Pow-R-Stock*Plus* quick selector reference guide

Frequently used distribution and control products available from distributor stock

Powering Business Worldwide

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Pow-R-Stock panelboards

Safety switches/ disconnects

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Questions to ask

Step 1

Select an interior

Q What is your voltage?

A
— 120/240 V single-phase, three-wire
— 208Y/120 V three-phase, four-wire
— 480Y/277 V three-phase, four-wire

Q What is your busbar rating?

A
— 100 A (aluminum or copper)
— 225 A (aluminum or copper)
— 400 A (aluminum or copper)
— 600 A (aluminum or copper)

Q What is the number of branch circuits/poles?

A
— 18
— 30
— 42

Step 2

Enclosure type

Q What enclosure is required?

A
— NEMA® 1 indoor
— NEMA 3R outdoor

Step 3

Trim type

Q For NEMA 1 indoor panels, will the panel be mounted recessed in the wall or mounted directly to the wall?

A
— Flush
— Surface

Step 4

Q What is the cable entry locations for the incoming feeder?

A
— Top
— Bottom

Step 5

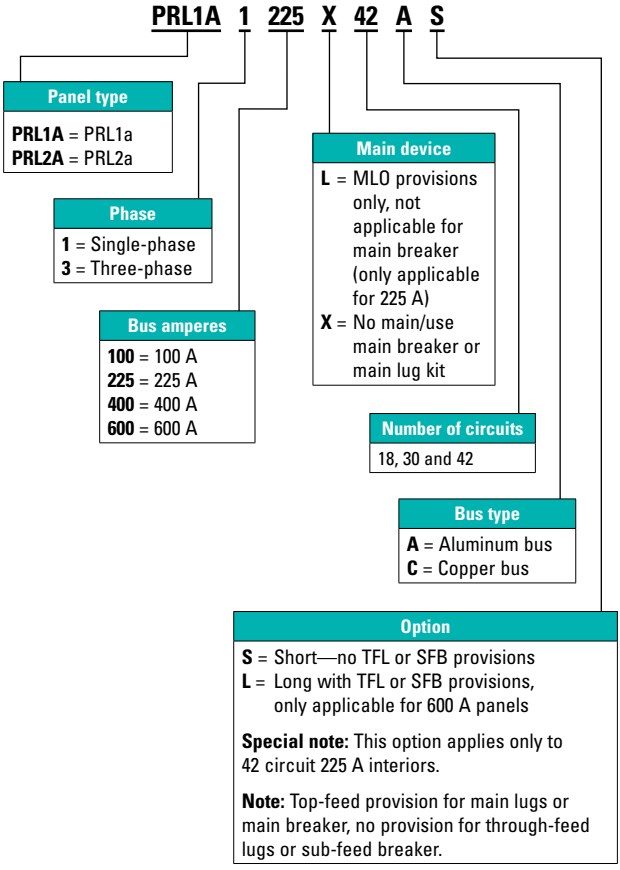
Main device

Q Main lugs only (MLO) or main circuit breaker?

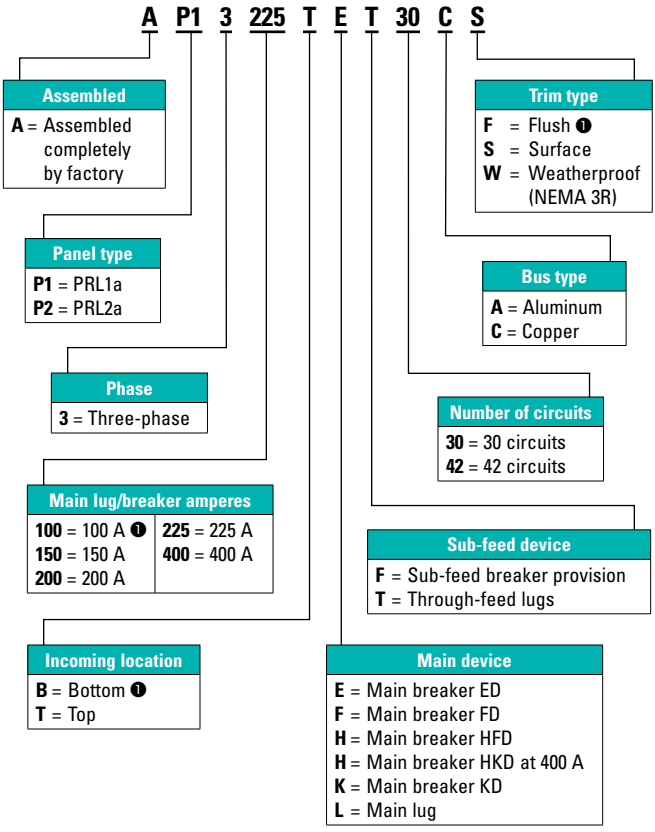
A
— MLO
— MCB (choose amperage and top or bottom)

Pow-R-Stock panelboards (unassembled)

Catalog numbering system—
Pow-R-Stock panelboard interiors



Catalog numbering system—
EZ Panel factory-assembled stock panelboards



❶ These items are not part of the initial launch. Please consult VISTA or your Eaton sales engineer for product availability.

Notes: Not all combinations may be valid. Please verify availability of catalog number created. Refer to PA014007EN for more information on the EZ Panel.

Pow-R-Stock panelboards—EZ™ Boxes and EZ Trims

Ampere rating	Max. number of poles	Capability: Main lugs	Main breaker	Through-feed lugs	Sub-feed breaker (225 A max.)	Catalog numbers: Interiors (less main device) Aluminum bus
Single-phase, three-wire 120/240 Vac						
100	18	■	■	■	N/A	**PRL1A1100X18A**
100	30	■	■	■	100	**PRL1A1100X30A**
100	42	■	■	■	N/A	**PRL1A1100X42A**
225	30	■	■	■	100, 125, 150, 175, 200, 225	**PRL1A1225X30A**
225	42	■	■	N/A	N/A	**PRL1A1225X42AS** ❶
225	42	■	■	■	100, 125, 150, 175, 200, 225	**PRL1A1225X42A**
400	42	■	■	N/A	N/A	**PRL1A1400X42AS** ❶
400	42	■	■	■	100, 125, 150, 175, 200, 225	**PRL1A1400X42A**
600	42	■	■	■	N/A	
600	42	■	■	■	100, 125, 150, 175, 200, 225, 250, 300, 350, 400	
Three-phase, four-wire 208Y/120 Vac						
100	18	■	■	■	N/A	**PRL1A3100X18A**
100	30	■	■	■	100	**PRL1A3100X30A**
100	42	■	■	■	N/A	**PRL1A3100X42A**
225	30	■	■	■	100, 125, 150, 175, 200, 225	**PRL1A3225X30A**
225	42	■	N/A	N/A	N/A	**PRL1A3225L42AS** ❶
225	42	■	■	N/A	N/A	**PRL1A3225X42AS** ❶
225	42	■	■	■	100, 125, 150, 175, 200, 225	**PRL1A3225X42A**
400	42	■	■	N/A	N/A	**PRL1A3400X42AS** ❶
400	42	■	■	■	100, 125, 150, 175, 200, 225	**PRL1A3400X42A**
600	42	■	■	■	N/A	
600	42	■	■	■	100, 125, 150, 175, 200, 225, 250, 300, 350, 400	
Three-phase, four-wire 480Y/277 Vac						
100	18	■	■	■	N/A	**PRL2A3100X18A**
100	30	■	■	■	100	**PRL2A3100X30A**
100	42	■	■	■	N/A	**PRL2A3100X42A**
225	30	■	■	■	100, 125, 150, 175, 200, 225	**PRL2A3225X30A**
225	42	■	N/A	N/A	N/A	**PRL2A3225L42AS** ❶
225	42	■	■	N/A	N/A	**PRL2A3225X42AS** ❶
225	42	■	■	■	100, 125, 150, 175, 200, 225	**PRL2A3225X42A**
400	42	■	■	N/A	N/A	**PRL2A3400X42AS** ❶
400	42	■	■	■	100, 125, 150, 175, 200, 225	**PRL2A3400X42A**
600	42	■	■	■	N/A	
600	42	■	■	■	100, 125, 150, 175, 200, 225, 250, 300, 350, 400	

❶ S = Short—no TFL or SFB provisions.

	Boxes	Trims (NEMA 1)		
Copper bus	NEMA 1	Surface	Flush	NEMA 3R enclosures
PRL1A1100X18C	EZB2036R	EZT2036S	EZT2036F	GWPBQ2036PR
PRL1A1100X30C	EZB2048R	EZT2048S	EZT2048F	GWPBQ2048PR
PRL1A1100X42C	EZB2048R	EZT2048S	EZT2048F	GWPBQ2048PR
PRL1A1225X30C	EZB2048R	EZT2048S	EZT2048F	GWPBQ2048PR
PRL1A1225X42CS ❶	EZB2048R	EZT2048S	EZT2048F	GWPBQ2048PR
PRL1A1225X42C	EZB2060R	EZT2060S	EZT2060F	GWPBQ2060PR
PRL1A1400X42CS ❶	EZB2060R	EZT2060S	EZT2060F	GWPBQ2060PR
PRL1A1400X42C	EZB2072R	EZT2072S	EZT2072F	GWPBQ2072PR
PRL1A1600X42C	EZB2072R	EZT2072S	EZT2072F	GWPBQ2072PR
PRL1A1600X42CL	EZB2090R	EZT2090S	EZT2090F	GWPBQ2090PR
PRL1A3100X18C	EZB2036R	EZT2036S	EZT2036F	GWPBQ2036PR
PRL1A3100X30C	EZB2048R	EZT2048S	EZT2048F	GWPBQ2048PR
PRL1A3100X42C	EZB2048R	EZT2048S	EZT2048F	GWPBQ2048PR
PRL1A3225X30C	EZB2048R	EZT2048S	EZT2048F	GWPBQ2048PR
PRL1A3225L42CS ❶	EZB2042R	EZT2042S	EZT2042F	GWPBQ2042PR
PRL1A3225X42CS ❶	EZB2048R	EZT2048S	EZT2048F	GWPBQ2048PR
PRL1A3225X42C	EZB2060R	EZT2060S	EZT2060F	GWPBQ2060PR
PRL1A3400X42CS ❶	EZB2060R	EZT2060S	EZT2060F	GWPBQ2060PR
PRL1A3400X42C	EZB2072R	EZT2072S	EZT2072F	GWPBQ2072PR
PRL1A3600X42C	EZB2072R	EZT2072S	EZT2072F	GWPBQ2072PR
PRL1A3600X42CL	EZB2090R	EZT2090S	EZT2090F	GWPBQ2090PR
PRL2A3100X18C	EZB2036R	EZT2036S	EZT2036F	GWPBQ2036PR
PRL2A3100X30C	EZB2048R	EZT2048S	EZT2048F	GWPBQ2048PR
PRL2A3100X42C	EZB2048R	EZT2048S	EZT2048F	GWPBQ2048PR
PRL2A3225X30C	EZB2048R	EZT2048S	EZT2048F	GWPBQ2048PR
PRL2A3225L42CS ❶	EZB2042R	EZT2042S	EZT2042F	GWPBQ2042PR
PRL2A3225X42CS ❶	EZB2048R	EZT2048S	EZT2048F	GWPBQ2048PR
PRL2A3225X42C	EZB2060R	EZT2060S	EZT2060F	GWPBQ2060PR
PRL2A3400X42CS ❶	EZB2060R	EZT2060S	EZT2060F	GWPBQ2060PR
PRL2A3400X42C	EZB2072R	EZT2072S	EZT2072F	GWPBQ2072PR
PRL2A3600X42C	EZB2072R	EZT2072S	EZT2072F	GWPBQ2072PR
PRL2A3600X42CL	EZB2090R	EZT2090S	EZT2090F	GWPBQ2090PR

Note: The colors shown in the tables correspond to the color coding on the trim, interior and box product packaging labels. Be sure that all three parts match when delivering to your customer.

Note: Distributors can purchase boxes in quantities via the Distributor toolbox.

Branch circuit breakers

Summary of branch breakers available

Breaker	No. of poles	Ampere rating	Voltage	kAIC rating	Example	Panel type
BAB ❶❷	1	15–70	120	10	**BAB1020**	PRL1a
	2	15–100	120/240	10	**BAB2020**	PRL1a
	2	15–100	240	10	**BAB2040H**	PRL1a
	3	15–100	240	10	**BAB3030H**	PRL1a
QBAF	1	15–20	120	10	**QBAF1020**	PRL1a
QBHAF	1	15–20	120	22	**QBHAF1020**	PRL1a
QBCAF	1	15–20	120	10	**QBCAF1020**	PRL1a
QBHCAF	1	15–20	120	22	**QBHCAF1020**	PRL1a
QBGFT	1	15–40	120	10	**QBGFT1020**	PRL1a
	2	15–50	120/240	10	**QBGFT2040**	PRL1a
QBHGFT	1	15–30	120	22	**QBHGFT1020**	PRL1a
	2	15–30	120/240	22	**QBHGFT2020**	PRL1a
QBGFEP	1	15–40	120	10	**QBGFEP1020**	PRL1a
	2	15–50	120/240	10	**QBGFEP2020**	PRL1a
QBHGFEP	1	15–30	120	22	**QBHGFEP1020**	PRL1a
	2	15–30	120/240	22	**QBHGFEP2020**	PRL1a
QBHW ❶	1	15–70	120	22	**QBHW1020**	PRL1a
	2	15–100	120/240	22	**QBHW2020**	PRL1a
	2	15–100	240	22	**QBHW2040H**	PRL1a
	3	15–100	240	22	**QBHW3030H**	PRL1a
GHQ ❶	1	15–20	277	14	**GHQ1020**	PRL2a
GHB ❶❷	1	15–100	277	14	**GHB1020**	PRL2a
	2	15–100	480Y/277	14	**GHB2040**	PRL2a
	3	15–100	480Y/277	14	**GHB3060**	PRL2a

❶ BAB, QBHW, GHQ and GHB breakers installed in PRL1a and PRL2a are available with shunt trip, i.e., BAB1020S.

❷ BAB-H and GHB 50–100 A available as chassis-mounted main device.

Universal main circuit breaker kits—top or bottom mounting

Kits—main circuit breaker (includes circuit breaker and terminals)

Max. volt.	Ampere rating	Service	Breaker frame	Mounting location	Wire range Al/Cu (in kcmil)	Catalog number
240 Vac	100	Single- or three-phase	ED	Universal	(1) #14–1/0	**BKED100**
	125	Single- or three-phase	ED	Universal	(1) #4–4/0	**BKED125**
	150	Single- or three-phase	ED	Universal	(1) #4–4/0	**BKED150**
	175	Single- or three-phase	ED	Universal	(1) #4–4/0 ❶	**BKED175**
	200	Single- or three-phase	ED	Universal	(1) #4–4/0 ❶	**BKED200**
	225	Single- or three-phase	ED	Universal	(1) #4–4/0 ❶	**BKED225**
480 Vac	100	Single- or three-phase	FD	Universal	(1) #14–1/0	**BKFD100**
	110	Single- or three-phase	FD	Universal	(1) #4–4/0	**BKFD110**
	125	Single- or three-phase	FD	Universal	(1) #4–4/0	**BKFD125**
	150	Single- or three-phase	FD	Universal	(1) #4–4/0	**BKFD150**
	175	Single- or three-phase	FD	Universal	(1) #4–4/0 ❶	**BKFD175**
	200	Single- or three-phase	FD	Universal	(1) #4–4/0 ❶	**BKFD200**
	225	Single- or three-phase	FD	Universal	(1) #4–4/0 ❶	**BKFD225**
480 Vac	100	Single- or three-phase	HFD	Universal	(1) #14–1/0	**BKHFD100**
	110	Single- or three-phase	HFD	Universal	(2) #4–4/0	**BKHFD110**
	125	Single- or three-phase	HFD	Universal	(2) #4–4/0	**BKHFD125**
	150	Single- or three-phase	HFD	Universal	(2) #4–4/0	**BKHFD150**
	175	Single- or three-phase	HFD	Universal	(2) #4–4/0	**BKHFD175**
	200	Single- or three-phase	HFD	Universal	(2) #4–4/0	**BKHFD200**
	225	Single- or three-phase	HFD	Universal	(2) #4–4/0	**BKHFD225**
480 Vac	250	Single- or three-phase	KD	Universal	(1) 250–500	**BKKD250**
	300	Single- or three-phase	KD	Universal	(1) 250–500	**BKKD300**
	350	Single- or three-phase	KD	Universal	(1) 250–500	**BKKD350**
	400	Single- or three-phase	KD	Universal	(2) 3/0–250 or (1) 3/0–500	**BKKD400**

❶ Order optional lug kit catalog no. 3TA225FDK for 175–225 A ED- and FD-Frame three-pole circuit breakers to provide terminations for (1) #6–300 kcmil.

Note: KD kits are to be used on 400 A and 600 A panels only.

Universal main circuit breaker kits—top or bottom mounting

Kits—main circuit breaker (includes circuit breaker and terminals)

Max. volt.	Ampere rating	Service	Breaker frame	Mounting location	Wire range Al/Cu (in kcmil)	Catalog number
480 Vac	250	Single- or three-phase	HKD	Universal	(1) 250–500	**BKHKD250**
	300	Single- or three-phase	HKD	Universal	(1) 250–500	**BKHKD300**
	350	Single- or three-phase	HKD	Universal	(1) 250–500	**BKHKD350**
	400	Single- or three-phase	HKD	Universal	(1) 250–500	**BKHKD400**
480 Vac	400	Single- or three-phase	LG	Universal	(1) #2–500	**BKLGE400**
	500	Single- or three-phase	LG	Universal	(2) #2–500	**BKLGE500**
	600	Single- or three-phase	LG	Universal	(2) #2–500	**BKLGE600**

Lug kits and accessories

Standard main/sub-feed breaker lug capacities

Ampere rating	Lug wire range Al/Cu
100	(1) #14–1/0
125–225	(1) #4–4/0
250–350	(1) 250–500 kcmil
400	(2) 3/0–250 kcmil or (1) 3/0–500 kcmil

Main/through-feed lug kits

Ampere rating	Wire range Al/Cu	Catalog number
100	(1) #14–1/0	**LUGKIT100**
225	(1) #6–300 kcmil	**LUGKIT225**
400	(2) #2–500 kcmil	**LUGKIT400**
600	(2) #2–500 kcmil	**LUGKIT600**

Kits

	Catalog number		
Description	**100 A**	**225 A**	**400/600 A**
Service entrance kit—MLO	**SEK1/2** ❶	**SEK1/2** ❶	**SEK4/6** ❶
Service entrance kit—MCB	**SEKB** ❷❹ **SEKG** ❸❹	**SEKF** ❹❺	**SEKKL** ❹❻
200% neutral kit	**2NK100**	**2NK225**	**1NK400**
Sub-feed breaker adapter (used to mount 225 A sub-feed breaker in 400 A panels)	—	—	**225ASFBKIT**
Sub-feed breaker adapter (used to mount 225 A sub-feed breaker in 600 A panels)	—	—	**225BSFBKIT**
Sub-feed breaker adapter (used to mount 400 A sub-feed breaker in 600 A panels)	—	—	**400ASFBKIT**

❶ Applicable for use with MLO, SE panels only.

❷ Only applicable for SE PRL1a with chassis-mounted BAB, QBH main breaker.

❸ Only applicable for SE PRL2a with chassis-mounted GHB main breaker.

❹ Main breaker panels only—includes barrier kit and bonding jumper.

❺ To be used with F-frame main breaker.

❻ To be used with K- and L-frame main breaker.

Accessories

Description	Catalog number
Isolated ground bar kit	**ISOGROUND**
Copper ground bar kit	**CUGROUND**
1P filler plate ❶	**5155C62H01**
Series rating kit ❷	**SRK**

❶ Each PRS panel comes with 50% filler plates, e.g., 18 circuit interior contains 9 filler plates.

❷ Series rating kit includes series rating book and adhesive sleeve and series rating sticker. If panelboard is being series rated higher than the base rating, an SRK is required.

Questions to ask

Step 1

Q Which type of switch do you need?

A
— Heavy-duty (DH)
— General-duty (DG)
— Double-throw (DT)

Step 2

Q What current (ampere) rating do you need?

A — 30, 60, 100, 200, 400, 600, 800, 1200

Step 3

Q Should it be fused, non-fused or fusible with neutral?

A
— F = Fusible without neutral
— U = Non-fusible
— N = Fusible with neutral

Step 4

Q How many poles?

A — 1, 2, 3, 4, 6

Step 5

Q Choose the maximum circuit voltage.

A
— 240 Vac
— 600 Vac

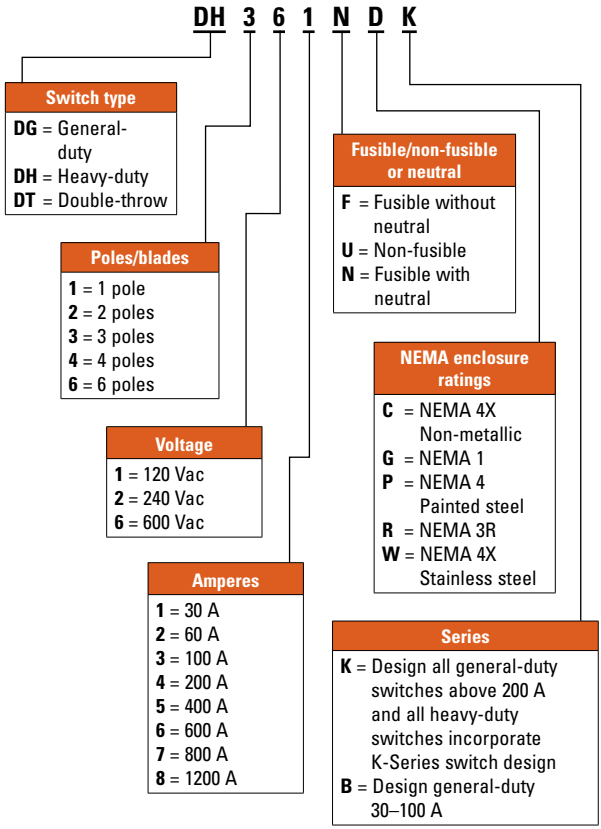
Step 6

Q What type of enclosure do you need?

A
— NEMA 1
— NEMA 3R
— NEMA 12
— NEMA 4 painted steel
— NEMA 4X stainless steel
— NEMA 4X non-metallic

Safety switches/ disconnects

Catalog numbering system—safety switches



General-duty safety switches (disconnects)

Two-pole—240 Vac (suitable for service entrance use with a neutral or ground kit)

Current rating (amps)	Type	Enclosure type	Max. hp ratings Single-phase 120 Vac	Single-phase 240 Vac	Catalog number
30	Fusible with neutral	NEMA 1		1.5–3	**DG221NGB**
30	Non-fusible	NEMA 1	2	3	**DG221UGB**
30	Fusible with neutral	NEMA 3R		1.5–3	**DG221NRB**
30	Non-fusible	NEMA 3R	2	3	**DG221URB**
60	Fusible with neutral	NEMA 1		3–10	**DG222NGB**
60	Non-fusible	NEMA 1	3	10	**DG222UGB**
60	Fusible with neutral	NEMA 3R		3–10	**DG222NRB**
60	Non-fusible	NEMA 3R	1	10	**DG222URB**
100	Fusible with neutral	NEMA 1		7.5–15	**DG223NGB**
100	Non-fusible	NEMA 1		15	**DG223UGB**
100	Fusible with neutral	NEMA 3R		7.5–15	**DG223NRB**
100	Non-fusible	NEMA 3R		15	**DG223URB**

Three-pole—240 Vac (suitable for service entrance use with a neutral or ground lug kit)

Current rating (amps)	Type	Enclosure type	Max. hp ratings ❶ Single-phase 240 Vac	Three-phase 240 Vac	Catalog number
30	Fusible with neutral	NEMA 1	1.5–3	3–7.5	**DG321NGB**
30	Non-fusible	NEMA 1	3	7.5	**DG321UGB**
30	Fusible with neutral	NEMA 3R	1.5–3	3–7.5	**DG321NRB**
30	Non-fusible	NEMA 3R	3	7.5	**DG321URB**
60	Fusible with neutral	NEMA 1	3–10	7.5–15	**DG322NGB**
60	Non-fusible	NEMA 1	10	15	**DG322UGB**
60	Fusible with neutral	NEMA 3R	3–10	7.5–15	**DG322NRB**
60	Non-fusible	NEMA 3R	10	15	**DG322URB**
100	Fusible with neutral	NEMA 1	7.5–15	15–30	**DG323NGB**
100	Non-fusible	NEMA 1	15	30	**DG323UGB**
100	Fusible with neutral	NEMA 3R	7.5–15	15–30	**DG323NRB**
100	Non-fusible	NEMA 3R	15	30	**DG323URB**

❶ Maximum hp ratings for fusible units apply only when dual element time-delay fuses are used.

Neutral and ground lug kits

Description	Catalog number
Neutral kit for 30 A switches	**DG030NB**
Neutral kit for 60–100 A switches	**DG100NB**
Ground lug kit for 30–100 A switches	**DG030GB**

Class R fuse adapter kits

Ampere rating	Type	Voltage	Catalog number
30	General-duty	240	**DG30RB**
60	General-duty	240	**DS16FK**
100	General-duty	240	**DG100RB**

Heavy-duty safety switches (disconnects)

Three-pole—480–600 Vac (suitable for service entrance use with a neutral or ground lug kit below)

Current rating (amps)	Type	Enclosure type	Max. hp ratings				Catalog number
			Single-phase		Three-phase		
			480 V	600 V	480 V	600 V	
30	Fusible	NEMA 1	7.5	15	10	20	**DH361FGK** ❶
30	Non-fusible	NEMA 1	7.5	15	10	20	**DH361UGK**
30	Fusible	NEMA 3R	7.5	15	10	20	**DH361FRK** ❶
30	Non-fusible	NEMA 3R	7.5	15	10	20	**DH361URK**
30	Fusible	NEMA 4X	7.5	10	15	20	**DH361FWK** ❶
30	Non-fusible	NEMA 4X	7.5	10	20	30	**DH361UWK**
60	Fusible	NEMA 1	20	30	25	50	**DH362FGK**
60	Non-fusible	NEMA 1	20	30	25	50	**DH362UGK**
60	Fusible	NEMA 3R	20	30	25	50	**DH362FRK**
60	Non-fusible	NEMA 3R	20	30	25	50	**DH362URK**
60	Fusible	NEMA 4X	20	25	30	50	**DH362FWK**
60	Non-fusible	NEMA 4X	20	25	50	60	**DH362UWK**
100	Fusible	NEMA 1	30	60	40	75	**DH363FGK**
100	Non-fusible	NEMA 1	30	60	40	75	**DH363UGK**
100	Fusible	NEMA 3R	30	60	40	75	**DH363FRK**
100	Non-fusible	NEMA 3R	30	60	40	75	**DH363URK**
100	Fusible	NEMA 4X	30	40	60	75	**DH363FWK**
100	Non-fusible	NEMA 4X	40	50	75	100	**DH363UWK**
200	Fusible	NEMA 1	50	125	50	150	**DH364FGK**
200	Non-fusible	NEMA 1	50	125	50	150	**DH364UGK**
200	Fusible	NEMA 3R	50	125	50	150	**DH364FRK**
200	Non-fusible	NEMA 3R	50	125	50	150	**DH364URK**
200	Fusible	NEMA 4X	50	50	125	150	**DH364FWK**
200	Non-fusible	NEMA 4X	50	50	125	125	**DH364UWK**

❶ For 30 A switches requiring Class J fusing, switch must be ordered with the Class J clips from the factory by adding a suffix "J" on the end.

Safety switch kits

Neutral and ground lug kits ❶

Description	Catalog number
Neutral kit for 30–60 A switches	**DH030NK**
Neutral kit for 100 A switches	**DH100NK**
Neutral kit for 200 A switches	**DG200NK**
Ground lug kit for 30–100 A switches	**DS100GK**
Ground lug kit for 200 A switches	**DS200GK**

❶ A factory-installed ground lug is supplied on all NEMA 4, 4X and 12 safety switches, as well as all 400 A and higher NEMA 1 and 3R safety switches. A factory-installed ground lug is also supplied on all heavy-duty NEMA 1 and 3R 30–200 A switches that do not have a factory installed neutral.

Class R fuse adapter kits

Ampere rating	Type	Voltage	Catalog number
30	Heavy-duty	600	**DS16FK**
60	Heavy-duty	600	**DS26FK**
100	Heavy-duty	600	**DS36FK**
200	Heavy-duty	600	**DS346FK**

Class J fuse adapter kit ❶

Ampere rating	Type	Voltage	Catalog number
60	Heavy-duty	600	**DS26JK**

❶ 30 A switches must be ordered from the factory with Class J fuse provisions by adding suffix "J" at the end of the switch catalog number. 100 A and 200 A switches can be field modified by moving the load side fuse base.

Questions to ask

Step 1

Q How many phases?

A — Single-phase
— Three-phase

Step 2

Q What type of enclosure is required?

A — Ventilated
— Encapsulated

Step 3

Q What is the primary voltage? (input voltage)

A — Single-phase is 240 V x 480 V
— Three-phase is 480 V delta (three-phase, three-wire)

Step 4

Q What is the secondary voltage? (output voltage)

A — Single-phase
— 120/240

— Three-phase
— 208Y/120 (three-phase, four-wire) or 240 V delta

Step 5

Q What kVA transformer is required?

A — If single-phase encapsulated, kVAs are:
0.05, 0.075, 0.1, 0.15, 0.25, 0.5, 0.75, 1,
1.5, 2, 3, 5, 7.5, 10, 15, 25, 37.5
— If single-phase ventilated, kVAs are:
15, 25, 37.5, 50, 75, 100, 167
— If three-phase encapsulated, kVAs are:
3, 6, 9, 15, 30, 45, 75
— If three-phase ventilated, kVAs are:
15, 30, 45, 75, 112.5, 150, 225, 300

Step 6

Q If a ventilated transformer was selected

A — Field kits: lug kits or weathershields
— Select from selection tables

Catalog numbering system—DOE 2016 ventilated transformers

V 48 M 28 T 75 16 _

Type
T = DS-3 (single-phase ventilated)
V = DT-3 (three-phase ventilated)

Primary voltage
20 = 240 x 480 ❶
48 = 480

Taps
D = 2@+2.5%, 2@–2.5%
G = 2@–5%
L = 2@–5%X 4@–2.5%
M = 2@+2.5%,4@–2.5%
N = None
P = 1@+5%, 2@–5%X ❶ 2@+2.5%,4@–2.5%

Secondary voltage
11 = 120/240 ❶
28 = 208Y/120
22 = 240 V delta with 120 V lighting tap

Phase
S = Single-phase
T = Three-phase

kVA

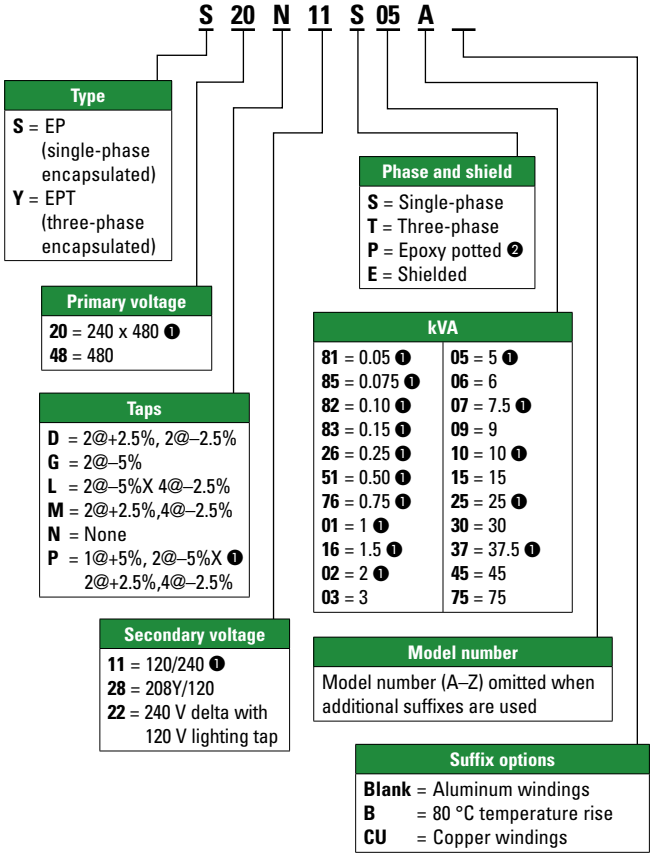
15 = 15	**50** = 50 ❶	**49** = 150
25 = 25 ❶	**75** = 75	**67** = 167 ❶
30 = 30	**99** = 100 ❶	**22** = 225
37 = 37.5 ❶	**12** = 112.5	**33** = 300
45 = 45		

DOE 10 CFR 431.2016
16 = DOE 2016 efficiency

Suffix options
Blank = Aluminum windings
CU = Copper windings
ES = Shielded

❶ Typically used with single-phase transformers.

Catalog numbering system—encapsulated transformers



❶ Typically used with single-phase transformers.

❷ Single-phase 0.25–2 kVA encapsulated transformers only.

General-purpose transformers

Three-phase ventilated, 480 delta—208Y/120, 150 °C rise, aluminum windings, DOE 2016

kVA	Frame number	Wiring diagram	Weathershield	Typical lug kit	Catalog number
15	939	280B	WS57	LKS1	**V48M28T1516** ❶
30	940	280B	WS58	LKS1	**V48M28T3016** ❶
45	940	280B	WS58	LKS1	**V48M28T4516** ❶
75	942	280B	WS59	LKS2	**V48M28T7516** ❷
112.5	943	280B	WS60	LKS2	**V48M28T1216** ❷
150	943	280B	WS60	LKS3	**V48M28T4916** ❷
225	944	280B	WS61	LKS3	**V48M28T2216**
300	945	280B	WS62	LKS3	**V48M28T3316**

❶ Suitable for use with wall-mounted bracket WMB05.

❷ Suitable for use with wall-mounted bracket WMB04.

Three-phase ventilated, 480 delta—240/120 lighting tap, 150 °C rise, aluminum windings, DOE 2016

kVA	Frame number	Wiring diagram	Weathershield	Typical lug kit	Catalog number
15	939	282B	WS57	LKS1	**V48M22T1516** ❶
30	940	282B	WS58	LKS1	**V48M22T3016** ❶
45	940	282B	WS58	LKS1	**V48M22T4516** ❶
75	942	282B	WS59	LKS2	**V48M22T7516** ❷
112.5	943	282B	WS60	LKS2	**V48M22T1216** ❷
150	943	282B	WS60	LKS3	**V48M22T4916** ❷
225	944	282B	WS61	LKS3	**V48M22T2216**
300	945	282B	WS62	LKS3	**V48M22T3316**

❶ Suitable for use with wall-mounted bracket WMB05.

❷ Suitable for use with wall-mounted bracket WMB04.

Three-phase encapsulated, 480 delta—208Y/120, 115 °C rise

kVA	Frame number	Wiring diagram	Catalog number
3	201	70A	**Y48G28T03N**
6	200	70A	**Y48G28T06N**
9	103	70A	**Y48G28T09N**
15	95	72B	**Y48D28T15N**
30	243	84A	**Y48M28T30N**
45	244	84A	**Y48M28T45N**
75	245	84A	**Y48M28T75N**

Note: For frame drawings and wiring diagrams, refer to www.eaton.com/transformers.

General-purpose transformers

Single-phase ventilated, 240 x 480—120/240, 150 °C rise, aluminum windings, DOE 2016

kVA	Frame number	Wiring diagram	Weathershield	Typical lug kit	Catalog number
15	842	3XA	WS45	LKS1	**T20P11S1516** ❶
25	842	3XA	WS45	LKS1	**T20P11S2516** ❶
37.5	843	3XA	WS43	LKS1	**T20P11S3716**
50	843	3XA	WS43	LKS2	**T20P11S5016**
75	844	3XA	WS44	LKS2	**T20P11S7516**
100	844	3XA	WS44	LKS3	**T20P11S9916**
167	814	288A	WS13	LKS3	**T48P11S6716** ❷

❶ Suitable for use with wall-mounted bracket WMB01.

❷ 480 V primary only.

Single-phase encapsulated 240 x 480—120/240, 115 °C rise

kVA	Frame number	Wiring diagram	Catalog number
0.05	52	3A	**S20N11S81N**
0.075	53	3A	**S20N11S85N**
0.1	54	3A	**S20N11S82N**
0.15	55	3A	**S20N11S83N**
0.25	57P	3A	**S20N11P26P**
0.5	57P	3A	**S20N11P51P**
0.75	58P	3A	**S20N11P76P**
1	67P	3A	**S20N11P01P**
1.5	67P	3A	**S20N11P16P**
2	68P	3A	**S20N11P02P**
3	176	3A	**S20N11S03N**
5	177	3A	**S20N11S05N**
7.5	178	3A	**S20N11S07N**
10	179	3A	**S20N11S10N**
15	180	3A	**S20N11S15N**
25	182	23A	**S20L11S25N**
37.5	300A	248A	**S20L11S37**

Note: For frame drawings and wiring diagrams, refer to www.eaton.com/transformers.

General-purpose transformers sizing tables

Three-phase transformer full load current

	Rated line–line voltage						
kVA	**208**	**240**	**480**	**600**	**2400**	**4160**	**4800**
3	8.3	7.2	3.6	2.9	0.7	0.4	0.4
6	16.7	14.4	7.2	5.8	1.4	0.8	0.7
9	25.0	21.7	10.8	8.7	2.2	1.2	1.1
15	41.6	36.1	18.0	14.4	3.6	2.1	1.8
30	83.3	72.2	36.1	28.9	7.2	4.2	3.6
45	124.9	108.3	54.1	43.3	10.8	6.2	5.4
75	208.2	180.4	90.2	72.2	18.0	10.4	9.0
112.5	312.3	270.6	135.3	108.3	27.1	15.6	13.5
150	416.4	360.9	180.4	144.3	36.1	20.8	18.0
225	624.6	541.3	270.6	216.5	54.1	31.2	27.1
300	832.7	721.7	360.9	288.7	72.2	41.6	36.1
500	1387.9	1202.8	601.4	481.1	120.3	69.4	60.1
750	2081.9	1804.3	902.1	721.7	180.4	104.1	90.2
1000	2775.8	2405.7	1202.8	962.3	240.6	138.8	120.3

Note: Line current = (kVA x 1000) / (line voltage x 1.732).

Single-phase transformer full load current

	Rated line–line voltage								
kVA	**120**	**208**	**240**	**277**	**480**	**600**	**2400**	**4160**	**4800**
0.5	4.2	2.4	2.1	1.8	1.0	0.8	0.2	0.1	0.1
1	8.3	4.8	4.2	3.6	2.1	1.7	0.4	0.2	0.2
1.5	12.5	7.2	6.3	5.4	3.1	2.5	0.6	0.4	0.3
2	16.7	9.6	8.3	7.2	4.2	3.3	0.8	0.5	0.4
3	25.0	14.4	12.5	10.8	6.3	5.0	1.3	0.7	0.6
5	41.7	24.0	20.8	18.1	10.4	8.3	2.1	1.2	1.0
7.5	62.5	36.1	31.3	27.1	15.6	12.5	3.1	1.8	1.6
10	83.3	48.1	41.7	36.1	20.8	16.7	4.2	2.4	2.1
15	125.0	72.1	62.5	54.2	31.3	25.0	6.3	3.6	3.1
25	208.3	120.2	104.2	90.3	52.1	41.7	10.4	6.0	5.2
37.5	312.5	180.3	156.3	135.4	78.1	62.5	15.6	9.0	7.8
50	416.7	240.4	208.3	180.5	104.2	83.3	20.8	12.0	10.4
75	625.0	360.6	312.5	270.8	156.3	125.0	31.3	18.0	15.6
100	833.3	480.8	416.7	361.0	208.3	166.7	41.7	24.0	20.8
167	1391.7	802.9	695.8	602.9	347.9	278.3	69.6	40.1	34.8
250	2083.3	1201.9	1041.7	902.5	520.8	416.7	104.2	60.1	52.1
333	2775.0	1601.0	1387.5	1202.2	693.8	555.0	138.8	80.0	69.4

Note: Line current = (kVA x 1000) / line voltage.

Questions to ask

Step 1

Q What type of enclosure do you need?

A
— NEMA 1 (general-duty)
— NEMA 3R (rain-tight)
— NEMA 12 (dust-tight)
— NEMA 4X (wash-down)

Step 2

Q What type of starter do you need?

A
— NEMA non-combination
— NEMA combination, non-fusible or fusible
— NEMA combination, breaker
— Lighting contactor

Step 3

Q What is the horsepower and voltage of the motor?
(Note: this will determine the NEMA starter size)

A
— Horsepower: 1, 5, 10, 25 hp etc.
— Motor voltage: 200, 230, 460, 575 V

Step 4

Q What is the control voltage for the coil?

A
— 120 Vac
— 240 Vac
— 480 Vac

Step 5

Q What size overload relay is needed?

A
— 1–5 FLA
— 4–20 FLA
— 9–45 FLA

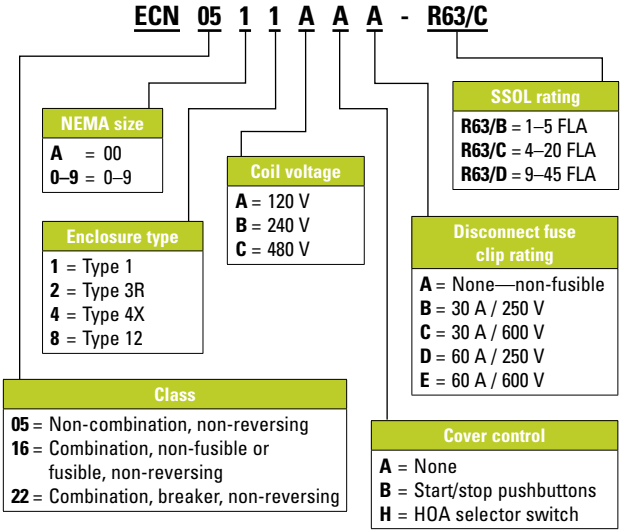
Step 6

Q What additional accessories do you need?

A
— Cover control kits, such as HAND/OFF/AUTO selector switch or STOP/START pushbuttons
— CPT kits
— Fuse kits

Enclosed control

Catalog numbering system—non-combination and combination NEMA enclosed starters



Starters

NEMA non-combination, non-reversing starters, Type 1

NEMA size	Motor voltage	Maximum hp rating	Magnet coil voltage	SSOL range	Catalog number
00	200, 230	1-1/2	120	1–5	**ECN05A1AAA-R63/B**
	460	2	120	1–5	**ECN05A1AAA-R63/B**
0	200, 230	3	120	1–5	**ECN0501AAA-R63/B**
	460	5	120	1–5	**ECN0501AAA-R63/B**
	200, 230	3	120	4–20	**ECN0501AAA-R63/C**
	460	5	120	4–20	**ECN0501AAA-R63/C**
1	200, 230	7-1/2	120	4–20	**ECN0511AAA-R63/C**
	460	10	120	4–20	**ECN0511AAA-R63/C**
2	200, 230	10	120	9–45	**ECN0521AAA-R63/D**
	460	25	120	9–45	**ECN0521AAA-R63/D**

NEMA combination, non-reversing starters, non-fusible disconnect Type 1

NEMA size	Motor voltage	Maximum hp rating	Magnet coil voltage	SSOL range	Catalog number
00	200, 230	1-1/2	120	1–5	**ECN16A1AAA-R63/B**
	460	2	120	1–5	**ECN16A1AAA-R63/B**
0	200, 230	3	120	1–5	**ECN1601AAA-R63/B**
	460	5	120	1–5	**ECN1601AAA-R63/B**
	200, 230	3	120	4–20	**ECN1601AAA-R63/C**
	460	5	120	4–20	**ECN1601AAA-R63/C**
1	200, 230	7-1/2	120	4–20	**ECN1611AAA-R63/C**
	460	10	120	4–20	**ECN1611AAA-R63/C**
2	200, 230	10	120	9–45	**ECN1621AAA-R63/D**
	460	25	120	9–45	**ECN1621AAA-R63/D**

NEMA enclosures with CPT modifications

To order an enclosure with CPT:

1. Change ECN05 to ECN07 for non-combination units, and ECN16 to ECN18 for combination units.
2. Change the "A" in the 7th catalog string to the correct letter based on the below table:

Catalog string letter	Primary	Secondary
E	208/60	120/60
B	240/480–220/440 wired for 240 V	120/60–110/50
C	240/480–220/440 wired for 480 V	120/60–110/50

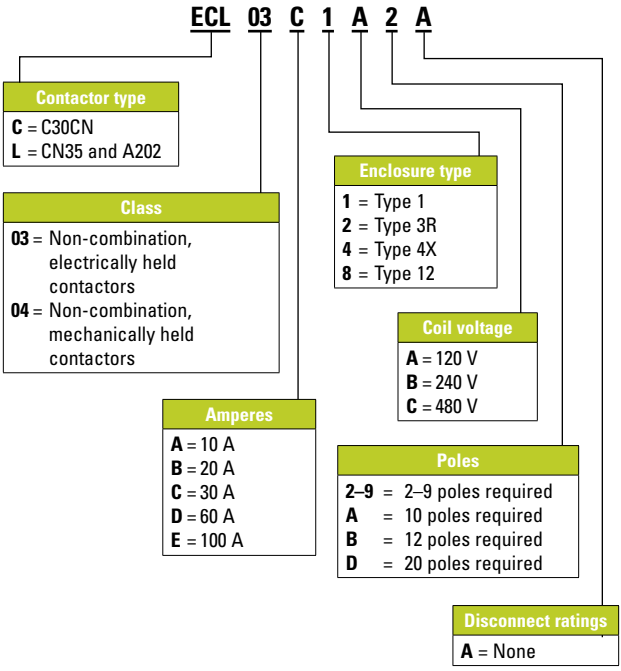
NEMA accessories—CPT and fuse kits

Description	Catalog number
100 VA CPT kit (208/277 V primary, 120 V secondary)	**C341CE**
100 VA CPT kit (240/480 V primary, 120 V secondary)	**C341CC**
Fuse clip kit for combination starter—30 A / 250 V	**C351KC21**
Fuse clip kit for combination starter—30 A / 600 V and 60 A / 250 V	**C351KD22-61**

NEMA accessories—cover control kits

	Catalog number		
Description	Non-combination Type 1, size 00–2	Non-combination Type 1, size 3–5	Combination Type 1 and all Type 3R, 12, 4X
STOP/START pushbuttons	**C600M1**	**C400GK1**	**C400T1**
STOP/START pushbuttons with red RUN light (85–264 Vac)	**C600M101A**	**C400GK12**	—
HAND/OFF/AUTO selector switch	**C600M12**	**C400GK3**	**C400T12**
HAND/OFF/AUTO selector switch with red RUN light (85–264 Vac)	**C600M121A**	**C400GK32**	—

Catalog numbering system—enclosed lighting contactors



Lighting contactors

Lighting non-combination contactors, Type 1

Contactor type	Number of poles	Ampere rating	Coil voltage	Catalog number
C30CN, electrically held	2	30	120	**ECC03C1A2A**
C30CN, electrically held	4	30	120	**ECC03C1A4A**
C30CN, electrically held	6	30	120	**ECC03C1A6A**
CN35, electrically held	2	20	120	**ECL03B1A2A**
CN35, electrically held	4	20	120	**ECL03B1A4A**
CN35, electrically held	6	20	120	**ECL03B1A6A**

Questions to ask

Step 1

Q Do you need an assembled pushbutton station or loose components in clam-shell packaging?

A — Assembled pushbutton station
— Loose components in clam-shell package

Step 2

For pushbutton stations

Q What size of pushbutton station do you need?

A — 22 mm
— 30 mm

Q How many elements (operators) do you want?

A — 1
— 2
— 3

Step 3

For loose components

Q What type of operator do you need?

A — Emergency stop operator
— Momentary pushbutton
— Indicating light
— Illuminated pushbutton
— Selector switches

Pushbutton stations and pushbuttons

Pushbutton stations

30 mm pushbutton stations

Description	Catalog number
Single-element	
Emergency Off—break glass pushbutton station, NC	**10250TGR**
Man-Off-Auto selector switch pushbutton station, 2NO	**10250T3524**
Stop mushroom head pushbutton station, 1NC	**10250T3519**
Two-element	
Start-Stop pushbutton station, 1NO-2NC	**10250T3525**
Start-Stop rectangular pushbutton station, 1NO-1NC	**10250H5200**
Three-element	
Open-Close-Stop pushbutton station, 2NO-3NC	**10250T3614**
Up-Down-Stop rectangular pushbutton station, 2NO-1NC	**10250H5301**

22 mm pushbutton stations

Description	Catalog number
Single-element	
40 mm mushroom head push-pull emergency stop operator, NC	**M22-C1-M1H**
40 mm illuminated mushroom head push-pull emergency stop operator, 85–264 Vac, NO-NC	**M22-C1-M2H**
Two-element	
Flush pushbutton, Start-Stop, NO-NC	**M22-C2-M2V**
Flush pushbutton, Forward-Reverse, 2NO	**M22-C2-M3V**
Three-element	
Flush pushbutton, Open-Stop-Close, 2NO-1NC	**M22-C3-M4V**
Flush pushbutton, Forward-Stop-Reverse, 2NO-1NC	**M22-C3-M5V**
Flush pushbutton, Up-Stop-Down, 2NO-NC	**M22-C3-M6V**

Pushbutton components

Individually packaged 30 mm pushbuttons and operators NEMA 4, 4X, 12 13

Description	Catalog number
Emergency stop operator	
Red non-illuminated push-pull, 1NO-1NC, includes 2 legend plates: EMERG. STOP and STOP	**10250T5B62-1-POP**
Jumbo mushroom pushbutton, 1NO-1NC, button engraved EMERG. STOP (button is engraved—no legend plate provided)	**10250T33-POP**
Red mushroom pushbutton engraved EMERG. STOP, 1NO-1NC, includes 2 legend plates: EMERG. STOP and STOP	**10250T32R-POP**
Momentary pushbutton	
Black flush pushbutton, 1NO-1NC, includes 1 legend plate: START and JOG	**10250T30B-POP**
Red extended pushbutton, 1NO-1NC, includes 1 legend plate: STOP	**10250T31R-POP**
Indicating light	
Red indicating light transformer 120 Vac with two extra lenses (green and amber), 1NO-1NC, includes 2 legend plates: RUN and JOG	**10250T34R-POP**
Illuminated pushbutton	
Red illuminated pushbutton (120 Vac/Vdc),with 2 extra lenses (green and amber), 1NO-1NC, includes 1 legend plate: Power On	**10250T411C21-1-POP**
Selector switches	
Two-position selector switch, 1NO-1NC, includes 3 legend plates: Off/On, Hand/Auto and Run/Jog	**10250T20KB-POP**
Three-position selector switch, 2NO-2NC, includes 1 legend plate: Hand/Off/Auto	**10250T22KB-POP**
Three-position selector switch, 1NO-1NC, includes 1 legend plate: Hand/Off/Auto	**10250T21KB-POP**

Questions to ask

Step 1

Q What is the motor nameplate information?

A — System (AC or DC) and voltage?
— If AC, is the motor single-phase or three-phase?
— What is the motor horsepower?

Step 2

Q What type of enclosure is needed?

A — No enclosure (will be mounted in separate enclosure)
— NEMA 1 enclosure

Step 3

Q Is overload protection required?

A — No
— Yes. If yes, what is the motor full load amperes (FLA)?

Step 4

Q What type of operator does the customer want?

A — Button
— Toggle

Manual starters

Manual starters

Manual motor switches without overload

Type	Pole config.	Maximum motor (hp) 120 V	240 V	480 V	230 V	Catalog number Open	Enclosed
B230A	Two-pole	2	5	—	—	**B230AN**	**B230AG**
B230B	Two-pole	2	5	10	15	**B230BND**	**B230BGD**
	Three-pole	3	7.5	15	20	**B330AND**	**B330AGD**

Single-phase manual starters with overload protection—Type MS series starters ❶

Pole config.	Maximum motor (hp) AC voltage 120 Vac	240 Vac	277 Vac	Catalog number Open	Enclosed ❷
Single-pole	1	1	1	**MST01**	**MST01SN1P**
Two-pole	1	1	1	**MST02**	**MST02SN1P**

Pole config.	Maximum motor (hp) DC voltage 120 Vdc	240 Vdc	32 Vdc	Catalog number Open	Enclosed ❷
Single-pole	¼	¼	¼	**MST01**	**MST01SN1P**
Two-pole	¼	¼	¼	**MST02**	**MST02SN1P**

❶ Use MSH heaters for MS series starters.

❷ With pilot light.

Single- and three-phase manual starters with overload protection—Type B100 ❶

Pole config.	NEMA size	Maximum motor (hp) AC voltage 120 Vac	208–240 Vac	480–600 Vac	Catalog number Open	Enclosed ❷
Two-pole (single-phase)	0	1	2	—	**B100M0B**	**B100S0B**
	1	2	3	—	**B100M1B**	**B100S1B**
Three-pole (three-phase)	0	2	3	5	**B100M0C**	**B100S0C**
	1	3	7½	10	**B100M1C**	**B100S1C**

Pole config.	NEMA size	Maximum motor (hp) DC voltage 115 Vdc	230 Vdc	Catalog number Open	Enclosed ❷
Two-pole (single-phase)	0	1	1½	**B100M0B**	**B100S0B**
	1	1½	2	**B100M1B**	**B100S1B**
Three-pole (three-phase)	0	—	—	**B100M0C**	**B100S0C**
	1	—	—	**B100M1C**	**B100S1C**

❶ Use FH heaters for Type B100 starters.

❷ NEMA 1.

Product contact information

Call 877-ETN-CARE (877-386-2273)

Notes:

At Eaton, we believe that power is a fundamental part of just about everything people do. Technology, transportation, energy and infrastructure—these are things the world relies on every day. That's why Eaton is dedicated to helping our customers find new ways to manage electrical, hydraulic and mechanical power more efficiently, safely and sustainably. To improve people's lives, the communities where we live and work, and the planet our future generations depend upon. Because that's what really matters. And we're here to make sure it works.

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