

Section 4

Panelboards



NQ Panelboard with Door-in-Door (Hinged) Trim



MH38 Enclosure with 12-inch Wireway and Mono-Flat™ Trim with 12-inch Wireway Cover

Panelboards	4-2
General Information	4-2
General Instructions	4-2
Special Features	4-3
Mains and Branches	4-3
Mains	4-3
Branches	4-3
Cabinets	4-4
Special Features	4-4
NQ Merchandised Panelboards	4-7
NQ Main Lug and Main Circuit Breaker Panelboard with SPD	4-7
NQ Main Lug and Main Circuit Breaker Interiors with SPD—240 Vac, 48 Vdc	4-7
Ready-to-Install (RTI) Merchandise	4-8
Miscellaneous Panelboard Accessories	4-8
Copper Equipment Ground Bars	4-8
Field Installable I-Line™ Door Kits	4-8
Type 1 Door-in-Door (Hinged) Trim Fronts	4-9
Replacement Parts for Standard Panelboards	4-9
Trim Clamps and Screws	4-9
Trim Clamps and Screws	4-9
Locks and Keys	4-10
Locks [2] Panelboards that meet 1984 NEC® Wire Bending Space are Series E1.	4-10
Keys	4-10
CTC Cabinets	4-11
Wall Mounted Metering Equipment	4-11
Main Circuit Breaker and Current Transformer Compartment	4-11
Retrofit Information	4-12
Retrofit Existing Enclosure Data Sheet	4-12
Data Sheet for Panelboards to Retrofit Existing Enclosures	4-12

General Instructions

The special feature options covered in this Panelboard estimating procedure are applicable to factory-assembled panelboards only. Do not apply this pricing to ready-to-assemble panelboards.

Special features are listed in three major categories:

- Mains
- Branches
- Cabinets

Metric Conversion

Inches (in.) x 25.4 = millimeters (mm).

I-Line™ Panelboards Factory Assembled

Panel Type	No. Poles	Main Circuit Breaker					
		400 A			600 A		
		LX ^[1]	LE ^[1]	LXI ^[1]	LX ^[1]	LE ^[1]	LXI ^[1]
HCP, HCP-SU	2						
	3						

Table 4.1: Micrologic LE, LX and LXI Branch Circuit Breakers
(See Digest pages 7-7 for interrupting rating, voltage rating, Fed. Specs. etc.)

Circuit Breaker Ampere	Circuit Breaker	3 pole			2 pole		1 pole						
		240 V	480 Vac 250 Vdc	H	240 V	480 Vac 250 Vdc	H	120 V	277 V	277 Vac 125 Vdc	Space only	H	
Micrologic™ Circuit Breakers (% Rated)													
100–250 A	LX (80%)	—	—	7.5	—	—	7.5	—	—	—	—	—	
300–400 A		—	—		—	—		—	—	—	—	—	—
450–600 A		—	—		—	—		—	—	—	—	—	—
100–250 A	LXI (80%)	—	—	7.5	—	—	7.5	—	—	—	—	—	
300–400 A		—	—		—	—		—	—	—	—	—	—
450–600 A		—	—		—	—		—	—	—	—	—	—
100–250 A	LE (100%)	—	—	7.5	—	—	7.5	—	—	—	—	—	
300–400 A		—	—		—	—		—	—	—	—	—	—
450–600 A		—	—		—	—		—	—	—	—	—	—

Table 4.2: LE, LX & LXI Micrologic Trip Units

	LE	LX and LXI
LI - Std	—	—
	Standard	—
	—	—

Table 4.3: D-Frame (600 A 480 Vac) 3P 50/60 Hz circuit Breaker with Electronic Trip Units

Electronic Trip Unit Type	Trip Function	Trip Unit	Continuous Current ^[2]	G Interrupting	J Interrupting	L Interrupting	Terminal Wire Ratings	
				Catalog No.	Catalog No.	Catalog No.		
Standard	LS	STR23SP	150 A	DGA34150E20	DJA34150E20	DLA34150E20	(1) 2–600 Cu or (1) 2–500 Al	
			250 A	DGA34250E20	DJA34250E20	DLA34250E20		
			400 A	DGA34400E20	DJA34400E20	DLA34400E20		
	600 A	DGA34600E20	DJA34600E20	DLA34600E20	(2) 2/0–350 Cu or (2) 2/0–500 Al			
	LSI	STR53UP- ^[3]	150 A	DGA34150E53	DJA34150E53	DLA34150E53		(1) 2–600 Cu or (1) 2–500 Al
			250 A	DGA34250E53	DJA34250E53	DLA34250E53		
400 A			DGA34400E53	DJA34400E53	DLA34400E53			
Ammeter	LSI	STR53-UPFI ^[4]	600 A	DGA34600E53	DJA34600E53	DLA34600E53	(2) 2/0–350 Cu or (2) 2/0–500 Al	
			150 A	DGA34150E58	DJA34150E58	DLA34150E58	(1) 2–600 Cu or (1) 2–500 Al	
			250 A	DGA34250E58	DJA34250E58	DLA34250E58		
			400 A	DGA34400E58	DJA34400E58	DLA34400E58		
			600 A	DGA34600E58	DJA34600E58	DLA34600E58		(2) 2/0–350 Cu or (2) 2/0–500 Al

Table 4.4: DG, DJ, DL Electronic Trip Units

	Standard	Ammeter
LS	Standard	—
LSI	—	—
LSIG	—	—

[1] Std. construction back-fed main.
 [2] D-frame circuit breakers 400 A and below are 100% rated, 600 A is standard (80%) rated only
 [3] F = Fault Indicator, I = Ammeter
 [4] F = Fault Indicator, I = Ammeter



Mains

Metering—Type 1 Enclosures Only (1200 A Maximum)

Enclosures and interiors are shipped fully assembled.

NQ, NF and Powerlink™ require a 7-inch left side gutter extension and a 6-inch main end extension for PowerLogic Power Meter applications.

I-Line™ and QMB require a 14-inch side gutter extension for PowerLogic Circuit Monitor and Power Meter applications.

Current Transformers In Mains (ac only and line side only)^[1]

Prices listed are based on transformers having a 5 A secondary and mounted under a separate cover. Apply appropriate charge from the table below

Table 4.5: Current Transformers

Primary Amperes (5 A—Secondary)	Additional Enclosure Height Required ^[2]
100–1200	6 inches

Customer Equipment Space^[3]

NOTE: End user must specify end use equipment to be installed.

Available with NQ, and NF lighting panelboards only. Must be opposite the mains end, both main breaker and main lug, to prevent interference with incoming cables. Customer equipment space is not available with thru-feed lugs or sub-feed breakers.

A barrier exists between the equipment space and the panelboard compartment; a separate door is provided as standard (requires 18-inch additional enclosure height).

NOTE: A separate door is not supplied in NEMA 3R/12 construction.

Branches

Keyed Interlocks

NOTE: Not available for use in NQ, NF or I-Line™ HCN panelboards with door. Not available on I-Line™ with door when key interlocked MG/MJ/P/R frame branch-mounted circuit breakers are installed. Must use 4-piece trim or NEMA 3R/12.

Keyed mechanical interlocking of two or more circuits is available on request. Individual locks are furnished for each circuit. All locks operate by one key, which can be removed only when the circuit is locked in the desired position.

I-Line Circuit Breakers — A 3-inch filler adjacent to the circuit is necessary for mounting the interlock; contact your nearest Schneider Electric sales office for assistance with power distribution panelboards with doors. Feature not available on vertically mounted main circuit breaker.

QMB Fusible Switches — Available on 100 A singles (100 A single QMB requires 9 inches of mounting space) through 800 A switches plus LA circuit breaker adapters. Requires 3 inches of branch mounting space per switch for interlock installation.

Motor Operators—I-Line Circuit Breakers Only

Motor operators provide remote *open*, *close*, and *reset* control of molded case circuit breakers. Price panelboard from the latest Digest, and, for each motor operator, add per table below. In I-Line panelboards, motor operators require 4.5 inches of circuit breaker mounting space. This can be provided on I-Line main circuit breaker only when the main is branch-mounted and back-fed.

NOTE: Not available in I-Line HCN Panelboards

Table 4.6: Motor Operators

Circuit Breaker Type	Motor Operator Voltage
F-frame	120 Vac
H-frame (3P modules only)	48/60, 110/130, 208/277, 380/480 Vac; 24/30, 48/60, 110/130, 250 Vdc
J-frame	48/60, 110/130, 208/277, 380/480 Vac; 24/30, 48/60, 110/130, 250 Vdc
LA, LH	120 Vac
PG, PJ, PL	48, 110/130, 220/240, 380/480 Vac; 24/30, 48/60, 110/130, 200/250 Vdc

NOTE: If the customer is not supplying the motor operator voltage, a control transformer can be supplied.

[1] Feature supported by product selectors in Q2C and EQM.

[2] For NQ, and NF panelboards.

[3] Feature supported by product selectors in Q2C and EQM.

Special Features**Cabinets****Increased Enclosure Depth****Type 1 Enclosure^[4]**

8-inch depth (HC26)
12-inch depth (HC32, 42, 44-12-inch only)

Type 3R, 5, or 12 Enclosure^[4]

8-inch or 12-inch depth

NOTE: No other depths are available.

Increased Side Gutters (Type 1 Enclosures Only)

NOTE: Available on MH enclosures (right or left) in 3, 6 and 12-inch added widths, 26-inch wide HC enclosures up to a maximum of 14 additional inches and 32-inch wide HC enclosures up to a maximum of 10 additional inches.

Not available on 42-inch wide HC enclosures.

No barrier will be supplied unless specified.

Includes one-piece trim.

Provide extended side gutters.

Steel Barrier in Enclosure

NOTE: The enclosure will be extended on one side only. If extension is required on both sides, contact your nearest Schneider Electric sales office for assistance.

Extended Top and Bottom End Gutters

NOTE: Available for Type 1 enclosures only

Type MH Enclosures

6-inch, 12-inch, 18-inch or 24-inch extension. Includes one-piece trim.

Type, HCM Enclosures

9-inch extension. Includes standard panel trim and enclosure extension cover.

Type HCP, HCR-U Enclosures

12-inch extension. Includes standard panel trim and enclosure extension cover.

Type QMB Enclosures

38-inch W x 11.5-inch D may have a 6-inch maximum increased end gutter. This is the only QMB enclosure with an increased end gutter option. Available only with a four-piece trim.

For lengths other than those listed above, refer to the Wireway section on page 4-8.

Drip Hoods^[4]

Surface-mounted-only panelboard

Special Finishes

NOTE: The standard finish of the enclosure fronts is ANSI 49. The enclosures are galvanized steel.

ANSI 49 Enclosure^[4]**ANSI 61 Front or Enclosure^[4]****Front and Enclosure with Polyester Acrylic Powder Paint Finish**

Provides increased salt spray performance in coastal areas and increased resistance to UV fading

Special or Custom Paint for Trim and/or Enclosure**Free-standing Enclosures (welded base channels)^[5]**

Supports extending out front and back, welded to bottom of enclosure



MH38 Enclosure with 6-inch Increased Left-side Gutter



MH38 Enclosure with 12-inch Extended Bottom End Gutter and One-Piece Trim

^[4] Feature supported by Product Selectors in Q2C and EQM.

^[5] Not available on NEMA 3R/12 I-Line™ and QMB.



Hinged Trim

Special Trims

Hinged Trim [6]

Hinged Trim with Outer Door Lock

NOTE: Outer door lock, must be priced with hinged trim. For door-in-door trim, use hinged trim with outer door lock.

Stainless Steel Trim Fronts [6]

NQ 20-inch-wide flush and surface

NF flush and surface

I-Line HCM—Standard trim with door

I-Line HCP—Standard trim with door

Special Locks

Padlock Hasp

For hasp, staple and standard lock (padlock not included)

Special Locks

On trim with a 3-point latch, special locks will be installed as a secondary latch. Special locks include Corbin 60, Corbin 15767, GE 75, Yale® 511S and Best 5L7RL2-626. For all other locks, contact your nearest Schneider Electric sales office for assistance.

Standard key change, Corbin 60, Corbin 15767 or GE 75 [6]

Standard key change, Yale 511S [6]

Standard key change, Best 5L7RL2-626 [6]

Quarter turn fasteners

NOTE: Special locks for all HC trims and NF panelboards with three-point latches, will be installed as secondary locks. Special locks are not available on I-Line™ 42-inch and 44-inch wide panelboards or QMB type panelboards. Many key configurations can be accommodated with our standard Square D™ brand lock. Contact your nearest Schneider Electric sales office for assistance.

Multi-Section Panels

Equal-Height Enclosures [6]

NQ, and NF

I-Line or QMB

Common Trim in Place of Two Individual Fronts [6]

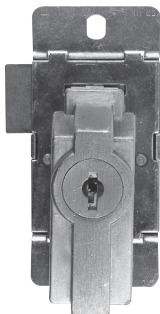
Used to cover two equal-height enclosures mounted side-by-side.

Sheared on Inside Edges

Allows enclosures to be butted together.



NC38S
Padlock Hasp



Corbin 15767 Lock

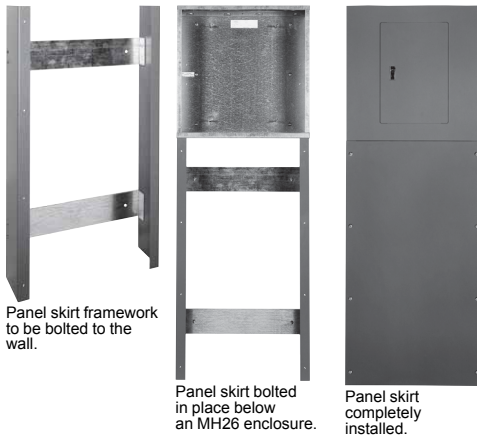


NC38S with
Yale Lock Installed



Common Trim Front for Use with
Multiple-Section Panelboards Mounted Side-By-Side

[6] Feature supported by Product Selectors in Q2C and EQM.



Panel skirt framework to be bolted to the wall.

Panel skirt bolted in place below an MH26 enclosure.

Panel skirt completely installed.



MH38 enclosure with 12-inch wireway and Mono-Flat™ trim with 12-inch wireway cover.

Panel Skirt for Standard Width Panelboards [7]

Panel skirts are intended for cosmetic purposes only; they are meant to hide cables which are enclosed in conduit. Do not use a panel skirt as a wireway; see the Wireway section below.

NOTE: Panel skirts are for Type 1 surface-mounted applications with standard depth and width, Square D™ brand enclosures only.

Table 4.7: Panel Skirts

Skirt Length	Panelboard Type	
	NQ, NF	I-Line™, QMB
4–60 inches		
61–92 inches		

Wireway

Allows for terminating conduit in the wireway endwall. Only the cable passes through the wireway into the panelboard enclosure. Includes trim and wireway cover.

NOTE: Wireway is for Type 1, surface-mounted applications with standard depth and width, Square D™ brand enclosures only.

Table 4.8: Wireway

Wireway Length	Panelboard Type	
	NQ, NF	I-Line™, QMB
4–60 inches		
61–92 inches		

Panels to Fit Existing Enclosures

Panelboard interiors and special fronts can be furnished to fit existing enclosures. First, price the complete panel along with the appropriate price adder from below. Next, photocopy the Retrofit Existing Enclosure data sheet found on page 4-12, record the required dimensions on the photocopy and forward it with your order to the nearest Schneider Electric sales office. For interiors requiring vented enclosures, contact your nearest Schneider Electric sales office for assistance.

NOTE: Existing enclosure depth on flush installations must be measured from inside surface of enclosure to outer wall or plaster surface.

Special Fronts

Existing enclosure the same depth as or deeper than our standard.

NOTE: Elevating brackets to be supplied by customer for existing enclosures deeper than our standard.

Existing enclosure shallower than our standard. Requires an enclosure extension (surface applications) or a formed front (flush applications). A hinged trim front option is not available for these applications.

NOTE: A formed front is available on NQ (225 A max.) and, NF (250 A max.). When a flush front is required for an existing enclosure that is shallower than our standard, be sure to indicate the position of the enclosure with respect to the wall in which it is mounted. This is required in order to determine whether an enclosure extension with a flat front should be supplied, or whether a flush formed front is more applicable. The interior must be centered in the enclosure and, if the enclosure is deeper than our standard, the interior must be leveled within the enclosure. The existing enclosure for NQ and, NF panels cannot be more than 3.0 inches shorter than the standard enclosure. Minimum width is 17 inches. Special trims that are manufactured to fit an existing enclosure will be within ± 0.25 inches of the specification. Refer to the table below for standard enclosure depths and for the maximum depth for which no special mounting brackets are required.

Table 4.9: Panelboard Enclosure Depths

Panelboard Type	Standard Enclosure Depth	Maximum Enclosure Depth for which No Special Mounting Brackets Required
NQ standard width—main lugs only	5.75 inches	5.75 inches
NQ standard width—main circuit breaker	5.75 inches	5.75 inches
NF	5.75 inches	5.75 inches
I-Line™—Maximum F, H or Q-frame branch circuit breaker	6.5 inches	7.25 inches
I-Line™—Maximum J-frame branch circuit breaker	8.25 inches	9.0 inches
I-Line™—Maximum P or R-frame branch circuit breaker	9.25 inches	10.25 inches

Space Heater

NOTE: Enclosure, interior and trim ship fully assembled. 120 V is standard. Top feed applications only.

NQ and NF require 18 inches equipment space in NEMA 3R/12 constructions.

NQ and NF require 6 inch bottom end gutter in NEMA 1 construction.

Unwired (provisions for wiring to external source)

Wired (with overcurrent device, thermostat)

[7] Feature supported by Product Selectors in Q2C and EQM.



I-Line Door-in-Door Enclosure



Access to Circuit Breaker Handles



Access to Wiring Gutters

Special Enclosures

Type 1 Gasketed Enclosure (gasketing between front and enclosure)

20-inch maximum panel width
Over 20-inch panel width

NOTE: For 250 A and below enclosures only.

Stainless Steel Enclosure (Type 3R, 4, 4X, 5 and 12; UL Listed)

NOTE: For #316 stainless steel, add 15% to the prices shown below.

NQ, and NF

For panelboard heights up to 41 inches

For panelboard heights of 44–56 inches

For panelboard heights of 59–80 inches

I-Line™

HCM

HCP

NOTE: 304 stainless, standard

QMB [8]

Fiberglass Enclosures (Type 4X, Non-Vented; UL Listed)

NQ, and NF

28-inch height

33-inch, 40-inch and 50-inch height

I-Line and QMB

Type 12 Door-In-Door Enclosures

Table 4.10: Available Enclosures

Interior Type	Enclosure Size		
	Height	Width	Depth
NQ [9]	56 inches	20 inches	6.5 inches
NF [10]	56 inches	20 inches	6.5 inches
I-Line (HCM)	91 inches	32 inches	11.5 inches
I-Line (HCP)	68 inches	42 inches	12.7 inches
I-Line (HCP)	86 inches	42 inches	12.7 inches

NQ Main Lug and Main Circuit Breaker Interiors with SPD—240 Vac, 48 Vdc

NOTE: For selecting SurgeLoc SPD for RTI NQ Panelboard application, please refer to Table 7.197 of Digest 177.

Table 4.11: NF Merchandised Interiors with SPD—Use I-Line Panelboards on 480 V 3Ø3W Delta Applications

Ma- ins Ra- ting	Ma- x. Bre- aker Spa- ces	SPD Ratings		Interior Catalog No.	Components for adding Vertical Main Circuit Breaker	
		Vol- tage	Surge Rating		MCB Kit Catalog No.	Main Circuit Breaker Frame Select the appropriate MCB and price from the tables starting on Digest page 7-22
250 A	42	480Y/ 277 3P4- W	120	NF442L2TV- S412	N250MJ or N250MK- C	JD/G/J/L or KI
				NF442L2TV- S412C		
250 A	42	480Y/ 277 3P4- W	160	NF442L2TV- S416	N250MJ or N250MK- C	JD/G/J/L or KI
				NF442L2TV- S416C		
400 A	42	480Y/ 277 3P4- W	120	NF442L4TV- S412	N400M	LAL/LHL (LC and LI F/A only)
				NF442L4TV- S412C		
400 A	42	480Y/ 277 3P4- W	160	NF442L4TV- S416	N400M	
				NF442L4TV- S416C		

NOTE: Dry contacts standard.

[8] Not available for QMB interiors over 800 A.
[9] Not available for NQ interiors over 225 A.
[10] Not available for NF interiors over 250 A.

Copper Equipment Ground Bars

Copper equivalents of our aluminum PK–GTA equipment ground bars are available. These copper ground bars accept #14–4 Cu only.

Table 4.12: Copper Ground Bars for NQOD and NF Panelboards (see the Digest, Section 9 for NQ copper ground bar kits)

Maximum Number of Circuits	Maximum Ampere Rating	Catalog No.
12	225	8010302651
18	225	8010302652
23	225	8010302653
27	400/600	PK27GTACU



Catalog No. NC44SHR

Field Installable I-Line™ Door Kits

Table 4.13: I-Line Door Kits

Panel Type	Catalog No. [1]
HCN	HCN52D ()
	HCN65D ()
	HCN74D ()
	HCN83D ()
	HCN92D ()
HCM	HCM48D ()
	HCM64D ()
	HCM73D ()
	HCM91D ()
HCP	HCW50D
	HCW59D
	HCW68D
	HCW86D
HCRU	HCW86D
HCN/HCM Latch Bracket	80104-908-50

- NOTE: HCRU door covers circuit breakers only, not entire box

[1] Add "S" for surface or "F" for flush in place of the parentheses.

Type 1 Door-in-Door (Hinged) Trim Fronts

Features

- Meets door-in-door specifications
- Provides continuous piano hinge
- Permits one-person maintenance

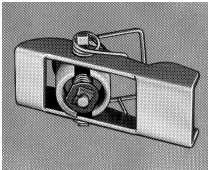
Table 4.14: Hinged Trim

I-Line Fronts Catalog No. [2]	NQ and NF Fronts Catalog No. [2]/[3]
HC2652T()HR	NC26()HR
HC2665T()HR	NC32()HR
HC2674T()HR	NC38()HR
HC2683T()HR	NC44()HR
HC2692T()HR	NC50()HR
HC3248T()HR	NC56()HR
HC3264T()HR	NC62()HR
HC3273T()HR	NC68()HR
HC3291T()HR	NC74()HR
HC4250T()HR	NC80()HR
HC4259T()HR	NC86()HR
HC4268T()HR	NC50V()HR
HC4286T()HR	NC56V()HR
HC4486T()HR	NC62V()HR
—	NC68V()HR
—	NC74V()HR
—	NC80V()HR
—	NC86V()HR

Trim Clamps and Screws

Table 4.15: Trim Clamps and Screws

Application	Catalog No.
NQOD Panelboards: Series E1 [1] 400 A and 600 A fronts NEHB Panelboards: Series E1 [1] 600 A fronts I-Line Panelboards: All Series E1 [1] fronts	LP9501
NQOD Panelboards: All Series E1 [1] vented fronts and hinged fronts manufactured after July 1994. NF Panelboards: All vented fronts and hinged fronts. NEHB Panelboards: All Series E1 [1] hinged fronts manufactured after July 1994. I-Line and QMB Panelboards: I-Line front with door manufactured after July 1994 but before August 1997; and I-Line hinged fronts and QMB front with door manufactured after July 1994.	LP9502 (includes 8 trim screws and captive hardware)
NQ and NQOD Panelboards: Screws for all fronts through 225 A. NF Panelboards: Screws for all fronts through 250 A. I-Line Panelboards: 4-piece trim and trim with door manufactured after July 1997. QMB Panelboards: Screws for 4-piece covers.	4020513001K (package of 10)
I-Line Panelboards: Panelboard deadfront screws for 4-piece trim manufactured after July 1994 but before August 1997.	8002506701



Catalog No
LP9501

[2] Add "S" for surface or "F" for flush in place of the parentheses.
 [3] For welded metal directory, add "WMD" suffix to the end of the catalog number.
 [1] Panelboards that meet 1984 NEC® Wire Bending Space are Series E1.



Catalog No. PK4FL and PD22FL



Catalog No. PK5FL



Catalog No. PK4NVL



Catalog No. 30007 11851

Locks [2]

Table 4.16: Locks—Type 1 Enclosures

Application	Catalog No.
NQOD, NQO, and NQOB Panelboards	
All fronts on enclosures up to and including 50-inch high and 53-inch through 68-inch high vented trims	PK4FL (Before 01/06/97) PK22FL (After 01/06/97 NQ or NQOD only)
All fronts on enclosures 56 inches high or higher, excluding 53-inch through 68-inch high vented fronts	PK5FL (Before 11/01/99) PK22FL (After 11/01/99 NQOD only)
NQ and NF Panelboards	
All fronts [3]/[4] with the exception of those for use on panels using LC or LI main circuit breakers	PK22FL
Fronts on enclosures 68 inches high or higher for panels using LC or LI main circuit breakers	PK5FL
I-Line Panelboards	
HCN: Series 1 and 2 fronts on enclosures up to 54 inches high	PK4FL
HCN: Series 1 and 2 fronts on enclosures 63 inches high or higher	PK5FL
HCM: Series 1 and 2 fronts on 38-inch high enclosures	PK4FL
HCM: Series 1 and 2 fronts on enclosures 47 inches high or higher	PK5FL
I-Line Panelboards	
HCW, HCWM: Series 1 and 2 fronts	PK5FL
HCN: Series E1 [2] fronts on enclosures up to and including 74 inches high	PK4FL (Before 11/14/97) PK22FL (After 11/14/97)
	PK5FL (Before 04/05/02) PK22FL (After 04/05/02) [5]
HCN: Series E1 [2] fronts on enclosures 83 inches high or higher	PK5FL (Before 11/14/97) PK22FL (After 11/14/97) [5]
HCM: Series E1 [2] fronts on enclosures 64 inches high or higher	PK5FL
HCW, HCWM, HCWM-U, HCR-U: Series E1 [2] Front	PK5FL
I-Line Panelboards (4-piece trim with door kit)	
HCN: Series E1 [2] fronts on enclosures up to and including 74 inches high	PK22FL
HCN: Series E1 [2] fronts on enclosures 83 inches high or higher	PK5FL (Before 02/22/02) PK22FL (After 02/22/02) [5]
	PK22FL
HCM: Series E1 [2] fronts on enclosures 73 inches high or higher	PK5FL
HCP, HCR-U: Series E1 [2] Front	PK22FL [5]
HCP-SU: Series E1 [2] Front and HCP-SU Hinged Front	PK22FL [5]

- One NSR-251 key is included with each lock.

Table 4.17: Locks—Type 3R/12 Enclosures

Application	Catalog No.
NQOD, NQO, NQOB, NF all enclosures Series E1	PK4NVL
NQ, NQOD, NF Series E2	8011604350 (one handle)
	8011604351 (two handles)
I-Line and QMB Series E1	PK4NVL
I-Line and QMB Series E2	8012106350
I-Line—Handle for padlocking Series 1 and 2	3000711851
Stainless steel enclosures	HSEM-3PLH

Keys

Table 4.18: Replacement Keys

Application	Catalog No.
For use on all locks except those on stainless steel enclosures	LP9618
Locks on stainless steel enclosures	80106-456-01



Catalog No. LP9618

[2] Panelboards that meet 1984 NEC® Wire Bending Space are Series E1.
 [3] Fronts 56 inches or higher on 250 A maximum interior require two locks.
 [4] Front 74 inches or higher on 600 A maximum interior require two locks.
 [5] Fronts require two locks.

Main Circuit Breaker and Current Transformer Compartment
Service Entrance Equipment Hot or Cold Sequence Metering, Top or Bottom Feed, Indoor Construction at 600 Volts

General: Suitable for use as service entrance equipment on AC systems. Listed by Underwriters' Laboratories.

Service: 1Ø3W, 3Ø3W, 3Ø4W, rated up to 600 Vac maximum.

Metering: [1] Current transformer compartment with provisions for installing bar type current transformers. For window type current transformers, order bus link kit from Table 4.19 Product Selection Table, page 4-11.

Standard unit is factory assembled for bottom feed cold sequence or top feed hot sequence metering applications. The unit is field convertible for bottom feed hot sequence or top feed cold sequence metering. Refer to instruction bulletin 80105-113-0x, *CTC Wall-Mounted Metering Equipment*, for field conversion details.

Mains: Main disconnects provided. 400-800 A: MJP. 1000-1200 A: PJP. Handle lock-off attachment provided for main circuit breaker as standard.

Refer to Digest pages 7-36—7-42 for field installable accessories.

Enclosure: Front accessible, totally enclosed, gray baked enamel finish. Available as indoor construction only. **Dimensions—78 in. H x 26 in. W x 14.3 in. D.**

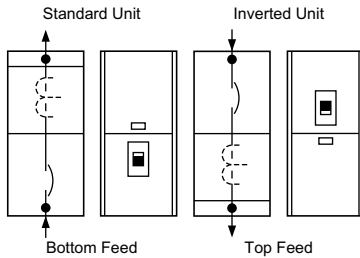
- NOTE: Not EUSERC approved. For EUSERC approved Speed-D switchboards, see Digest pages 11-4 and 11-5. Service Applications



Standard Unit

Inverted Unit

Cold Sequence Metering



Hot Sequence Metering

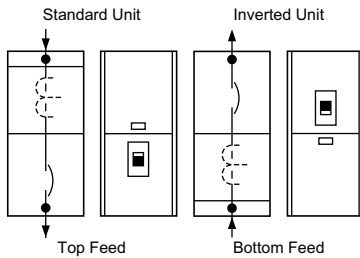


Table 4.19: Product Selection Table [2]

System	Service Voltage (AC)	Ampere Rating of Main	Catalog Number
1Ø3W, 3Ø3W, 3Ø4W	600 V Max.	400 A	CTC364CU
		600 A	CTC366CU
		800 A	CTC368CU
		1000 A	CTC3610CU
		1200 A	CTC3612CU
Bus link kit—used when installing window-type current transformers [3]			SS4BLC

Table 4.20: Lug Table

Ampere Rating	Main Circuit Breaker Lug Wire Range [4]	Ground Lug
400 A	(3) 3/0–500 kcmil Al or Cu	#6 AWG–300 kcmil Al or Cu
600 A	(3) 3/0–500 kcmil Al or Cu	
800 A	(3) 3/0–500 kcmil Al or Cu	
1000 A	(4) 3/0–500 kcmil Al or Cu	
1200 A	(4) 3/0–500 kcmil Al or Cu	

PANELBOARDS

4

[1] Field conversion is the customer's responsibility, only the standard configuration is built by the factory.
 [2] Must specify feed (top or bottom) and sequence (hot or cold) at the time of order.
 [3] Kits required per 3Ø application:
 400–600 A—Order one kit
 800–1200 A—Order two kits
 [4] CT bus lugs and neutral lugs are identical to the main circuit breaker lugs.

Data Sheet for Panelboards to Retrofit Existing Enclosures

Distribu- tor:	
Job Name:	
Contra- ctor:	
Panel Marking:	

The following dimensions are necessary for quotation and production of a panel to fit an existing enclosure. Provide dimensions in inches only.

Existing Flush-Mounted Enclosures

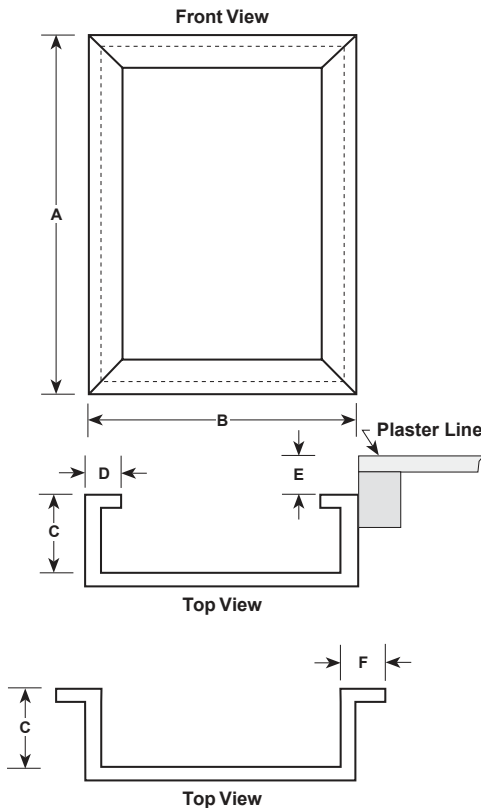
- Height dimension "A":
- Width dimension "B":
- Depth dimension "C":
- Flange width dimension "D":
- If enclosure is not flush with Plaster Line, dimension "E":

Existing Surface-Mounted Enclosures

- Height dimension "A":
- Width dimension "B":
- Depth dimension "C":
- Flange dimension may be either dimension "D" or "F"
(select one)
 - Dimension "D":
 - Dimension "F": NOTE: Trims are furnished so that the interior must be centered within the enclosure.

If the enclosure is deeper than the standard panelboard enclosure for the required type of panelboard, *customer-supplied mounting brackets may be necessary to bring the interior out to the front of the enclosure.*

If interior requires a vented enclosure, contact your nearest Schneider Electric sales office for assistance.



This data sheet is also available on-line.

- Go to <http://intranet.us.schneider-electric.com>
- Click on **U.S. Business**, then select **Sales & Marketing Home** from the pulldown menu
- On the Sales & Marketing page, select **Support and Resources**
- On the Support and Resources page, select **Mentor** from the **Tools** options
- On the Mentor page, select **Mentor Order Quality** from the **Mentor Application** options
- When the Mentor order page appears, type in a project name in the **Project Name:** field, an 8-character number in the **Q2C #** field and your name in the **Prepared by:** field. Click on the box next to **Panelboards**, and then click on the **Next—>** button at the top of the page.
- On the Panelboards Mentor page, click on the box next to **Trims to Fit**, and then click on the **Next—>** button at the top of the page.
- When the **File Download** window appears, click on the **Open** option.
- When the Mentor document opens, click on the **Trims to Fit Data Sheet** link at the bottom of the page.
- When the **File Download** window appears, click on the **Open** option to display the data sheet, or click the **Save** option to save the data sheet to your hard drive.