



disconnect SWITCHES

Type CFS Compact Fusible
Disconnect Switches



SIEMENS

Disconnect Switches

Type CFS Switches, Shafts and Handles — General Information

CONTENTS

Catalog Numbering System	2
Features	3
Ordering Information	3
Switch Selection	4
Handle and Shaft Selection	4
Accessories Selection	5
UL, CSA and IEC Characteristics	6
Switch Dimensions	7 - 10
Handle and Handle Cutout Dimensions	11

DESCRIPTION

Siemens Type CFS compact fusible switches meet UL 98 requirements and can be used in either service entrance or branch circuit applications. 30-400A, 3 pole switches are offered and all are rated 600V AC maximum. 30A switches are available with provisions for either Class CC or J fuses. A 30A non-fusible switch, catalog number CNFS361, is also available. 60A and larger switches provided with Class J fuse provisions can also be used in non-fusible applications with field installable no-fuse kits.

All are open style, designed to be panel mounted and are UL listed under file number E1211152 and CSA certified under file number 222227. A variety of door mounted rotary operators are available with Type 1, 3R, 12 or 4/4X ratings.

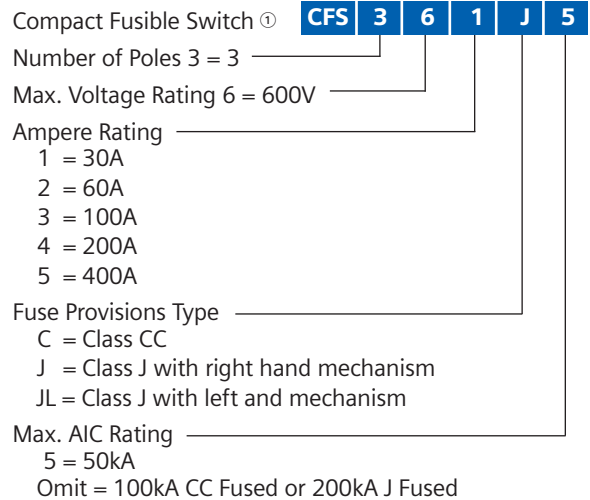
NEW!

CFSNFPA1 AND CFSNFPA2 kits provide an internal handle and padlocking means to comply with article 5.3.4.2 of the NFPA-2002 standard.



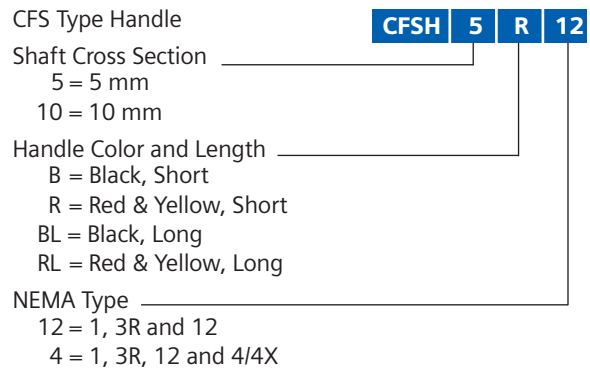
CATALOG NUMBERING SYSTEM

CFS SWITCHES

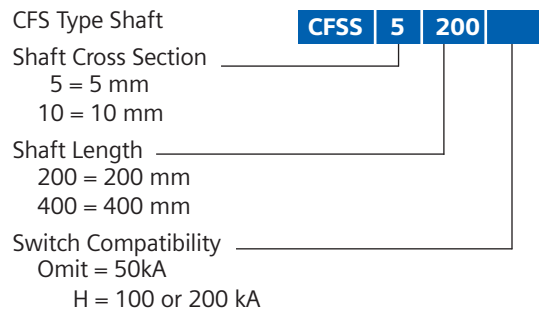


① 30A non-fusible switch (catalog number CNFS361) is also available.

OPERATING HANDLES



CFS OPERATING SHAFTS



Disconnect Switches

Type CFS Compact Fusible UL98 Switches — Features and Ordering

FEATURES

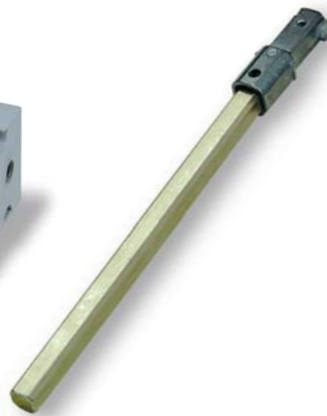
- 30 – 400A ratings
- UL Listed and CSA Certified
- IEC 60 947-3 Certified and CE marked
- Door mounted rotary handles with defeatable cover interlock
- Meets UL98 requirements and suitable for both service entrance and branch circuit applications
- Compact size
- 50 or 100kA with Class CC fuses or up to 200kA with Class J fuses
- Load break and horsepower rated
- Quick make and break operation
- All handles are padlockable with up to (3) padlocks with 5/16" hasps in the OFF position
- Catalog numbers CFS361C5, CFS361J5 and CNFS361 can be DIN-rail mounted and can be either front or side operated with standard rotary handles
- Handles are available in Type 1, 3R, 4/4X and 12 ratings

Switch



CFS362J

Shaft



CFS10200H

Handle



CFSH10B4

Lugs/Accessories



CFSL100

ORDERING INFORMATION

1. Select the panel mounted switch required based on Ampere, HP and AIC requirements. Switches with a right hand mechanism are standard. 30-100A switches with a left hand mounted mechanism are available.
2. Select handle based on environment rating required.
3. Select operating shaft (200 or 400mm in length). For enclosure depths of 9.0" or less from panel mounting surface to outside of door, use 200mm long shafts. For deeper enclosures, use 400mm long shafts. 30A 50kA switches can be used in 10.0" deep enclosures (panel to inside of door) with 200mm shaft and CFSH5 handles.
- Note: Be sure to check shaft and handle compatibility with the switch selected by using the information provided in the selection tables.
4. Line and load lugs are provided as standard on 30 and 60A switches. Terminal kits are available for 100 – 400A switches if needed.
5. Auxiliary contacts are available if needed as follows:
 - A. 30A, 50kA switch CFS361C5 will accept up to (4) auxiliary contacts without an auxiliary contact holder.
 - B. 30A, 50kA switch CFS361J5 will accept up to (2) auxiliary contacts without an auxiliary contact holder. If more than (2) auxiliary contacts are required, order auxiliary contacts PLUS auxiliary contact holder kit CFS AUXH1.
 - C. For all 100 or 200kA 30–400A switches, order the auxiliary contacts required PLUS auxiliary contact holder kit CFS AUXH2.
6. If a non-fusible switch is required, order a shorting bar kit for 60 – 600A switches or catalog number CNFS361 for 30A.
7. 30 and 60A switches have built in line and load shields. Line side terminal shrouds are provided with 100 – 400A switches. Load side terminal shroud kits are available for 100 – 400A switches.

Disconnect Switches

Type CFS Switches, Shafts and Handles — Selection

Fusible Switches, ① 3 Pole 600V AC Max, 250V DC Max ②

Switch Ampere Rating	Catalog Number	Fuse Provisions Provided	Max. Horsepower Ratings				AC Short Circuit Rating
			240V 3Ø AC	480V 3Ø AC	600V 3Ø AC	250V DC	
Standard — with Right Hand Mounted Mechanism							
30 ③	CFS361C5	Class CC	7.5	15	20	5 ⑤	50kA
30 ③	CFS361J5	Class J	7.5	15	20	5 ⑤	50kA
30 ③	CFS361C	Class CC	7.5	15	20	5 ⑤	100kA
30 ③	CFS361J	Class J	7.5	15	20	5 ⑤	200kA
30 ③	CNFS361 ①	None	7.5	15	20	5 ⑤	50kA
60 ③	CFS362J		15	30	50	10 ⑤	
100 ④	CFS363J	Class J	30	60	75	20 ⑤	200kA
200 ④	CFS364J		60	125	150	40 ⑥	
400 ④	CFS365J		125	250	350	50 ⑥	
Optional — with Left Hand Mounted Mechanism							
30 ③	CFS361JL	Class J	7.5	15	20	5 ⑤	200kA
60 ③	CFS362JL		15	30	50	10 ⑤	
100 ④	CFS363JL		30	60	75	20 ⑤	

① Catalog number CNFS361 is a non-fusible switch.

② Catalog numbers CFS361C5, CFS361J5 and CNFS361 accept 5mm x 5mm operating shafts. All others accept 10mm x 10mm operating shafts.

③ Line and load lugs included.

④ Line and load lugs are not included. Order from table on next page if required.

⑤ DC HP rating requires (2) poles to be connected in series.

⑥ DC HP rating requires (3) poles to be connected in series.

Operating Shafts

Catalog Numbers	Maximum Enclosure Depth ⑦	Shaft Length In. (mm)	Switch and Handle Compatibility
CFSS5200	10.04 (255)	7.9 (200)	5mm x 5mm for use with CFS361C5, CFS361J5 and CNFS361 switches and with "CFSH5" handles only
CFSS5400	18.24 (463)	15.7 (400)	
CFSS5200H	8.54 (217)	7.9 (200)	5mm x 5mm for use with all "CFSH10" handles and with CFS361C5, CFS361J5 and CNFS361 switches only
CFSS5400H	17.19 (437)	15.7 (400)	
CFSS10200H	9.08 (231)	7.9 (200)	10mm x 10mm for use with all "CFSH10" handles and with all switches except CFS361C5, CFS361J5 and CNFS361
CFSS10400H	16.92 (430)	15.7 (400)	

⑦ Dimensions shown are inches (mm) from mounting pan to outside of door.

Rotary Operating Handles – Door Mounted (use with CFS361C5, CFS361J5 & CNFS361 switches only)

Catalog Numbers	Color	Operating Shaft Compatibility
Type 1, 3R & 12 ⑧ (IP54)		
CFSH5B12	Black	CFSS5200 OR CFSS5400 (5mm x 5mm)
CFSH5R12	Yellow and Red	

⑧ Compact pistol grip design (3.25" long) with defeatable cover interlock. Cover can be opened when handle is padlocked in the OFF position.

Rotary Operating Handles – Door Mounted (use with all operating shafts except CFSS5200 and CFSS5400 and with all CFS switches)

Catalog Numbers	Color	Description
Type 1, 3R & 12 ⑨ (IP54)		
CFSH10B12	Black	Heavy duty pistol grip (3.78" long)
CFSH10R12	Yellow and Red	
CFSH10BL12	Black	Heavy duty pistol grip (6.00" long)
CFSH10RL12	Yellow and Red	
Type 1, 3R, 4/4X & 12 ⑨ (IP65)		
CFSH10B4	Black	Heavy duty pistol grip (3.78" long)
CFSH10R4	Yellow and Red	
CFSH10BL4	Black	Heavy duty pistol grip (6.00" long)
CFSH10RL4	Yellow and Red	

⑨ Defeatable cover interlock provided. Cover cannot be opened when handle is padlocked in the OFF position.



CFS361J5



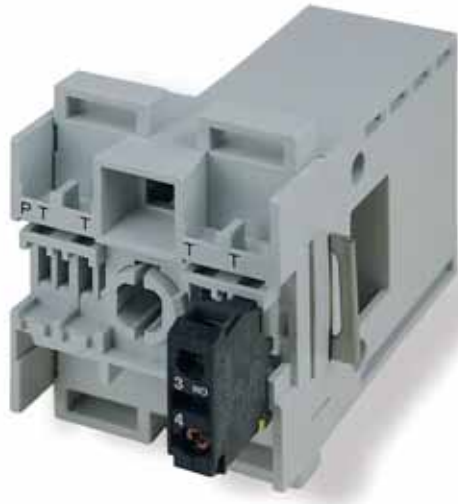
CFSS5400
CFSS5200H



CFSH5R12

Disconnect Switches

Type CFS Switches Accessories — Selection



CFAUXH2 and CFAUX1NO



CFSL100 and CFSL400

Type CFS Fusible Switch Accessories	
Catalog Numbers	Description
Terminals ①	
CFSL100	100A Lug Kit (6 lugs per kit)
CFSL200	200A Lug Kit (6 lugs per kit)
CFSL400	400A Lug Kit (6 lugs per kit)
Shorting Bars (no fuse kits)	
CFSSB60	60A Shorting Bar Kit (3 lines per kit)
CFSSB100	100A Shorting Bar Kit (3 lines per kit)
CFSSB200	200A Shorting Bar Kit (3 lines per kit)
CFSSB400	400A Shorting Bar Kit (3 lines per kit)
Auxiliary Contacts ②	
CFAUXH1 ②	Auxiliary Contact Holder (30A–50kA Sws)
CFAUXH2 ②	Auxiliary Contact Holder (30–400A 100 and 200kA Sws)
CFAUX1NO ②	Auxiliary Contact 1 NO (30–400A Sws)
CFAUX1NC ②	Auxiliary Contact 1 NC (30–400A Sws)
Load Side Terminal Shroud (line side shrouds provided with switch)	
CFSTS100	100A Shroud Kit
CFSTS200	200A Shroud Kit
CFSTS400	400A Shroud Kit (supplied for both line and load lugs on CFS365J)
Padlock Kit (when door is open) ③	
CFSPK	Shaft Padlocking Kit for 30A Compact Switch
NFPA 79 Kits (operating shaft, internal handle and internal padlocking means provided)	
CFSNFPA1 ④	For Use with CFS361C5 and CFS361J5 Switches
CFSNFPA2 ⑤	For Use with CFS361J, CFS362J, CFS363J, CFS364J and CFS365J Switches



CFAUX1NO



CFSSB60 and CFSSB100

- ① Supplied as standard on 30 and 60A switches.
- ② CFS361C5 and CNFS361 will accept (4) auxiliary contacts without an auxiliary contact holder. CFS361J5 will accept (2) auxiliary contacts without an auxiliary contact holder. ON ALL OTHER SWITCHES, CFAUXH2 IS REQUIRED TO MOUNT AUXILIARY CONTACTS.
- ③ Supplied as standard on all but 30A compact switches.
- ④ 12.6" (320 mm) long operating shaft included.
- ⑤ 11.3" (288 mm) long operating shaft included.

Disconnect Switches

Type CFS Dimensions and Technical Characteristics — Selection

UL and CSA Technical Characteristics

Description	Catalog Number			CFS361J	CFS362J	CFS363J	CFS364J	CFS365J
	CFS361C5 ①	CFS361J5	CFS361C	CFS361JL	CFS362JL	CFS363JL		
Amp Rating	30	30	30	30	60	100	200	400
Max AC Volts	600	600	600	600	600	600	600	600
Max Horsepower Ratings								
240V 3Ø AC	7.5	7.5	7.5	7.5	15	30	60	125
480V 3Ø AC	15	15	15	15	30	60	125	250
600V 3Ø AC	20	20	20	20	50	75	150	350
250V DC	5 ②	5 ②	5 ②	5 ②	10 ②	20 ②	40 ③	50 ③
AC Short Circuit Rating	50kA	50kA	100kA	200kA	200kA	200kA	200kA	200kA
Fuse Type (Class)	CC	J	CC	J	J	J	J	J
Electrical Endurance	6000	6000	6000	6000	6000	6000	6000	1000
Mechanical Endurance	10000	10000	10000	10000	10000	10000	8000	6000
Shaft Cross Section	5mm	5mm	10mm	10mm	10mm	10mm	10mm	10mm
Operating Torque (lb.in.)	21	21	53	88	88	88	106	132
Aux Contacts								
NEMA Rating AC	A600	A600	A600	A600	A600	A600	A600	A600
NEMA Rating DC	N600	N600	N600	N600	N600	N600	N600	N600

① Ratings also apply to catalog number CNFS361 except the 50kA AIC rating applies when switch is protected by Class J or CC 30A max. fuses.

② DC HP rating requires (2) poles to be connected in series.

③ DC HP rating requires (3) poles to be connected in series.

IEC Technical Characteristics

Description	Catalog Number							
	CFS361C5 ④	CFS361J5	CFS361C	CFS361J	CFS362J	CFS363J	CFS364J	CFS365J
Rating Insulation Voltage Ui	800	800	750	750	750	750	750	800
Rated Impulse Voltage (Uimp)	8kV	8kV	8kV	8kV	8kV	8kV	8kV	8kV
Operational Current I _e								
400V AC (AC22A & AC23A)	32	32	32	32	63	100	200	400
690V AC (AC22A & AC23A)	32	32	32	32	63	100	200	400
Motor Power (kW)								
400V AC	15	15	15	15	30	51	100	220
500V AC	18.5	18.5	18.5	18.5	40	63	140	220
690V AC	25	25	25	25	55	90	185	220
Max Peak (kA peak) let through current	5.5	5.5	7.6	17.6	17.6	22	32	36
Cu cable size (mm ²)	6	6	6	6	10	25	50	185

④ Ratings also apply to catalog number CNFS361.

Wire Ranges Line & Load Lugs ⑤

Switch Ampere Rating	UL Approved Wire Size (75°C)	Mechanical Wire Range of Lug (75°C)
30	#10 Cu	#14-10 Cu
60	#6 Cu	#10-3 Cu
100	#3 Cu	#14-2/0 Cu/Al
200	#3/0 Cu	#6-3/0 Cu/Al
400	(2) 300 kcmil AL or (2) 4/0 Cu	(2)#2-600 Kcmil Cu/Al

⑤ Line and load lugs are factory installed on 30 and 60A switches and are available as field installed kits only on 100–400A switches.

Panel Space Requirements

Catalog Number	Ampere Rating	Dimensions Inches (mm)		Depth ⑥
		Height	Width	
CFS361C5 CNFS361	30	4.56 (116)	3.78 (96)	6.00 (152)
CFS361J5	30	4.56 (116)	4.15 (105)	6.00 (152)
CFS361C	30	5.88 (149)	5.62 (143)	7.00 (178)
CFS361J CFS361JL	30	5.88 (149)	6.75 (171)	7.00 (178)
CFS362J CFS362JL	60	5.88 (149)	6.75 (171)	7.00 (178)
CFS363J CFS363JL	100	7.19 (183)	8.25 (210)	7.00 (178)
CFS364J	200	8.13 (206)	9.44 (240)	8.00 (203)
CFS365J	400	14.94 (379)	11.94 (303)	8.00 (203)

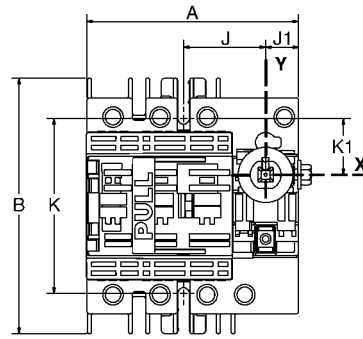
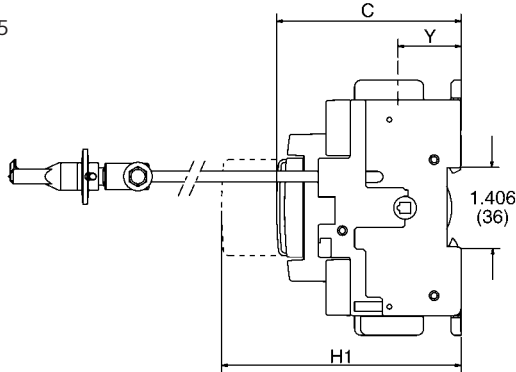
⑥ Minimum dimension from mounting surface to inside of cover. Dimensions shown can be decreased if auxiliary contacts are not required.

Disconnect Switches

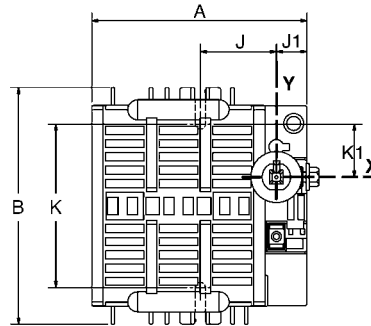
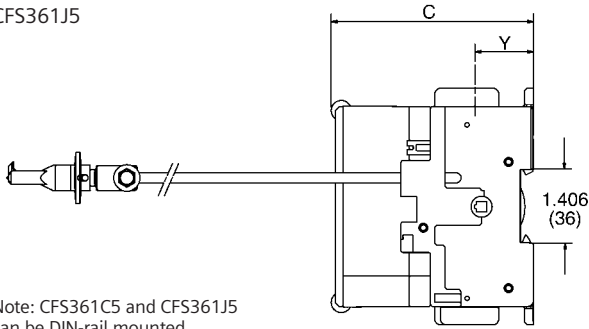
Type CFS Compact Fusible UL98 Switches — Dimensions

DIMENSIONS – 30A, 50kA SWITCHES

CFS361C5
CNFS361



CFS361J5



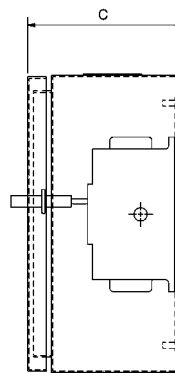
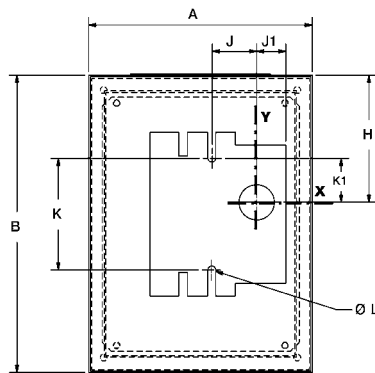
Note: CFS361C5 and CFS361J5
can be DIN-rail mounted

Dimensions – Inches (mm)

Catalog Number	A	B	C	H1	J	J1	K	K1	Y
CFS361C5	3.78 (96)	4.56 (116)	3.28 (84)	5.19 (132)	1.47 (37)	0.59 (15)	3.13 (80)	1.00 (25)	1.12 (28)
CFS361J5	4.13 (105)	4.56 (116)	3.89 (99)	—	1.47 (37)	0.59 (15)	3.30 (84)	1.00 (25)	1.12 (28)
CNFS361	3.78 (96)	4.56 (116)	2.59 (66)	—	1.47 (37)	0.59 (15)	3.13 (80)	1.00 (25)	1.12 (28)

RECOMMENDED MINIMUM ENCLOSURE DIMENSIONS

CFS361C5
CFS361J5
CNFS361



Dimensions – Inches (mm)

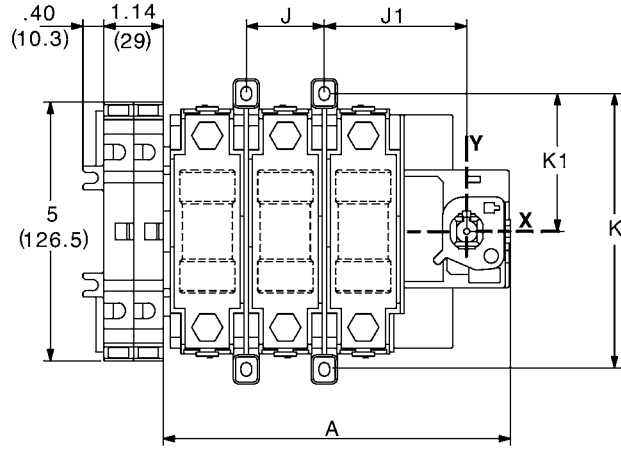
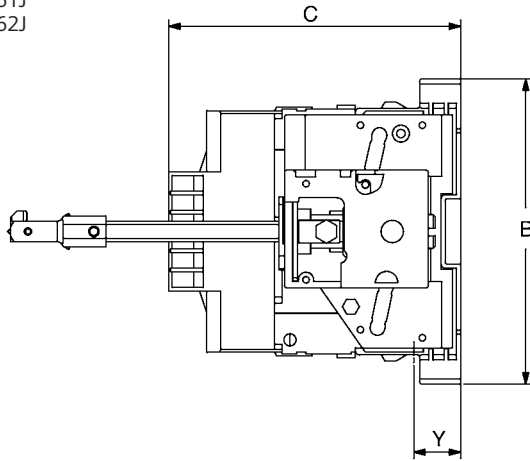
Catalog Number	A	B	C	H	J	J1	K	K1	ØL
CFS361C5 CNFS361	6.0 (152)	8.00 (203)	6.0 (152)	3.5 (89)	1.47 (37)	0.59 (15)	3.13 (80)	1.00 (25)	0.21 (5)
CFS361J5	6.0 (152)	8.00 (203)	6.0 (152)	3.5 (89)	1.47 (37)	0.59 (15)	3.30 (84)	1.00 (25)	0.21 (5)

Disconnect Switches

Type CFS Compact Fusible UL98 Switches — Dimensions

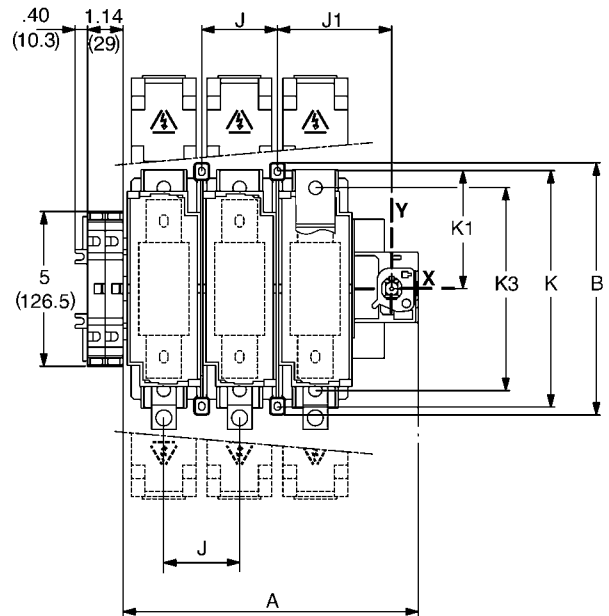
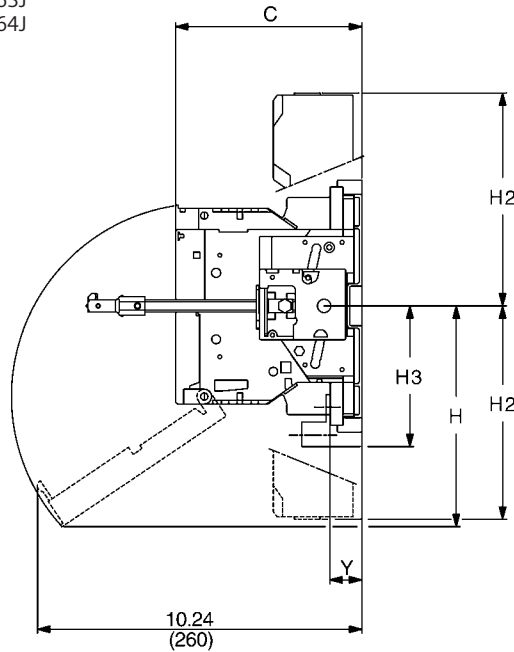
DIMENSIONS – 30-200A, 100kA & 200kA SWITCHES

CFS361C
CFS361J
CFS362J



Dimensions shown in inches and millimeters ().

CFS363J
CFS364J



Dimensions shown in inches and millimeters ().

Dimensions – Inches (mm)

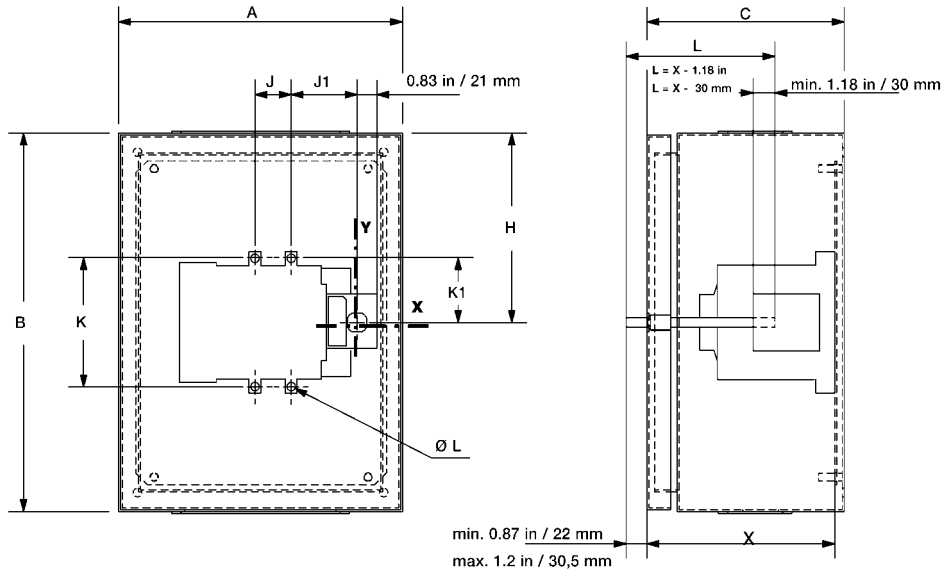
Catalog Number	A	B	C	H	H2	H3	J	J1	K	K1	K3	Y
CFS361C	5.63 (143)	5.87 (149)	3.89 (99)	—	—	—	1.14 (29)	2.38 (60)	5.31 (135)	2.63 (67)	—	1.21 (31)
CFS361J	6.72 (171)	5.87 (149)	5.62 (143)	—	—	—	1.5 (38)	2.75 (70)	5.31 (135)	2.63 (67)	—	0.95 (24)
CFS362J	6.72 (171)	5.87 (149)	5.62 (143)	—	—	—	1.5 (38)	2.75 (70)	5.31 (135)	2.63 (67)	—	0.95 (24)
CFS363J	8.26 (210)	7.19 (183)	5.63 (143)	4.06 (103)	5.27 (134)	3.66 (93)	2.05 (52)	3.28 (83)	6.61 (168)	3.28 (83)	5.55 (141)	1.0 (25)
CFS364J	9.44 (240)	8.13 (207)	6.0 (152)	7.27 (185)	6.87 (175)	4.79 (122)	2.44 (62)	3.68 (94)	7.56 (192)	3.75 (95)	6.53 (166)	1.03 (26)

Disconnect Switches

Type CFS Compact Fusible UL98 Switches — Dimensions

RECOMMENDED MINIMUM ENCLOSURE DIMENSIONS FOR 30 – 200A, 100kA and 200kA SWITCHES

CFS361C
 CFS361J
 CFS362J
 CFS363J
 CFS364J



Dimensions shown in inches and millimeters ().

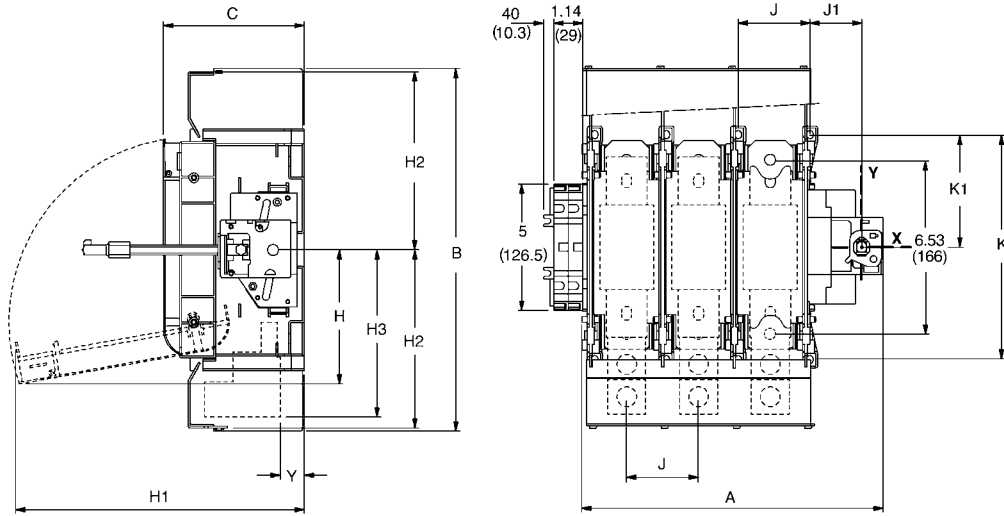
Dimensions – Inches (mm)									
Catalog Number	A	B	C	H	J	J1	K	K1	ØL
CFS361C	12 (305)	10 (254)	5 (127)	3 (76)	1.14 (29)	2.38 (61)	5.31 (135)	2.63 (67)	0.20 (5)
CFS361J	10 (254)	10 (254)	6 (153)	3 (76)	1.5 (38)	2.75 (70)	5.31 (135)	2.63 (67)	0.20 (5)
CFS362J	10 (254)	10 (254)	6 (153)	4.5 (114)	1.5 (38)	2.75 (70)	5.31 (135)	2.63 (67)	0.20 (5)
CFS363J	20 (508)	24 (610)	9 (229)	7.5 (190)	2.05 (52)	3.28 (83)	6.61 (168)	3.28 (83)	0.20 (5)
CFS364J	20 (508)	24 (610)	9 (229)	12 (305)	2.44 (62)	3.68 (94)	7.56 (192)	3.75 (95)	0.20 (5)

Disconnect Switches

Type CFS Compact Fusible UL98 Switches — Dimensions

DIMENSIONS – 400A, 200kA SWITCH

CFS365J

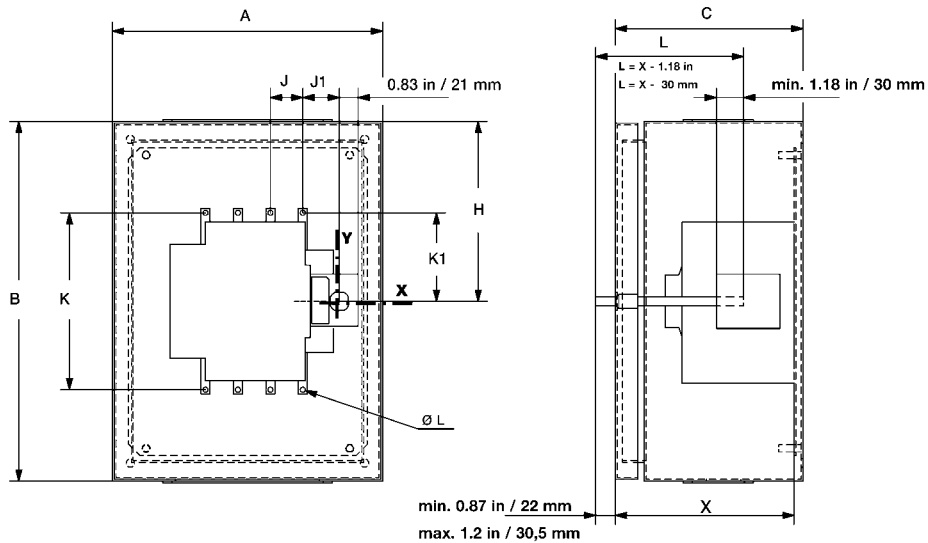


Dimensions shown in inches and millimeters ().

Dimensions – Inches (mm)												
Catalog Number	A	B	C	H	H1	H2	H3	J	J1	K	K1	Y
CFS365J	11.93 (303)	14.31 (363)	5.56 (141)	5.28 (134)	11.41 (290)	7.04 (179)	6.59 (167)	2.84 (72)	2.04 (52)	8.83 (224)	4.41 (112)	1.06 (27)

RECOMMENDED MINIMUM ENCLOSURE DIMENSIONS

CFS365J



Dimensions shown in inches and millimeters ().

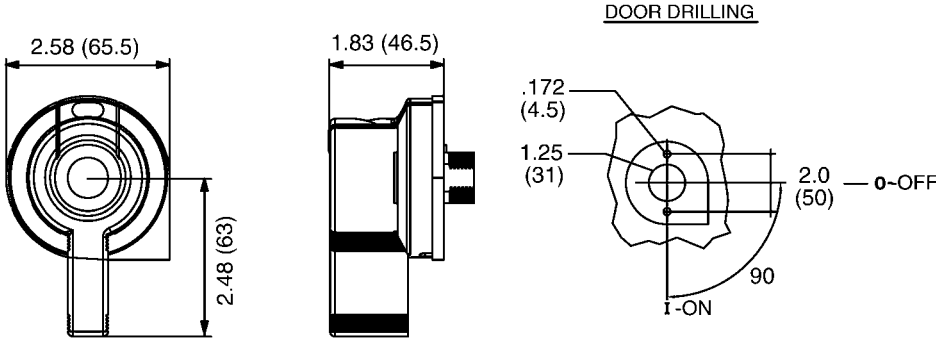
Dimensions – Inches (mm)									
Catalog Number	A	B	C	H	J	J1	K	K1	ØL
CFS365J	24 (610)	30 (762)	12 (305)	14 (358)	2.84 (72)	2.04 (52)	8.83 (224)	4.41 (112)	0.26 (7)

Disconnect Switches

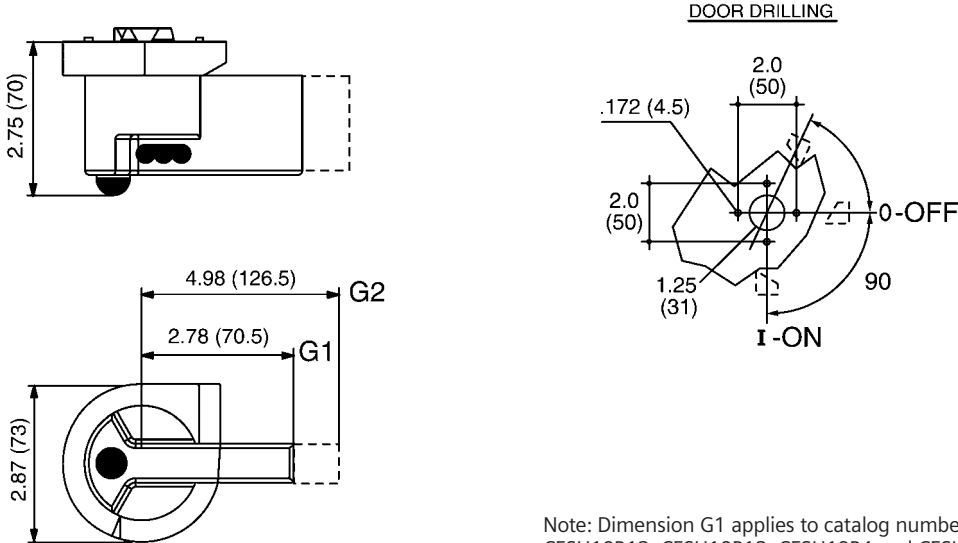
Type CFS Compact Fusible UL98 Switches — Dimensions

DIMENSIONS — HANDLES AND DOOR DRILLINGS

Compact Handles – CFSH5 Type



Heavy Duty Type – CFSH10 Handles



Dimensions shown in inches and millimeters ().

Note: Dimension G1 applies to catalog numbers: CFSH10B12, CFSH10R12, CFSH10B4 and CFSH10R4. Dimension G2 applies to catalog numbers CFSH10BL12, CFSHRL12, CFSH10BL4 and CFSH10RL4.



Siemens Energy & Automation, Inc.

3333 Old Milton Parkway
Alpharetta, GA 30005

1-800-964-4114

info.sea@siemens.com

www.sea.siemens.com

©2006 Siemens Energy & Automation, Inc. All Rights Reserved.
Siemens is a registered trademark of Siemens AG. Product names mentioned may be trademarks or registered trademarks of their respective companies. Specifications are subject to change without notice.