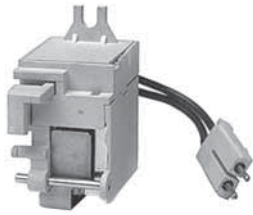# Electrical accessories
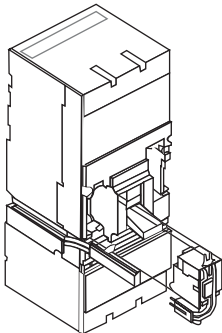## Shunt trip, undervoltage release
S3 – S7

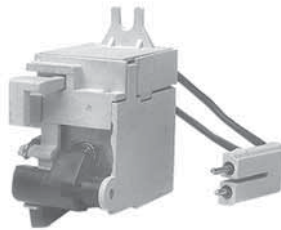
K5S1

S5 with K5S2

K5U1

K6C-SUP

Shunt trips

Voltage	Factory installation		Field installation		
	Catalog number suffix ①	List price adder	Catalog numbers		List price
			S3 – S4 – S5	S6 – S7	
480VAC/250VDC	S1		K5S1	K7S1	
240VAC	S2		K5S2	K7S2	
120VAC/125VDC	S4	$ 430	K5S4	K7S4	$ 415
48VDC	S7		K5S7	K7S7	
24VAC/VDC	S8		K5S8	K7S8	
12VDC	S9		K5S9	K7S9	

Low power shunt trips

Voltage	Factory installation		Field installation		
	Catalog number suffix ①	List price adder	Catalog numbers		List price
			S3 – S4 – S5	S6 – S7	
24VDC	SA		K5SA	K7SA	
120VAC	SB	$ 430	K5SB	K7SB	$ 415

For remote opening of circuit breaker and includes internal cut-off switch to protect solenoid. All shunt trips are left pole mounted and can not be used with UVRs. Except for 12VDC, all shunt trips are approved for use in GF systems. Shunt trips must be ordered with correct connector.

Shunt trip connectors (required)

Type circuit breaker	Voltage	Factory installation ①	Field kit catalog number		
			S3 – S4 – S5 – S6	S7	List price
Fixed mounted	All	included	K6C-SU	K7C-SU	
Plug-in/Draw-out	All	included	K6C-SUP	K7C-SUP	$ 15

Electrical specifications – shunt trips (standard)

V	24, 120, 240, 480VAC ~ 50/60 Hz 12, 24, 48, 125, 250 VDC –
For S3-S5 P For S6-S7	100 VA~/120W– Instantaneous duty 150 VA~/150W–

Undervoltage releases

Voltage	Factory installation		Field installation		
	Catalog number suffix ①	List price adder	Catalog numbers		List price
			S3 – S4 – S5	S6 – S7	
480VAC	U1		K5U1	K7U1	
240VAC	U2		K5U2	K7U2	
120VAC	U4		K5U4	K7U4	
24VAC	U3	$ 430	K5U3	K7U3	$ 415
250VDC	U5		K5U5	K7U5	
125VDC	U6		K5U6	K7U6	
48VDC	U7		K5U7	K7U7	
24VDC	U8		K5U8	K7U8	

Will trip CB when connected voltage drops to 35-70% of UVR voltage rating. Will allow CB to close (ON) when voltage is approximately 85% of rated voltage. All UVRs are left pole mounted and can not be used with shunt trips. UVRs must be ordered with correct connector.

Undervoltage release connectors (required)

Type circuit breaker	Voltage	Factory installation ①	Field kit catalog number		
			S3 – S4 – S5 – S6	S7	List price
Fixed mounted	All	included	K6C-SU	K7C-SU	
Plug-in/Draw-out	All	included	K6C-SUP	K7C-SUP	$ 15

Electrical specifications – UVR & low power shunt trips

V	24, 120, 240, 480 VAC ~ 50/60 Hz 24, 48, 125, 250 VDC –
For S3-S5 P For S6-S7	6 VA~/3W– Continuous duty 10 VA~/4W–

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① For factory installation add suffix given to end of circuit breaker catalog number per accessory format.
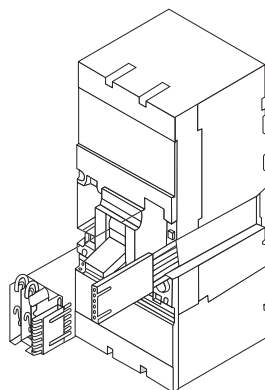
Electrical accessories
Auxiliary contacts
S3 – S7

K5AS

K6C-ABP

S5 with K6C-AB

Auxiliary contacts — S3 – S7

Contacts	Factory installation		Field installation		
	Catalog number suffix ①	List price adder	Catalog numbers		List price
			S3 – S4 – S5	S6 – S7	
2 Form Cs	A	**$ 275**	K5AS	K7AS	**$ 260**
1 BA & 1 C	BA	365	K5BA	K7BA	350
1 B BA & 1A + 1B	BA3		—	K7BA-3	

The auxiliary contacts are accessory contacts for the indication of circuit breaker open-closed or tripped. Bell alarm contacts (B.A.) can be used to indicate circuit breaker tripping. All contacts are right pole mounted.

Auxiliary contact connectors (required) — S3 – S7

Type circuit breaker	Voltage	Factory installation①	Field kit catalog number		
			S3 – S4 –- S5 – S6	S7	List price
Fixed mounted	All	included	K6C-AB	K7C-AB	**$ 15**
Plug-in/Draw-out	All	included	K6C-ABP	K7C-ABP	

Electrical specifications

Voltage	Maximum contact amperage rating
125 VDC	0.3 A
250 VDC	0.15 A
250 VAC	6 A

N.O. = contact is open as circuit breaker is open
N.C. = contact is closed when circuit breaker is open
B.A. = will open/close <u>only</u> when circuit breaker trips

① For factory installation add suffix given to end of circuit breaker catalog number per accessory format.
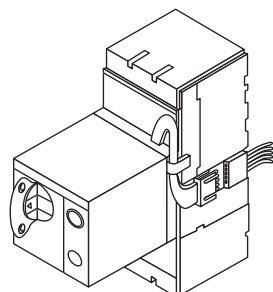② Not UL approved for field installation.

Discount schedule SA

Low Voltage Products & Systems

ABB Inc. • 888-385-1221 • www.abb-control.com
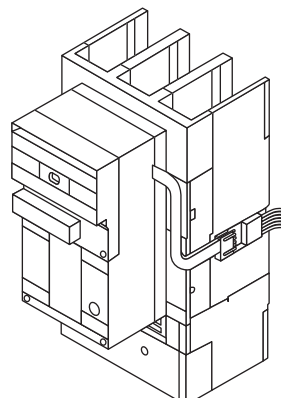
Motor operator

Voltage	Catalog number S3 – S4 – S5	List price
240VAC/250VDC	K5M2	
120VAC/125VDC	K5M4	$ 678
48VDC	K5M7	
24VDC	K5M8	

For remote control of circuit breaker opening and closing.
Complete with manual operating lever, padlock device and emergency opening push-button.
When ordering the connector always specify type and version of the circuit-breaker.
The following options are also available:
– key lock for open position
– key lock for open position of two or more circuit breakers (using the same key for groups of circuit breakers)

Motor operator connectors (required)

Type circuit breaker	Voltage	Field kit catalog number S3 – S4 – S5	List price
Fixed mounted	All	K6C-M	$ 15
Plug-in/Draw-out	All	K6C-MP	

Electrical specifications

V	120, 240VAC ~ 50/60 Hz 24, 48, 125, 250 VDC –
P inrush	500 VA~/500W–
P normal	350 VA~/500W–
Close time	0.1 s
Open time	0.1 s

Stored-energy motor operator

Voltage	Catalog number		List price
	S6	S7	
240VAC/250VDC	K6M2	K7M2	
120VAC/125VDC	K6M4	K7M4	$ 2407
48VDC	K6M7	K7M7	
24VDC	K6M8	K7M8	

• Stored-energy motor operator with springs automatically pre-loaded by motor.
• Complete with shunt opening and closing release, and compartment door flange.
• When ordering the connector always specify type and version of the circuit-breaker.
• The following options are also available:
  – key lock for open position
  – key lock for open position of two or more circuit-breakers (using the same key for groups of circuit-breakers).

Stored-energy motor operator connectors (required)

Type circuit breaker	Voltage	Field kit catalog number		List price
		S6	S7	
Fixed mounted	All	K6C-M	K7C-M	$ 15
Plug-in/Draw-out	All	K6C-MP	K7C-MP	

Electrical specifications

V	120, 240 VAC ~ 50/60 Hz 24, 48, 125, 250 VDC –
P inrush	660 VA~/600W–
P normal	180 VA~/180W–
Close time	0.09 s
Open time	1.2 s
Reset time	2.0 s

K5M2

S4 with K5M2

K6C-M

K6M2

S7 with K7M4

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External accessories
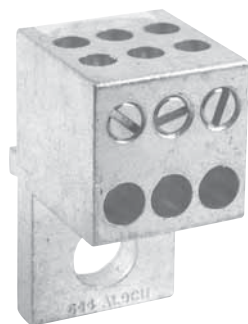## Lugs and termination kits
S3 – S7

K4TB

K4ET-250

K4TES

K4TER

K4TN

Standard cable lug kits

For breakers	Amps①	Wire range	Set of 2 catalog number	List price	Set of 3 catalog number	List price
S3	60	14AWG – 2AWG	K3TA-2	$ 4	K3TA	$ 6
S3 – S4	100	14AWG – 1/0	K4TB-2	4	K4TB	6
S3 – S4	150	2AWG – 4/0	K4TC-2	4	K4TC	6
S3 – S4 – S5	225	4AWG – 300kcmil	K4TD-2	10	K4TD	15
S4	250	6AWG – 350kcmil	K4TE-2	20	K4TE	30
S5	300	250kcmil – 500kcmil	K5TF-2	30	K5TF	45
S5	400	(2) 3/0 – 250kcmil	K5TG-2②	30	K5TG②	45
S6	600	(2) 250kcmil – 500kcmil	K6TH-2	50	K6TH	75
S6	800	(3) 2/0 – 400kcmil	K6TJ-2②	90	K6TJ②	135
S7	1200	(4) 4/0 – 500kcmil	K7TK-2	120	K7TK	180

Standard cable lugs, for use on line and load side of circuit breaker. Suitable for use with Cu or Al. Special versions available with taps and screws for control wire connection. Note: S6 and S7 lugs are Al9Cu (90°C); all others Al7Cu (75°C).

Standard cable lug kits with control power taps

For breakers	Amps①	Wire range	Set of 2 catalog number	List price	Set of 3 catalog number	List price
S3 – S4	100	14AWG – 1/0	K4TB-2C	$ 8	K4TBC	$ 12
S3 – S4	150	2AWG – 4/0	K4TC-2C	8	K4TCC	12
S3 – S4 – S5	225	4AWG – 300kcmil	K4TD-2C	14	K4TDC	21
S4	250	6AWG – 350kcmil	K4TE-2C	24	K4TEC	36
S5	300	250kcmil – 500kcmil	K5TF-2C	34	K5TFC	51
S5	400	(2) 3/0 – 250kcmil	K5TG-2C②	34	K5TGC②	51
S6	600	(2) 250kcmil – 500kcmil	K6TH-2C	54	K6THC	81
S6	800	(3) 2/0 – 400kcmil	K6TJ-2C②	94	K6TJC②	141
S7	1200	(4) 4/0 – 500kcmil	K7TK-2C	124	K7TKC	186

Extended front termination kits

Suitable for use with	Maximum amps	Set of 6 catalog number	List price
S3 – S4	250	K4ET-250	$ 46
S5	400	K5ET-400	114
S6	630	K6ET-600	150
S6	800	K6ET-800	170
S7	1250	K7ET-1250	240

For adding onto standard circuit breaker front terminals, extending available connection area for user termination. Suitable for spaded cable or bus connection. S3 – S5 include terminal covers.

Saddle cable lug kits (Cu cable only)

Suitable for use with	Max amps	Wire range	Set of 6 catalog number	List price
S3 – S4	250	14AWG – 250kcmil	K4TES	$ 30
S5	400	250kcmil – 500kcmil	K5TGS	90

These special non-aluminum cable lugs are for use with copper cable. Lugs are intended for use with copper cable or where non-aluminum connectors are required (marine, salt or corrosive environments).

Rear cable lug kits (Cu cable only)

Suitable for use with	Max amps	Wire range	Set of 6 catalog number	List price
S3 – S4	250	6AWG – 250kcmil	K4TER	$ 30
S5	400	250kcmil – 500kcmil	K5TGR	90
S6	600	(2) 2/0 – 350kcmil	K6THR	150
S6	800	(3) 250kcmil – 350kcmil	K6TJR	170

For use where cable connection from the back-rear of the breaker is desired.

Distribution cable lug kit

Suitable for use with	Max amps	Wire range	Set of 3 catalog number	List price
S3 – S4	250	(6) #14 - 6	K4TN	$ 125
S5	400	(6) #14 - 1/0	K5TGD	240

① Suggested lugs for circuit breaker up to amps shown. Cable size and type determine maximum amperes.
② Includes required lug covers.

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External accessories
Rotary and variable depth handle operators
S3– S7

K5RH

OHB65J10

OHB95J10

OHB125J10

K5VD-M, K5VD-S12,
K5VD-H

Rotary handle operating mechanism

Frame	Catalog number	List price
S3 – S4 – S5	K5RH	$ 108
S6	K6RH	124
S7	K7RH	145

Mounts directly onto breaker. Includes door interlock to prevent CB door opening while CB is in ON position. Padlock provision included to padlock CB in open position. Can also be key locked with optional cylinder lock assembly. Door interlock bracket must be ordered separately, if required. See page 15.62.

Variable depth rotary handles

New pistol type 1, 3R, 12

Frame	Catalog number mechanism	List price	Shaft catalog number (length in inches)	List price	Handle catalog number (length in inches)	List price
S3–S4–S5	K5VD-M	49		$ 24 26 32	OHB95J10 (3.7) OHG95J10 (3.7)	80
S6	K6VD-M	80	OXP10X148 (5.8) OXP10X225 (8.9) OXP10X500 (19.7)		OHB125J10 (4.9) OHG125J10 (4.9)	90
S7	K7VD-M	80			OHB175J10 (6.9) OHG175J10 (6.9)	100

Pistol type 4, 4X

Frame	Catalog number mechanism	List price	Shaft catalog number (length in inches)	List price	Handle catalog number (length in inches)	List price
S3–S4–S5	K5VD-M	49		$ 24 26 32	OHB95L10 (3.7) OHG95L10 (3.7)	120
S6	K6VD-M	80	OXP10X148 (5.8) OXP10X225 (8.9) OXP10X500 (19.7)		OHB125L10 (4.9) OHG125L10 (4.9)	130
S7	K7VD-M	80			OHB175L10 (6.9) OHG175L10 (6.9)	140

Square type 1

S3–S4–S5	K5VD-M	49	K5VD-S12	$ 24	K5VD-H	$ 25
S6	K6VD-M	80	K7VD-S20	27	K7VD-H	28
S7	K7VD-M	80			K7VD-H	28

NOTE: Complete assembly requires a mechanism, shaft and handle.

Variable depth shaft support

For frames	Catalog number	List price
S3 – S4 – S5	K5VD-LSS	$ 25

New pistol handle catalog number explanation

OHB   125   J   10

Shaft size (diameter in mm)

J = Type 1, 3R, 12
L = Type 1, 3R, 4, 4X, 12

Physical size (length in mm)

Color
B = black
G = gray
Y = yellow / red

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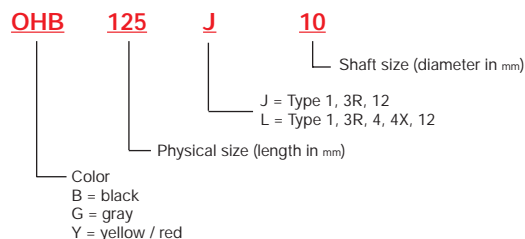
External accessories
Flange handle operators
S3 – S6

Flange handle
Solid shaft linkage

K7FHD-HS12

Breaker	NEMA type	Complete handle kit	List price	Mechanism only	List price	Shaft only	Shaft length	List price	Handle only	List price
S3	1,3R,12	K3FHD-12S12 K3FHD-17S12 K3FHD-22S12	240 248 255	K3FHD-M	128	K7FHD-S12 K7FHD-S17 K7FHD-S22	12 17 22.5	19 27 34	K7FHD-HS12	93
	4, 4X	K3FHD-12S4 K3FHD-17S4 K3FHD-22S4	280 288 295			K7FHD-S12 K7FHD-S17 K7FHD-S22	12 17 22.5	19 27 34	K7FHD-HS4	133
S4	1,3R,12	K4FHD-12S12 K4FHD-17S12 K4FHD-22S12	240 248 255	K4FHD-M	128	K7FHD-S12 K7FHD-S17 K7FHD-S22	12 17 22.5	19 27 34	K7FHD-HS12	93
	4, 4X	K4FHD-12S4 K4FHD-17S4 K4FHD-22S4	280 288 295			K7FHD-S12 K7FHD-S17 K7FHD-S22	12 17 22.5	19 27 34	K7FHD-HS4	133
S5	1,3R,12	K5FHD-12S12 K5FHD-17S12 K5FHD-22S12	240 248 255	K5FHD-M	128	K7FHD-S12 K7FHD-S17 K7FHD-S22	12 17 22.5	19 27 34	K7FHD-HS12	93
	4, 4X	K5FHD-12S4 K5FHD-17S4 K5FHD-22S4	280 288 295			K7FHD-S12 K7FHD-S17 K7FHD-S22	12 17 22.5	19 27 34	K7FHD-HS4	133
S6	1,3R,12	K6FHD-12S12 K6FHD-17S12 K6FHD-22S12	523 531 538	K6FHD-M	411	K7FHD-S12 K7FHD-S17 K7FHD-S22	12 17 22.5	19 27 34	K7FHD-HS12	93
	4, 4X	K6FHD-12S4 K6FHD-17S4 K6FHD-22S4	563 571 578			K7FHD-S12 K7FHD-S17 K7FHD-S22	12 17 22.5	19 27 34	K7FHD-HS4	133

Available as complete kits including flange handle, shaft and breaker operating mechanism. Mechanism mounts directly onto breaker and shaft can be cut to the desired length for the breaker enclosure. Door is interlocked with the handle when the breaker is in the closed (ON) position; handles include interlock defeater for emergency override. Handle can be padlocked in the open (OFF) position. Can be field converted for left hand mounting.

Door hardware kits — Solid shaft linkage & cable operated

Item	Catalog number	List price
Door hardware kit, right hand, 2 point latch for enclosures less than 40 inches high	FH-DHK	$ 150
Roller for 3 point latch, add to FH-DHK	FH-3RL	30

Enclosure depths
Minimum

Breaker	Depth (inches)
S3 - S5	10
S6	11

Maximum

For maximum depth, add 4 inches to the shaft length

① Cable not included.
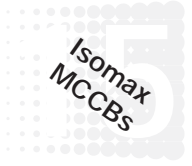
Flange handle
Cable linkage

Breaker	NEMA type	Mechanism only	List price	Cable only	Cable length	List price	Handle only	List price
S3-S4	1,3R,12	K4FPM	110	K5C036	36″ (91cm)	114	K5FCH	213
				K5C048	48″ (122cm)	146		
	4, 4X	K4FPM	110	K5C060	60″ (152cm)	160	K5FCH4	243
				K5C072	72″ (183cm)	175		
S5	1,3R,12	K5FPM	128	K5C084	84″ (213cm)	204	K5FCH	213
				K5C096	96″ (244cm)	221		
	4, 4X	K5FPM	128	K5C108	108" (274cm)	238	K5FCH4	243
				K5C120	120" (305cm)	256		
S6	1,3R,12	K6FPM	220	K7C048	48″ (122cm)	190	K7FCH	310
				K7C060	60″ (152cm)	220		
	4, 4X	K6FPM	220	K7C072	72″ (183cm)	256	K7FCH4	415
				K7C084	84″ (213cm)	270		
S7	1,3R,12	K7FPM	220	K7C096	96″ (244cm)	320	K7FCH	310
				K7C120	120″ (305cm)	350		
	4, 4X	K7FPM	220				K7FCH4	415

Notes: For complete assembly; mechanism, cable and handle are required.
All cables mount onto the right side of the breaker.
Handle can be mounted on the right or left side.

Door hardware kits — S3 - S7 Cable operated

Item	Catalog number	List price
Door hardware kit, right hand, 2 point latch for enclosures less than 40 inches high	KDH2R	$ 200
Door hardware kit, right hand, 3 point latch for enclosures 40 inches high or greater	KDH3R	225

Enclosure depths
Minimum

Breaker	Depth (inches)
S3 - S6	8
S7	10

Maximum
Maximum depth is determined by cable length.

K7FCH

External accessories
S3 – S7

Front locking device

Item	Catalog number	List price
S3 – S4 – S5	K5LD	$ 14
S6	K6LD	16
S7	K7LD	20
S3 – S4 – S5	K5LDW ①	14
S6	K6LDW ①	16
S7	K7LDW ①	20

Mounts directly onto front of CB. Includes padlock device for locking CB in open position. Can be used as a manual handle block, with padlock or with optional key lock accessory. Optional door interlock kit that will prevent CB door from opening while CB is in the closed (ON) position.

Door interlock bracket

Item	Catalog number S3 – S7	List price
Bracket	K7DB	$ 5

Key locks

Accessory	Keys	Catalog number S3 – S4 – S5	Catalog number S6 – S7	List price
Electric operator	different	K5KL-EO	K7KL-EO	
	same	K5KL-EO-2	K7KL-EO-2	$ 25
Rotary HM & locking device	different	K7KL	K7KL	
	same	K7KL-2	K7KL-2	

Keyed cylinder locks are available for mounting onto Isomax electric operators, rotary handle mechanisms and front locking devices. Key locks can be for one individual circuit breaker (different keys in each order) or for two circuit breakers using the same key.

Terminal covers for fixed circuit breakers

Frame	Low profile catalog number	List price	High profile catalog number	List price
S3 – S4	K4LC	8	K4LCH	$ 16
S5	K5LC	12	K5LCH	24
S6	K6LC	18	K6LCH	32
S7	K7LC	40	––	––

Both high and low types are available for fixed circuit-breakers. Covers provide IP40 degree of protection for fixed mounted circuit breakers. Lug covers are required and included as standard with S5 **400A** and S6 **800A** cable lug kits. Covers up to S6 can be sealed with lug cover seal shown in next section.

Terminal cover seals

Suitable for use with breakers	Used with LC covers	List price
S3 – S4 – S5 – S6	K6LC-S	$ 5

These screws prevent the terminal covers from being removed.

DIN rail mounting kits

Suitable for use with breakers	Catalog number	List price
S3	K3DMB	$ 24
S4	K4DMB	26
S5	K5DMB	38

Kit consists of mounting bracket to fix S3-S5 breakers onto **75mm DIN rail (EN 50023 rail)** and includes 45mm high front face plate to match up with miniature circuit breakers and manual motor starters. S1 breaker mounts on 35mm DIN rail.

Mechanical interlock plate

Frame	Horizontal catalog number	List price	Vertical catalog number	List price
S3	K3MI-H	$ 570	K3MI-V	$ 570
S4	K4MI-H	570	K4MI-V	570
S5	K5MI-H	590	K5MI-V	590
S6	K6MI-H	620	K6MI-V	620
S7	K7MI-H	630	K7MI-V	630

Provides for mounting of two similar breakers on a single mounting plate. CBs are interlocked via a "walking beam" type interlock, preventing breakers from being ON or closed at the same type. Both breakers can be OFF or tripped. MIP is available in two versions, one with breakers mounted horizontally and then also a version for vertical mounting of breakers.
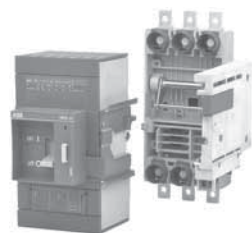
① Required for drawout breakers.

K5LD

K7KL

K6LC

K6LCH

K6LC-S

K3DMB

Accessories
S3 – S7
IEC

K4RC

Rear plug-in & drawout circuit breakers

K7TUT

Rear connected stud kits①

For breakers	Max. amps	Set of 6 catalog number	List price
S3 – S4	250	K4RC	$ 87
S5	400	K5RC	225
S6	800	K6RC	280
S7	1200	K7RC	340

Provides means to connect breakers directly onto rear bus bars.

Rear plug-in and draw-out circuit breakers

Isomax breakers are available in both rear plug-in and complete draw-out configurations. Plug-in breakers can be rear bus, front bus or front cable connected and are available up to the S5 400A size. The draw-out configuration uses a unique racking system and is available for all breakers from S3 through S7.

Plug-in (3 pole)①

| | Separate kits fixed and movable | | | | | | Complete plug-in kits | | | |
| | Movable kit | | Fixed base kit | | | | Includes both fixed and movable portion | | | |
Frame	Movable	List price	Front bus	List price	Rear conn.	List price	Front bus	List price	Rear conn.	List price
S3	K4PMK	203	K3PFF	190	K3PFR	230	K3PF	393	K3PR	$ 433
S4	K4PMK	203	K4PFF	203	K4PFR	243	K4PF	406	K4PR	446
S5	K5PMK	238	K5PFF	278	K5PFR	278	K5PF	516	K5PR	516

Draw-out (3 pole) ①③

| | Separate kits fixed and movable | | | | | | Complete draw-out kits | | | |
| | Movable kit | | Fixed base kit | | | | Includes both fixed and movable portion | | | |
Frame	Movable	List price	Front bus	List price	Rear conn.	List price	Front bus	List price	Rear conn.	List price
S3	K4WMK	$ 203	K3WFF	$ 230	K3WFR	$ 270	K3WF	$ 433	K3WR	$ 473
S4	K4WMK	203	K4WFF	283	K4WFR	323	K4WF	486	K4WR	526
S5	K5WMK	278	K5WFF	318	K5WFR	318	K5WF	596	K5WR	596
S6 Horiz	K6WMK	523	K6WFF	1346	K6WFR-H	1346	K6WF	1869	K6WR-H	1869
S6 Vert	K6WMK	523	K6WFF	1346	K6WFR-V	1346	K6WF	1869	K6WR-V	1869
S7 Horiz	K7WMK	821	K7WFF	2111	K7WFR-H	2111	K7WF	2932	K7WR-H	2932
S7 Vert	K7WMK	821	K7WFF	2111	K7WFR-V	2111	K7WF	2932	K7WR-V	2932

Movable kit = parts needed to modify standard CB to movable type.
Fixed base kit = fix mount onto panel.
Ext Fr bus = fixed base with line and load side extended front bus connectors. (FF)
Rear Conn. = fixed base with line and load side rear bus connectors. (FR)
Complete kit = includes all parts required for plug-in or draw-out connection; does not include CB.
Plug-in = open breaker can be physically removed from fixed base without disconnecting cable or bus from fixed base. (P)
Draw-out = also known as withdrawable, breaker can be removed from fixed base via a through the door crank. Includes ON, TEST and OFF position. (W)

Four pole versions (plug-in and/or draw-out)

Take the above list prices times 1.35 for four (4) pole versions and add "-4" to the end of the catalog number.

Draw-out crank

Isomax frames	Catalog number	List price
S3 – S7	K7WCR	$ 20

Cable termination kits (3 pole only)①

Compression type cable lug kit used to modify extended front bus connectors for direct cable connection.

Frame	Set of 6	List price
S3	K4FCT	$ 72
S4	K4FCT	72
S5	K5FCT	86

Hand-held test kit (for all electronic trip types)

Isomax frames	Catalog number	List price
S4 – S5 – S6 – S7	K7TUT	$ 210

Isomax hand-held test kit is used to both test and exercise microprocessor trip units in breakers S4 through S7. Unit includes test forks that insert into the test plugs on all Isomax microprocessor trip units. Tester generates 15VDC signal that performs diagnostic on electronic trip functions and will confirm test by tripping the CB. Will not test S3 nor any molded case switch versions.

① IEC ratings only.
② Front cable connection.
③ Requires front locking device to prevent drawout while breaker is closed.

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Enclosures
Type 1 & 3R/12

Description

Type 1
- General purpose indoor enclosure intended for use in normal environments to provide a degree of protection against contact with enclosed equipment.
- Sheet steel, surface mount.
- Breaker is front-operable and can be padlocked via front hasp.
- Available through 2500A, 600VAC
- UL Listed for use as service entrance equipment (SUSE), per UL file E116374.

Type 3R/12
- Type 3R is intended for outdoor use providing protection against rain, sleet or snow.
- Type 12 is for use in indoor atmospheres to provide a degree of protection against circulating dust, lint, sawdust, falling dirt and dripping non-corrosive liquids.
- Surface-mounted, sheet steel enclosure.
- Breaker can be operated via **separately ordered** handle mechanism; door is interlocked with mechanism.
- Available through 2500A, 600VAC.
- UL Listed for use as service entrance equipment (SUSE), per UL file E116374.

Type 7/9
- Cast from copper-free aluminum (max. 0.025 copper content)
- Stainless steel shotblasted or sandblasted natural finish
- Standard conduit openings in top and bottom
- Breaker is operated from front handle and can be padlocked
- NEC Class I Groups D, Div. 1 & 2
  NEC Class II Groups E, F & G, Div 1 & 2
  NEC Class III
- External machined flange joint design
- Integral cast mounting feet
- Machined flange for ease of hinge installation
- Ground lug
- Cast mounting pan bosses
- All enclosures suitable for drilling & tapping
- UL panel listed per UL File # E183868

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Enclosures
Type 1 & 3R/12

S3E-1

S4E-3R12 ③

Enclosures (Price does not include circuit breaker; order as a separate item.) ④

NEMA designation	Breaker type	Enclosure maximum rating		Approximate dimensions① H x W x D (inches)	Catalog number	List price
		AL cables	CU cables			
Type 1	S3	150A	225A	22 x 12 x 4.5	S3E-1	235
	S4	225A	250A	30 x 17.5 x 4.5	S4E-1	305
	S5	400A	400A	30 x 17.5 x 4.5	S5E-1	305
	S6	800A	800A	44 x 22 x 6	S6E-1	685
	S7	1000A	1200A	44 x 22 x 6	S7E-1	685
	S8	2500A	2500A	88 x 36 x 24	S8ES250-1	5285
Type 3R/12③	S1 ②	100A	100A	14 x 10 x 8.8	S1E-3R12	305
	S2 ②	125A	125A	16 x 11 x 8	S2E-3R12	305
	S3	150A	225A	22 x 12 x 9	S3E-3R12	395
	S4	225A	250A	30 x 17.5 x 9	S4E-3R12	575
	S5	400A	400A	30 x 17.5 x 9	S5E-3R12	575
	S6	800A	800A	44 x 22 x 11	S6E-3R12	905
	S7	1000A	1200A	44 x 22 x 11	S7E-3R12	905
	S8	2500A	2500A	88 x 36 x 24	S8ES250-3R12	5285

Neutral kits

Breaker type	Neutral cable capacity and wire range	Neutral kit catalog number	List price
S3	Neutral #6-250 kcmil Bonding Lug #14-1/0	S3NK225	135
S4	Neutral #6-250 kcmil Bonding Lug #14-1/0 kcmil	S4NK250	155
S5	Neutral (2) #6-250 kcmil Bonding Lug #14-1/0 kcmil	S5NK400	260
S6	Neutral (2) #2-600 kcmil Bonding Lug #6-250 kcmil	S6NK800	350
S7	Neutral (4) #2-600 kcmil Bonding Lug #6-250 kcmil	S7NK1200	535
S8	Neutral (6) #1/0-750 kcmil Bonding Lug (2) #2-600 kcmil	—	included

NOTE: The list price adder for factory installation of an enclosed circuit breaker is 50% of the enclosure list price.
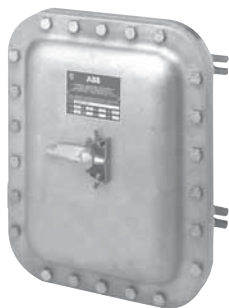
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① Enclosures may not meet size requirement for UL 100% rated breakers.
② Not UL approved.
③ Variable depth rotary handle must be ordered separately (S1 - S7).
④ Consult ABB for breakers installed in enclosures.

Enclosures
Type 7/9

S5N400BW7

Explosion-proof enclosures
(Price does not include circuit breaker; order as a separate item for factory assembly.)

NEMA designation	Breaker type	Enclosure max. rating	Approximate dimensions H x W x D (inches)	Catalog number suffix	List price adder
Type 7/9	S3	Cu only 100A	17 x 10 x 8.65	7	**$ 2100**
	S3	Cu only 225A	22.5 x 11.5 x 8.77	7	**2850**
	S4	Cu only 250A	25 x 18 x 9.92	7	**4700**
	S5	Cu only 400A	30 x 17 x 9.25	7	**6600**
	S6	Cu only 600A	35 x 17 x 11	7	**8600**
	S6	Cu only 800A	41 x 17 x 11	7	**10,450**
	S7	Cu only 1200A	51 x 17 x 13	7	**22,450**

To order a breaker in an explosion-proof enclosure, add the suffix "7" to the end of the catalog number and add the list price adder to the list price of the breaker.
Example: **S5N400BW7**
S5N400BW breaker .... $ 2151
Explosion proof enclosure 6600
Total .... $ 8751

Additional options

NEMA 4X   **Stainless steel bolts**   **Captive bolts**   **Drain**

NEMA designation	Breaker type	Enclosure max. rating	Cat. no. adder	List price adder	Cat. no. adder	List price adder	Cat. no. adder	List price adder	Cat. no. adder	List price adder
Type 7/9	S3	Cu only 100A	-X	**$ 130**	-S	**$ 20**	-B	**$ 145**	-D	
	S3	Cu only 225A	-X	**145**	-S	**25**	-B	**170**	-D	
	S4	Cu only 250A	-X	**145**	-S	**45**	-B	**355**	-D	
	S5	Cu only 400A	-X	**175**	-S	**60**	-B	**415**	-D	**$ 110**
	S6	Cu only 600A	-X	**250**	-S	**60**	-B	**465**	-D	
	S6	Cu only 800A	-X	**315**	-S	**60**	-B	**535**	-D	
	S7	Cu only 1200A	-X	**430**	-S	**80**	-B	**600**	-D	

To add additional options, simply add the suffix to the end of the catalog number.
Example: **S5N400BW7XSD**
S5N400BW breaker .... $ 2151
Explosion proof enclosure 6600
NEMA 4X 175
Stainless steel bolts..................... 60
Drain 110
Total .... $ 9096

Catalog number information — Type 7/9

S4 N 250 B W 7 - 2 xxx

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● **Frame size**
S3 = 150 / 225A
S4 = 250A
S5 = 400A
S6 = 600 / 800A
S7 = 1200A

● **Interrupting rating class**
B = Basic (240VAC)
N = Normal
H = High
L = Extra high
D = Special molded case switch

● **Current rating**
015 = 15A
250 = 250A
400 = 400A
600 = 600A
800 = 800A
1200 = 1200A

● **Trip unit function**
B = LI   **F** = LSIG/K
C = LSI   **H** = LSIG/D
D = Molded case switch (MCS)   **J** = LSIG/DT
E = LSIG   **K** = LSIG/DTK
T = Thermal-magnetic   **M** = Magnetic only (MCP)

● **Accessories** (added in alpha-numeric order)
A = Auxiliary switch
B = Captive bolts
BA = Bell alarm
BA3 = Bell alarm (S6/S7 only)
D = Breather/drain
H = Fixed rotary handle mounted on CB
S_ = Shunt trip with voltage code
S = Stainless steel bolts
U_ = Undervoltage release with voltage code
X = NEMA 7/9/4X

● **Number of poles**
-2 = 2 pole
-4 = 4 pole
None = 3 pole

● **NEMA enclosure 7/9**

● **Type connectors**
W = None   **L** = Lugs

NEMA 1

FRONT VIEW   SIDE VIEW   SECTION

F
4-MTG. HOLES

Cat. #	A	B	C	D	E	F
S3E-1	22.0 *559.0*	12.0 *305.0*	4.25 *108.0*	19.0 *482.0*	9.0 *229.0*	0.312 *7.93*
S4E-1	30.0 *762.0*	17.5 *444.5*	4.25 *108.0*	27.0 *686.0*	14.5 *368.5*	0.312 *7.93*
S5E-1	30.0 *762.0*	17.5 *444.5*	4.25 *108.0*	27.0 *686.0*	14.5 *368.5*	0.312 *7.93*
S6E-1	44.0 *1118.0*	22.0 *559.0*	5.75 *146.0*	41.0 *1041.5*	19.0 *483.0*	0.312 *7.93*
S7E-1	44.0 *1118.0*	22.0 *559.0*	5.75 *146.0*	41.0 *1041.5*	19.0 *483.0*	0.312 *7.93*

NEMA 3R, 12

FRONT VIEW   SIDE VIEW   SECTION

F
4-MTG. HOLES
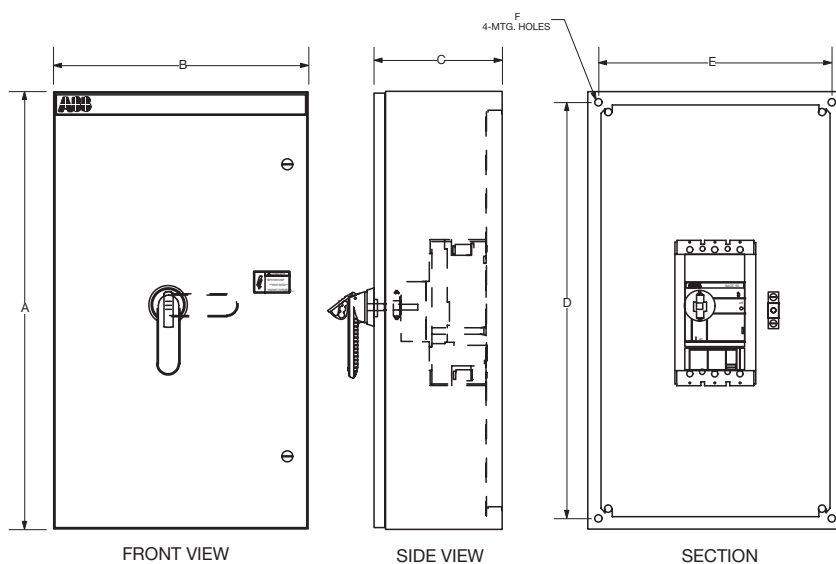
Cat. #	A	B	C	D	E	F
S3E-3R12	22.0 *559.0*	12.0 *305.0*	8.8 *224.0*	20.5 *520.5*	10.5 *267.0*	0.50 *13.7*
S4E-3R12	30.0 *762.0*	17.5 *444.5*	8.8 *224.0*	28.5 *724.0*	16.0 *406.5*	0.50 *13.7*
S5E-3R12	30.0 *762.0*	17.5 *444.5*	8.8 *224.0*	28.5 *724.0*	16.0 *406.5*	0.50 *13.7*
S6E-3R12	44.0 *1118.0*	22.0 *559.0*	10.8 *274.5*	42.5 *1080.0*	20.5 *521.0*	0.50 *13.7*
S7E-3R12	44.0 *1118.0*	22.0 *559.0*	10.8 *274.5*	42.5 *1080.0*	20.5 *521.0*	0.50 *13.7*

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Enclosures
Approximate dimensions
S8, NEMA 1, 3R & 12

Front Elevation view:

2.0 / 51

35.8 / 909

ABB

87.4 / 2220

CIRCUIT
BREAKER
ESCUTCHEON
CUT-OUT
TYPE 1 ONLY

1.5 / 38

FRONT ELEVATION
(DOOR CLOSED)

Side view:

24.0 / 610

2.0 / 51

SILL CHANNEL
4.0 x 1.5 INCHES
103   38

Top view:

35.1 / 892

REAR

3.8 / 97

LEFT

3.6 / 91

CONDUIT
ENTRY SPACE
(16.2 X 28.0)
411   711

16.2 / 411

RIGHT

23.8 / 605

FRONT

3.8 / 97

TOP VIEW
ENCLOSURE ROOF
(SOLID REMOVABLE ROOF PANEL)

Bottom view:

35.79 (OVER ALL) / 909

4.53 / 115

26.73 / 679

REAR

4.53 / 115

4.00 / 102

5.00 / 127

SILL CHANNEL

3.36 / 85

21.81 / 554

0.50 DIA.
13
MTG. HOLES
(QTY. 4)

13.8 / 351

CONDUIT
ENTRY SPACE
(28.0 X 13.8)
711   351

15.09 / 383

23.80 / 605

LEFT

RIGHT

5.00 / 127

SILL CHANNEL

3.36 / 85

FRONT

3.9 / 99

5.20 / 132

BOTTOM VIEW
ENCLOSURE FLOOR
(SOLID NON-MOVABLE FLOOR PANEL)

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