

VL Circuit Breaker – MG 800A frame



Breaker type

Defined by the 3rd character of the catalog number

- G – Global (UL, CSA, NOM, IEC, CE), interchangeable
- X – Global, non-interchangeable
- Y – Global, 100% Rated, non-interchangeable

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

For DC applications, use thermal magnetic trip unit only.
For reverse-feed applications, select non-interchangeable trip breakers only.
HACR rated.

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
N	NMG	65	35	25	65 / 65	50 / 50	20 / 10	22	35	–
H	HMG	100	65	35	100 / 75	70 / 70	30 / 15	25	50	65
L	LMG	200	100	50	200 / 150	100 / 75	35 / 17	42	65	–

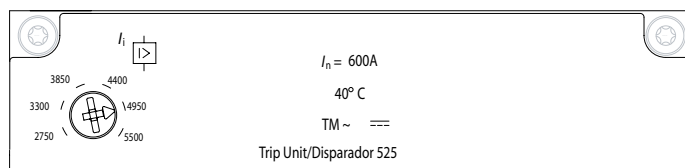
UL / CSA / NOM 40°C 50/60Hz IEC 40°C 50/60Hz

① For DC applications and wiring diagrams, see p. 5 of VL Information Guide.
② Special version, Type HMGD. 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)				
600	3000	3600	4200	4800	6000
700	3250	3900	4550	5200	6500
800	3250	3900	4550	5200	6500



Trip unit model 525

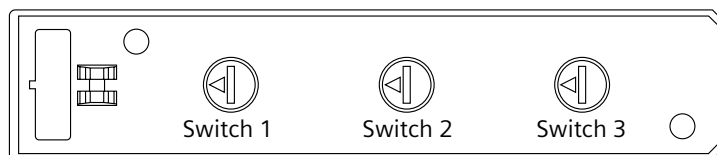
Trip Unit Model 545

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)										
		600	200	200	225	250	300	315	350	400	500	600
800	300	300	315	350	400	500	600	630	700	800		
Switch 2	I_n – Trip unit rating (amps)	t_r – Long time delay switch settings (seconds) Pt @ 6 x I_r										
		600, 800	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)										
		600	750	900	1200	1800	2400	3000	3600	4800	5400	6000
		800	1000	1000	1200	1600	2400	3200	4000	4800	5600	6000

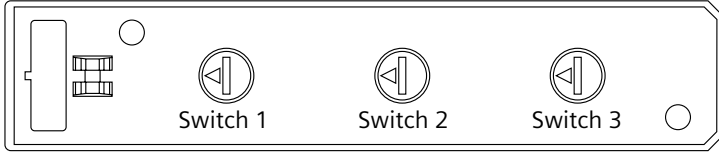
Fixed settings (LIG only)

I_n – Trip unit rating (amps)	I_g – Ground fault pickup (amps)	t_g – Ground fault delay
600	360	.18 sec
800	480	.25 sec



Trip unit model 545

Trip Unit Model 545 (continued)

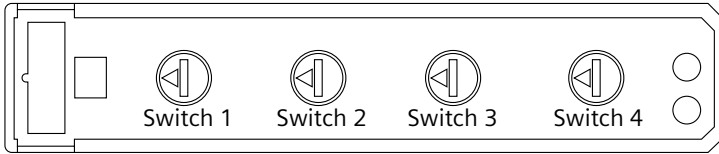


Electronic trip units, Model 545 with LSI (Trip unit type P) or LSIG (Trip unit type U) Trip Functions												
Switch 1	I_n – Trip unit rating (amps)	I_r – Continuous amp switch settings (amps)										
	600 800	200	200	225	250	300	315	350	400	500	600	
Switch 2	I_n – Trip unit rating (amps)	I_{sd} – Short time pick-up switch settings (amps) x I_r										
	600 400, 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) @ $8xI_r$										
	600, 800	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	

Fixed settings

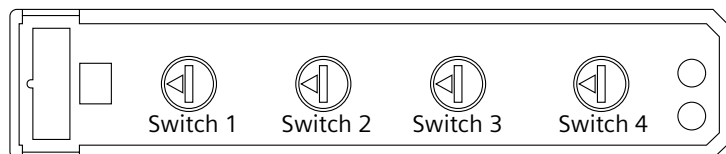
I_n – Trip unit rating (amps)	t_r – Long time delay	I_i – Nominal instantaneous trip	I_g – Ground fault pick-up (LSIG only)	t_g – Ground fault delay (LSIG only)
600	10 sec. (I^2t @ $6 \times I_r$)	6000A	360A	.18 sec.
800		6000A	480A	.25 sec

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)										
	600 800	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^2t @ $6 \times I_r$										
	600, 800	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)										
	600 800	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)										
	600 800	360	240	240	240	360	360	360	600	600	600	
Switch 4 (LIG Only)	I_n – Trip unit rating (amps)	t_g – Ground fault delay switch settings (seconds)										
	600 800	0.18	0.10	0.20	0.30	0.10	0.20	0.30	0.10	0.20	0.30	
Switch 4 (LIG Only)	I_n – Trip unit rating (amps)	t_g – Ground fault delay switch settings (seconds)										
	600 800	0.25	0.10	0.20	0.30	0.10	0.20	0.30	0.10	0.20	0.30	

Trip Unit Model 555 (continued)



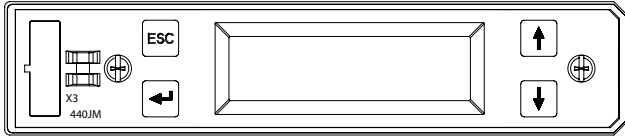
Electronic trip unit, Model 555 with LSI (Trip unit type T) Trip Functions

Switch 1	I_n – Trip unit rating (amps)	I_r – Continuous amp switch settings (amps)										
	600	350	400	450	500	600	350	400	450	500	600	
800	400	500	600	700	800	400	500	600	700	800		
Switch 1	I_n – Trip unit rating (amps)	t_r – Long time delay switch settings (seconds) $I^2t @ 6 \times I_r$										
	600, 800	10	10	10	10	10	20	20	20	20	20	
Switch 2	I_n – Trip unit rating (amps)	I_{sd} – Short time pick-up switch settings (amps) $\times I_r$										
	600, 800	1.5	2	2.5	3	4	5	6	7	8	10	
Switch 3	I_n – Trip unit rating (amps)	t_{sd} – Short time delay switch settings (seconds)										
	600, 800	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)										
	600	750	900	1200	1800	2400	3000	3600	4800	5400	6000	
800	1000	1000	1200	1600	2400	3200	4000	4800	5600	6000		

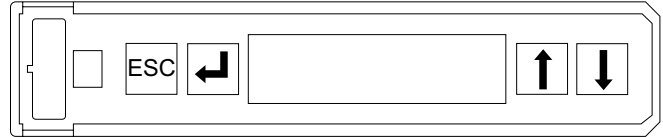
Electronic trip unit, Model 555 with LSI (Trip unit type V) Trip Functions

Switch 1	I_n – Trip unit rating (amps)	I_r – Continuous amp switch settings (amps)										
	600	350	400	450	500	600	350	400	450	500	600	
800	400	500	600	700	800	400	500	600	700	800		
Switch 1	I_n – Trip unit rating (amps)	t_r – Long time delay switch settings (seconds) $I^2t @ 6 \times I_r$										
	600, 800	10	10	10	10	10	20	20	20	20	20	
Switch 2	I_n – Trip unit rating (amps)	I_{sd} – Short time pick-up switch settings (amps) $\times I_r$										
	600, 800	1.5	2	2.5	3	4	5	6	7	8	10	
Switch 2	I_n – Trip unit rating (amps)	I_i – Nominal instantaneous trip switch settings (amps) $\times I_n$										
	600	5	5	5	5	5	10	10	10	10	10	
800	5	5	5	5	5	7.5	7.5	7.5	7.5	7.5		
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)										
	600	360	240	240	240	360	360	360	600	600	600	
800	480	320	320	320	480	480	480	800	800	800		
Switch 4	I_n – Trip unit rating (amps)	t_g – Ground fault delay switch settings (seconds)										
	600	0.18	0.10	0.20	0.30	0.10	0.20	0.30	0.10	0.20	0.30	
800	0.25	0.10	0.20	0.30	0.10	0.20	0.30	0.10	0.20	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 ^{①②}
600	200 - 600	2.5, 4, 6, 8, 10, 14,	1.25 - 10 x I_r (5,400 A max.)	0.1, 0.2, 0.3, 0.4, 0.5 sec.	750 - 6000A
800	300 - 800	17, 20, 25, 30 sec.	1.25 - 10 x I_r (5,600 A max.)	or $I^2t @ 8 \times I_r$	1000 - 6000A
I_n – Trip unit rating (amps)	I_g – Ground fault pick-up range ^①	t_g – Ground fault delay	Pre-alarm indication		
600	240 - 600A	0.1, 0.2, 0.3, 0.4, 0.5 sec. (I^2t off) or	80 - 100%		
800	320 - 800A	$I^2t @ .5 \times I_n$ (I^2t on)	$\times I_r$ (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)
800	3250 – 6500

600 V DC circuit breakers

Amp rating	Short-circuit rating 600 V DC
600, 700, 800	65 kA

Molded case switch

Amp rating	Self-protective instantaneous override	Short-circuit current rating 480 V AC ^①
800	6500A	65 kA
800	6500A	100 kA

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

Terminal Connectors

Wire range	Cables per connectors	Wire size	Torque lb-in. (Nm)	Catalog number
500 – 750 kcmil	2 (Cu / Al)	500 - 750	375 (42.37)	TA2MG750
1/0 – 500 kcmil	3 (Cu / Au)	1/0 - 500	375 (42.37)	TA3MG500 ^①
1/0 – 500 kcmil	3 (Cu)	1/0 - 500	375 (42.37)	TC3MG500 ^③
#2 – 600 kcmil	3 (Cu / Al)	#2 - 600	375 (42.37)	3TA3MG600 ^②

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

② Packaged as 3 connectors.

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

Internal accessories

Auxiliary and alarm switch kits		
Description	Mounting pocket	Catalog number
2 Aux + 2 Alarm switches (2NO + 2NC + 1 base)	Left	ASKP3
4 Aux. switches (2NO + 2NC + 1 base)	Left, right	ASKP4

Auxiliary and alarm switch mounting base only		
Description	Mounting pocket	Catalog number
For 2 Aux + 2 Alarm	Left	AMBP2
For 4 Aux	Left, right	AMBP1

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 4 auxiliary switches	Shunt trip or UVR or up to 4 auxiliary switches
Up to 2 auxiliary switches + 2 alarm switches	Shunt trip or UVR or up to 4 auxiliary switches

Maximum of 8 switches total.

Maximum of 2 alarm switches, Left Pocket only.

Maximum of 4 switches in Left Pocket.

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

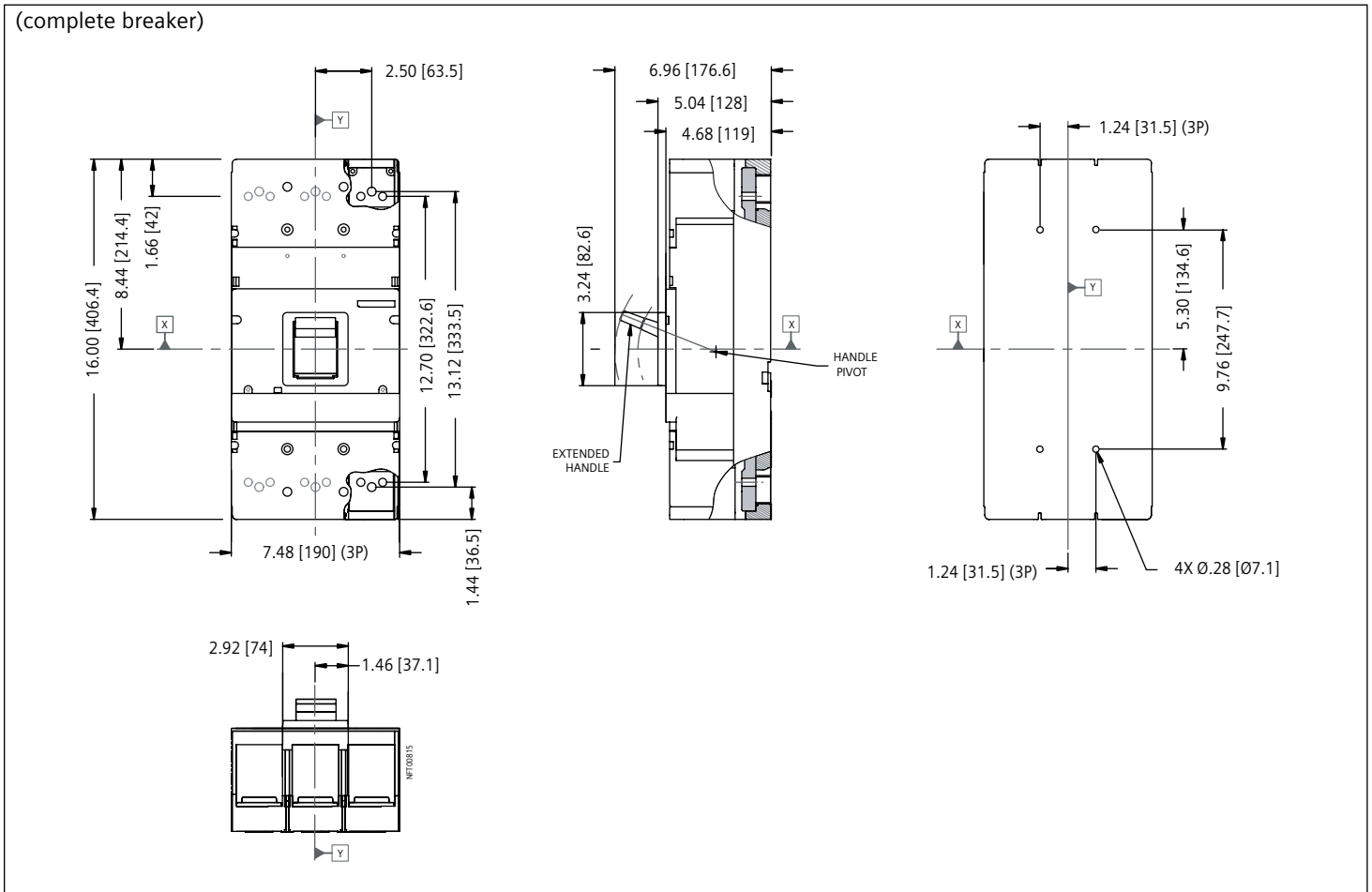
(A) Normally open contacts are open when the breaker contacts are open.

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

Undervoltage release	
Control voltage	Catalog number
110 – 127 VAC	UVRPN120
220 – 250 VAC	UVRPR240
208 VAC	UVRPP208
277 VAC	UVRPS277
380 – 425 VAC	UVRPT415
440 – 480 VAC	UVRPU480
12 VDC	UVRPA12DC
24 VDC	UVRPB24DC
48 VDC	UVRPC48DC
60 VDC	UVRPG60DC
110 – 127 VDC	UVRPD125DC
220 – 250 VDC	UVRPE250DC

Dimensions

(complete breaker)



Shipping weight, lbs. (kg)

Poles	Frame	Trip unit	Complete breaker
2,3	31.3 (14.2)	4.0 (1.8)	35.3 (16.0)

Permissible mounting positions

