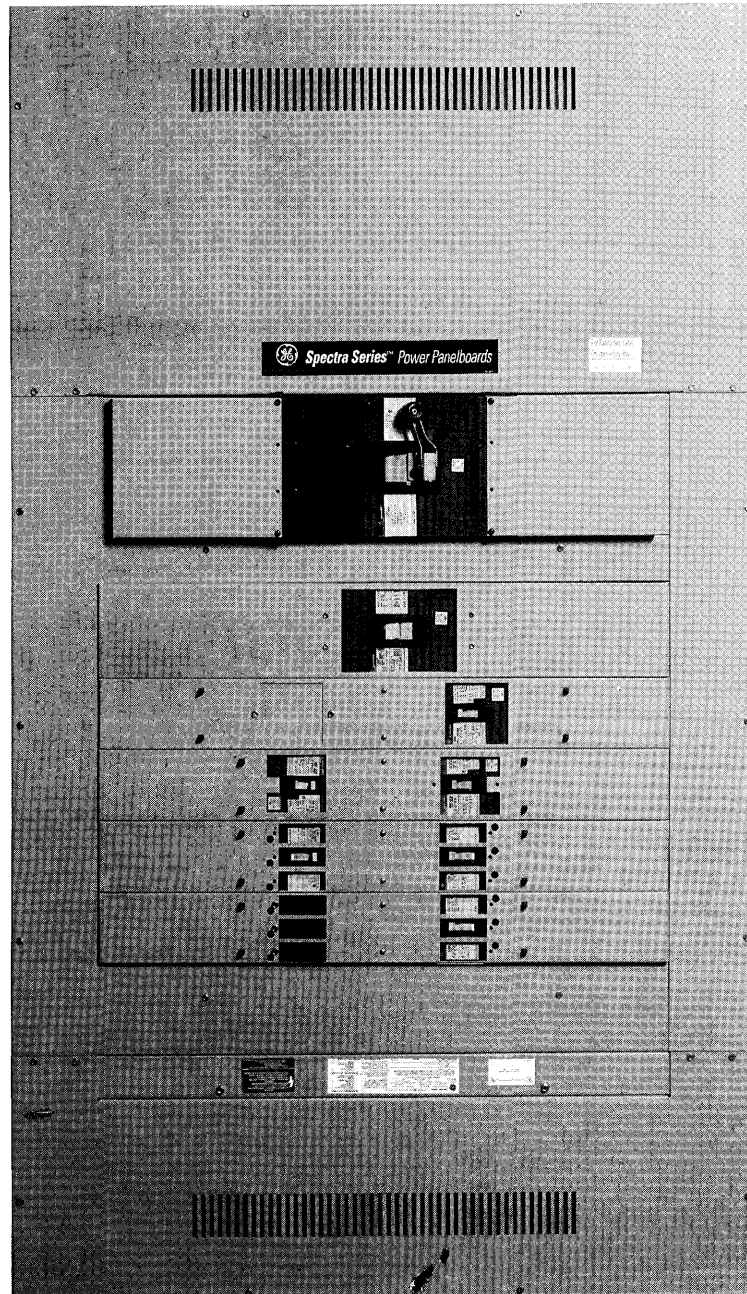


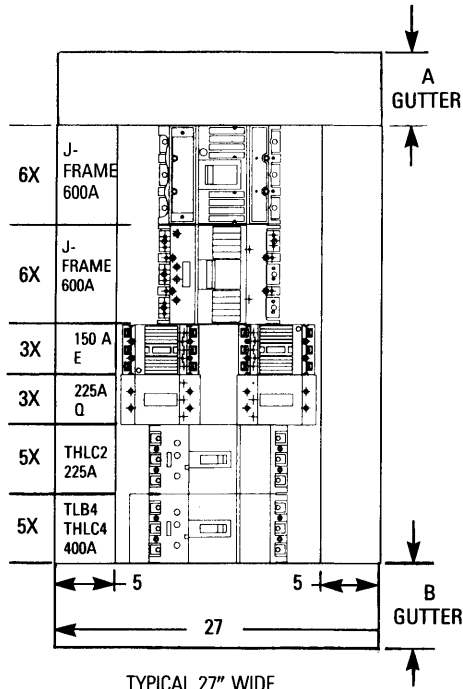


*DE-208A Typical*

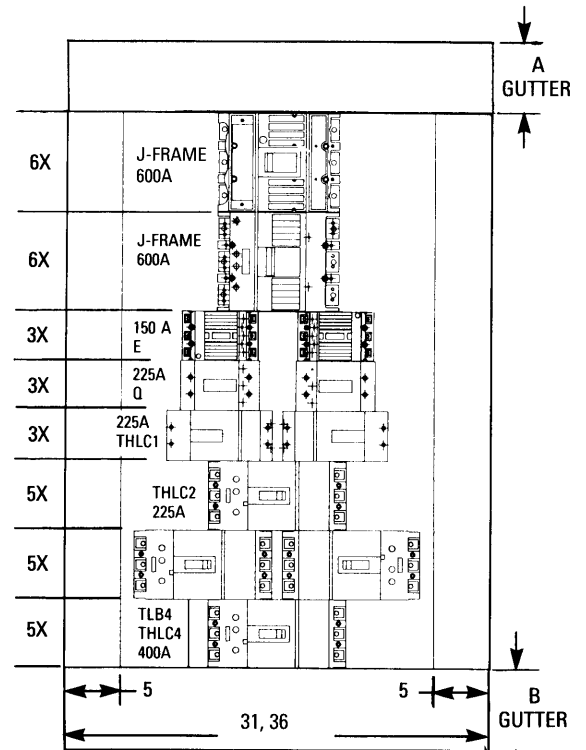
## ***Spectra Series™ Power Panelboards***

Plug-In™ and Bolt-On™  
Circuit Breaker Mains and Feeders





TYPICAL 27" WIDE  
CIRCUIT BREAKER PANEL  
Note: X value = 1.375"



TYPICAL 31" AND 36" WIDE  
CIRCUIT BREAKER PANEL

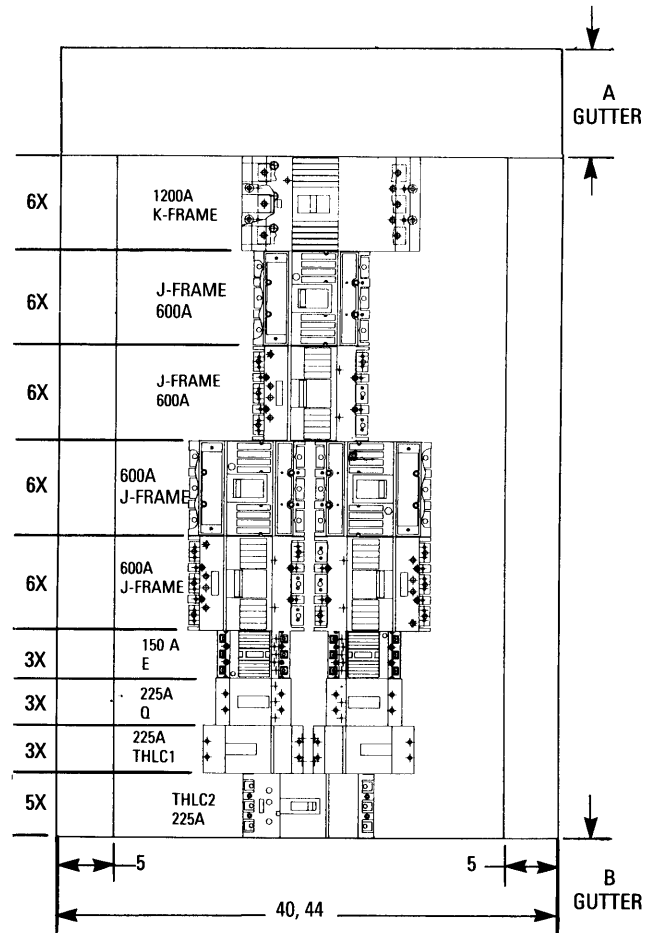
### Main Lug Assemblies

Maximum Amp Rating	Lug Type	Box Widths	Dual Lug Type	Box Widths	X-Height
250 400 600	Mechanical	27"-44"	Mechanical	27"-44"	4X
800 1200	Mechanical	31"-44"	Mechanical	36"-44"	4X
250 400 600 800 1200	Compression Mechanical 750 kcmil Lug Provisions	36"-44"	Compression Mechanical 750 kcmil Lug Provisions	36"-44"	6X

### Main Breaker Plug-In Style or Bolt-On Style

Maximum Ampere Rating	Main Breaker Type	Poles	X-Height	Minimum Enclosure Width
225A 225A	TFJ TFK/THFK	2/3 2/3	3X 3X	27" 27"
400A 400A 600A	TJD① TJJ① TJK①/THJK①	2/3 2/3 2/3	6X 6X 6X	27" 27" 27"
1200A	TKM/THKM	3	6X	40"
225A	THQD/TQD	2/3	2X	27"
250A 400A	THLC2 THLC4	3 3	5X 5X	27" 27"
250A 250A 250A	SFH SFL SFP	2/3 2/3 2/3	3X 3X 3X	27" 27" 27"
1200A 1200A 1200A	SKH SKL SKP	2/3 2/3 2/3	6X 6X 6X	40" 40" 44"
400A 600A	SGD SGH/SGL/SGP	2/3 2/3	4X 4X	27" 27"

① Not available in bolt-on style.



TYPICAL 40" AND 44" WIDE  
CIRCUIT BREAKER PANEL

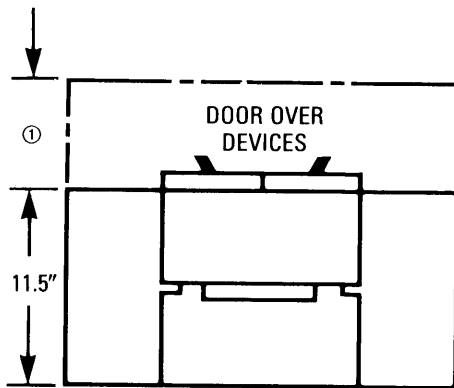
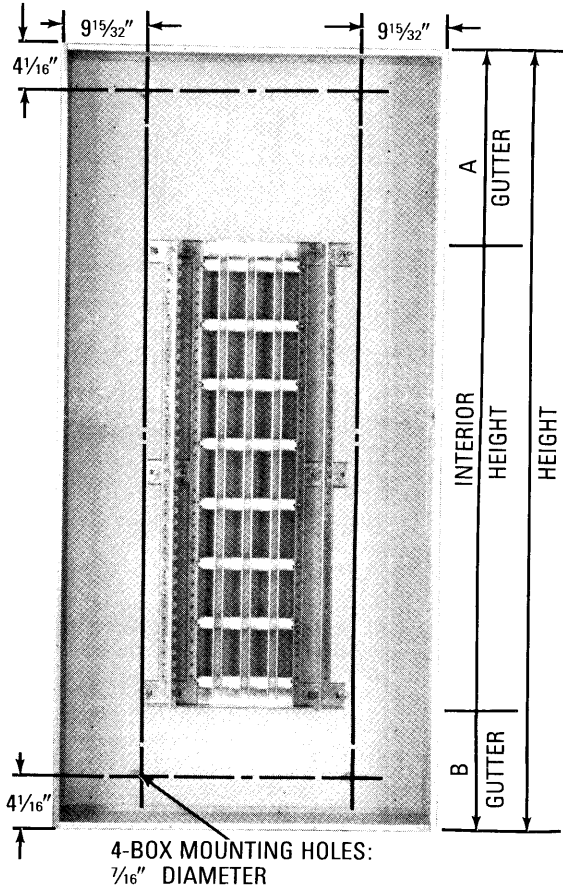
# Enclosures

Spectra Series Panelboard Enclosures come in eight standard sizes. Enclosure heights are determined by two criteria: interior height and main device rating (to provide adequate wire-bending space). Enclosure widths are determined by the largest main/branch device.

**Notes:** When 250A through 1200A circuit breakers are applied as mains, the line cables terminate on the left side. When they are mounted as single branch devices, the load cables terminate on the right side.

"A" gutter is located on the end with the main circuit breaker or main lug. "B" gutter is located at the opposite end.

Boxes are furnished without knockouts.



**Typical Sectional End View**

① For standard enclosures, all widths are 11.5" deep. When a door, NEMA3R, or NEMA12 construction is required, the enclosure depths are 14.25" (27", 31", & 40" wide enclosures) and 16.25" (36" & 44" wide enclosures).

## 31", 36", 40" and 44" Wide Enclosures

Main Amp Rating	Interior Height		Gutter Inches		Enclosure Dimensions	
	X-Height	Inches	A	B	Height Inches	Width Inches
250	18X	24.75	19.94	19.94	64.63	36
	23X	31.63	19.94	13.13	64.63	36
	28X	38.50	19.94	6.25	64.63	36
	38X	52.25	22.75	14.25	89.25	31/36
	48X	66.00	19.94	10.25	96.13	31/36
400	18X	24.75	19.94	19.94	64.63	36/40/44
	23X	31.63	19.94	13.13	64.63	36/40/44
	28X	38.50	22.75	14.25	75.50	31/36/40/44
	33X	45.38	22.75	21.25	89.25	31/36/40/44
	38X	52.25	22.75	14.25	89.25	31/36/40/44
600	23X	31.63	19.94①	13.13①	64.63①	36/40/44
	28X	38.50	22.75	14.25	75.50	31/36/40/44
	33X	45.38	22.75	21.25	89.25	31/36/40/44
	38X	52.25	22.75	14.25	89.25	31/36/40/44
	43X	59.13	22.75	14.25	96.13	31/36/40/44
800	23X	31.63	22.75①	21.25①	75.50	31/36/40/44
	28X②③	38.50	22.75	14.25	75.50	31/36/40/44
	33X②③	45.38	22.75	21.25	89.25	31/36/40/44
	38X②③	52.25	22.75①	14.25	89.25①	31/36/40/44
	43X②	59.13	22.75	14.25	96.13	31/36/40/44
1200	23X	31.63	22.75①	21.25①	75.50	31/36/40/44
	28X②③	38.50	22.75	14.25	75.50	31/36/40/44
	33X②③	45.38	22.75	21.25	89.25	31/36/40/44
	38X②③	52.25	22.75①	14.25	89.25①	31/36/40/44
	43X②	59.13	22.75	14.25	96.13	31/36/40/44

① This dimension may change if dual main, feed through and neutral, or 200% neutral are provided.

② This enclosure is available for use with a single main and single neutral only.

③ This enclosure is not available for use with 200% neutrals.

## 27" Wide Enclosures

Main Amp Rating	Interior Height		Gutter Inches		Enclosure Dimensions	
	X-Height	Inches	A	B	Height Inches	Width Inches
250	18X	24.75	19.94	19.94	64.63	27
	23X	31.63	18.50	14.50	64.63	27
	28X	38.50	18.50	7.62	64.63	27
	38X	52.25	18.50	18.50	89.25	27
400	18X	24.75	19.94	19.94	64.63	27
	23X	31.63	18.50	14.50	64.63	27
	28X	38.50	18.50	18.50	75.50	27
	33X	45.38	25.39	18.50	89.25	27
	38X	52.25	18.50	18.50	89.25	27
600	23X	31.63	18.50	14.50	64.63	27
	28X	38.50	18.50	18.50	75.50	27
	33X	45.38	25.39	18.50	89.25	27
	38X	52.25	18.50	18.50	89.25	27

## Branch Breaker Plug-In Style and Bolt-On Style

Breaker Type	Poles	Double Branch			Single Branch		X-Height
		Maximum Poles	Minimum Enclosure Width	Maximum # Poles Blank Option	Maximum Poles	Minimum Enclosure Width	
THQB①/THQB①	1/2/3	6	27"	5	—	—	3X
TEY	1/2/3	6	27"	5	—	—	3X
TEB/TED/THED	1/2	4	27"	2	—	—	2X
TEB/TED/THED	1/2/3	6	27"	3	—	—	3X
TQD/THQD	2	4	27"	2	—	—	2X
TQD/THQD	3	6	27"	3	—	—	3X
TFJ①	2/3	6	36"	3	3	27"	3X
TFK①/THFK①	2/3	6	36"	3	3	27"	3X
THLC2	3	6	36"	3	3	27"	5X
THLC4	3	6	40"	3	3	27"	5X
TJD①	2/3	6	44"	3	3	27"	6X
TJJ①/TJK①/THJK①	2/3	6	44"	3	3	27"	6X
THLC1	2/3	-	-	-	3	36"	3X
TKM/THKM	2/3	-	-	-	3	40"	6X
SED/SHE	2	4	27"	2	-	-	3X
SEL/SEP	3	6	27"	3	-	-	3X
SFH/SFL/SFP	2/3	6	31"	3	3	27"	3X
SGD/SGH/SGL/SGP	2/3	6	40"	3	3	27"	4X
SKH/SKL	2/3	-	-	-	3	40"	6X
SKP	2/3	-	-	-	3	44"	6X

① Not available for bolt-on style.

## Molded Case Circuit Breakers Interrupting Ratings

Molded Case Circuit Breakers					Maximum UL Listed Interrupting Ratings in Thousand Amps								
Construction	Frame	Trip Range (Amps)	No. Poles	Federal Specs C/B Class W-C-375B	rms Symmetrical ac Volts							dc Volts	
					120	120/240	240	277	480Y/277	480	600	125	250
HQ Frames	THQB <sup>③</sup>	15-70	1	12a	10	10	—	—	—	—	—	—	—
		15-125	2	12a	—	10	—	—	—	—	—	—	—
		15-100	2,3	12b	—	—	10	—	—	—	—	—	—
HHQ Frames	THHQB <sup>③</sup>	15-70	1	14a	22	22	—	—	—	—	—	—	—
		15-125	2	14a	—	22	—	—	—	—	—	—	—
		15-100	2,3	14b	—	—	22	—	—	—	—	—	—
Standard Frames	TEY	15-100	1	—	—	—	65	14	—	—	—	10	—
		15-100	2,3	—	—	—	65	—	14	—	—	—	10
	TEB	15-100	1	12a	10	10	—	—	—	—	—	5	—
		15-100	2	12b	—	—	10	—	—	—	—	—	5
	TED	15-100	1	13a	—	—	—	14	—	—	—	10	—
		15-50 <sup>①</sup>	1	13b	—	—	—	14	—	14	—	—	—
	TED4	15-100	2	13b	—	—	18	—	—	18	—	10	—
	TED4	15-150	3	13b	—	—	18	—	—	18	—	10	—
	TED6	15-100	3	18a	—	—	18	—	—	14	14	—	—
	TED6	110-150	3	N/A	—	—	18	—	—	14	14	—	—
	TQD	125-225	2,3	12b	—	—	10	—	—	—	—	—	—
	TFJ	70-225	2	20a	—	—	25	—	—	22	—	—	10
	TFK	70-225	2	20a	—	—	25	—	—	22	—	—	10
	TFJ	70-225	3	20a	—	—	25	—	—	22	18	—	—
	TFK	70-225	3	20a	—	—	25	—	—	22	18	—	—
TJD <sup>③</sup>	250-400	2,3	14b	—	—	22	—	—	—	—	—	10	
TJJ <sup>③</sup>	125-400	2,3	21a	—	—	42	—	—	30	22	—	10	
TJK4 <sup>③</sup>	125-400	2,3	21a	—	—	42	—	—	30	22	—	10	
TJK6 <sup>③</sup>	250-600	2,3	21a	—	—	42	—	—	30	22	—	10	
TKM8	300-800	2,3	21a	—	—	42	—	—	30	22	—	10	
TKM12	600-1200	2,3	21a	—	—	42	—	—	30	22	—	—	
Hi-Break <sup>®</sup> Frames	THED	15-30	1	13a	—	—	—	65	—	—	—	20 <sup>②</sup>	—
	THED4	15-100	2	22a	—	—	65	—	—	25	—	—	20 <sup>②</sup>
	THED4	110-150	3	—	—	—	42	—	—	25	—	—	—
	THED6	15-100	3	22a	—	—	65	—	—	25	18	—	—
	THED6	110-150	3	N/A	—	—	42	—	—	25	18	—	—
	THQD	125-225	2,3	N/A	—	—	22	—	—	—	—	—	—
	THFK <sup>③</sup>	70-225	2,3	20a	—	—	65	—	—	25	18	—	20 <sup>②</sup>
	THJK4 <sup>③</sup>	125-400	2,3	23a	—	—	65	—	—	35	25	—	20 <sup>②</sup>
THJK6 <sup>③</sup>	250-600	2,3	23a	—	—	65	—	—	35	25	—	20 <sup>②</sup>	
THKM8	300-800	2,3	23a	—	—	65	—	—	35	25	—	—	
THKM12	600-1200	2,3	23a	—	—	65	—	—	35	25	—	—	
Current Limiting Circuit Breakers	THLC1	15-150	3	—	—	—	200 <sup>③</sup>	—	—	150 <sup>③</sup>	50	—	—
	THLC2	125-225	3	—	—	—	200 <sup>③</sup>	—	—	150 <sup>③</sup>	50	—	—
	THLC4	225-400	3	—	—	—	200 <sup>③</sup>	—	—	150 <sup>③</sup>	50	—	—
SE150	SEDA	15-150	2,3	—	—	—	18	—	—	18	10	—	—
	SEHA	15-150	2,3	—	—	—	65	—	—	25	18	—	—
	SELA	15-150	2,3	—	—	—	100	—	—	65	25	—	—
	SEPA	15-150	2,3	—	—	—	200 <sup>③</sup>	—	—	100	25	—	—
SF250	SFHA	70-250	2,3	—	—	—	65	—	—	35	18	—	—
	SFLA	70-250	2,3	—	—	—	100	—	—	65	25	—	—
	SFPA	70-250	2,3	—	—	—	200 <sup>③</sup>	—	—	100	25	—	—
SG600	SGDA	125-600	2,3	—	—	—	65	—	—	—	—	—	—
	SGHA	125-600	2,3	—	—	—	65	—	—	35	25	—	—
	SGLA	125-600	2,3	—	—	—	100	—	—	65	65	—	—
	SGPA	125-600	2,3	—	—	—	200 <sup>③</sup>	—	—	100	65	—	—
SK1200	SKHA	300-1200	2,3	—	—	—	65	—	—	50	25	—	—
	SKLA	300-1200	2,3	—	—	—	100	—	—	65	42	—	—
	SKPA	300-1200	2,3	—	—	—	200 <sup>③</sup>	—	—	100	65	—	—

① UL Listed for only 100,000 AIC when internally mounted accessories are use.

② DC ratings above 10,000 AIC are not UL Listed.

③ Not available in bolt-on style.

# Termination Information

## Standard Main Lug Terminations (Cu/Al Mechanical)

Amp Rating	Single Wire Size (Cu/Al) ①	Single Main Lugs-② # Wires Per Phase	Dual Wire Size (Cu/Al) ①	Dual Main Lugs-② # Wires Per Phase
250	#8 - 500 kcmil 2/0 - 600 kcmil	1 1	8 - 500 kcmil 2/0 - 600 kcmil	1 1
400	#8 - 500 kcmil 2/0 - 600 kcmil	1 1	2/0 - 600 kcmil	4
600	#8 - 500 kcmil 2/0 - 600 kcmil	1 1	2/0 - 600 kcmil	4
800	2/0 - 600 kcmil	4	2/0 - 600 kcmil	8
1200	2/0 - 600 kcmil	4	2/0 - 600 kcmil	8

① Cu lugs are intended to be used only with Cu Wire.  
② One lug per phase

## Standard Neutral Lug Terminations (Al Mechanical)

Amp Rating	Lug Type	Lug Quantity	Wire Size (Cu/Al)
250	Main	2	#2 - 600 kcmil
	Branch	24	#14 - #4
	Branch	15	#14 - 2/0
	Branch	5	#6 - 300 kcmil
400	Main	2	#2 - 600 kcmil
	Branch	24	#14 - #4
	Branch	15	#14 - 2/0
	Branch	5	#6 - 300 kcmil
600	Main	4	#2 - 600 kcmil
	Branch	4	#2 - 600 kcmil
	Branch	10	#14 - #4
	Branch	9	#14 - 2/0
800	Main	4	#2 - 600 kcmil
	Branch	4	#2 - 600 kcmil
	Branch	10	#14 - #4
	Branch	9	#14 - 2/0
1200	Main	4	#2 - 600 kcmil
	Branch	4	#2 - 600 kcmil
	Branch	10	#14 - #4
	Branch	9	#14 - 2/0
	Branch	10	#6 - 300 kcmil

Ground lugs are available in kit form for field installation. Catalog numbers are included here for references.

## Ground Lug Terminations (Cu/Al Mechanical)

Lug Quantity	Wire Size	Catalog Number	Insulated/Isolated
10	#6-2/0 CU/AL	AEG 10	No
12	#14-#8 CU } Solid #12-#8 AL } or #12-#8 CU } Stranded #12-#8 AL }	AEG 21	No
12	Identical lug offering as listed above for Cat. #AEG 21	AEG 21S	Yes
9	Identical lug offering as listed above for Cat. #AEG 21	AEG 21S	Yes
12	Identical lug offering as listed for AEG 21	AEG 31S	Yes
9	Identical lug offering as listed for AEG 21		
10	#6-2/0 CU/AL		

## Standard Circuit Breaker Terminations (CU/AL Mechanical)

Circuit Breaker Frame					Terminal Lugs (CU-AL)			
Standard	Hi-Break*	Current Limiting	High Interrupting	Poles	No. Per Pole	Catalog Number	Wire — CU-AL (Unless otherwise noted)	
							Per Lug	Range
THOB③	THQB③	—	—	1,2,3	1	Fixed to Breaker Terminal	1	(15-30a) #14-4 CU or #12-4 AL (35-100A) #14-1/0 CU or #12-1/0 AL
TEY	—	—	—	1,2,3	1	TCAL14 TCAL12 TCAL12A TCAL15	1	(15-20A) #14-#12 CU or #12-#1 AL (30-60A) #10-#6 CU or #8-#4 AL (70-100A) #4-#1 CU or #2-1/0 AL
TEB	—	—	—	1,2,3	1		1	(15-30A, TCAL14) #14-8
TED	THED①	—	—	1	1		1	(30-60A, TCAL 12) #14-3 CU #12-1 AL
TED4	—	—	—	2-3	1		1	(70-110A, TCAL 12A) #6-2/0 CU #4-2/0 AL (110-150A, TCAL15) #2-3/0
TED6	THED	—	—	2-3	1	TCAL25	1	#1-300MCM
TQD	THQD	—	—	2-3	1	TCAL24,26	1	#4-300MCM
TFJ, TFK	THFK	—	—	2-3	1	TCAL43	1	#6-600MCM OR 2-(2/0-250MCM)
TJJ③, TJK4③	THJK4③	—	—	2-3	1	TCAL43	1	#6-600MCM OR 2-(2/0-250MCM)
TJD③	—	—	—	2-3	1	TCAL43	1	#6-600MCM OR 2-(2/0-250MCM)
TJK6③	THJK6③	—	—	2-3	1	TCAL63	2	250-350MCM, CU OR 350-500MCM, AL
—	—	—	—	3	1	TCAL61	2	2/0-500MCM
TKM8	THKM8	—	—	2-3	1	TCAL41	1	#4-600MCM OR 2-(1/0-250MCM)
—	—	—	SK1200	—	1	TCAL61	2	2/0-500MCM
—	—	—	LOAD END	—	1	TCAL81	3	300-500MCM
—	—	—	—	3	1	TCAL91	3	250-500MCM
TKM12	THKM12	—	SK1200	2-3	1	TCAL81	3	250-500MCM
—	—	—	LOAD END	—	1	TCAL121	4	250-300MCM CU or 350-500MCM AL
—	—	—	—	1	1	TCAL131	4	250-300MCM CU or 350-500MCM AL
—	—	THCL1	—	3	1	TCAL12	1	(15-60A, TCAL12) #14-#3 CU OR #12-#1 AL (70-110A, TCAL12A) #6-2/0 CU OR #4-2/0 AL (125-150A, TCAL 15) #1-2/0 CU or 1/0-3/0 AL
—	—	THLC2	—	3	1	TCAL27	1	(125-225A, TCAL 27) #4-300MCM
—	—	THLC4	—	3	1	TCLK43②		3/0-500MCM OR 2-(3/0-250MCM)
SE150	—	—	—	2,3	1	TCAL14	1	(15-40A) #14-#8
—	—	—	—	2,3	1	TCAL18	1	(15-150A) #14-3/0 CU or #12-3/0 AL
SF250	—	—	—	2,3	1	TCAL29	1	#8-350MCM
SG600	—	—	—	2,3	1	TCLK36	1	Copper #6-600MCM or 2-#2/0-400MCM AL #6-600 MCM or 2-#2/0-500MCM

① One-pole THED frame available only in 15-30 amp trip.  
② Three-pole lug assembly suitable for line or load end.  
③ Not available in bolt-on style strap kits.

## GENERAL:

- Panelboards are listed and labeled by Underwriters Laboratories, Inc. in accordance with UL Standards 50 and 67, and shall conform to the latest requirements of the National Electrical Code and NEMA standard PB.1
- The panelboard will meet service entrance requirements when specified.
- Federal specifications: panelboards W-P-115a.
- Boxes are corrosion-resistant galvanealed (zinc finished) sheet metal with removable end walls. Boxes are furnished without knockouts. Panel fronts are cold-rolled steel, coated with a phosphatized rust inhibitor and then finish coated with ANSI 61 light gray polyester powder coat.
- A four-piece front is furnished to provide ease of wiring access. All screw fasteners are zinc coated to retard corrosion.
- Main and branch circuit breakers shall be quick-make, quick-break, and trip-indicating. All two and three pole breakers shall have internal common trips. Interrupting rating of the circuit breaker shall not be less than the maximum short-circuit currents available at the incoming line terminals as shown on the plans.
- Bus bars are current density rated and meet UL67 temperature rise limits thru actual tests.
- Bus bars are sequenced-phased, and rigidly supported by high-impact resistant, insulated bus supporting assemblies to prevent vibration and resulting damage when subjected to stress, vibration or short circuits. All solderless terminations are suitable for either copper or aluminum UL Listed wire or cable and have been tested and listed in conjunction with appropriate UL standards.
- Panelboards are so designed to permit the oncoming line conductors to enter either the top or bottom of the enclosure.
- The neutral bar is fully rated and capable of being relocated to either corner of the enclosure at the line end to facilitate conductor termination.
- Ground wire termination is provided as an option in kit form suitable for installation by the panelboard installer without voiding UL label.
- Terminations are rated for use with conductor ampacity assigned in 75°C NEC table.

These instructions do not purport to cover all details or variations in equipment nor to provide for every possible contingency to be met in connection with installation operation or maintenance. Should further information be desired or should particular problems arise which are not covered sufficiently for the purchaser's purposes, the matter should be referred to the GE Company.



**GE Industrial Systems**

General Electric Company  
41 Woodford Ave., Plainville, CT 06062  
[www.ge.com/edc](http://www.ge.com/edc)