

# CUBEFuse safety switch



## Product description:

Bussmann series heavy duty 600Vac safety switch with the finger-safe CUBEFuses™ is UL® 98 Listed and features a 200kA short-circuit current rating. It is available up to 100A in NEMA® 1, 3R, 12, and 4X enclosures.

The Bussmann series safety switch is horsepower rated for use in motor applications and is suitable for service entrance use with a neutral kit.

Additional features include a lineside shield and red flange handle that can accommodate up to three padlocks to facilitate lockout/tagout procedures during maintenance.

## Standard features:

- Utilizing the current-limiting time-delay or fast-acting Bussmann series CUBEFuse makes it easy to precisely match the type and level of protection required, and provide Type 2 “no damage” motor starter protection when properly sized. Bussmann series CUBEFuse is available in ratings from 1 to 100 amps.
- Up to 200kA short-circuit current rating to safely handle high fault current levels, minimize arc flash hazard, protect downstream equipment and help to comply with NEC® 110.9 and 110.10 requirements per UL 98 and UL 50.
- Extended, clear lineside terminal shield and finger-safe 30, 60, or 100A Bussmann series Class CF CUBEFuse/CUBEFuse holder combination isolate live electrical components to improve electrical safety.
- A visible double break, quick-make, quick-break rotary blade mechanism provides positive visual confirmation of switch status for increased electrical safety.
- Optional viewing window on NEMA 12 and 4X stainless enclosures provides visual confirmation that switch contacts have operated, and view fuse indication without opening the switch door.
- Industry standard flange handle provides quick visual status at a glance, while the triple padlocking capability makes it easy to comply with lockout/tagout procedures.
- Dual mechanically interlocked door improves electrical safety by preventing door opening when the switch is ON, or turning the switch ON when the door is open.
- Available NEMA 1, 3R, 12, and 4X stainless enclosures make it easy to apply in virtually all safety switch applications.
- Horsepower rated for use as a motor disconnect on single- and three-phase AC motors provides application flexibility.
- Bussmann series CUBEFuse holder eliminates the need for fuse reducers, making it easy to install lower fuse ratings.
- Ampacity rejecting Bussmann series CUBEFuse holder helps prevent overfusing.

**Catalog symbol:**

- CF36\_

**Ratings:**

Heavy duty

- Volts
  - 600Vac
  - 250Vdc
- Amps
  - 30, 60, 100A
- SCCR
  - 200kA AC (30 and 60A)
  - 200kA AC (100A NEMA 1, 3R, 4X and 12 @ 480Vac)
  - 200kA AC (100A NEMA 4X and 12 @ 600Vac)
  - 100kA AC (100A NEMA 1 and 3R @ 600Vac)
  - 10kA DC (30, 60 and 100A)

**Agency information**

- UL 98 standard for enclosed deadfront switches
- UL 50 standard for enclosures for electrical equipment
- NEMA KS-1
- UL Listed, File E5239-G
- cUL Listed, C22.2 No.4-M89

**Poles**

- 3

**Enclosures**

- NEMA 1
- NEMA 3R
- NEMA 12
- NEMA 4X stainless

**Operating temperature range**

- -30°C to +50°C<sup>1</sup>

**Options and accessories**

- Viewing window on NEMA 12, and 4X stainless enclosures
- Neutral lug kit suitable for service entrance use<sup>2</sup>
- Auxiliary contacts for remote indication<sup>3</sup>

**Fuses (order separately)**

- Time-delay Class CF CUBEFuse
  - Indicating (TCF\_)
  - Non-indicating (TCF\_RN)
- Fast-acting Class CF CUBEFuse
  - Non-indicating (FCF\_RN)

**Lineside switch wire range and torque, 75°C Cu only**

Switch amps	AWG wire range and torque (lb-in)
30 and 60A	14-10 (35), 8 (40), 6-4 (45), 3-2 (50)
100A	14-10 (35), 8 (40), 6-4 (45), 3-1/0 (50)

**Loadside CUBEFuse holder AWG wire range and torque, 75°C Cu only**

Switch amps	AWG wire range and torque (lb-in)	
	Single wire	Dual wire
30A	18-12 (20) 10-8 (25)	18-10 (25) —
60A	18-10 (20) 8-4 (35)	18-10 (20) 8-6 (35)
100A	18-10 (25) 8-1 (40)	6 (45) —

**CUBEFuse holder ampacity/fuse rejection ranges**

- 30A Holder
  - Accepts 1-30A CUBEFuse
- 60A Holder
  - Accepts 1-60A CUBEFuse
- 100A Holder
  - Accepts 1-100A CUBEFuse

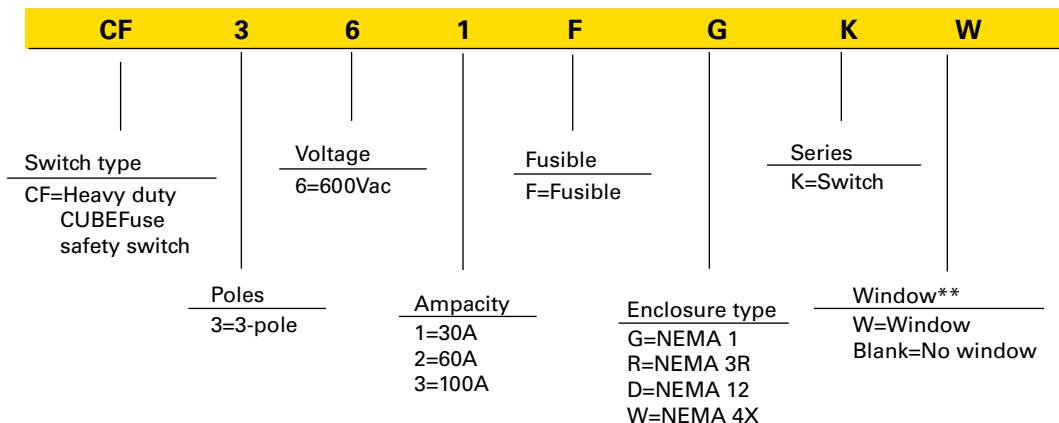
**Additional information**

- Time-delay CUBEFuse data sheet No. 9000
- Fast-acting CUBEFuse data sheet No. 2147
- CUBEFuse holder data sheet No. 9007

**Maximum horsepower ratings**

System	Amp rating	Fuse class/ type	Single-phase		Three-phase	
			480Vac	600Vac	480Vac	600Vac
3-pole	30	Class CF CUBEFuse <sup>4</sup>	7 1/2	10	15	20
	60	Class CF CUBEFuse <sup>4</sup>	20	25	30	50
	100	Class CF CUBEFuse <sup>4</sup>	30	40	60	75

**CUBEFuse safety switch catalog numbering system**



<sup>1</sup> For operation over or under 25°C, consult fuse derating tables.

<sup>2</sup> Neutral kits, order part number DH030NKB (30 and 60A) or DH100NKB (100A).

<sup>3</sup> Auxiliary contact kits, order part number DS200EK1B (1NO/1NC) or DS200EK2B (2NO/2NC).

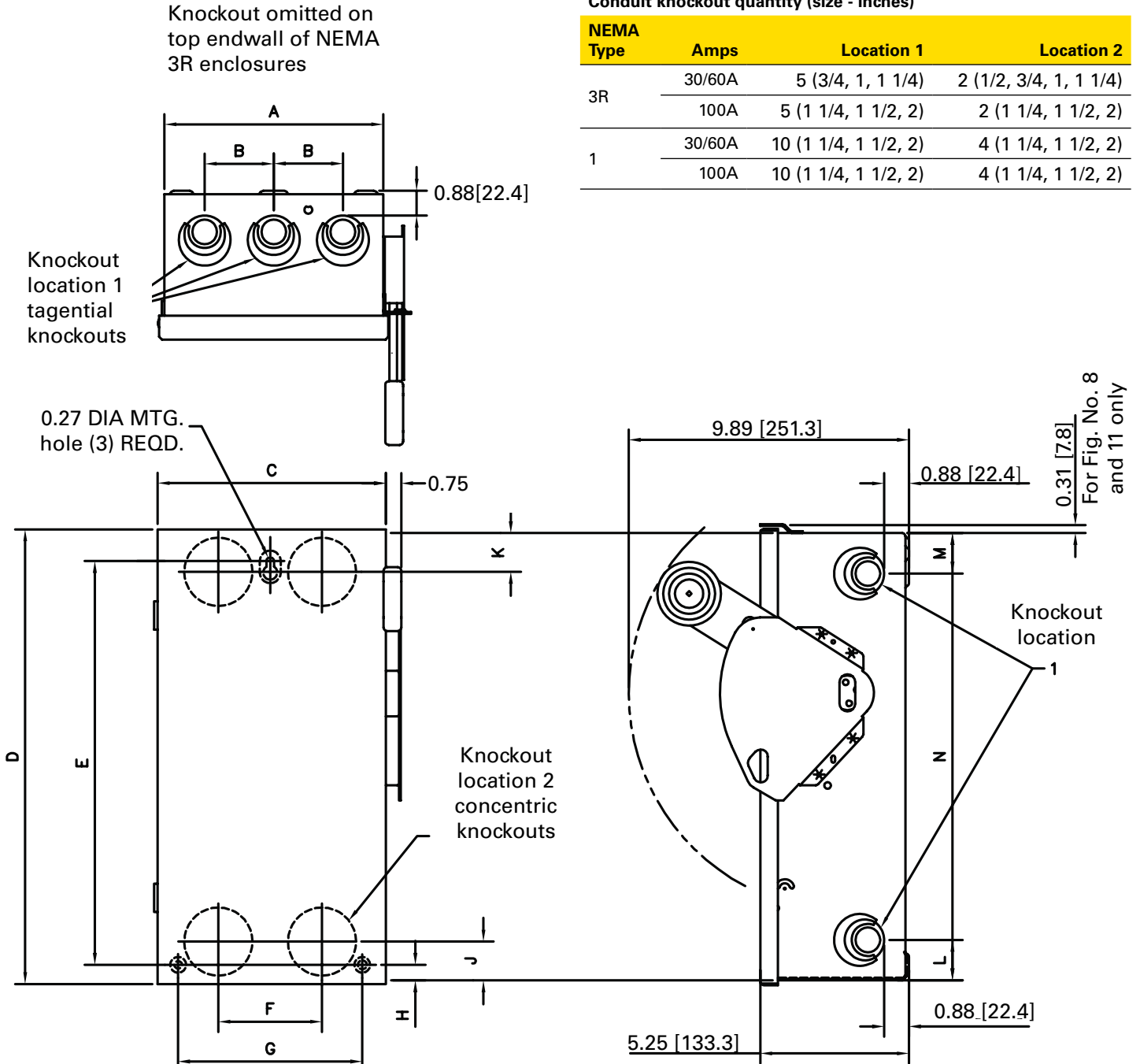
<sup>4</sup> Current-limiting Class J electrical performance.

\*\*Only available with NEMA 12 and 4X stainless enclosures.

**NEMA 1 and 3R enclosures dimensions - 30 to 100 amps - in (mm):**

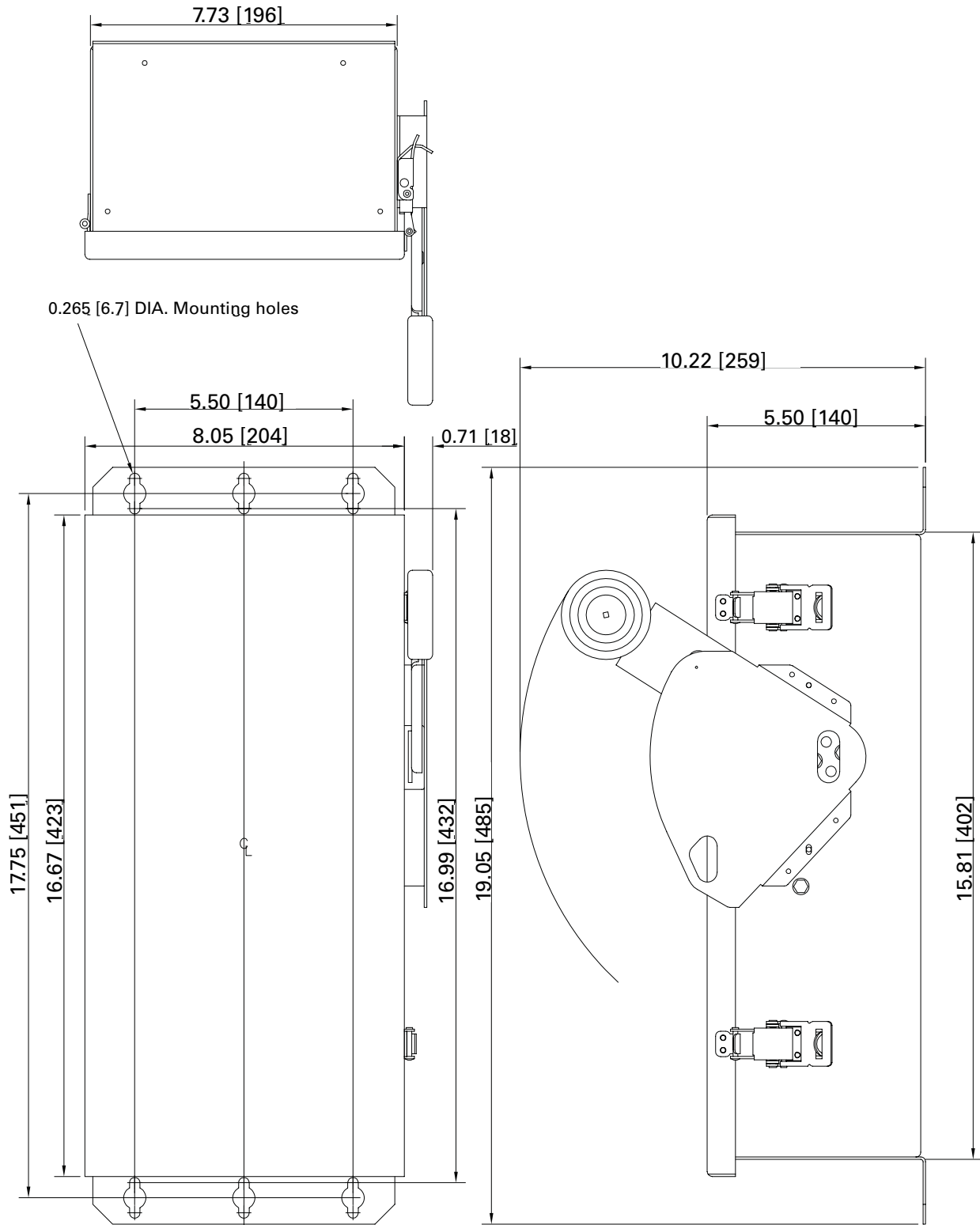
**Conduit knockout quantity (size - inches)**

NEMA Type	Amps	Location 1	Location 2
3R	30/60A	5 (3/4, 1, 1 1/4)	2 (1/2, 3/4, 1, 1 1/4)
	100A	5 (1 1/4, 1 1/2, 2)	2 (1 1/4, 1 1/2, 2)
1	30/60A	10 (1 1/4, 1 1/2, 2)	4 (1 1/4, 1 1/2, 2)
	100A	10 (1 1/4, 1 1/2, 2)	4 (1 1/4, 1 1/2, 2)



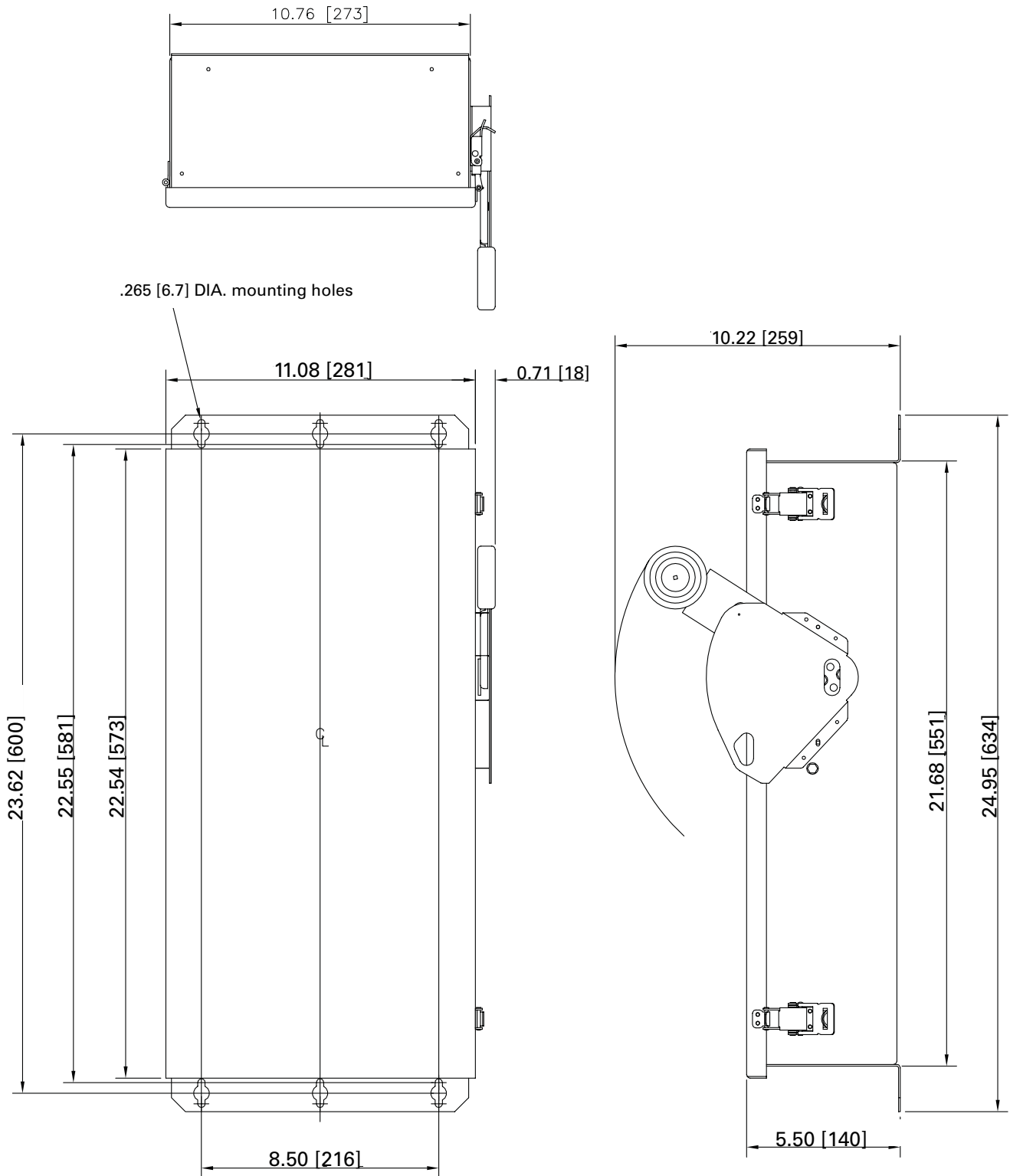
NEMA type	Amps	A	B	C	D	E	F	G	H	J	K	L	M	N
3R	30/60A	7.75 (196.9)	2.44 (62.0)	8.12 (206.2)	16.27 (413.3)	14.25 (362.0)	3.66 (93.0)	6.5 (165.1)	0.56 (14.2)	1.38 (35.1)	- (-)	1.44 (36.6)	- (-)	15.81 (401.6)
	100A	10.78 (273.8)	3.5 (88.9)	11.09 (281.7)	21.99 (558.5)	20.0 (508.0)	4.5 (114.3)	9.5 (241.3)	0.75 (18.8)	1.88 (47.8)	- (-)	1.88 (47.8)	- (-)	21.68 (550.7)
1	30/60A	7.75 (169.9)	2.44 (62.0)	8.06 (204.7)	16.00 (406.4)	14.25 (362.0)	3.66 (93.0)	6.5 (165.1)	0.56 (14.2)	1.38 (35.1)	1.38 (35.1)	1.44 (36.6)	1.44 (36.6)	15.81 (401.6)
	100A	10.78 (273.8)	3.5 (88.9)	11.09 (281.7)	21.99 (558.5)	20.0 (508.0)	4.5 (114.3)	9.5 (241.3)	0.74 (18.8)	1.88 (47.8)	1.88 (47.8)	1.88 (47.8)	1.88 (47.8)	21.68 (550.7)

**NEMA 4X and 12 enclosures dimensions - 30 and 60 amps - in (mm):**



Dimensions FO

**NEMA 4X and 12 enclosures dimensions - 100 amps - in (mm):**



**Neutral kit wire ranges:**

DH030NKB neutral kit for 30A and 60A switches:

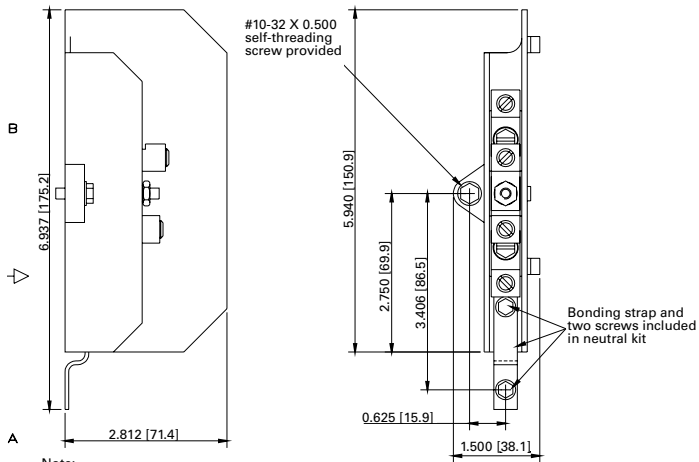
No. of lugs	Wire range
4	14 to 2AWG Cu/Al

DH100NKB Neutral kit for 100A switches:

No. of lugs	Wire range
2	14 to 2AWG Cu/Al
2	14 to 1/0AWG Cu/Al

**Neutral kit dimensions - in (mm)**

30 and 60A DH030NKB



Note:  
1. Four lugs with wire range of 2-14 AL9CU.  
2. Metric dimension (in millimeters) shown in brackets.

**Auxiliary contact kit ratings**

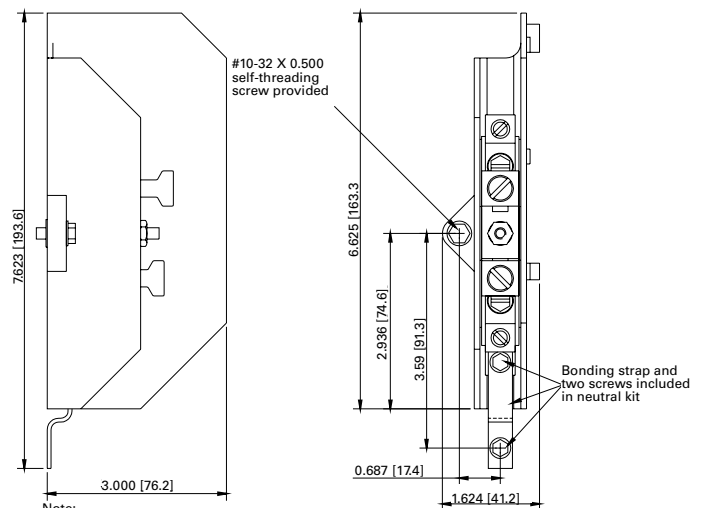
DS200EK1B 1NO/1NC auxiliary contacts

AC pilot duty ratings		DC pilot duty ratings		
Volts AC	Break	Make	Volts DC	Amps
110	15A	40A	115	2.0A
220	10A	20A	230	0.5A
440	6A	10A	600	0.1A
600	5A	8A		

DS200EK2B 2NO/2NC auxiliary contacts

AC pilot duty ratings		DC pilot duty ratings		
Volts AC	Break	Make	Volts DC	Amps
110	3.0A	30A	115	1.0A
220	1.5A	15A	230	0.3A
440	1.0A	8A	600	0.1A
600	0.8A	6A		

100A DH100NKB



Note:  
1. Two lugs with wire range of 2-14 AL9CU.  
2. Two lugs with wire range of 1/0-14 AL9CU  
3. Metric dimension (in millimeters) shown in brackets.

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Printed in USA  
Publication No. 1156 – BU-SB13916  
December 2015

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