Bussmann series Quik-Spec™ Coordination Panelboard

Up to 200 kA SCCR in **40% less space** than traditional solutions

Plus, the easiest way to achieve **selective coordination**

Contents

30-400A Quik-Spec™ Coordination Panelboard (QSCP)

Configurable 600 Vac fused branch circuit panelboard with from 30 to 400 amp mains, 15 to 100 amp 1-, 2- and 3-pole branch switches and 18, 30 or 42 branch circuit positions. Finger-safe fused branch circuit switches use the time-delay or fast-acting CUBEFuse available in ratings from 1 to 100 amps.

Ratings

- Volts
  - Up to 600 Vac
  - Up to 125 Vdc *
- Amps 30, 60, 100, 200, 225 or 400 A
- SCCR
  - 200 kA, 100 kA or 50 kA AC
  - 100 kA or 20 kA@125 Vdc*

* 125 Vdc rating applicable to 80 amp or less CCPBs on MLO panels only.

Agency information

- UL Listed to UL 67
- Complies with NFPA 70

Mains

- MLO (main lug only)
- Fused disconnect
- Non-fused disconnect

Enclosure**

- NEMA 1 (top or bottom feed)
- NEMA 3R (bottom feed only)
- Consult factory for other ratings

**Standard size 20" W x 5" D x various heights, depending on configuration. Flush mount and door-in-door not available with NEMA 3R enclosure.

Mounting

- Surface – NEMA 1 and 3R
- Flush – NEMA 1 only

Doors

- Single - NEMA 1 and 3R
- Door-in-Door – NEMA 1 only

Branch positions

- 18, 30 and 42 (factory configured)

Branch switches

- 1-, 2- and 3-pole amp rating rejecting CCPB fused switches† (field installable)
- Amp rejection breaks 15, 20, 30, 40, 50, 60, 70, 90, 100 A

† CCPBs will not accept a fuse with a greater amp rating than the switch.

Loadside lugs and disconnect

- Feed-through single and double
- Fused loadside disconnect, ≥100 to ≤200 amp (400 amp panels only)

Neutrals

- 200, 400 and 800 A unbonded and bonded

Ground

- Non-isolated or isolated

Features

- UL Listed and cULus to CSA Standard 22.2, No. 29-M1989 make it easy to address NEC and CEC selective coordination requirements in an all fused system or upstream Eaton circuit breakers
- Value-engineered for greater flexibility with up to 400 amp mains, 200 kA SCCR, 100 A branches with 18, 30 and 42 branch positions
- Same size footprint as traditional circuit breaker panelboards and 40% smaller than standard fusible panelboards: 20" W x 5-3/4" D x various heights (depending on configuration)
- Increased safety with the current-limiting finger-safe Class CF CUBEFuse that helps reduce arc flash hazard levels
- Quik-Quote online configurator makes specifying and ordering easy – delivers a full bill of material and submittal drawings for an entire project

Ordering

The QSCP is factory configured to the specific electrical system. To place your order, contact your Bussmann series product distributor or representative and provide the relevant electrical and circuit information for your installation.

Data sheet no. 1160

600-1200A Quik-Spec Coordination Panelboard (QSCP)

Configurable fused panelboard with 600, 800 and 1200 amp MLO mains and branch switches up to 600 amps.

Ratings

- Volts
  - Up to 600 Vac
  - Up to 125 Vdc
- Amps 600, 800, 1200 A
- SCCR 200 kA

Agency information

- UL Listed to UL 67
- Complies with NFPA 70

Assembly

- Main lug only
- Floor mount NEMA 1 enclosure
- Branch switches 1-, 2- and 3-pole, 15 to 600 A

Available Branch switch fuses

- Fast-acting or time-delay Class J (time-delay LPJ or fast-acting JKS) non-CCPB disconnects only
- High speed DFJ Class J fuses (non-CCPB disconnects only)
- Fast-acting or time-delay Class CF (time-delay TCF or fast-acting FCF) CCPB disconnects only

Features

- Configurable panelboards with options for 600, 800 and 1200 A MLO mains and branches from 15-600 A all rated 200 kA SCCR at 600 Vac
- The CCPB finger-safe branch switches (utilizing the UL Class CF CUBEFuse up to 100 A) features ampacity rejection to help prevent over fusing
- Fused switches make it simple to address NEC selective coordination system requirements in an all fused system

Ordering

The QSCP is factory configured to the specific electrical system. To place your order, contact your Bussmann series product distributor or representative and provide the relevant electrical and circuit information for your installation.

Configuration and dimensions — in

Panel amps	Branch configurations	H	W	D
600	(18) 1-100 A	65	27	15
	(18) 1-100 A + 200 A single			
	(18) 1-100 A + 200 A twin			
	200 A single + 200 A single			
	200 A single + 200 A twin			
	200 A twin + 200 A twin			
	(2) 300 A single	89	38	15
800	(18) 1-100 A + 200 A single	65	38	15
	(18) 1-100 A + 200 A twin			
	(2) 200 A twin			
	(18) 1-100 A + 400 A single	89	38	15
	200 A twin + 400 A single			
	(2) 400 A single			
1200	(18) 1-100 A + 600 A single	89	38	15
	(3) 200 A twin			
	200 A twin + 600 A single			
	(2) 200 A twin + 400 A single			
	(3) 400 A single	102	38	15
	600 A single + 400 A single + 200 A single			
	600 A single + 400 A single + 200 A twin			
	(2) 600 A single			

Quik-Spec Power Module switch and panel all-in-one elevator disconnects

Fused power switch (PS) or panel (PMP) with shunt trip and fire safety interface provide a single point tie in with fire alarm systems.

Ratings

- Volts 600 Vac, 3Ø
- Amps*
  - 30-400 A (PS)
  - 30-200 A (PMP feeder switches)
  - 400-800 A (PMP main switches)
- SCCR 200 kA RMS

* Contact your Bussmann series product representative for applications greater than 800 amps.

Agency information

- Power Module switch (PS) — UL Listed (UL 98) enclosed and dead front switch Guide 96NK3917, File E182262, NEMA 1, UL 50 Listed enclosure**, cUL per Canadian Standards C22.2, No. 0-M91-CAN/CSA C22.2, No. 4-M89 Enclosed switch.
- Power Module Panel (PMP) — UL 98 enclosed and deadfront switches, complies with NFPA 70

**NEMA 12, 3R, and 4 enclosures also available.

Elevator shutdown

- ANSI/ASME A17.1, 2.8.3.3.2
- NEC 620.51(B) (elevator shutdown)
- NEC 240.12 (orderly shutdown)
- Shunt trip voltage monitoring
- NFPA 72, 6.16.4.4

Selective coordination

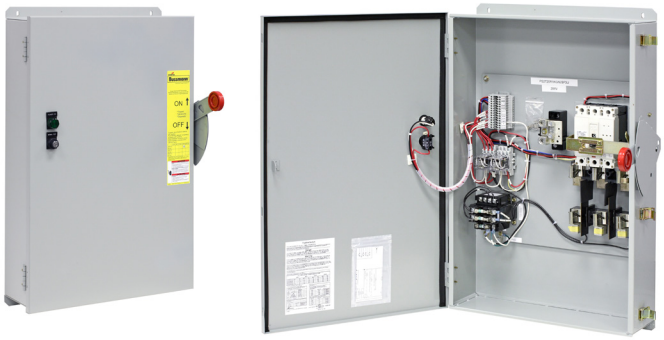
- NEC 620.62

Auxiliary contact (hydraulic elevator)

- NEC 620.91(C)

Features

- Internally powered, relay activated shunt trip system
- Mechanically interlocked auxiliary contact
- Self-contained adherence to elevator consensus standards, NFPA 70, NFPA 72, ANSI/ASME A17.1
- Shunt trip capability
- Fire safety signal interface
- Shunt trip voltage monitoring
- Component protection with Low-Peak™ Class J fuses
- Lockable in the open position with three-lock capability
- Optional key-test switch and optional pilot light for easy inspection
- No annual calibration or testing of overcurrent protection required
- Padlockable for service-work safety and open-door "override" for troubleshooting



PS† Power Module Switch for single elevator applications.

PMP† Power Module Panel for multiple elevator applications.

† Fused main disconnect requires Class J fuses, not supplied with switch.

Typical applications

- Elevator disconnects
- Computer room shunt trip disconnect
- Fire safety interface relay

Accessories

- For added safety, use the Bussmann series SAMI™ fuse covers to improve maintenance personnel protection (OSHA 1910.333, paragraph C)

Ordering

- The Quik-Spec Power Module Switch and Panel are factory configured. To place your order, have all relevant electrical and circuit information contact your Bussmann series product representative.

Data sheet no. 1145 (switch) 1146 (panel)

Hydraulic elevators

Hydraulic elevators need battery backup to help prevent stranding passengers. To keep the elevator from moving when it's been manually shut down for maintenance, the NEC requires battery backup be connected to the elevator disconnecting means through an auxiliary contact.

However, an unintended consequence can be passengers getting stranded because of devices that open automatically (circuit breakers and disconnects utilizing a molded case switch with a trailing fuse block) will operate with a fault on their loadside. That operation also disables the battery backup and strands passengers. That's why the Power Module has a non-automatic fusible shunt trip switch. If the Power Module has a fault on its loadside, the fuses open and the battery stays enabled. Thus the Power Module ensures that battery power is enabled when the passengers need it to exit - and disabled to allow safe maintenance of the elevator and hoistway.

Scenario	Battery lowering required	Reason	Offered by Power Module	Offered by other elevator disconnects
Power failure	Yes	Need to lower elevator and allow passengers to exit.	Yes	Yes
Fire in shaft or machine room	No	Recall is initiated by smoke detector and lowers elevator to a safe floor. Battery not needed.	Yes	Yes
Disconnect manually opened	No	Worker to perform maintenance. Elevator must remain stationary to prevent injury.	Yes	Yes
Fault on loadside of disconnect	Yes	Need to lower elevator and allow passengers to exit.	Yes	No

Power Module Switch catalog number system

To order, use this build-a-code to specify your Power Module switch.

PS 1 T48 R1 K G N1 B F1 U

PS = Power Module Switch

Amp rating†

- 3 = 30, 6 = 60, 1 = 100
  2 = 200, 4 = 400

Control transformer*†

- T20 = 208 V, T24 = 240 V
  T48 = 480 V, T60 = 600 V

Fire safety interface relay (3PDT, 10A, 12V)†

- R1 = 120 Vac coil,
  R2 = 24 Vdc coil

Optional key test switch

- K = Key

Optional pilot light ON

- G = Green, R = Red
  W = White

Optional neutral lug††

- N6 = 30-60 A, N1 = 100 A
  N2 = 200 A, N4 = 400 A

Auxiliary contacts†

- B = 2 NO/NC

Fire alarm voltage monitoring relay (to monitor shunt trip voltage)

- F1 = Single-pole,
  F3 = Three-pole**

Optional NEMA enclosures (Type 1 standard with no suffix designation required)

- U = Type 3R, Y = Type 4,
  Z = Type 12

* 100 Va with primary and secondary fusing (120 V secondary).
** Only for use with R1 option.
† Required equipment.
†† Neutral lug rating should be equal to or greater than the switch amp rating.

QuikShip service program, 3 days for switches and 10 days for panels!

Ship-direct service within three business days for Power Module switches (PS_) and 10 business days for Power Module panels (PMP_).

Power Module switch*			Power Module panel**	
Catalog no.	Amps	Volts	Catalog no.	Amps
PS6T48R1KGBF3-X	60	480	PMP-400-X	400
PS1T48R1KGBF3-X	100	480	PMP-600-X	600
PS1T20R1KGBF3-X	100	208	PMP-800-X	800
PS2T48R1KGBF3-X	200	480		
PS2T20R1KGBF3-X	200	208		

* Three day PS_ shipment requires ordering from catalog numbers shown.
** 10 day PMP_ shipment covers NEMA 1 enclosures with the ampacities shown and all requirements for relay type (AC or DC), accessory options and number of switches. To order PMP_, contact your Bussmann series product representative with all relevant electrical and circuit information. We do the rest.

Data sheet no. 1145 (switch) 1146 (panel)

Fused and non-fused DC safety switch

The Bussmann series flange handle operated DC safety switch is available in fused and non-fused versions in ratings from 30 to 200 amps, up to 600 Vdc. The three-pole switch is factory configured so that the load make/break is distributed across all three blades. The fused versions accept 600 volt UL Class R fuses. The clear polycarbonate deadfront enhances electrical safety and provided a means for visual confirmation of switch status.

Ratings

- Volts 600 Vdc
- Amps 30, 60, 100, 200
- SCCR
  - Fused version:
    - 20 kA DC (20-60 A)
    - 10 kA DC (70-200 A)
  - Non-fused version 10 kA DC

Agency information

- Meets UL and NEC requirements, NEC 690.17 compliant label warns that the switch terminals may be energized in the open position

Enclosures

- NEMA 3R
- NEMA 12
- NEMA 4X stainless

Features

- High visibility, padlockable handle is easy to operate with gloves and accommodates up to three padlocks to protect maintenance personnel, while door interlock prevents opening door while energized, but can be manually overridden for testing or inspection
- Clear deadfront helps protect against electrical hazards (lineside stays in place during fuse servicing) permits viewing the switch contacts provide positive visual identification of switch status
- Fused versions have fuse clips on switch center pole to ensure both are de-energized in OFF position. Meets NEC Article 690.16 that requires isolating the fuse from all potential supply sources.

DC safety switch catalog number system

To order, use this build-a-code to specify your DC safety switch.

BD 1 6 1 F R

BD = Heavy duty DC safety switch

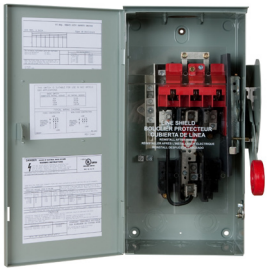
Poles
- 1 = 1-pole

Volts
- 6 = 600 Vdc

Amps
- 1 = 30, 2 = 60, 3 = 100, 4 = 200

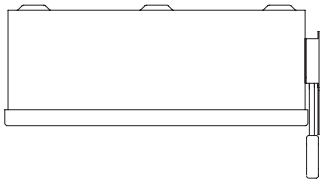
Switch type
- F = Fused with neutral, N = Non-fused with neutral

Enclosure type
- R = NEMA 3R, D = NEMA 12, W = NEMA 4X stainless

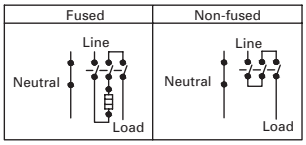


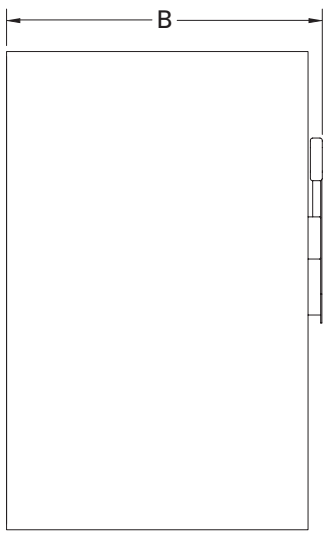
Dimensions (in) and conductors

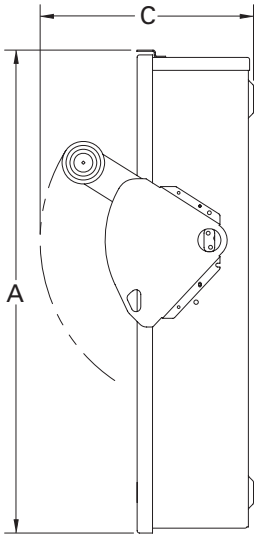
Amps	A	B	C	Main lug capacity (Cu/Al AWG)	Neutral lug capacity (Cu/Al AWG)	I_{sc}
NEMA 3R						
30	16.35	8.87	9.89	2-14	4-14	19.2
60						38.4
100	22.15	11.84		1/0-14		64.0
200	28.27	16.66	11.26	250kcmil - 6	2-14	128.0
NEMA 12 and 4X						
Non-fusible 30 and 60	14.14	8.76	10.22	2-14	4-14	19.2
Fusible 30 and 60	19.08					
100	24.95	11.79		1/0-14		64.0
200	35.38	16.95	11.63	250kcmil - 6	2-14	128.0



Wiring diagram







CUBEFuse™ safety switch

The CUBEFuse™ Safety Switch uses the finger-safe CUBEFuse to provide greater electrical safety. The Bussmann series UL Class CF time-delay and fast-acting CUBEFuse is available in ratings from 1 to 100 amps. The current limiting operation helps mitigate incident energy and arc flash hazard, and offers excellent component protection. The holders of this safety switch will accept any CUBEFuse up to the holder's amp rating (e.g., a 60 amp holder will hold from 1 to 60 amp fuses).

Ratings

- Volts
  - 600 Vac
  - 250 Vdc
- Amps 30, 60 or 100 A
- SCCR
  - 200 kA AC (30 and 60 A)
  - 200 kA AC (100 A NEMA 1, 3R, 4X and 12 @ 480 Vac)
  - 200 kA AC (100 A NEMA 4X and 12 @ 600 Vac)
  - 100 kA AC (100 A NEMA 1 and 3R @ 600 Vac)
  - 10 kA DC (30, 60 and 100 A)

Agency information

- UL Listed, File E5239-G
- cUL Listed to C22.2 No.4-M89
- UL 98 standard for enclosed deadfront switches
- UL 50 standard for enclosures for electrical equipment
- NEMA KS 1

Features

- Extended line terminal shield and finger-safe 30, 60, or 100 A Bussmann series CUBEFuse
- Up to a 200 kA short-circuit current rating
- Visible double break quick-make, quick-break rotary blade mechanism
- Triple padlocking capability
- Mechanically interlocked door

Options

- Viewing window for visible blades and open fuse indication
- Neutral kits when used for service equipment. Order catalog number DH030NKB (30 and 60 A switches) or DH100NKB (100 A switch).
- Auxiliary contacts. Order catalog number DS200EK1B (1NO/1NC) or DS200EK2B (2NO/2NC).

CUBEFuse safety switch catalog number system

To order, use this build-a-code to specify your CUBEFuse safety switch.

CF 3 6 1 F G K W

CF = CUBEFuse, heavy duty

Poles
- 3 = 3-pole

Volts
- 6 = 600 Vac

Amps
- 1 = 30 A, 2 = 60 A, 3 = 100 A

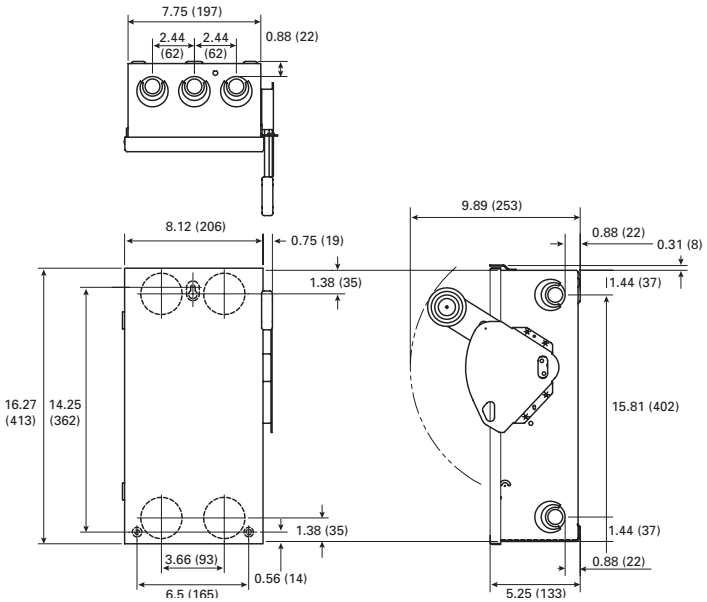
Type
- F = fused

Enclosure
- G = NEMA 1, R = NEMA 3R, D = NEMA 12, W = NEMA 4X stainless

Switch
- K = Switch

Viewing window
- W = with window, Blank = no window

Dimensions for 30/60 A NEMA 1/3R enclosures — in (mm)*



* See data sheet 1156 for all 4X and 12, and 100 amp 1 and 3R dimensions and maximum horsepower ratings.

Fused and non-fused HVAC disconnects

Fused and non-fused pullout HVAC disconnects in NEMA 3R enclosures. Fused versions are available in 30 and 60 amp ratings with or without self-testing GFCI receptacles. Non-fused versions are available in 60 amp versions with or without self-testing GFCI receptacles.

Fused disconnect

Non-fused disconnect

Non-fused disconnect with GFCI receptacle

Ratings

- Volts
  - 120 Vac single-phase
  - 240 Vac split-phase
- Amps 30 or 60 A

Agency Information

- UL Listed to UL 1429, cUL Certified, UL Guide WGEW

Conductors - AWG

- 14-3 Cu/Al

Enclosure

- Metallic NEMA 3R housing with weather resistant coating

Dimensions

- See catalog numbers table

Features

- A/C disconnects meet NEC Code requirements under article 440.14
- Self-testing GFCI units meet NEC Code requirements under articles 210.63, 210.8, and 406.8(B)(1)
- NEMA 3R enclosures withstand outdoor environment
- Padlockable with two-position pullout handle to lock safety shield when in the ON position. (Not available on GFCI or 60 A switched units.) For added safety, pullout handle can be stored in the compartment in the OFF position

Typical applications

- Residential, light industrial/commercial A/C and heat pump service
- Spas/whirlpools, swimming pools, pump houses
- Suitable for service entrance equipment applications with field installed ground bar — order catalog number DPFG

Catalog no.	Description	Amp rating	Max Hp rating 120 V	Max Hp rating 240 V	Fuse class	Approximate dimensions (in) Height	Width	Depth
Fused disconnects								
B221-30F	Pullout disconnect	30	1.5	3	H or R	8-3/4	5-3/8	2-7/8
B221-30FGFST	Pullout disconnect with GFCI					13	7-1/2	4-3/4
B221-30FGFWTST	Pullout disconnect with weather-resistant/tamper-resistant rated GFCI							
B222-60F	Pullout disconnect	60	3	10	H or R	8-3/4	5-3/8	2-7/8
B222-60FGFST	Pullout disconnect with GFCI					13	7-1/2	4-3/4
B222-60FGFWTST	Pullout disconnect with weather-resistant/tamper-resistant rated GFCI							
Non-fused disconnects								
B222-60NF	Pullout disconnect	60	3	10	*	8-3/4	5-3/8	2-7/8
B222-60NFGFST	Pullout disconnect with GFCI					11-3/4	6-1/2	4-1/2
B222-60NFGFWTST	Pullout disconnect with weather-resistant/tamper-resistant rated GFCI							
B222-60NFNA	Disconnect switch		—			8-3/4	5-3/8	3-5/8

* Upstream overcurrent protective device (OPCD) not to exceed 60 A.

For a 30 and 60 amp pullout replacement handle, order catalog number 96-3258-4.

Recommended Bussmann series fuses

Fuse class	Catalog symbol	Operation	Available amps	Data sheet no.
H	NON-(amp)	One time, general purpose	Up to 60	1030
R	FRN-R-(amp)	Dual element, time-delay	Up to 60	1019
	LPN-RK-(amp)SP (non-indicating)			1003
	LPN-RK-(amp)SPI (indicating		35 to 60	1003

Data sheet no. 1143