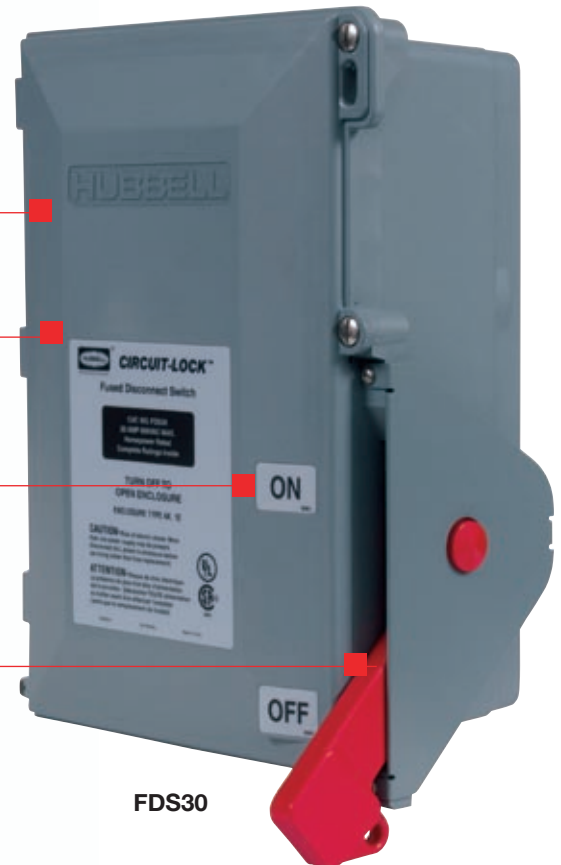
### Compact fused disconnect switch.

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.



FDS30

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



HBLDS3



HBLAC1

## 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	<b>FDS30</b>
60A Disconnect switch	3	15	30	40	<b>FDS60</b>
Aux. contact, norm. open, A600 pilot duty	—	—	—	—	<b>ACFSNO</b>
Aux. contact, norm. closed, A600 pilot duty	—	—	—	—	<b>ACFSNC</b>



FDS30

### 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)		

#### Mechanical

Mechanical Life	10,000 minimum cycles		
	<b>Amps</b>	<b>AWG Min.</b>	<b>AWG Max.</b>
Terminal Accommodations	30 60A 100A	#14 #14	#10 # 4
Terminal Torque	30A 60A 100A	20 inch pounds 25 inch pounds 25 inch pounds	
Impact Resistance	UL746C		

#### Environmental

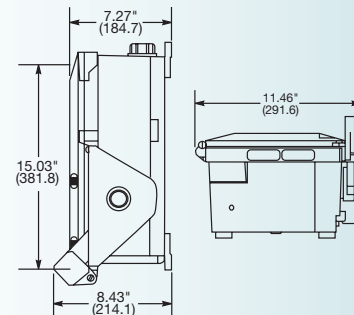
Flammability	UL94-5VA and V0 Classification		
Operating Temp.	Max. continuous	75 °C	
	Min. continuous	-40 °C	

#### Listings

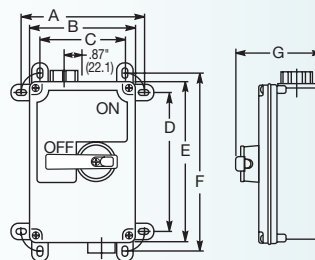
UL 508	Industrial Control Equipment File #E70402
CSA-C22.2 No.14	Industrial Control Equipment
	File # LR-46186

### Dimensional Drawings

#### Fused



#### Unfused



Key	30A		60A/100A	
	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








# Hubbell's CIRCUIT-LOCK®

## Manual Motor Controllers "Suitable as Motor Disconnects"






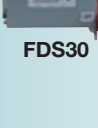


### QUICK REFERENCE

#### Toggle Switches

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

#### Toggle Switches in Enclosures

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

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