

VL Information Guide

Technical Data

Introduction

The VL family of circuit breakers by Siemens utilizes a compact and modular design which can be configured to suit a wide range of ratings and applications. Designed for global requirements, these breakers include the following standards and markings:

- UL (UL 489)
- CSA (CSA-C22.2) ①
- NOM (NMX-J-266-ANCE-2002) ①
- IEC (IEC-60947-2)
- CE (EN 60947-2) ①
- CCC ①

The range of frames includes 150A to 1600A and each rating is available with interchangeable trip units. The frames are available in three (3) interrupting ratings classes:

- N – Normal
- H – High
- L – Very High

The assortment of trip units allows a choice of trip functions and each trip unit features adjustable settings. The interchangeable trip units are available in three (3) varieties as well:

- Model 525 – Thermal-Magnetic
- Model 545 – Electronic
- Model 576 – Electronic with LCD display

The VL family also includes Molded Case Switches, Motor Circuit Protectors, and other complete breakers with non-interchangeable trip units.

Internal accessories are field installable and are conveniently located in pockets behind the front accessory cover. To simplify the selection of accessories, just two (2) groups of internal accessories cover the entire VL product family. To accommodate the wide variety of application requirements for connecting, mounting, and operating the breakers, a wide range of external accessories is also available. Some of these accessories are listed in this guide.

For a complete list of the accessories, configurations, and ratings available in the VL family of circuit breakers refer to the VL Circuit Breaker Product Guide or consult your local Siemens Energy & Automation Sales Office.

① Approval pending.

Catalog Number Information

	Primary Catalog Number								Lugs	Switch		Release		Other	
Position	1	2	3	4	5	6	7	8	P1	P1	P2	P1	P2	P1	P2
Breaker Example	H	F	G	3	B	2	5	0	L						
Trip Unit Example	C	F	T	3	E	2	5	0	—	—	—	—	—	—	—
Character Type	a	a	a	n	a	n	n	n	a	a	n	a	a/n	a	a

Interrupting Capacity

- N – Normal
- H – High
- L – Very High

Frame Size

{G, E, D, F, J, L, M, N, P}

Breaker Type

- G – Global (UL, IEC, CE, CSA, NOM)
- H – Global, 100% Rated
- X – Global, Non-interchangeable
- Y – Global, 100% Rated, Non-interchangeable
- T – Trip Unit Only

Number of Poles {1, 2, 3, 4}

{5 = Protected Neutral}

Trip Unit Type {F for Frame Only}

Current Rating (I_n) in Amperes

(Amperes/10 if > = 1000)

Terminations

Two Letter Suffixes Describing Accessories and Modifications

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		DG	FG	JG	LG	MG	NG	PG
Max rated continuous current		150	250	400	600	800	1200	1600
Rated operational voltage	NEMA V AC	600	600	600	600	600	600	600
	IEC V AC	690	690	690	690	690	690	690
Rated Impulse Withstand Voltage								
Main conducting paths	kV	8	8	8	8	8	8	8
Auxiliary circuits	kV	4	4	4	4	4	4	4
Ambient Temperature Range		°C	-25 to +75	-25 to +75	-25 to +75	-25 to +75	-25 to +75	-25 to +75
High Ambient Derating (thermal-mag.)	50°C	93%	93%	93%	93%	95%	95%	95%
	60°C	86%	86%	86%	86%	86%	86%	80%
	70°C	80%	80%	80%	80%	80%	80%	74%
Operating Cycles		20,000	20,000	20,000	10,000	5,000	3,000	3,000
Max switching rate (per hour)		120	120	120	60	60	30	30
Power loss (at max. rated current)								
Thermal-magnetic	W	15 – 48	32 – 80	60 – 175	85 – 230	170 – 250	150 – 220	200 – 260
Electronic trip unit	W	40	60	90	160	250	210	260
IEC ①								
Time constant t = 10 ms								
1 current path								
2 current paths in series								
3 current paths in series								
Up to 250V DC		—	—	—	—	—	—	—
440V DC								
600V DC								
NEMA								
Time constant t = 8 ms								
2 poles switching								
1 current path								
250V DC Max. ②		30	30	30	30	42	42	42
3 poles switching								
2 current paths in series								
500V DC Max. ②		18	25	35	35	65	65	65
Accessories								
Auxiliary/Alarm Switch								
Current rating (1 or 2 switches)		10	10	10	10	10	10	10
Current rating (3 or 4 same switch)		A 5	5	5	5	5	5	5
Shunt Trip								
Pick-up voltage	V	0.7 – 1.1	0.7 – 1.1	0.7 – 1.1	0.7 – 1.1	0.7 – 1.1	0.7 – 1.1	0.7 – 1.1
Power Consumption (short-time) at:								
48 – 60 V AC	VA	401 – 501	401 – 501	401 – 501	401 – 501	401 – 501	401 – 501	401 – 501
110 – 127 V AC	VA	424 – 489	424 – 489	424 – 489	424 – 489	424 – 489	424 – 489	424 – 489
208 – 277 V AC	VA	533 – 736	533 – 736	533 – 736	533 – 736	533 – 736	533 – 736	533 – 736
380 – 600 V AC	VA	408 – 645	408 – 645	408 – 645	408 – 645	408 – 645	408 – 645	408 – 645
24 V DC	W	594	594	594	594	594	594	594
48 – 60 V DC	W	740 – 925	740 – 925	740 – 925	740 – 925	740 – 925	740 – 925	740 – 925
110 – 127 V DC	W	559 – 648	559 – 648	559 – 648	559 – 648	559 – 648	559 – 648	559 – 648
220 – 250 V DC	W	722 – 820	722 – 820	722 – 820	722 – 820	722 – 820	722 – 820	722 – 820
Max. Operating time	ms	50	50	50	50	50	50	50

① Consult Siemens for short circuit values.

② Review individual frame and type values.

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		DG	FG	JG	LG	MG	NG	PG
Undervoltage Trip								
Drop voltage (percentage)	V	35% – 70%	35% – 70%	35% – 70%	35% – 70%	35% – 70%	35% – 70%	35% – 70%
Pick-up voltage (percentage)	V	70% – 85%	70% – 85%	70% – 85%	70% – 85%	70% – 85%	70% – 85%	70% – 85%
Power consumption (continuous) at:								
110 – 127 V AC	VA	1	1	1	1	1.1	1.1	1.1
220 – 250 V AC	VA	2.1	2.1	2.1	2.1	2.1	2.1	2.1
208 V AC	VA	1.2	1.2	1.2	1.2	1.2	1.2	1.2
277 V AC	VA	1.4	1.4	1.4	1.4	1.4	1.4	1.4
380 – 415 V AC	VA	1.9	1.9	1.9	1.9	1.9	1.9	1.9
440 – 480 V AC	VA	2.2	2.2	2.2	2.2	2.2	2.2	2.2
500 – 525 V AC	VA	2.5	2.5	2.5	2.5	2.5	2.5	2.5
600 V AC	VA	2.8	2.8	2.8	2.8	2.8	2.8	2.8
Max. opening time	ms	50	50	50	50	50	50	50
Motorized Operating Mechanism								
Motor with stored energy mechanism (synchronizable)		X	X	X	X	X	X	X
Motor Operator						X	X	
Max. switching rate (per hour)		120	120	120	60	60	30	30
Command duration	ms	20 – 50	20 – 50	20 – 50	20 – 50	20 – 50	—	—
Closing time	ms	<100	<100	<100	<100	<100	<5,000	<5,000
Charging time	s	<5	<5	<5	<5	<5	<5	<5
Break time	s	<5	<5	<5	<5	<5	<5	<5
Power consumption	VA/W	<500						
Inrush (A)								
Control Voltages 110 – 127 V AC								
220 – 250 V AC								
24 V DC								
48 V DC								
60 V DC								
Operating Range: 85 – 110% of rated control voltage								

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DC Switching

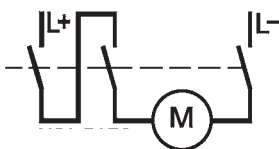
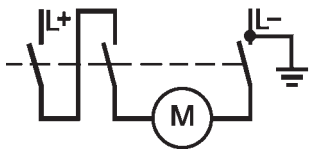
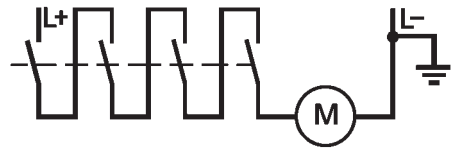
The DG through PG frame circuit breakers with thermal-magnetic trip units, as motor circuit protectors, or as molded case switches are suitable for switching and protecting DC circuits.

The DG through PG frame circuit breakers with electronic trip units are not suitable for DC currents.

For switching DC currents, the maximum allowable DC voltage per conducting path has to be considered.

For voltages greater than 250V, the series connection of 2 or 3 conducting paths is required. To maintain the thermal-tripping characteristics, the current needs to flow through all conducting paths. Recommended circuit arrangements are shown below.

With DC applications, the operating values of the instantaneous values are increased by 30 to 40%.

Recommended Connection For 3-pole and 4-pole circuit breakers	Maximum Voltage	Comments
	250 V DC	Double pole switching. If there is no risk of ground fault or if any ground fault can be eliminated immediately, the max. DC voltage can be 600V.
	440 V DC	Double pole switching (grounded system). If there is no risk of ground fault or if any ground fault can be eliminated immediately, the max. DC voltage can be 600V.
	600 V DC	Single pole switching (grounded system). Three conducting paths in series. The grounded pole must be assigned to the non-switched conducting path.
	750 V DC	Single pole switching (grounded system). Four conducting paths in series. The grounded pole must be assigned to the non-switched conducting path.

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Modularity To Support All Your Application Needs Modules and More: VL Circuit Breakers with Optional Accessories



- | | | |
|-----------------------------------|--|-------------------------------------|
| 1 Base for Plug-In or Draw-Out | 9 Cover Frame for Door Cutout | 17 Thermal-Magnetic Trip Unit (525) |
| 2 Interphase Barriers | 10 Stored Energy Operator | 18 Electronic Trip Unit (545) |
| 3 Rear Terminals – Flat and Round | 11 Rotary Handle Operator | 19 Elec. Trip Unit with LCD (576) |
| 4 Bus Extensions | 12 Variable Depth Rotary Operator | 20 Communication Module with ZSI |
| 5 Terminal Connectors | 13 Max Flex Operator | 21 Electronic Trip Unit Test Kit |
| 6 Plug-In Terminal Blades | 14 Circuit Breaker | |
| 7 Extended Terminal Shield | 15 Shunt Trip or Undervoltage Releases | |
| 8 Standard Terminal Shield | 16 Auxiliary/Alarm Switches | |

NGG Circuit Breaker

Ratings and Markings

Type	Current Range (A)	HACR Rated	SWD Marked	HID Marked
1 pole	15 – 125	15 – 125	15 – 20	15 – 50
2 pole	15 – 125	15 – 125	—	15 – 50
3 pole	15 – 125	15 – 125	—	15 – 50

Shipping Weight:	0.9 lbs. / 0.4 kgs.	1 Pole
	1.9 lb. / 0.9 kgs.	2 Poles
	2.9 lbs. / 1.2 kgs.	3 Poles

Terminal Connectors

Lug Information			
Breaker Amp Rating (A)	Wire Size (AWG)	Torque (lb.- in.)	Lug Catalog Number
15 – 30	#14 – #10 Al	35 (4.0)	3TC1Q1 (pkg. of 3)
	#8 Al	40 (4.5)	
35 – 125	#8 Al or Cu	40 (4.5)	3TC1GG20 (pkg. of 3)
	#3 – 1/0 Cu	55 (6.2)	
	#6 – #4 Al or Cu	45 (5.1)	
	#3 – 2/0 Al	55 (6.2)	

60/75° C wire
Global Rated (UL / CSA / NOM / IEC)
Includes retainer clips



Interrupting Ratings (max. RMS symmetrical amperes kA)

Breaker Type	Poles	UL489 Volts AC						Volts DC		IEC 60947-2 (Ics = 50% Icu)		
		120	240	277	347	480	600Y/347	125	125/250	240	415	125/250
NGG	1	65	—	25	14	—	—	14	—	25	—	—
	2, 3	—	65	—	—	25	14	—	14 ①	65	25	14

40°C, 50/60Hz ① 2-pole only

Ordering Information

Type NGG 1, 2 and 3 Poles

Ampere Rating I _n	NGG Catalog Number (Cable In - Cable Out)
15	NGG __ B015L
20	NGG __ B020L
25	NGG __ B025L
30	NGG __ B030L
35	NGG __ B035L
40	NGG __ B040L
45	NGG __ B045L
50	NGG __ B050L
60	NGG __ B060L
70	NGG __ B070L
80	NGG __ B080L
90	NGG __ B090L
100	NGG __ B100L
110	NGG __ B110L
125	NGG __ B125L

1 = 1 pole
2 = 2 pole
3 = 3 pole

L = Line & Load side lugs ①

① This "L" indicates Line Side and Load Side lugs are supplied as standard. To order an NGG without lugs, remove the L suffix.

NGG Circuit Breaker

Shunt Trip Contains (1) shunt trip device. A combination includes a shunt trip device and an auxiliary switch with 1A-1B contacts.

Control Voltage			Shunt Trip	Shunt Trip and Auxiliary Switch Combination
AC	DC	Current Draw	Catalog Number	Catalog Number
120	—	0.09A	CQDST120	CQDST120AAS
240	—	0.50A	CQDST240	CQDST240AAS
277	—	0.55A	CQDST277	CQDST277AAS
380 – 415	—		STRGT415 ①	ASTGT415 ①
480	—	0.45A	CQDST480	CQDST480AAS
600	—	0.50A	CQDST600	CQDST600AAS
—	12	1.20A	CQDST12	CQDST12DAS
—	24	0.80A	CQDST24	CQDST24DAS
—	48	0.80A	CQDST48	CQDST48DAS
—	125	0.35A	CQDST125	CQDST125DAS

① This is an IEC only rating

Auxiliary Switch Contains (1) or (2) sets of “A” contacts and “B” contacts.

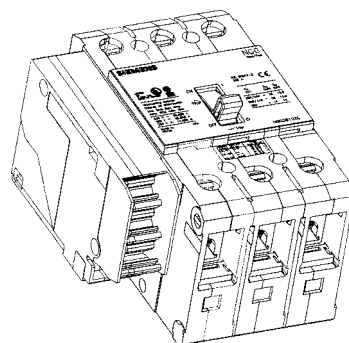
Maximum Control Supply Voltage U _s		Single Auxiliary Switch 1A-1B Contact		Double Auxiliary 2A-2B Switch Contacts	
AC	DC	Catalog Number	Max. Operational Current	Catalog Number	Maximum Operational Current
240	125	CQDA1	@240V AC – 15A @125V DC – 0.5A	CQDA2	@240V AC – 15A @125V DC – 0.5A

Alarm Switch Contains (1) sets of “A” contacts and “B” contacts.

Maximum Control Supply Voltage U _s		Single Alarm Switch Catalog Number	Auxiliary and Alarm Switch Catalog Number	Maximum Operational Current
AC	DC			
240	125	CQDBA	CQDA1BA	@240V AC – 15A @125V DC – 0.5A

Available Accessory Combinations

Shunt Trip	Auxiliary Switch	Alarm Contact
1	0	0
0	1	0
0	2	0
1	1	0
0	0	1
0	1	1



Mounted left side only, not available on single pole breakers.

External Accessories



Handle Blocking Device
BQDHBD



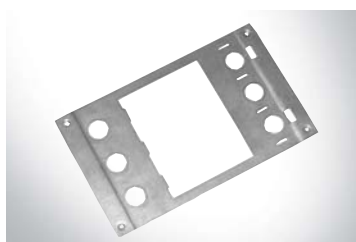
Handle Padlock Device
HPLG
(Use BQDPLD in panelboards)



Mounting Screw Kit
MSKG4



Terminal Shield (3-pole)
TSSG3A Line
TSSG3B Load



Face Mounting Plate
FMPG1 1-pole
FMPG2 2-pole
FMPG3 3-pole



Nut Keeper Plate
TNKG3 (Kit of 3)

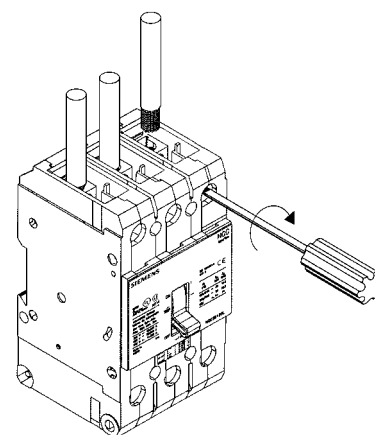
Terminal Connectors

Lug Information for NGG

Breaker Amp Rating (A)	Wire Size (AWG)	Torque Inch-lb. (NM)	Lug Catalog No.
15 – 30	#14 – #10 Al #8 Al	35 (4.0) 40 (4.5)	3TC1Q1 (pkg. of 3)
35 – 125	#8 Al or Cu #3 – 1/0 Cu #6 – #4 Al or Cu #3 – 2/0 Al	40 (4.5) 55 (6.2) 45 (5.1) 55 (6.2)	3TC1GG20 (pkg. of 3)

60/75° C wire

Includes retainer clips



It is possible to remove these terminals of the NGG breaker to allow customer-supplied connections.

Nut Keeper Plates are available instead of lugs for use with customer-supplied connections.

Accessories



Standard Depth Operator Handle (through the door)
 Standard FMHOS
 Red and Yellow Handle FMHOE



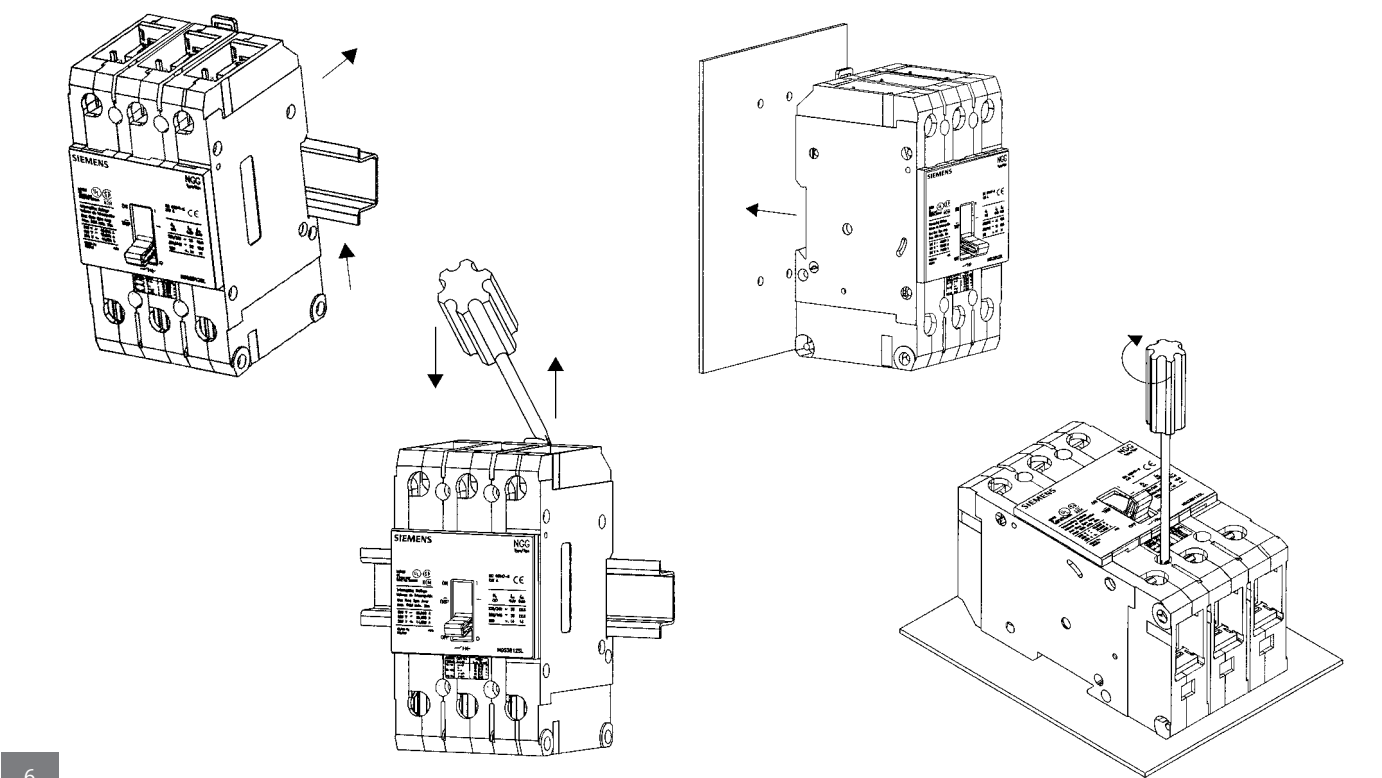
NEMA 1 and 12 Variable Depth Operator Kit (handle, shaft, operator)
 Standard RHOCQVD
 Red and Yellow Handle RHOCQVDE
 NEMA 3R and 4X CQDOP34 (not suitable for isolation for IEC markets)

Enclosure Type	Mounting	Ampere Rating	Catalog Number
NEMA 1 - Indoor (general duty)	Surface	15 - 125	GG0121SN
NEMA 1 - Indoor (general duty)	Flush	15 - 125	GG0121FN
NEMA 3R - Outdoor (rain, snow)	Surface	15 - 125	GG0123RN
NEMA 12 - Indoor (dust, lint)	Surface	15 - 125	GG01212N

Mounting

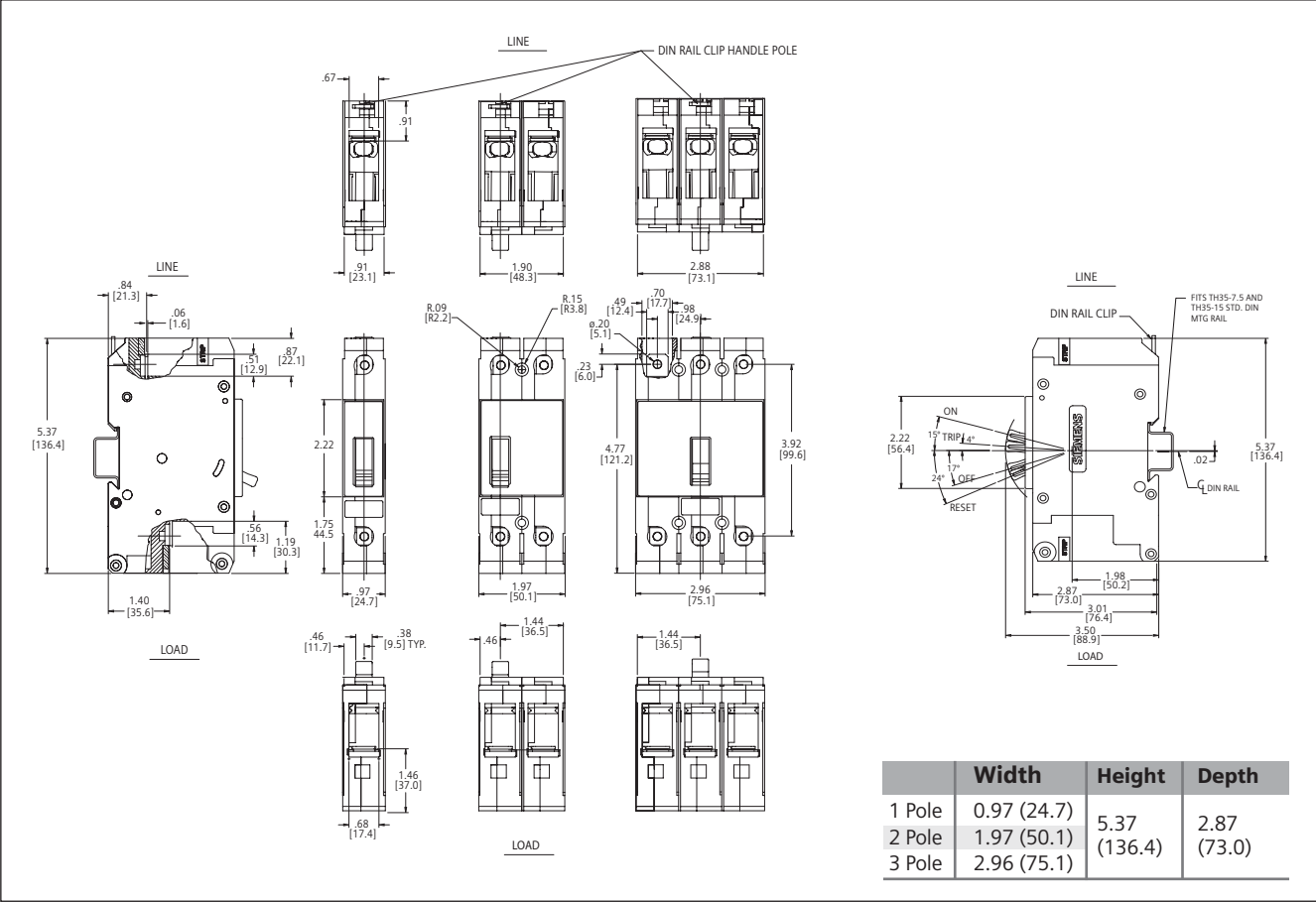
The NGG125 series of Siemens circuit breakers can be mounted in several manners.

- 1) Mounted on 35x7.5mm or 35x15mm DIN rail
- 2) Mounted to customer supplied surface using Mounting Screw Kit – MSKG4



NGG Circuit Breaker

NGG Frame Outline Drawing – 1, 2, 3 Pole



VL Circuit Breakers

DG 150A Frame, VL Series

• Revised •
03/08/13

Selection

Ordering Information

Complete Assembled Breaker

A complete factory assembled DG breaker includes the frame, trip unit, and standard line and load connectors, all factory installed and shipped as a complete breaker. Assembled breakers are only available with standard connectors.

For DC applications, use thermal magnetic trip unit only.

Breakers are suitable for reverse feed applications.

For special applications, refer to page 7-156.

Mounting hardware is included with each frame or complete breaker.

For 100% rated breakers with a non-interchangeable trip unit, change the 3rd character of the catalog number to "W". Available in electronic and electronic with LCD only.

HACR rated.



Interrupting Ratings

Interrupting Class	Breaker Type	RMS Symmetrical Amperes (KA)										
		UL 489						IEC 60947-2				
		Volts AC (50/60 Hz)			Volts DC			Volts AC (50/60 Hz)				
		240	480	600Y /347	250	500	220/240		380/415		690	
							I _{CU}	I _{CS}	I _{CU}	I _{CS}	I _{CU}	I _{CS}
N	NDGB	65	35	18	30	18	65	65	40	40	12	6
H	HDGB	100	65	18	30	18	100	75	70	70	12	6
L	LDGB	200	100	18	30	18	200	150	100	75	12	6

Connectors for 75°C Wire

Construction	Ampere Rating	Wire Range	No. of cables per connector	Catalog Number
Steel	30-150	#8-1/0 Cu	1	3TW1DG20 ^②
Aluminum	30-150	#6-3/0 Al/Cu	1	3TA1DG30 ^{①②}
Copper	30-150	#6-3/0 Cu	1	3TC1DG30 ^{②④}
Distribution Lugs				
	30-150	#14-#2 Al/Cu (3pcs. Max)	3	3TA3DG02 ^②
	30-150	#14-#4 Cu, #14-#6 Al	6	3TA6DG04 ^②
Compression Lugs				
	30-150	#14-2/0 kcmil Al/Cu	—	2CLD20 ^③
	30-150	#14-2/0 kcmil Al/Cu	—	3CLD20 ^②

① Standard connector supplied with complete breakers.

② Kit consists of 3 terminal connectors.

③ 2 Lugs for 2-pole breakers.

④ Required for 100% rated DG breakers. Requires 90°C Cu cable sized at 75°C ampacity

DG Thermal-Magnetic, Instantaneous Trip Adjustment Range

Trip Unit Continuous Amp Rating (I _n)	Instantaneous Overcurrent Setting (I _t)	
	Min.	Max.
50	450	600
60	450	600
70	450	700
80	450	800
90	500	1000
100	500	1000
110	550	1100
125	625	1250
150	800	1600

Note: Each breaker has 6 trip settings in this range.

Dimensions, inches (mm)

Number of Poles	Width	Length	Depth	To Handle D1
2, 3	4.1 (105)	6.9 (175)	3.4 (81)	4.2(107)

Approx. Shipping Weight, lbs. (kg)

Poles	Frame	Trip Unit		Complete Breaker
		Thermal-Mag.	Electronic	
2, 3	3.7 (1.7)	2.2 (1.0)	2.6 (1.2)	5.9 (2.7)

7
MOLDED CASE
CIRCUIT BREAKERS

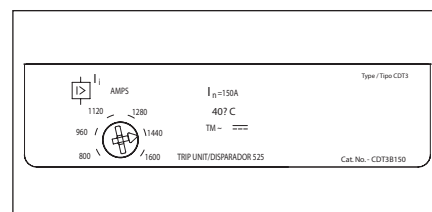
External Accessories pages 7-137 through 7-151

VL Circuit Breakers

DG 150A Thermal-Magnetic Trip Unit

• Revised •
03/08/13

Selection



Model 525 Trip Unit

DG 150A Frame 2-Pole with Thermal-Magnetic Trip Unit

Continuous Ampere Rating	COMPLETE FACTORY ASSEMBLED CIRCUIT BREAKER		
	N-Interrupting Class	H-Interrupting Class	L-Interrupting Class
	Catalog Number	Catalog Number	Catalog Number
50	NDK2B050L	HDK2B050L	LDK2B050L
60	NDK2B060L	HDK2B060L	LDK2B060L
70	NDK2B070L	HDK2B070L	LDK2B070L
80	NDK2B080L	HDK2B080L	LDK2B080L
90	NDK2B090L	HDK2B090L	LDK2B090L
100	NDK2B100L	HDK2B100L	LDK2B100L
110	NDK2B110L	HDK2B110L	LDK2B110L
125	NDK2B125L	HDK2B125L	LDK2B125L
150	NDK2B150L	HDK2B150L	LDK2B150L

DG 150A Frame 3-Pole with Thermal-Magnetic Trip Unit

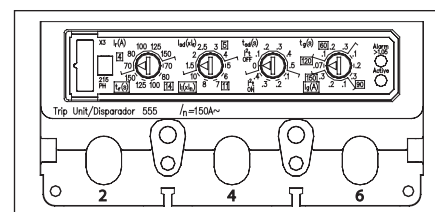
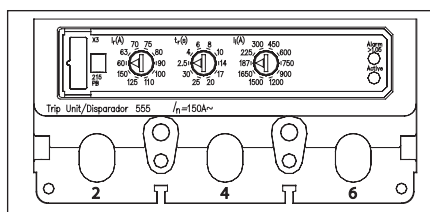
Continuous Ampere Rating	COMPLETE FACTORY ASSEMBLED CIRCUIT BREAKER		
	N-Interrupting Class	H-Interrupting Class	L-Interrupting Class
	Catalog Number	Catalog Number	Catalog Number
50	NDK3B050L	HDK3B050L	LDK3B050L
60	NDK3B060L	HDK3B060L	LDK3B060L
70	NDK3B070L	HDK3B070L	LDK3B070L
80	NDK3B080L	HDK3B080L	LDK3B080L
90	NDK3B090L	HDK3B090L	LDK3B090L
100	NDK3B100L	HDK3B100L	LDK3B100L
110	NDK3B110L	HDK3B110L	LDK3B110L
125	NDK3B125L	HDK3B125L	LDK3B125L
150	NDK3B150L	HDK3B150L	LDK3B150L

VL Circuit Breakers

DG 150A Electronic Trip Units

• Revised •
03/08/13

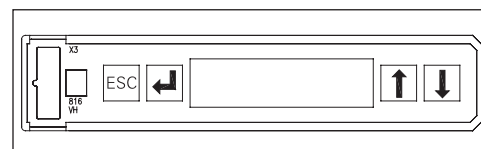
Selection



Model 555 Trip Units

DG 150A Frame 3-Pole Electronic Trip Unit^①

Continuous Ampere Rating	COMPLETE FACTORY ASSEMBLED CIRCUIT BREAKER		
	N-Interrupting Class	H-Interrupting Class	L-Interrupting Class
	Catalog Number	Catalog Number	Catalog Number
ELECTRONIC LI TRIP			
60	NDK3R060L	HDK3R060L	LDK3R060L
100	NDK3R100L	HDK3R100L	LDK3R100L
150	NDK3R150L	HDK3R150L	LDK3R150L
ELECTRONIC LSI TRIP			
60	NDK3T060L	HDK3T060L	LDK3T060L
100	NDK3T100L	HDK3T100L	LDK3T100L
150	NDK3T150L	HDK3T150L	LDK3T150L
ELECTRONIC LSIG TRIP			
60	NDK3V060L	HDK3V060L	LDK3V060L
100	NDK3V100L	HDK3V100L	LDK3V100L
150	NDK3V150L	HDK3V150L	LDK3V150L
ELECTRONIC LIG TRIP			
60	NDK3W060L	HDK3W060L	LDK3W060L
100	NDK3W100L	HDK3W100L	LDK3W100L
150	NDK3W150L	HDK3W150L	LDK3W150L



Model 586 Trip Unit

DG 150A Frame 3-Pole Electronic LCD Trip Unit^①

Continuous Ampere Rating	COMPLETE FACTORY ASSEMBLED CIRCUIT BREAKER		
	N-Interrupting Class	H-Interrupting Class	L-Interrupting Class
	Catalog Number	Catalog Number	Catalog Number
LCD ELECTRONIC LSI TRIP			
60	NDK3A060L	HDK3A060L	LDK3A060L
100	NDK3A100L	HDK3A100L	LDK3A100L
150	NDK3A150L	HDK3A150L	LDK3A150L
LCD ELECTRONIC LSIG TRIP			
60	NDK3G060L	HDK3G060L	LDK3G060L
100	NDK3G100L	HDK3G100L	LDK3G100L
150	NDK3G150L	HDK3G150L	LDK3G150L
LCD ELECTRONIC LSI TRIP + GF ALARM ONLY			
60	NDK3K060L	HDK3K060L	LDK3K060L
100	NDK3K100L	HDK3K100L	LDK3K100L
150	NDK3K150L	HDK3K150L	LDK3K150L

^① Due to the location of the magnetic tripping solenoid, the left accessory pocket is not available for accessories.

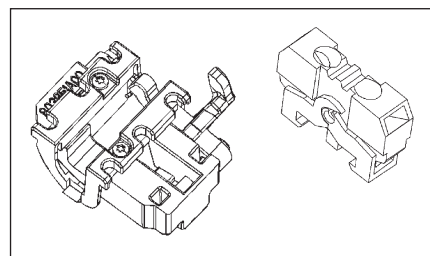
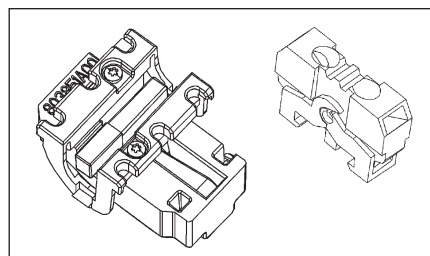
VL Circuit Breakers

Internal Accessories for DG 150A and FG 250A Frames

Selection

Auxiliary Switch and Alarm Switch Combination Kits

Description	Mounting Pocket ^①	Catalog Number
1 Alarm Switch 1A/B ^③ Bases AMBL2 & AMBL3	Left, Right ^②	ASKL1
2 Aux. Switches 1A + 1B Bases AMBL1	Left, Right	ASKL2
2 Aux. + 1 Alarm Switch 1A + 1B, 1A/B ^③ Bases AMBL2 & AMBL3	Left, Right ^②	ASKL3



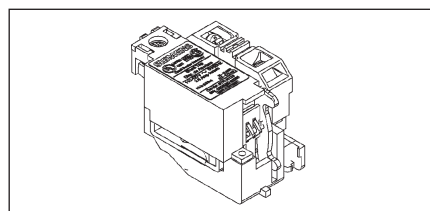
Auxiliary/Alarm Switch Mounting Base Only

Description	Mounting Pocket	Catalog Number
Up to 3 Auxiliary Switches	Left, Right	AMBL1
2 Aux. + 1 Alarm Switch	Left Pocket Only	AMBL2
2 Aux. + 1 Alarm Switch	Right Pocket Only	AMBL3

Auxiliary/Alarm Switch Only

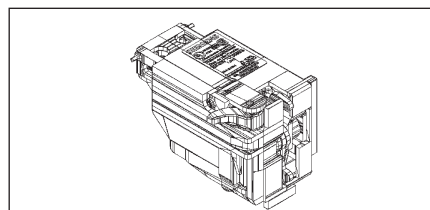
Common to DG - PG Frames

Description	Catalog Number
1 Normally Open Contact (1A)	ASWPA
1 Normally Closed Contact (1B)	ASWPB



Shunt Trips

Description	Mounting Pocket	Catalog Number
24 VDC	Right Pocket Only	STRLB24DC
48-60 VDC		STRLC60DC
110-127 VDC		STRLD125DC
220-250 VDC		STRLE250DC
48-60 VAC		STRLM60
110-127 VAC		STRLN120
208-277 VAC		STRLS277
380-600 VAC		STRLV600



Undervoltage Release

Description	Mounting Pocket	Catalog Number
12 VDC	Right Pocket Only	UVRLA12DC
24 VDC		UVRLB24DC
48 VDC		UVRLC48DC
60 VDC		UVRLG60DC
110-127 VDC		UVRLD125DC
220-250 VDC		UVRLE250DC
24 VAC		UVRL24
110-127 VAC		UVRLN120
220-240 VAC		UVRLR240
208 VAC		UVRLP208
277 VAC		UVRLS277
380-415 VAC		UVRLT415
440-480 VAC		UVRLU480

① Refer to the "Accessory Locations" chart on page 7-152 for guidelines and limitations about which pockets may be used for accessory combinations.

② These kits include two bases, one for mounting switches in the left pocket and another for mounting in the right.

③ Includes 1A and 1B contact for alarm purposes, only one of which may be installed at any time.

'A' refers to a normally open contact (open when the breaker contacts are open).

'B' refers to a normally closed contact (closed when the breaker contacts are open).

External Accessories pages 7-137 through 7-151

VL Circuit Breakers

FG 250A Frame, VL Series

• Revised •
11/15/13

Selection/Dimensions

Ordering Information

Complete Assembled Breaker

A complete factory assembled FG breaker includes the frame, trip unit, and standard line and load connectors, all factory installed and shipped as a complete breaker. Assembled breakers are available only with standard connectors.

For DC applications, use thermal magnetic trip unit only.

Breakers are suitable for reverse feed applications.

For special applications, refer to page 7-156.

Mounting hardware is included with each frame or complete breaker.

HACR rated.



Interrupting Ratings

Breaker Type	RMS Symmetrical Amperes (KA)										
	UL 489					IEC 60947-2					
	Volts AC (50/60 Hz)			Volts DC		Volts AC (50/60 Hz)					
						220/240		380/415		690	
	240	480	600 ^①	250	500	I _{CU}	I _{CS}	I _{CU}	I _{CS}	I _{CU}	I _{CS}
NFG	65	35	18	30	18	65	65	40	40	12	6
HFG	100	65	20	30	25	100	75	70	70	12	6
LFG	200	100	25	30	30	200	150	100	75	12	6

Connectors for 75°C Wire

Construction	Ampere Rating	Wire Range	No. of cables per connector	Catalog Number
Steel	50-250	#4-350 kcmil Cu	1	3TW1FG350 ^③
Aluminum ^②	50-250	#4-350 kcmil Al/Cu	1	3TAW1FG350 ^③
Copper	50-250	#4-350 kcmil Cu	1	3TCW1FG350 ^③
Distribution Lugs				
	50-250	#12-2/0 Cu	3	3TA3FG20 ^③
	50-250	#14-#4 Cu	6	3TA6FG04 ^③

① 2-pole FG breakers are rated 600Y/347.

② Standard connector supplied with complete breakers.

③ Kit consists of 3 terminal connectors.

④ 2 Lugs for 2-pole breakers.

⑤ 3 Lugs for 3-pole breakers.

FG Thermal-Magnetic, Instantaneous Trip Adjustment Range

Trip Unit Continuous Amp Rating (I _n)	Instantaneous Overcurrent Setting (I _i)	
	Min.	Max.
100	625	1250
110	800	1600
125	800	1600
150	800	1600
175	1000	2000
200	1000	2000
225	1250	2500
250	1250	2500

Note: Each breaker has 6 trip settings in this range.

Dimensions, inches (mm)

Number of Poles	Width	Length	Depth	To Handle D1
2, 3	4.1 (105)	6.9 (175)	3.4 (81)	4.2 (107)

Shipping Weight, lbs. (kg)

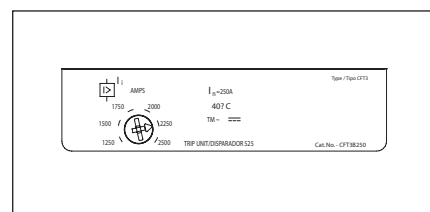
Poles	Frame	Trip Unit		Complete Breaker
		Thermal-Mag.	Electronic	
2, 3	4.0 (1.8)	2.2 (1.0)	2.6 (1.2)	6.2 (2.8)

VL Circuit Breakers

FG 250A Thermal-Magnetic Trip Unit

• Revised •
11/15/13

Selection



Model 525 Trip Unit

FG 250A Frame 2-Pole with Thermal-Magnetic Trip Unit

Continuous Ampere Rating	COMPLETE FACTORY ASSEMBLED CIRCUIT BREAKER		
	N-Interrupting Class	H-Interrupting Class	L-Interrupting Class
	Catalog Number	Catalog Number	Catalog Number
100	NFK2B100L	HFK2B100L	LFK2B100L
110	NFK2B110L	HFK2B110L	LFK2B110L
125	NFK2B125L	HFK2B125L	LFK2B125L
150	NFK2B150L	HFK2B150L	LFK2B150L
175	NFK2B175L	HFK2B175L	LFK2B175L
200	NFK2B200L	HFK2B200L	LFK2B200L
225	NFK2B225L	HFK2B225L	LFK2B225L
250	NFK2B250L	HFK2B250L	LFK2B250L

FG 250A Frame 3-Pole with Thermal-Magnetic Trip Unit

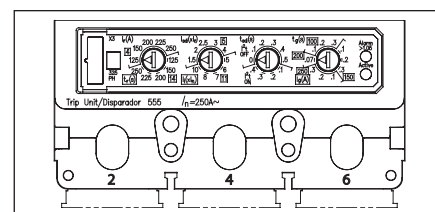
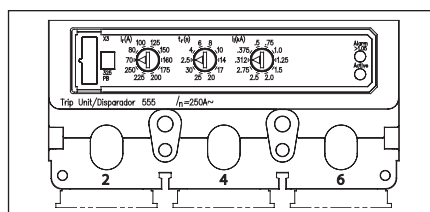
Continuous Ampere Rating	N-Interrupting Class	H-Interrupting Class	L-Interrupting Class	Catalog Number
	Catalog Number	Catalog Number	Catalog Number	
	FRAME ONLY			
	NFG3F250	HFG3F250	LFG3F250	
	COMPLETE FACTORY ASSEMBLED CIRCUIT BREAKER			
100	NFG3B100L	HFG3B100L	LFG3B100L	CFT3B100
110	NFG3B110L	HFG3B110L	LFG3B110L	CFT3B110
125	NFG3B125L	HFG3B125L	LFG3B125L	CFT3B125
150	NFG3B150L	HFG3B150L	LFG3B150L	CFT3B150
175	NFG3B175L	HFG3B175L	LFG3B175L	CFT3B175
200	NFG3B200L	HFG3B200L	LFG3B200L	CFT3B200
225	NFG3B225L	HFG3B225L	LFG3B225L	CFT3B225
250	NFG3B250L	HFG3B250L	LFG3B250L	CFT3B250

VL Circuit Breakers

FG 250A Electronic Trip Units

• Revised •
03/08/13

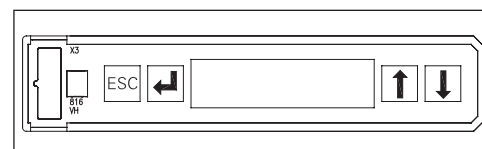
Selection



Model 555 Trip Units

FG 250A Frame 3-Pole Electronic Trip Unit^①

Continuous Ampere Rating	COMPLETE FACTORY ASSEMBLED CIRCUIT BREAKER		
	N-Interrupting Class	H-Interrupting Class	L-Interrupting Class
	Catalog Number	Catalog Number	Catalog Number
ELECTRONIC LI TRIP			
100	NFK3R100L	HFK3R100L	LFK3R100L
150	NFK3R150L	HFK3R150L	LFK3R150L
250	NFK3R250L	HFK3R250L	LFK3R250L
ELECTRONIC LSI TRIP			
100	NFK3T100L	HFK3T100L	LFK3T100L
150	NFK3T150L	HFK3T150L	LFK3T150L
250	NFK3T250L	HFK3T250L	LFK3T250L
ELECTRONIC LSIG TRIP			
100	NFK3V100L	HFK3V100L	LFK3V100L
150	NFK3V150L	HFK3V150L	LFK3V150L
250	NFK3V250L	HFK3V250L	LFK3V250L
ELECTRONIC LIG TRIP			
100	NFK3W100L	HFK3W100L	LFK3W100L
150	NFK3W150L	HFK3W150L	LFK3W150L
250	NFK3W250L	HFK3W250L	LFK3W250L



Model 586 Trip Unit

FG 250A Frame 3-Pole Electronic LCD Trip Unit^①

Continuous Ampere Rating	COMPLETE FACTORY ASSEMBLED CIRCUIT BREAKER		
	N-Interrupting Class	H-Interrupting Class	L-Interrupting Class
	Catalog Number	Catalog Number	Catalog Number
LCD ELECTRONIC LSI TRIP			
100	NFK3A100L	HFK3A100L	LFK3A100L
150	NFK3A150L	HFK3A150L	LFK3A150L
250	NFK3A250L	HFK3A250L	LFK3A250L
LCD ELECTRONIC LSIG TRIP			
100	NFK3G100L	HFK3G100L	LFK3G100L
150	NFK3G150L	HFK3G150L	LFK3G150L
250	NFK3G250L	HFK3G250L	LFK3G250L
LCD ELECTRONIC LSI TRIP + GF ALARM ONLY			
100	NFK3K100L	HFK3K100L	LFK3K100L
150	NFK3K150L	HFK3K150L	LFK3K150L
250	NFK3K250L	HFK3K250L	LFK3K250L

^① Due to the location of the magnetic tripping solenoid, the left accessory pocket is not available for accessories.

7
MOLDED CASE
CIRCUIT BREAKERS

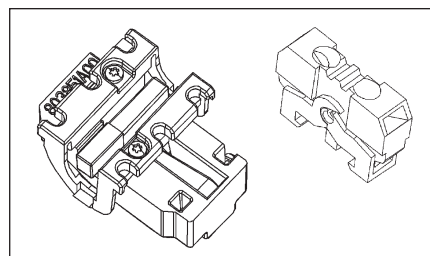
VL Circuit Breakers

Internal Accessories for DG 150A and FG 250A Frames

Selection

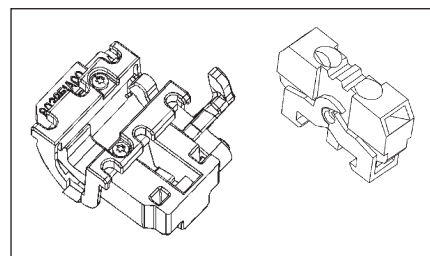
Auxiliary Switch and Alarm Switch Combination Kits

Description	Mounting Pocket ^①	Catalog Number
1 Alarm Switch 1A/B ^③ Bases AMBL2 & AMBL3	Left, Right ^②	ASKL1
2 Aux. Switches 1A + 1B Bases AMBL1	Left, Right	ASKL2
2 Aux. + 1 Alarm Switches 1A + 1B, 1A/B ^③ Bases AMBL2 & AMBL3	Left, Right ^②	ASKL3



Auxiliary/Alarm Switch Mounting Base Only

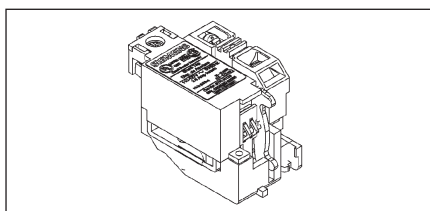
Description	Mounting Pocket	Catalog Number
Up to 3 Auxiliary Switches	Left, Right	AMBL1
2 Aux. + 1 Alarm Switch	Left Pocket Only	AMBL2
2 Aux. + 1 Alarm Switch	Right Pocket Only	AMBL3



Auxiliary/Alarm Switch Only

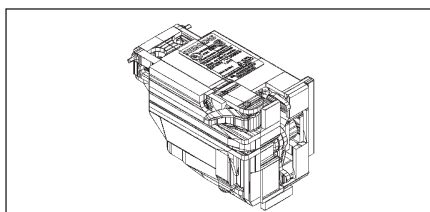
Common to DG - PG Frames

Description	Catalog Number
1 Normally Open Contact (1A)	ASWPA
1 Normally Closed Contact (1B)	ASWPB



Shunt Trips

Description	Mounting Pocket	Catalog Number
24 VDC	Right Pocket Only	STRLB24DC
48-60 VDC		STRLC60DC
110-127 VDC		STRLD125DC
220-250 VDC		STRLE250DC
48-60 VAC		STRLM60
110-127 VAC		STRLN120
208-277 VAC		STRLS277
380-600 VAC		STRLV600



Undervoltage Release

Description	Mounting Pocket	Catalog Number
12 VDC	Right Pocket Only	UVRLA12DC
24 VDC		UVRLB24DC
48 VDC		UVRLC48DC
60 VDC		UVRLG60DC
110-127 VDC		UVRLD125DC
220-250 VDC		UVRLE250DC
24 VAC		UVRL24
110-127 VAC		UVRLN120
220-240 VAC		UVRLR240
208 VAC		UVRLP208
277 VAC		UVRLS277
380-415 VAC		UVRLT415
440-480 VAC		UVRLU480

① Refer to the "Accessory Locations" chart on page 7-152 for guidelines and limitations about which pockets may be used for accessory combinations.

② These kits include two bases, one for mounting switches in the left pocket and another for mounting in the right.

③ Includes 1A and 1B contact for alarm purposes, only one of which may be installed at any time.

'A' refers to a normally open contact (open when the breaker contacts are open).

'B' refers to a normally closed contact (closed when the breaker contacts are open).

External Accessories pages 7-137 through 7-151

VL Circuit Breakers

JG 400A Frame, VL Series

• Revised •
10/01/13

Selection/Dimensions

Ordering Information

Complete Assembled Breaker

A complete factory assembled JG breaker includes the frame, trip unit, and standard line and load connectors, all factory installed and shipped as a complete breaker. Assembled breakers are available only with standard connectors.

For any other configuration, order the frame, trip unit, and terminals as separate items.

For DC applications, use thermal magnetic trip unit only.

For reverse feed applications, select non-interchangeable trip breakers only.

For non-interchangeable trip breakers, change the third digit of the catalog number to "X" for standard breakers.

For 100% rated breakers with a non-interchangeable trip unit, change the 3rd character of the catalog number to "Y".

For special applications, refer to page 7-156.

Mounting hardware is included with each frame or complete breaker.

HACR rated.



Dimensions, inches (mm)

Number of Poles	Width	Length	Depth	To Handle D1
2, 3	5.5 (139)	11 (279)	4.2 (102)	5.4 (138)

Shipping Weight, lbs. (kg)

Poles	Frame	Trip Unit		Complete Breaker
		Thermal-Mag.	Electronic	
2, 3	9.3 (4.2)	4.0 (1.8)	4.0 (1.8)	12.6 (5.7)

Interrupting Ratings

Interrupting Class	Breaker Type	RMS Symmetrical Amperes (KA)										
		UL 489 AIR (File E10848)					IEC 60947-2					
		Volts AC (50/60 Hz)			Volts DC		Volts AC (50/60 Hz)					
							220/240		380/415		690	
		240	480	600	250	500	I _{cu}	I _{cs}	I _{cu}	I _{cs}	I _{cu}	I _{cs}
N	NJGA	65	35	25	30	25	65	65	45	45	12	6
H	HJGA	100	65	25	30	35	100	75	70	70	15	8
L	LJGA	200	100	25	30	35	200	150	100	75	15	8

Connectors for 75°C Wire

Construction	Ampere Rating	Wire Range	No. of cables per connector	Catalog Number
Steel	70-400	1/0-600 kcmil Cu	1	3TW1JG600 ^②
Aluminum	70-400	3/0-250 kcmil Al/Cu	2	3TA2JG250 ^{①②}
Aluminum	70-400	250-750 kcmil Al	1	3TA1JG750 ^②
Aluminum	70-400	3/0-600 kcmil Cu	1	3TA1JG750 ^②
Copper	70-400	3/0-600 kcmil Cu	1	TC1JG750 ^③
Copper	70-400	3/0-250 kcmil Cu	2	TC2JG250 ^③
Distribution Lugs				
	70-400	#14-4 Cu	12	3TA12JG04 ^②
	70-400	#14-2/0 Al/Cu	6	3TA6JG20 ^②
Compression Lugs				
	70-400	#6-350 kcmil	—	3CLJ350 ^②
	70-400	250-600 kcmil	—	3CLJ600 ^②
	70-400	250-750 kcmil	—	3CLJ750 ^②

① Standard construction supplied for each breaker.

② Kit consists of 3 terminal connectors.

③ Required for 100% rated JG breakers. Requires 90°C Cu cable sized at 75°C ampacity.

JG Thermal-Magnetic, Instantaneous Trip Adjustment Range

Trip Unit Continuous Amp Rating (I _n)	Instantaneous Overcurrent Setting (I _i)	
	Min.	Max.
250	1250	2500
300	1500	3000
350	1750	3500
400	2000	4000

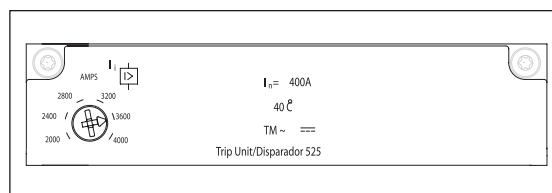
Note: Each breaker has 6 trip settings in this range.

External Accessories pages 7-137 through 7-151

VL Circuit Breakers

JG 400A Thermal-Magnetic Trip Unit

Selection



Model 525 Trip Unit

JG 400A Frame 2-Pole with Thermal-Magnetic Trip Unit

Continuous Ampere Rating	N-Interrupting Class	H-Interrupting Class	L-Interrupting Class	
	Catalog Number	Catalog Number	Catalog Number	Catalog Number
	FRAME ONLY			
	NJG2F400	HJG2F400	LJG2F400	
	COMPLETE FACTORY ASSEMBLED CIRCUIT BREAKER			
250	NJG2B250L	HJG2B250L	LJG2B250L	CJT2B250
300	NJG2B300L	HJG2B300L	LJG2B300L	CJT2B300
350	NJG2B350L	HJG2B350L	LJG2B350L	CJT2B350
400	NJG2B400L	HJG2B400L	LJG2B400L	CJT2B400

JG 400A Frame 3-Pole with Thermal-Magnetic Trip Unit

Continuous Ampere Rating	N-Interrupting Class	H-Interrupting Class	L-Interrupting Class	
	Catalog Number	Catalog Number	Catalog Number	Catalog Number
	FRAME ONLY			
	NJG3F400	HJG3F400	LJG3F400	
	COMPLETE FACTORY ASSEMBLED CIRCUIT BREAKER			
250	NJG3B250L	HJG3B250L	LJG3B250L	CJT3B250
300	NJG3B300L	HJG3B300L	LJG3B300L	CJT3B300
350	NJG3B350L	HJG3B350L	LJG3B350L	CJT3B350
400	NJG3B400L	HJG3B400L	LJG3B400L	CJT3B400

JJ 400A Frame 240V max., 2-pole with Thermal-Magnetic Non-Interchangeable Trip Unit^①

Continuous Ampere Rating	N-Interrupting Class
	Catalog Number
	COMPLETE BREAKER
250	NJJ2B250
300	NJJ2B300
350	NJJ2B350
400	NJJ2B400

JJ 400A Frame 240V max., 3-pole with Thermal-Magnetic Non-Interchangeable Trip Unit^①

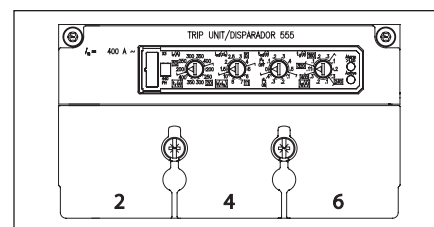
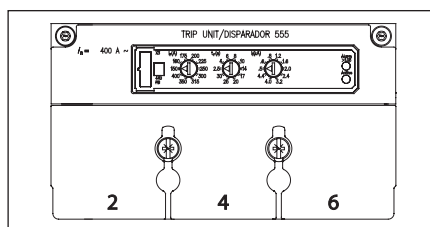
Continuous Ampere Rating	N-Interrupting Class
	Catalog Number
	COMPLETE BREAKER
250	NJJ3B250
300	NJJ3B300
350	NJJ3B350
400	NJJ3B400

^① Terminal connectors must be ordered separately.
Breaker Type NJJA.

VL Circuit Breakers

JG 400A Electronic Trip Units

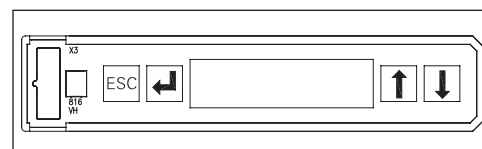
Selection



Model 555 Trip Units

JG 400A Frame 3-Pole Electronic Trip Unit

Continuous Ampere Rating	N-Interrupting Class	H-Interrupting Class	L-Interrupting Class	
	Catalog Number	Catalog Number	Catalog Number	Catalog Number
	FRAME ONLY			TRIP UNIT ONLY
	NJG3F400	HJG3F400	LJG3F400	
	COMPLETE FACTORY ASSEMBLED CIRCUIT BREAKER			
ELECTRONIC LI TRIP				
250	NJG3R250L	HJG3R250L	LJG3R250L	CJT3R250
400	NJG3R400L	HJG3R400L	LJG3R400L	CJT3R400
ELECTRONIC LSI TRIP				
250	NJG3T250L	HJG3T250L	LJG3T250L	CJT3T250
400	NJG3T400L	HJG3T400L	LJG3T400L	CJT3T400
ELECTRONIC LSIG TRIP				
250	NJG3V250L	HJG3V250L	LJG3V250L	CJT3V250
400	NJG3V400L	HJG3V400L	LJG3V400L	CJT3V400
ELECTRONIC LIG TRIP				
250	NJG3W250L	HJG3W250L	LJG3W250L	CJT3W250
400	NJG3W400L	HJG3W400L	LJG3W400L	CJT3W400



Model 586 Trip Unit

JG 400A Frame 3-Pole Electronic LCD Trip Unit

Continuous Ampere Rating	N-Interrupting Class	H-Interrupting Class	L-Interrupting Class	
	Catalog Number	Catalog Number	Catalog Number	Catalog Number
	FRAME ONLY			TRIP UNIT ONLY
	NJG3F400	HJG3F400	LJG3F400	
	COMPLETE FACTORY ASSEMBLED CIRCUIT BREAKER			
LCD ELECTRONIC LSI TRIP				
250	NJG3A250L	HJG3A250L	LJG3A250L	CJT3A250
400	NJG3A400L	HJG3A400L	LJG3A400L	CJT3A400
LCD ELECTRONIC LSIG TRIP				
250	NJG3G250L	HJG3G250L	LJG3G250L	CJT3G250
400	NJG3G400L	HJG3G400L	LJG3G400L	CJT3G400
LCD ELECTRONIC LSI TRIP + GF ALARM ONLY				
250	NJG3K250L	HJG3K250L	LJG3K250L	CJT3K250
400	NJG3K400L	HJG3K400L	LJG3K400L	CJT3K400

7
MOLDED CASE
CIRCUIT BREAKERS

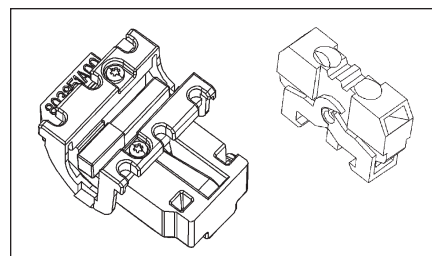
VL Circuit Breakers

Internal Accessories for JG 400A and LG 600A Frames

Selection

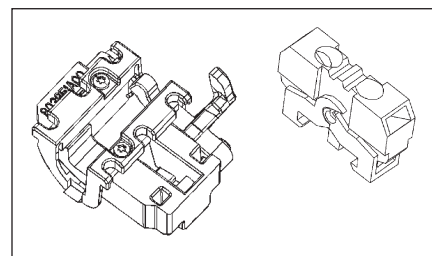
Auxiliary Switch and Alarm Switch Combination Kits

Description	Mounting Pocket ^①	Catalog Number
1 Alarm Switch 1A/B ^③ Bases AMBL2 & AMBL3	Left, Right ^②	ASKL1
2 Aux. Switches 1A + 1B Bases AMBL1	Left, Right	ASKL2
2 Aux. + 1 Alarm Switches 1A + 1B, 1A/B ^③ Bases AMBL2 & AMBL3	Left, Right ^②	ASKL3



Auxiliary/Alarm Switch Mounting Base Only

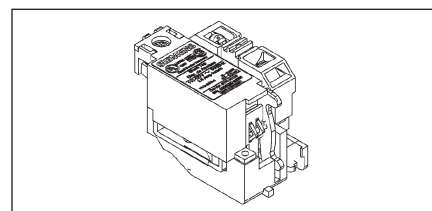
Description	Mounting Pocket	Catalog Number
Up to 3 Auxiliary Switches	Left, Right	AMBL1
2 Aux. + 1 Alarm Switch	Left Pocket Only	AMBL2
2 Aux. + 1 Alarm Switch	Right Pocket Only	AMBL3



Auxiliary/Alarm Switch Only

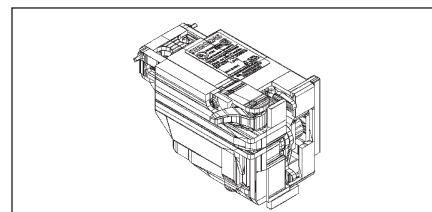
Common to DG - PG Frames

Description	Catalog Number
1 Normally Open Contact (1A)	ASWPA
1 Normally Closed Contact (1B)	ASWPB



Shunt Trips

Description	Mounting Pocket	Catalog Number
24 VDC	Right Pocket Only	STRLB24DC
48-60 VDC		STRLC60DC
110-127 VDC		STRLD125DC
220-250 VDC		STRLE250DC
48-60 VAC		STRLM60
110-127 VAC		STRLN120
208-277 VAC		STRLS277
380-600 VAC		STRLV600



Undervoltage Release

Description	Mounting Pocket	Catalog Number
12 VDC	Right Pocket Only	UVRLA12DC
24 VDC		UVRLB24DC
48 VDC		UVRLC48DC
60 VDC		UVRLG60DC
110-127 VDC		UVRLD125DC
220-250 VDC		UVRLE250DC
24 VAC		UVRL24
110-127 VAC		UVRLN120
220-240 VAC		UVRLR240
208 VAC		UVRLP208
277 VAC		UVRLS277
380-415 VAC		UVRLT415
440-480 VAC		UVRLU480

① Refer to the "Accessory Locations" chart on page 7-152 for guidelines and limitations about which pockets may be used for accessory combinations.

② Includes 1A and 1B contact for alarm purposes, only one of which may be installed at any time.
'A' refers to a normally open contact (open when the breaker contacts are open).

'B' refers to a normally closed contact (closed when the breaker contacts are open).

External Accessories pages 7-137 through 7-151

VL Circuit Breakers

LG 600A Frame, VL Series

• Revised •

02/21/14

Selection/Dimensions

Ordering Information

Complete Assembled Breaker

A complete factory assembled LG breaker includes the frame, trip unit, and standard line and load lugs, all factory installed and shipped as a complete breaker. Assembled breakers are available only with standard connectors.

For DC applications, use thermal magnetic trip unit only.

Breakers are suitable for reverse feed applications.

For special applications, refer to page 7-156.

Mounting hardware is included with each breaker.

For 100% rated breakers, change the 3rd character of the catalog number to "W". Available on 400/500 Amp only (3-pole only).

HACR rated.



Interrupting Ratings

Interrupting Class	Breaker Type	RMS Symmetrical Amperes (KA)										
		UL 489					IEC 60947-2					
		Volts AC (50/60 Hz)			Volts DC		Volts AC (50/60 Hz)					
		240	480	600	250	500	220/240		380/415		690	
							I _{CU}	I _{CS}	I _{CU}	I _{CS}	I _{CU}	I _{CS}
N	NLGB	65	35	18	30	25	65	65	45	45	12	6
H	HLGB	100	65	18 ^①	30	35	100	75	70	70	15	8
L	LLGB	200	100	18	30	35	200	150	100	75	15	8

① Special 600Vac 25kA thermal-magnetic version (Type HLGC) available, see page 7-120.

Connectors for 75°C Wire

Construction	Ampere Rating	Wire Range	No. of cables per connector	Catalog Number ^③
Aluminum	150-600	#2-600 kcmil Al/Cu	2 (load side)	3TA2LG600LD ^②
Aluminum	150-600	#2-600 kcmil Al/Cu	2 (line side)	3TA2LG600LN ^②
Copper	150-600	#2-600 kcmil Cu	2 (load side)	3TC2LG600LD ^⑤
Copper	150-600	#2-600 kcmil Cu	2 (line side)	3TC2LG600LN ^⑤
Compression Lugs				
	150-600	#6-350 kcmil Al/Cu	—	6CLL350 ^④
	150-600	250-750 kcmil Al/Cu	—	3CLL750 ^③
	150-600	250-600 kcmil Al/Cu	—	6CLL600 ^⑤

② Standard construction supplied for each breaker.

③ Kit consists of 3 terminal connectors.

④ Kit consists of 6 lugs for Line or Load end.

⑤ Required for 100% rated LG breakers. Requires 90°C Cu cable sized at 75°C ampacity.

LG Thermal-Magnetic, Instantaneous Trip Adjustment Range

Trip Unit Continuous Amp Rating (I _n)	Instantaneous Overcurrent Setting (I _i)	
	Min.	Max.
400	2000	4000
500	2500	5000
600	2750	5500

Note: Each breaker has 6 trip settings.

Dimensions, inches (mm)

Number of Poles	Width	Length	Depth	To Handle D1
2, 3	5.5 (139)	11 (279)	4.2 (102)	5.4 (138)
Ext. Shield		13.6 (345.5)		

Shipping Weight, lbs. (kg)

Poles	Frame	Trip Unit		Complete Breaker
		Thermal-Mag.	Electronic	
2, 3	17.4 (7.9)	3.5 (1.6)	4.2 (1.9)	20.9 (9.5)

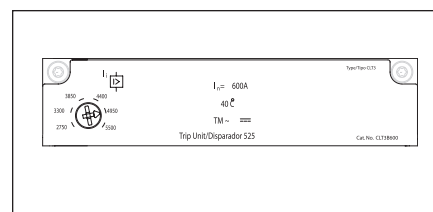
External Accessories pages 7-137 through 7-151

VL Circuit Breakers

LG 600A Thermal-Magnetic Trip Unit

• Revised •
02/21/14

Selection



Model 525 Trip Unit

LG 600A Frame 2-Pole with Thermal-Magnetic Trip Unit

Continuous Ampere Rating	N-Interrupting Class	H-Interrupting Class	L-Interrupting Class
	Catalog Number	Catalog Number	Catalog Number
	COMPLETE FACTORY ASSEMBLED CIRCUIT BREAKER		
400	NLK2B400L	HLK2B400L	LLK2B400L
500	NLK2B500L	HLK2B500L	LLK2B500L
600	NLK2B600L	HLK2B600L	LLK2B600L

LG 600A Frame 3-Pole with Thermal-Magnetic Trip Unit^①

Continuous Ampere Rating	N-Interrupting Class	H-Interrupting Class	L-Interrupting Class
	Catalog Number	Catalog Number	Catalog Number
	COMPLETE FACTORY ASSEMBLED CIRCUIT BREAKER		
400	NLK3B400L	HLK3B400L	LLK3B400L
500	NLK3B500L	HLK3B500L	LLK3B500L
600	NLK3B600L	HLK3B600L	LLK3B600L

LG 600A Frame 2-Pole with Thermal-Magnetic Trip Unit , 600Vac 25kA only^②

Continuous Ampere Rating	N-Interrupting Class	H-Interrupting Class	L-Interrupting Class
	Catalog Number	Catalog Number	Catalog Number
	COMPLETE FACTORY ASSEMBLED CIRCUIT BREAKER		
400	—	HLV2B400L	—
500	—	HLV2B500L	—
600	—	HLV2B600L	—

LG 600A Frame 3-Pole with Thermal-Magnetic Trip Unit , 600Vac 25kA only^{①②}

Continuous Ampere Rating	N-Interrupting Class	H-Interrupting Class	L-Interrupting Class
	Catalog Number	Catalog Number	Catalog Number
	COMPLETE FACTORY ASSEMBLED CIRCUIT BREAKER		
400	—	HLV3B400L	—
500	—	HLV3B500L	—
600	—	HLV3B600L	—

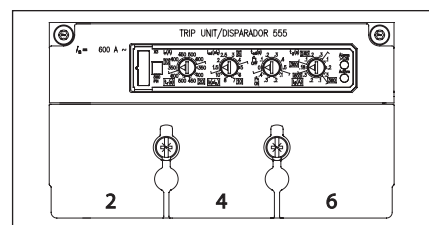
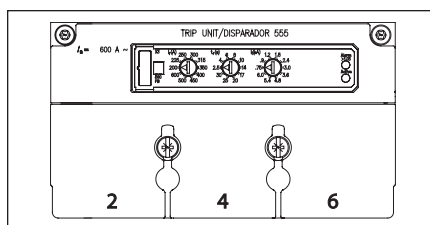
① For 100% rated 400A or 500A versions, change the third character of the catalog number to "Z".

② Consult sales office for availability.

VL Circuit Breakers

LG 600A Electronic Trip Units

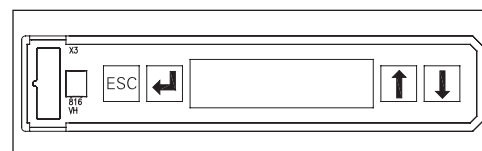
Selection



Model 555 Trip Unit

LG 600A Frame 3-Pole Electronic Trip Unit

Continuous Ampere Rating	N-Interrupting Class	H-Interrupting Class	L-Interrupting Class
	Catalog Number	Catalog Number	Catalog Number
COMPLETE FACTORY ASSEMBLED CIRCUIT BREAKER			
ELECTRONIC LI TRIP			
400	NLK3R400L	HLK3R400L	LLK3R400L
600	NLK3R600L	HLK3R600L	LLK3R600L
ELECTRONIC LSI TRIP			
400	NLK3T400L	HLK3T400L	LLK3T400L
600	NLK3T600L	HLK3T600L	LLK3T600L
ELECTRONIC LSIG TRIP			
400	NLK3V400L	HLK3V400L	LLK3V400L
600	NLK3V600L	HLK3V600L	LLK3V600L
ELECTRONIC LIG TRIP			
400	NLK3W400L	HLK3W400L	LLK3W400L
600	NLK3W600L	HLK3W600L	LLK3W600L



Model 586 Trip Unit

LG 600A Frame 3-Pole Electronic LCD Trip Unit

Continuous Ampere Rating	N-Interrupting Class	H-Interrupting Class	L-Interrupting Class
	Catalog Number	Catalog Number	Catalog Number
COMPLETE FACTORY ASSEMBLED CIRCUIT BREAKER			
ELECTRONIC LSI TRIP			
400	NLK3A400L	HLK3A400L	LLK3A400L
600	NLK3A600L	HLK3A600L	LLK3A600L
ELECTRONIC LSIG TRIP			
400	NLK3G400L	HLK3G400L	LLK3G400L
600	NLK3G600L	HLK3G600L	LLK3G600L
ELECTRONIC LSI TRIP + GF ALARM ONLY			
400	NLK3K400L	HLK3K400L	LLK3K400L
600	NLK3K600L	HLK3K600L	LLK3K600L

7
MOLDED CASE
CIRCUIT BREAKERS

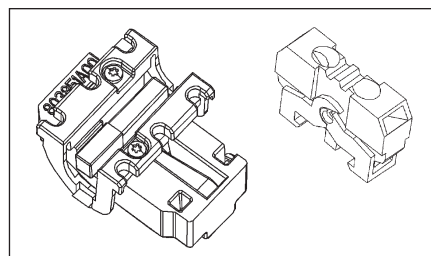
VL Circuit Breakers

Internal Accessories for JG 400A and LG 600A Frames

Selection

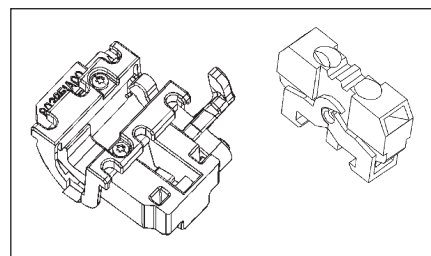
Auxiliary Switch and Alarm Switch Combination Kits

Description	Mounting Pocket ^①	Catalog Number
1 Alarm Switch 1A/B ^③ Bases AMBL2 & AMBL3	Left, Right ^②	ASKL1
2 Aux. Switches 1A + 1B Bases AMBL1	Left, Right	ASKL2
2 Aux. + 1 Alarm Switches 1A + 1B, 1A/B ^③ Bases AMBL2 & AMBL3	Left, Right ^②	ASKL3



Auxiliary/Alarm Switch Mounting Base Only

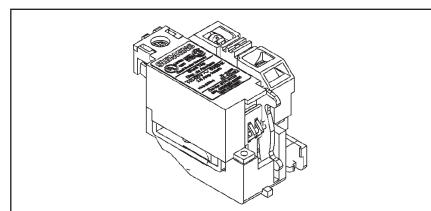
Description	Mounting Pocket	Catalog Number
Up to 3 Auxiliary Switches	Left, Right	AMBL1
2 Aux. + 1 Alarm Switch	Left Pocket Only	AMBL2
2 Aux. + 1 Alarm Switch	Right Pocket Only	AMBL3



Auxiliary/Alarm Switch Only

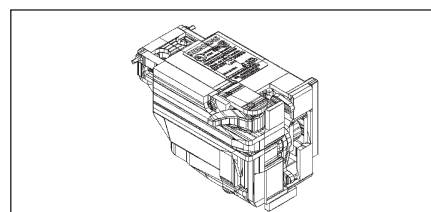
Common to DG - PG Frames

Description	Catalog Number
1 Normally Open Contact (1A)	ASWPA
1 Normally Closed Contact (1B)	ASWPB



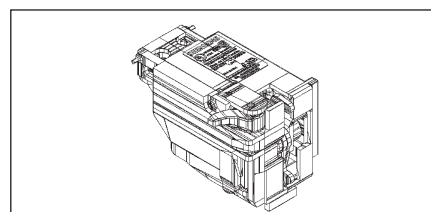
Shunt Trips

Description	Mounting Pocket	Catalog Number
24 VDC	Right Pocket Only	STRLB24DC
48-60 VDC		STRLC60DC
110-127 VDC		STRLD125DC
220-250 VDC		STRLE250DC
48-60 VAC		STRLM60
110-127 VAC		STRLN120
208-277 VAC		STRLS277
380-600 VAC		STRLV600



Undervoltage Release

Description	Mounting Pocket	Catalog Number
12 VDC	Right Pocket Only	UVRLA12DC
24 VDC		UVRLB24DC
48 VDC		UVRLC48DC
60 VDC		UVRLG60DC
110-127 VDC		UVRLD125DC
220-250 VDC		UVRLE250DC
24 VAC		UVRLI24
110-127 VAC		UVRLN120
220-240 VAC		UVRLR240
208 VAC		UVRLP208
277 VAC		UVRLS277
380-415 VAC		UVRLT415
440-480 VAC		UVRLU480



① Refer to the "Accessory Locations" chart on page 7-152 for guidelines and limitations about which pockets may be used for accessory combinations.

② Includes 1A and 1B contact for alarm purposes, only one of which may be installed at any time.
'A' refers to a normally open contact (open when the breaker contacts are open).

'B' refers to a normally closed contact (closed when the breaker contacts are open).

External Accessories pages 7-137 through 7-151