

VL Circuit Breaker – LG 600A frame



Breaker type

Defined by the 3rd character of the catalog number

- X – Global (UL, CSA, IEC, CE) non-interchangeable, thermal-magnetic
- Y – Global, 100% rated, non-interchangeable, thermal-magnetic (400/500A only)
- K – Global, non-interchangeable, electronic
- W – Global, 100% rated, non-interchangeable, electronic

For DC applications, use thermal magnetic trip unit only. HACR rated.

Trip unit type

Defined by the 5th character of the catalog number

- B – Thermal-magnetic, model 525
- N – LI, electronic, model 545
- P – LSI, electronic, model 545
- X – LIG, electronic, model 545
- U – LSIG, electronic, model 545
- D – LSI, electronic with LCD, model 576
- E – LSIG, electronic with LCD, model 576
- R – LI, electronic, Model 555
- T – LSI, electronic, Model 555
- W – LIG, electronic, Model 555
- V – LSIG, electronic, Model 555
- A – LSI, electronic with LCD, Model 586
- G – LSIG, electronic with LCD, Model 586
- K – LSI + GF alarm, electronic with LCD, Model 586

Interrupting ratings

Interrupting Class	Breaker Type	RMS symmetrical amperes (kA)								
		UL 489			IEC 60947-2			UL or IEC		
		Volts AC			Volts AC			Volts DC ^①		
		240	480	600	240	415	690	250	500	600 ^②
		I_{cu}/I_{cs}			I_{cu}/I_{cs}					
N	NLGB	65	35	18	65 / 65	45 / 45	12 / 6	30	25	–
H	HLGB	100	65	18 ^③	100 / 75	70 / 70	15 / 8	30	35	65
L	LLGB	200	100	18	200 / 150	100 / 75	15 / 8	30	35	–

UL / CSA / NOM 40°C 50/60Hz IEC 40°C 50/60Hz

① For DC applications and wiring diagrams, see p. 5 of VL Information Guide.

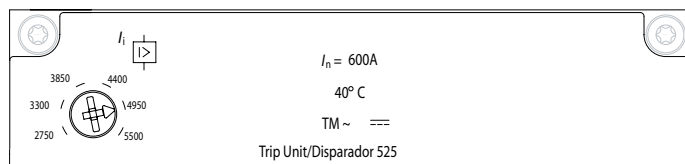
② Special version, Type HLGD. See Speedfax catalog for more information.

③ Special version, 600VDC 25kA available. See Speedfax catalog for more information.

Trip Unit Model 525

Thermal magnetic trip units, model 525

I_n – Trip unit rating (amps)	I_i – Nominal instantaneous trip adjustable range (amps)					
400	2000	2400	2800	3200	3600	4000
500	2500	3000	3500	4000	4500	5000
600	2750	3300	3850	4400	4950	5500



Trip unit model 525

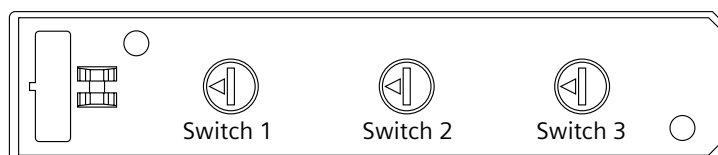
Trip Unit Model 545

Electronic trip units, Model 545 with LI (Trip unit type N) or LIG (Trip unit type X) Trip Functions

Switch 1	I_n – Trip unit rating (amps)	I_r – Continuous amp switch settings (amps)										
		400	150	160	175	200	225	250	300	315	350	400
600	200	200	225	250	300	315	350	400	500	600		
Switch 2	I_n – Trip unit rating (amps)	t_r – Long time delay switch settings (seconds) Pt @ 6 x I_r										
		400, 600	2.5	4	6	8	10	14	17	20	25	30
Switch 3	I_n – Trip unit rating (amps)	I_i – Nominal instantaneous trip switch settings (amps)										
		400	500	600	800	1200	1600	2000	2400	3200	4000	4400
		600	750	900	1200	1800	2400	3000	3600	4800	5400	6000

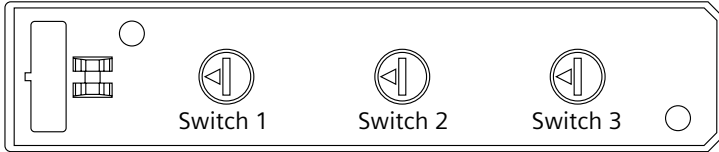
Fixed settings (LIG only)

I_n – Trip unit rating (amps)	I_g – Ground fault pickup (amps)	t_g – Ground fault delay
400	320	.11 sec
600	360	.18 sec



Trip unit model 545

Trip Unit Model 545 (continued)



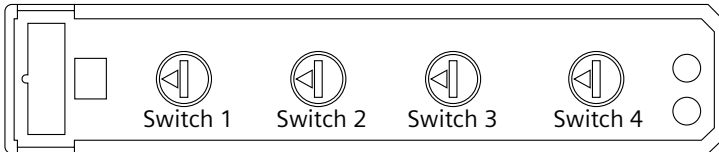
Electronic trip units, Model 545 with LSI (Trip unit type P) or LSIG (Trip unit type U) Trip Functions

Switch 1	I_n – Trip unit rating (amps)	I_r – Continuous amp switch settings (amps)									
	400	150	160	175	200	225	250	300	315	350	400
600	200	200	225	250	300	315	350	400	500	600	
Switch 2	I_n – Trip unit rating (amps)	I_{sd} – Short time pick-up switch settings (amps) $\times I_r$									
	400, 600	1.5	2	2.5	3	4	5	6	7	8	9
Switch 3	I_n – Trip unit rating (amps)	t_{sd} – Short time delay switch settings (seconds) @ $8 \times I_r$									
	400, 600	0	0.1, I _r t OFF	0.2, I _r t OFF	0.3, I _r t OFF	0.4, I _r t OFF	0.5, I _r t OFF	0.1, I _r t ON	0.2, I _r t ON	0.3, I _r t ON	0.4, I _r t ON

Fixed settings

I_n – Trip unit rating (amps)	t_r – Long time delay	I_i – Nominal instantaneous trip	I_g – Ground fault pick-up (LSIG only)	t_g – Ground fault delay (LSIG only)
400	10 sec. (I _r t @ $6 \times I_r$)	4000A	320A	.11 sec.
600		6000A	360A	.18 sec

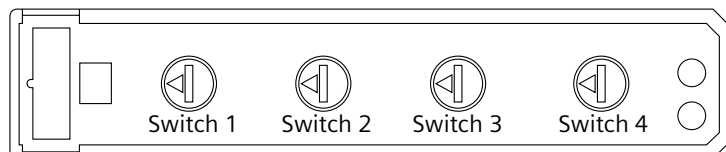
Trip Unit Model 555



Electronic trip units, Model 555 with LI (Trip unit type R) or LIG (Trip unit type W) Trip Functions

Switch 1	I_n – Trip unit rating (amps)	I_r – Continuous amp switch settings (amps)									
	400	150	160	175	200	225	250	300	315	350	400
600	200	225	250	300	315	350	400	450	500	600	
Switch 2	I_n – Trip unit rating (amps)	t_r – Long time delay switch settings (seconds) I _r t @ $6 \times I_r$									
	400, 600	2.5	4	6	8	10	14	17	20	25	30
Switch 3	I_n – Trip unit rating (amps)	I_i – Nominal instantaneous trip switch settings (amps)									
	400	500	600	800	1200	1600	2000	2400	3200	4000	4400
600	750	900	1200	1800	2400	3000	3600	4800	5400	6000	
Switch 4 (LIG Only)	I_n – Trip unit rating (amps)	I_g – Ground fault pick-up switch settings (amps)									
	400	320	160	160	160	240	240	240	400	400	400
	600	360	240	240	240	360	360	360	600	600	600
	I_n – Trip unit rating (amps)	t_g – Ground fault delay switch settings (seconds)									
400	0.11	0.10	0.20	0.30	0.10	0.20	0.30	0.10	0.20	0.30	
600	0.18	0.10	0.20	0.30	0.10	0.20	0.30	0.10	0.20	0.30	

Trip Unit Model 555 (continued)



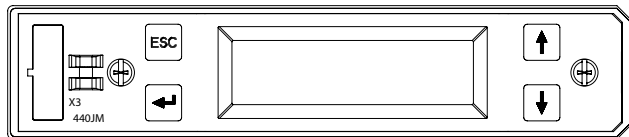
Electronic trip unit, Model 555 with LSI (Trip unit type T) Trip Functions

Switch 1	I_n – Trip unit rating (amps)	I_r – Continuous amp switch settings (amps)										
	400 600	200 350	250 400	300 450	350 500	400 600	200 350	250 400	300 450	350 500	400 600	
Switch 2	I_n – Trip unit rating (amps)	t_r – Long time delay switch settings (seconds) $I^2t @ 6 \times I_r$										
	400, 600	10	10	10	10	10	20	20	20	20	20	
Switch 3	I_n – Trip unit rating (amps)	I_{sd} – Short time pick-up switch settings (amps) $\times I_r$										
	400, 600	1.5	2	2.5	3	4	5	6	7	8	10	
Switch 4	I_n – Trip unit rating (amps)	t_{sd} – Short time delay switch settings (seconds)										
	400, 600	0	0.1, I^2t OFF	0.2, I^2t OFF	0.3, I^2t OFF	0.4, I^2t OFF	0.5, I^2t OFF	0.1, I^2t ON	0.2, I^2t ON	0.3, I^2t ON	0.4, I^2t ON	
Switch 4	I_n – Trip unit rating (amps)	I_i – Nominal instantaneous trip switch settings (amps)										
	400 600	500 750	600 900	800 1200	1200 1800	1600 2400	2000 3000	2400 3600	3200 4800	4000 5400	4400 6000	

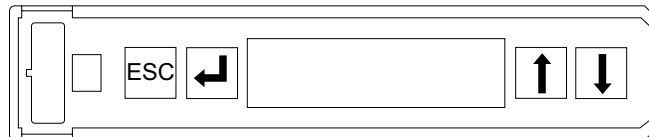
Electronic trip unit, Model 555 with LSIG (Trip unit type V) Trip Functions

Switch 1	I_n – Trip unit rating (amps)	I_r – Continuous amp switch settings (amps)										
	400 600	200 350	250 400	300 450	350 500	400 600	200 350	250 400	300 450	350 500	400 600	
Switch 2	I_n – Trip unit rating (amps)	t_r – Long time delay switch settings (seconds) $I^2t @ 6 \times I_r$										
	400, 600	4	4	4	4	4	14	14	14	14	14	
Switch 3	I_n – Trip unit rating (amps)	I_{sd} – Short time pick-up switch settings (amps) $\times I_r$										
	400, 600	1.5	2	2.5	3	4	5	6	7	8	10	
		I_n – Trip unit rating (amps)	I_i – Nominal instantaneous trip switch settings (amps) $\times I_n$									
Switch 3	I_n – Trip unit rating (amps)	t_{sd} – Short time delay switch settings (seconds)										
	400, 600	0	0.1, I^2t OFF	0.2, I^2t OFF	0.3, I^2t OFF	0.4, I^2t OFF	0.5, I^2t OFF	0.1, I^2t ON	0.2, I^2t ON	0.3, I^2t ON	0.4, I^2t ON	
Switch 4	I_n – Trip unit rating (amps)	I_g – Ground fault pick-up switch settings (amps)										
	400 600	320 360	160 240	160 240	160 240	240 360	240 360	240 360	400 600	400 600	400 600	
	I_n – Trip unit rating (amps)	t_g – Ground fault delay switch settings (seconds)										
Switch 4	I_n – Trip unit rating (amps)											
	400 600	0.11 0.18	0.10 0.10	0.20 0.20	0.30 0.30	0.10 0.10	0.20 0.20	0.30 0.30	0.10 0.10	0.20 0.20	0.30 0.30	

Trip Unit Model 576 and 586



Trip unit model 576



Trip unit model 586

Electronic trip units with LCD Model 576 (Trip unit type D and E) or Model 586 (Trip unit type A, G and K)

I_n – Trip unit rating (amps)	I_r – Continuous amps range ^①	t_r – Long time delay settings ($I^2t @ 6 \times I_r$)	I_{sd} – Short time pick-up range	t_{sd} – Short time delay settings	I_i – Nominal instantaneous trip range ^{②②}
400	150 - 400	2.5, 4, 6, 8, 10, 14,	1.25 - 10 x I_r	0.1, 0.2, 0.3, 0.4, 0.5 sec. or $I^2t @ 8 \times I_r$	500 - 4400A
600	200 - 600	17, 20, 25, 30 sec.			750 - 6000A
I_n – Trip unit rating (amps)	I_g – Ground fault pick-up range ^①	t_g – Ground fault delay	Pre-alarm indication		
400	160 - 150A	0.1, 0.2, 0.3, 0.4, 0.5 sec.	80 - 100%		
600	240 - 600A	$I^2t @ .5 \times I_n$	$x I_r$ (Amps)		

① Current settings are adjustable in 1-amp increments.

② Model 586, can turn function OFF. Instantaneous trip override function will be enabled to ensure self protection of circuit breaker.

Motor circuit protectors

Amp rating	I_i – Nominal instantaneous trip adjustable range (amps)
600	2000 – 4000 ^①
600	2750 – 5500 ^②

① Settings adjustable in increments of 400 amps.

② Settings adjustable in increments of 550 amps.

Molded case switch

Amp rating	Self-protective instantaneous override	Short-circuit current rating 480 V AC ^①
600	5500A	65 kA
600	5500A	100 kA

① Max. available current when protected by an appropriate overcurrent protective device.

600 V DC circuit breakers

Amp rating	Short-circuit rating 600 V DC
400, 600	65 kA

Terminal Connectors

Wire range	Cables per connectors	Wire size	Torque lb-in. (Nm)	Catalog number
#2 – 600 kcmil	2 (Cu / Al)	#2 – 600	375 (42.37)	3TA2LG600LN (Line end only) ^{①②④}
#2 – 600 kcmil	2 (Cu / Au)	#2 – 600	375 (42.37)	3TA2LG600LD (Load end only) ^{①②④}
Cu: 3/0 – 600	2 (Cu only)	300 – 750	500 (56.69)	3TA1JG750 ^{②③}
Al: 250 – 750 kcmil	1 (Cu / Al)	250 300 – 750	275 (31.07) 500 (56.59)	
#2 – 600 kcmil	1 (Cu only)	#2 – 600	375 (42.37)	3TC2LG600LN (Line end only) ^{②④⑥}
#2 – 600 kcmil	2 (Cu only)	#2 – 600	375 (42.37)	3TC2LG600LN (Load end only) ^{②④⑥}

Compression Lug kits

#6 – 350 kcmil	2 (Cu / Al)		6CLL350 ^③
250 – 750 kcmil	1 (Cu / Al)		3CLL750 ^②
250 – 600 kcmil	2 (Cu / Al)		6CLL600 ^③

① Standard connector when an “L” suffix is used on an assembled breaker catalog number.

② Packaged as 3 connectors.

③ Packaged as 6 connectors (2 connectors per phase).

④ Includes extended length terminal cover - see dimensions on drawing.

⑤ Up to 400A applications only.

⑥ Required for 100% rated LG breakers. Requires 90°C cable sized at 75°C ampacity.

Internal accessories

Auxiliary and alarm switch kits		
Description	Mounting pocket	Catalog number
1 Alarm switch 1 A/B ^① bases AMBL2 and AMBL3	Left, right ^②	ASKL1
2 Aux. switches 1A + 1B base AMBL1	Left, right	ASKL2
2 Aux. + 1 Alarm switch 1A + 1B, 1A/B bases ^① AMBL2 and AMBL3	Left, right ^②	ASKL3

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

② Kit includes 2 bases - one for mounting switches in left pocket and another for mounting in right pocket.

Auxiliary and alarm switch mounting base only		
Description	Mounting pocket	Catalog number
For 2 Aux + 1 Alarm	Left	AMBL2
For 2 Aux + 1 Alarm	Right	AMBL3
For 3 Aux	Left, right	AMBL1

Shunt trip	
Control voltage	Catalog number
48 – 60 VAC	STRLM60
110 – 127 VAC	STRLN120
208 – 277 VAC	STRLS277
380 – 600 VAC	STRLV600
24 VDC	STRLB24DC
48 – 60 VDC	STRLC60DC
110 – 127 VDC	STRLD125DC
220 – 250 VDC	STRLE250DC

Shunt trips or UVR's may be mounted in the Right Pocket only.

Internal accessory locations	
Left accessory pocket	Right accessory pocket
Up to 3 auxiliary switches	Shunt trip or UVR or up to 3 auxiliary switches
Up to 2 auxiliary switches + 1 alarm switch	Shunt trip or UVR or up to 2 auxiliary switches + 1 alarm switch

Maximum of 6 switches total.

Maximum of 2 alarm switches, 1 Left + 1 Right Pocket.

Auxiliary / Alarm switches only (requires a base)	
Description	Catalog number
1 NO (normally open contact)	ASWPA
1 NC (normally closed contact)	ASWPB

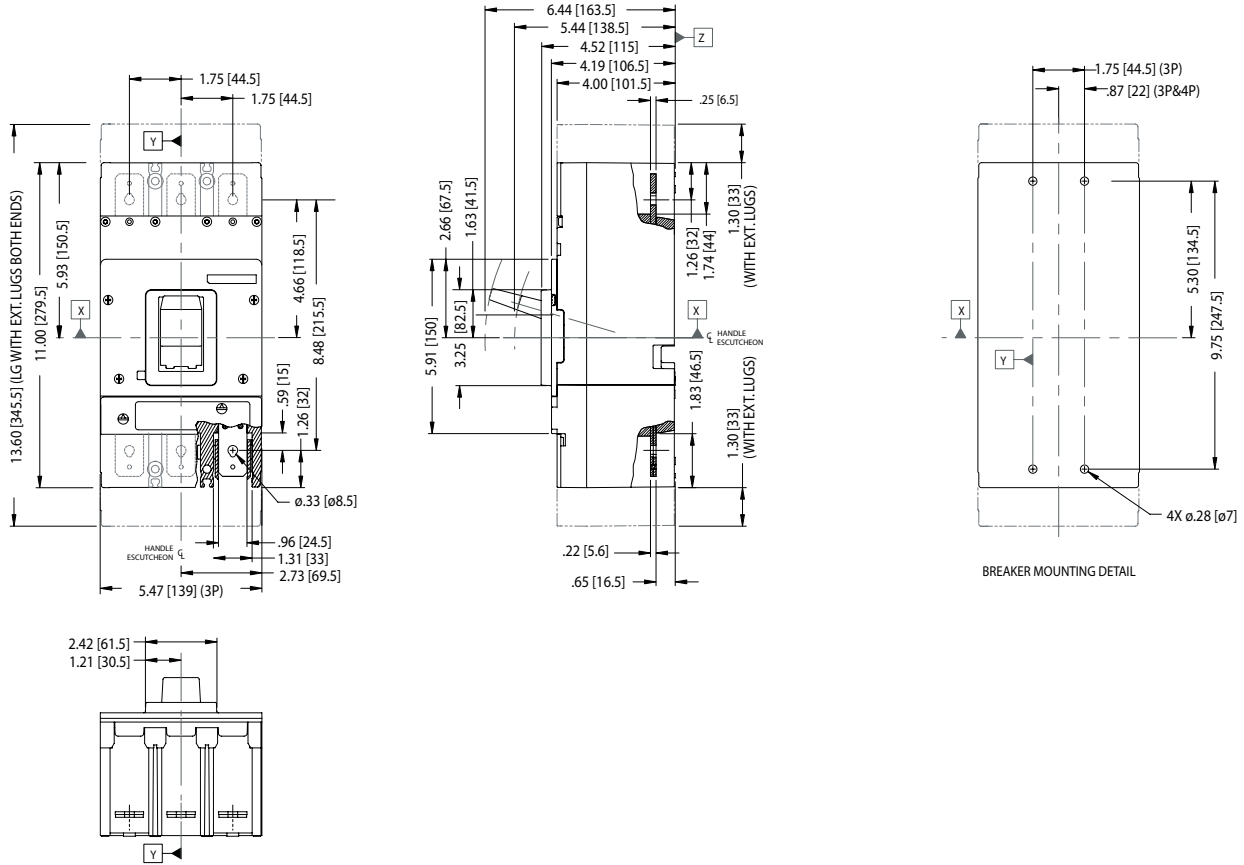
(A) Normally open contacts are open when the breaker contacts are open.

(B) Normally closed contacts are closed when the breaker contacts are open.

Undervoltage release	
Control voltage	Catalog number
110 – 127 VAC	UVRLN120
220 – 250 VAC	UVRLR240
208 VAC	UVRLP208
277 VAC	UVRLS277
380 – 425 VAC	UVRLT415
440 – 480 VAC	UVRLU480
12 VDC	UVRLA12DC
24 VDC	UVRLB24DC
48 VDC	UVRLC48DC
60 VDC	UVRLG60DC
110 – 127 VDC	UVRLD125DC
220 – 250 VDC	UVRLE250DC

Dimensions

(complete breaker)



Shipping weight, lbs. (kg)

Poles	Frame only	Trip unit		Complete T/M breaker
		Thermal-mag	Electronic	
2, 3	33 (15)	4.0 (1.8)	5 (2)	37 (17)

Permissible mounting positions

