

Power Defense Molded Case Circuit Breakers—Frame Size 2



Contents

Description	Page
Power Defense Molded Case Circuit Breakers	
Frame Size 1 (15–125 A)	V4-T2-22
Frame Size 2 (15–225 A)	
Catalog Number / Product Selection	V4-T2-30
Accessories	V4-T2-35
Dimensions and Weights	V4-T2-41
Frame Size 3 (45–600 A)	V4-T2-42
Frame Size 4 (300–800 A)	V4-T2-57
Frame Size 5 (320–1200 A)	V4-T2-70
Frame Size 6 (700–2500 A)	V4-T2-79
Motor Circuit Protectors (3–600 A)	V4-T2-87
Motor Protection Circuit Breakers (15–600 A)	V4-T2-98
Terminals, Lugs and Connectors	V4-T2-104
Communications and Software	V4-T2-127
Special Applications	V4-T2-129

Power Defense Molded Case Circuit Breakers—Frame Size 2

Product Description

Frame Size 2 covers a range of 15 A through 225 A with a complete offering of trip units, including PXR electronic trip units and fixed-fixed thermal-magnetic trip units.

Application Description

Frame Size 2 can be used to meet a wide range of circuit protection and power distribution needs, including ground fault protection and current limiting options. PXR trip units in PD-2 provide all levels of protection, including energy metering with multiple communication schemes, breaker health indication, and zone selective interlocking with visual indication.

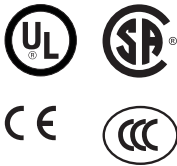
Features and Benefits

Frame Size 2 breakers are available in multiple ratings from 15 A through 225 A. They are configured with a trip unit from the factory. Accessories are modular in design to allow for field installation or factory configuration. PXR trip units are available with advanced features to provide customers unparalleled situational awareness of their electrical system.

Standards and Certifications

Power Defense breakers are designed and tested to meet stringent requirements for:

- UL
- CSA
- IEC (CE)
- CB (CCC)



Catalog Number / Product Selection

2

Power Defense—Frame Size 2 (15–225 A)

Frame Size 2 covers a range of 15 A through 225 A using electronic trip units or thermal-magnetic trip units. It is available in configurations of single-pole, 2-pole, 3-pole and 4-pole.

Interrupting Ratings (2-, 3- and 4-Pole)

Catalog Designator	F		G		K ^①		M ^①		N ^①		P ^①	
ANSI (UL/CSA)	kA rms		kA rms		kA rms		kA rms		kA rms		kA rms	
240 Vac	35		65		85		100		150		200	
480 Vac	25		35		50		65		85		100	
600 Vac	14		18		22		25		30 / 25 ^③		35 / 25 ^③	
250 Vdc ^②	10		10		10		22		22		22	
IEC	I _{cu}	I _{cs}	I _{cu}	I _{cs}	I _{cu}	I _{cs}	I _{cu}	I _{cs}	I _{cu}	I _{cs}	I _{cu}	I _{cs}
240 Vac	35	35	55	55	85	85	100	100	150	100	200	150
380–415 Vac	25	25	36	36	50	50	70	53	70	70	100	70
440 Vac	25	20	30	22.5	35	35	50	40	70	50	100	65
480 Vac	20	20	25	20	35	22.5	50	30	65	40	65	40
525 Vac	18	15 / 13 ^③	20	15 / 13 ^③	30 / 25 ^③	15 / 13 ^③	30 / 25 ^③	15 / 13 ^③	30 / 25 ^③	15 / 13 ^③	35 / 25 ^③	18 / 13 ^③
660–690 Vac	—	—	8	4	10	5	10	5	10	5	10	5
250 Vdc ^②	10	10	10	10	10	10	22	22	22	22	22	22

Interrupting Ratings (Single-Pole)

Catalog Designator	F		G		K		M		N		P	
ANSI (UL/CSA)	kA rms		kA rms		kA rms		kA rms		kA rms		kA rms	
277 Vac	25		35		50		65		85		100	
347 Vac	14		18		22		25		30		35	
125 Vdc	10		10		10		22		22		22	
IEC	I _{cu}	I _{cs}	I _{cu}	I _{cs}	I _{cu}	I _{cs}	I _{cu}	I _{cs}	I _{cu}	I _{cs}	I _{cu}	I _{cs}
240 Vac	25	25	36	36	50	50	70	70	85	70	100	70
125 Vdc	10	10	10	10	10	10	22	22	22	22	22	22

Notes

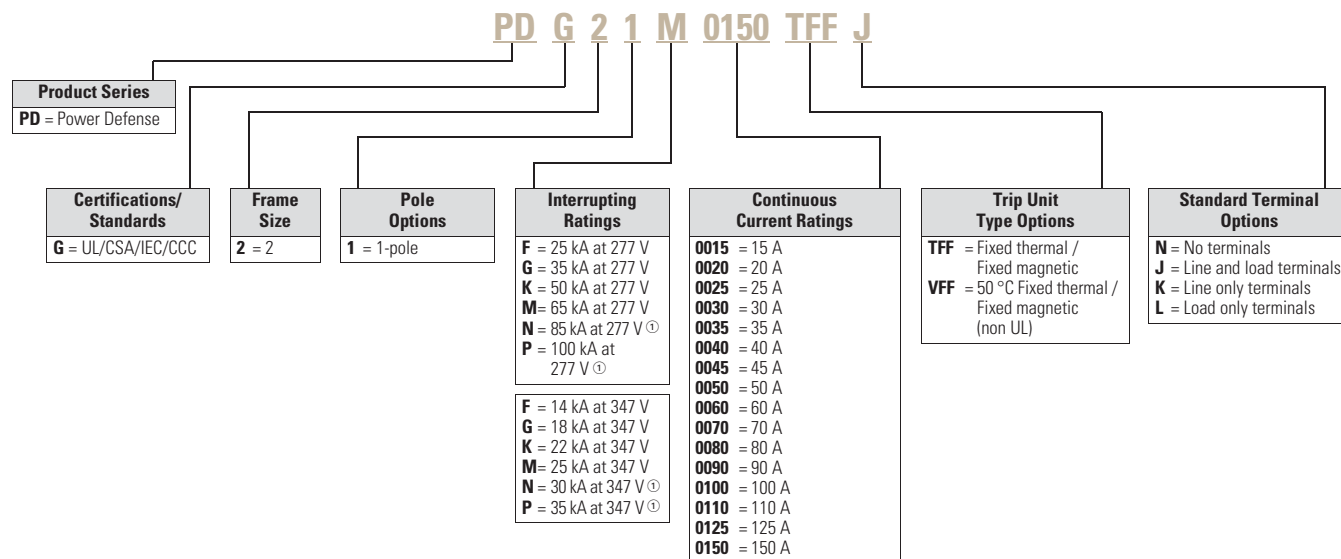
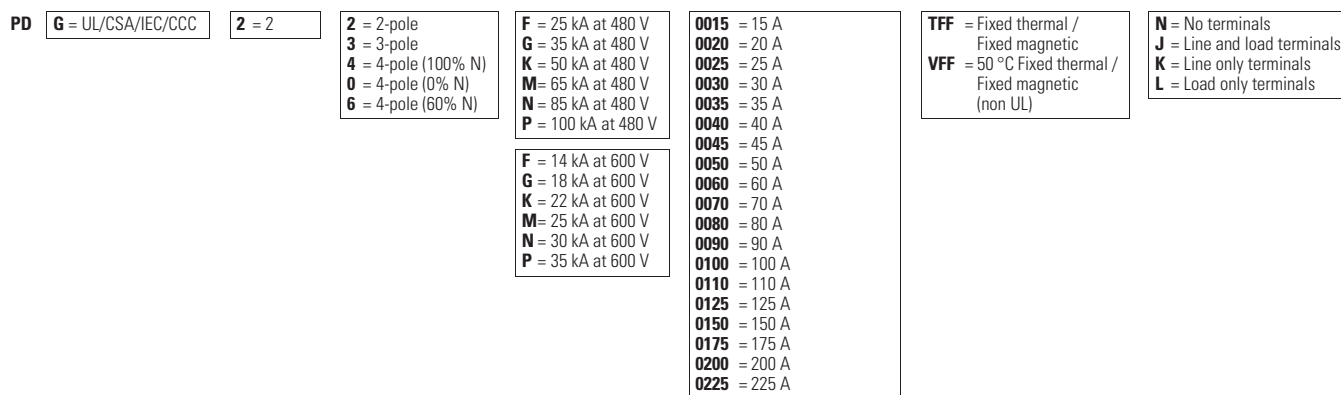
① UL current limiting for 3- and 4-pole breakers.

② DC ratings available in thermal-magnetic breakers only. 250 Vdc is achieved using 2-poles in series.

③ First rating listed is for thermal-magnetic breakers, second rating is for breakers with PXR electronic trip units.

Power Defense—Frame Size 2 (15–225 A)

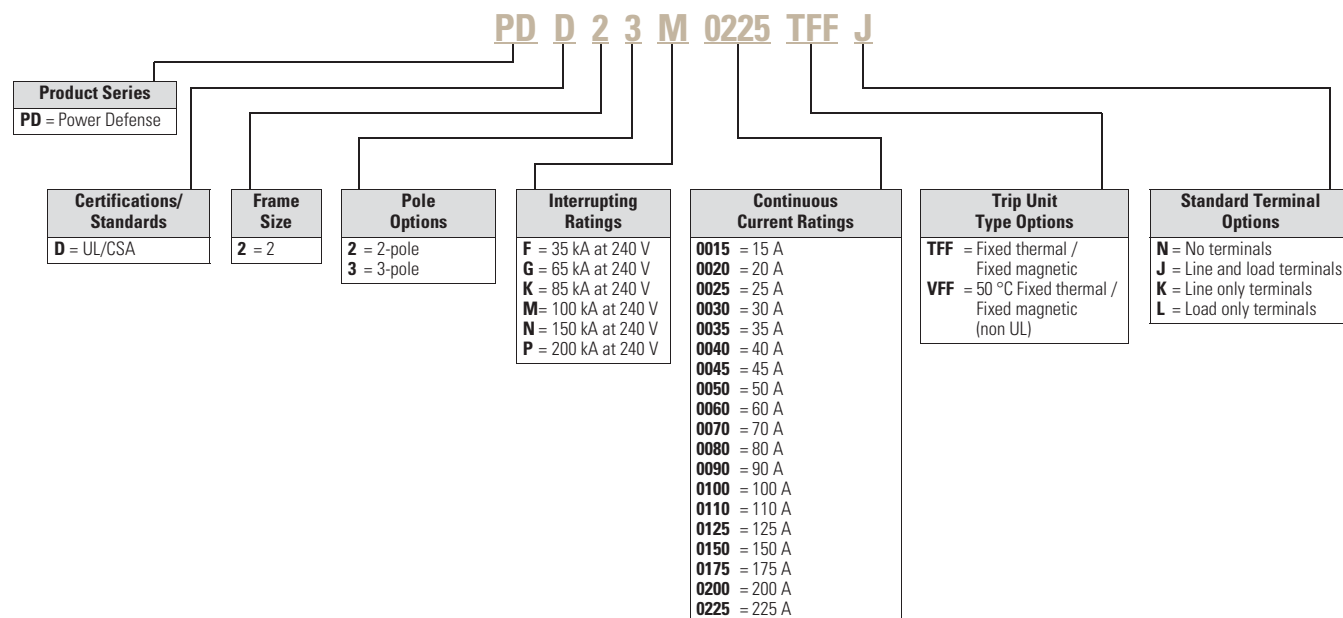
This information is presented as a tool to develop catalog numbers for selecting Power Defense circuit breakers and trip units.

Molded Case Circuit Breakers (Single-Pole) with Thermal-Magnetic Trip Units (TMTU)—Globally Rated**Molded Case Circuit Breakers (Two-, Three- and Four-Pole) with Thermal-Magnetic Trip Units—Globally Rated****Note**

① N and P ratings available for 15–30 A on single-pole breakers.

Power Defense—Frame Size 2 (15–225 A)

This information is presented as a tool to develop catalog numbers for selecting Power Defense circuit breakers and trip units.

Molded Case Circuit Breakers with TMTU—UL/CSA Rated to 240 Vac**Molded Case Switches—Globally Rated ①**

PD	G = UL/CSA/IEC/CCC	2 = 2	2 = 2-pole 3 = 3-pole 4 = 4-pole	G = 35 kA at 480 V M = 65 kA at 480 V G = 18 kA at 600 V M = 35 kA at 600 V	0100 = 100 A 0150 = 150 A 0225 = 225 A	KNS = Molded Case Switch	N = No terminals J = Line and load terminals K = Line only terminals L = Load only terminals
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Molded Case Circuit Breakers with Power Xpert Release Electronic Trip Units (ETU)—Globally Rated

PD	G = UL/CSA/IEC/CCC	2 = 2	3 = 3-pole 4 = 4-pole (programmable N)	F = 25 kA at 480 V G = 35 kA at 480 V K = 50 kA at 480 V M = 65 kA at 480 V N = 85 kA at 480 V P = 100 kA at 480 V F = 14 kA at 600 V G = 18 kA at 600 V K = 22 kA at 600 V M = 25 kA at 600 V N = 25 kA at 600 V P = 25 kA at 600 V	0060 = 60 A 0100 = 100 A 0150 = 150 A 0225 = 225 A	B2N = PXR 10 LSI E## ②=PXR 20 D## ②=PXR 20D P## ②=PXR 25	N = No terminals J = Line and load terminals K = Line only terminals L = Load only terminals
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Molded Case Circuit Breakers with Power Xpert Release Electronic Trip Units (ETU)—100% UL Rated

PD	F = UL/CSA/IEC/CCC (100% UL Rated)	2 = 2	3 = 3-pole 4 = 4-pole	F = 25 kA at 480 V G = 35 kA at 480 V K = 50 kA at 480 V M = 65 kA at 480 V N = 85 kA at 480 V P = 100 kA at 480 V F = 14 kA at 600 V G = 18 kA at 600 V K = 22 kA at 600 V M = 25 kA at 600 V N = 25 kA at 600 V P = 25 kA at 600 V	0060 = 60 A 0100 = 100 A 0150 = 150 A 0225 = 225 A	B2N = PXR 10 LSI E## ②=PXR 20 D## ②=PXR 20D P## ②=PXR 25	J = Line and load terminals W = Optional line and load terminals
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Notes

① Molded case switch may open above 1800 A.

② See tables and descriptions on **Page V4-T2-33** for protection type (#₁) and available configured options (#₂).

Power Xpert Release (PXR) Trip Unit Options—Frame Size 2**Power Xpert Release (PXR) Trip Unit Options**

		#(1)—Protection Type		#(2)—Available Configured Options							
					Relays	Relays Modbus	Relays	Relays	Relays Modbus ZSI	Relays	Relays Modbus ZSI CAM
PXR	ETU	LSI	LSIG		—	—	—	—	—	—	—
PXR 10	B	2	—	N	—	—	—	—	—	—	—
PXR 20	E	2	—	N	R	M	Z	C	W	X	—
		—	3	—	R	M	Z	C	W	X	—
PXR 20D	D	2	3	—	—	M	—	—	W	—	D Y
PXR 25	P	2	3	—	—	M	—	—	W	—	D Y

Description of PXR Configured Options

Relays ①—Form A contacts (rated for 240 Vac, 1 A)

- 2 available if Modbus RTU is not used; 1 available when used in conjunction with Modbus RTU
- Interface: 3 wires (ALM1, ALM2, ALM Common)
- Programmable to indicate breaker conditions
- Available as field-installable option if not pre-configured (catalog number **PDG2XRELAYS**) ②

Modbus ①—Modbus RTU directly from breaker

- Interface: 3 wires (MODBA, MODBB, MODBG)
- No additional modules required
- Available as field-installable option if not pre-configured (catalog number **PDG2XMODRTUREL**) ②

ZSI—Zone Selective Interlocking

- Includes ability to turn ON and OFF
- Interface: 3 wires (Zin, Zout, Zcomm)
- No additional modules required

CAM—CAM Link Connection (requires a CAM module per breaker)

- Interface: 5 wires (refer to CAM IL for details)
- Communications Adapter Modules available for Modbus TCP and PROFIBUS

Auxiliary Power

- Connection included with all PXR 20, 20D and 25 trip units
- Required for communications, relays and metering accuracy
- 24 Vdc, 0.5 A
- Interface: 2 wires (Aux +24 V, Aux 0 V)

Available Continuous Current (I_r) Settings on PXR Electronic Trip Units

		Catalog Number Selection and Maximum Setting (I_n)			
Option	Setting	0060 60 A	0100 100 A	0150 150 A	0225 225 A
PXR 10, PXR 20	1	15 A	32 A	50 A	80 A
	2	16 A	35 A	60 A	90 A
	3	20 A	40 A	63 A	100 A
	4	25 A	50 A	70 A	110 A
	5	30 A	60 A	80 A	125 A
	6	35 A	63 A	90 A	150 A
	7	40 A	70 A	100 A	160 A
	8	45 A	80 A	110 A	175 A
	9	50 A	90 A	125 A	200 A
	10 = I_n	60 A	100 A	150 A	225 A
PXR 20D, PXR 25		Programmable from minimum to maximum values in 1 A increments.			

Notes

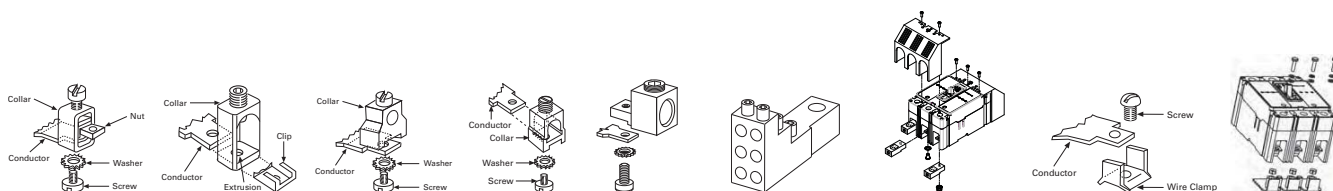
- ① Relays and/or Modbus RTU in PD-2 uses accessory pocket, therefore UVR and shunt trip use is not possible.
- ② PD-2 can only be equipped with one field-installable communication option (PDG2XMODRTUREL or PDG2XRELAYS).

Terminals—Frame Size 2

Catalog numbers shown are for a single side of a 3-pole breaker.

For 2- and 4-pole options, replace the **X3** with **X2** or **X4**, respectively.

Example: PDG**2X3**T100 becomes PDG**2X2**T100 for 2-pole

Terminal Types

PDG2X3T100 PDG2X3T150	PDG2X3TA225 PDG2X3TA150 PDG2X3T225	PDG2X3TA50	PDG2X3TA100	PDG2X3TA225K	PDG2X3TA225W PDG2X3TA225V	PDG2X3TA150RF PDG2X3TA225RF	PDG2X3T20	PDG2X3TS225
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Note: Pictures are for reference only.

Terminals

Maximum Breaker Amperes	Breaker Frame ①	Terminal Body Type	Wire Type	Wire Class	Number of Conductors per Phase	AWG/kcmil Range per Conductor	Metric (mm ²) Range per Conductor	3-Pole Catalog Number	Included Accessories	Digit 14 Designation			
										Line and Load	Line Only	Load Only	Standard on Amperes
Standard Terminals													
100	15–100	Steel	Cu/Al	B, C	1	14–1/0	2.08–53.5	PDG2X3T100 ②		J	K	L	15–100
225	60–225	Aluminum	Cu/Al	B, C	1	4–4/0	21.2–107	PDG2X3TA225 ③		J	K	L	110–225
Alternate Terminals													
50	15–50	Aluminum	Cu/Al	B, C	1	14–4	2.08–21.2	PDG2X3TA50		T	U	V	15–50
100	60–100	Aluminum	Cu/Al	B, C	1	14–1/0	2.08–53.5	PDG2X3TA100		T	U	V	60–100
150	60–150	Aluminum	Cu/Al	B, C	1	14–4/0	2.08–107	PDG2X3TA150		T	U	V	110–150
225	175–225	Aluminum	Cu/Al	B, C	1	6–300	13.3–152	PDG2X3TA225K ③	Terminal shield	T	U	V	175–225
Non-standard Terminals													
100	15–100	Steel	Cu/Al	B, C	1	14–1/0	2.08–53.5	PDG2X3T100 ②		W	Y	Z	15–100
150	60–150	Stainless Steel	Cu	B, C	1	4–4/0	21.2–107	PDG2X3T150		W	Y	Z	110–150
225	60–225	Copper	Cu	B, C	1	4–4/0	21.2–107	PDG2X3T225		W	Y	Z	175–225
Multi-wire Terminals													
225	150–225	Aluminum	Cu/Al	B, C	6	14–6	2.08–13.3	PDG2X3TA2256W	Terminal shield	—	—	G	15–225
225	150–225	Aluminum	Cu/Al	B, C	3	14–2	2.08–33.6	PDG2X3TA2253W	Terminal shield	—	—	H	15–225
Rear Fed Terminals ④													
150	60–150	Aluminum	Cu/Al	B, C	1	14–4/0	2.08–107	PDG2X3TA150RF	Terminal shield	—	—	—	15–150
225	60–225	Aluminum	Cu/Al	B, C	1	6–300	13.3–152	PDG2X3TA225RF	Terminal shield	—	—	—	175–225
Box Terminal													
20	15–20	Steel	Cu/Al	B, C	1	14–10	2.08–5.26	PDG2X3T20		—	—	—	15–20
Rear Connectors ④													
225	—	—	—	—	—	—	—	PDG2X3T225RC		R	—	—	15–25
End Cap Kits/Screw Terminals													
225	—	—	—	—	—	—	—	PDG2X3TS225		S	D	E	15–25

Note: Wire capacity is based on standard imperial wire sizes; metric sizes provided in table are a direct conversion to demonstrate maximum capacity, not to denote metric wire sizes.

Notes

① The “Breaker Frame” column provides information on the ampere ratings for which the terminal may be used (field installation); in some cases the range is limited by proper fit of the terminal onto the breaker conductor.

The column “Standard on Amperes” provides information on what terminal is used during factory configuration per Digit 14 of the breaker catalog number. The two may not match.

② Factory standard terminals and non-aluminum terminals for 100 A and below are the same terminals.

③ PDF2 225 A breakers with Digit 14 designation of “J” are equipped with PDG2X3TA225K terminals. PDF2 150 A breakers with Digit 14 designation of “J” are equipped with PDG2X3TA225 terminals.

④ Breaker loses UL when fitted with rear-fed terminals or rear connectors.

Control Wire Tabs

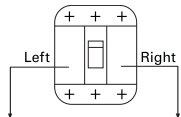
Use	Package Qty.	Catalog Number
15–150 A	12	FCWTK
175–225 A	12	FCWTK225

Accessories

Internal Accessory Configurations—Frame Size 2

Thermal-Magnetic Circuit Breakers ^{①②}

3-Pole Circuit Breakers

Tripping
Accessory
Options

None

Shunt Trip



UVR

Alarm (2 Spaces)
Options

None

1NO (1 space)

1NC (1 space)

1NO/1NC (2 spaces)

2NO (2 spaces)

2NC (2 spaces)

Aux (2 Spaces)
Options

None

1NO (1 space)

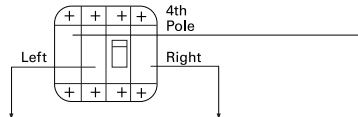
1NC (1 space)

1NO/1NC (2 spaces)

2NO (2 spaces)

2NC (2 spaces)

4-Pole Circuit Breakers

Tripping
Accessory
Options

None

Shunt Trip



UVR

Alarm (2 Spaces)
Options

None

1NO (1 space)

1NC (1 space)

1NO/1NC (2 spaces)

2NO (2 spaces)

2NC (2 spaces)

Aux (4 Spaces)
Options

None

1NO (1 space)

1NC (1 space)

1NO/1NC (2 spaces)

2NO (2 spaces)

2NC (2 spaces)

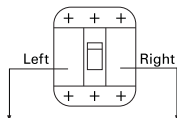
2CO (4 spaces)

4NO (4 spaces)

4NC (4 spaces)

Electronic Circuit Breakers

3-Pole Circuit Breakers

Tripping
Accessory
Options

None

Shunt Trip



UVR

Bell alarm
(1NO/1NC—Form C)Qty: 1 Programmable relay
with Modbus RTU

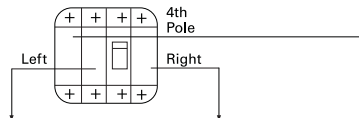
Qty: 2 Programmable relays

Alarm
Options

None

Aux
Options1NO/1NC ^③

4-Pole Circuit Breakers

Tripping
Accessory
Options

None

Shunt Trip



UVR

Bell alarm
(1NO/1NC—Form C)Qty: 1 Programmable relay
with Modbus RTU

Qty: 2 Programmable relays

Alarm
Options

None

Aux (2 Spaces)
Options1NO/1NC ^③1NO/1NC ^③ + 1NO (1 space)1NO/1NC ^③ + 1NC (1 space)1NO/1NC ^③ + 1NO/1NC (2 spaces)1NO/1NC ^③ + 2NO (2 spaces)1NO/1NC ^③ + 2NC (2 spaces)

Notes

^① 2-pole PD-2 breakers have an accessory pocket compatible with indicating accessory options only.^② Single-pole PD-2 breakers may be equipped with a Form C bell alarm as a factory installation only. Use "BC" as a suffix code in digits 15–16.^③ Qty: 1 1NO/1NC (Form C) auxiliary contact is automatically factory installed for all Frame 2 Power Defense breakers with electronic trip units.

Alarm and Auxiliary Contact Blocks—Frame Size 2

Power Defense breakers have designated positions for alarm and auxiliary switches in the right-pole accessory cavity. For Frame 2, the two left-most positions are used for alarm switches, and the two right-most locations are used for auxiliary switches.

Power Defense breakers have secondary covers for ease of field installation of accessories, including alarm and auxiliary switches.

Power Defense alarm and auxiliary switches are available in contact blocks, in Form A (NO), Form B (NC) and Form C (NO-NC) types. Form A and Form B contacts take one position in the breaker accessory cavity, and Form C contacts take two positions in the cavity. Identical contact blocks are used for the alarm and auxiliary switch functions.

Frame 2 breakers with electronic trip units are automatically configured with a factory-installed Form C auxiliary contact block because the right-pole accessory cavity is not available for field modification. Trip position can also be communicated via communications and the PXR programmable relays.

Pigtail (29 in / 0.75 m) Contact Blocks for Alarm and Auxiliary Switch Functionality

Catalog Number	PDGXAA	PDGXAB	PDGXAC
Type	Form A / NO	Form B / NC	Form C / NO-NC

Screw Terminal Contact Blocks for Alarm and Auxiliary Switch Functionality

Catalog Number	PDGXXA	PDGXXB	PDGXXA + PDGXXB
Type	Form A / NO	Form B / NC	For NO-NC, use two separate contact blocks

Push-In Clamp Contact Blocks for Alarm and Auxiliary Switch Functionality

Catalog Number	PDGXUA	PDGXUB	PDGXUC
Type	Form A / NO	Form B / NC	Form C / NO-NC

Pigtail (118 in / 3.0 m) Contact Blocks for Alarm and Auxiliary Switch Functionality

Catalog Number	PDGXDA	PDGXDB	PDGXDC
Type	Form A / NO	Form B / NC	Form C / NO-NC

Alarm Switch for Use with PXR Electronic Trip Units ^①

Catalog Number	PDG2XALMBC	PDG2XALMEC
Type	Form C / NO-NC	Form C / NO-NC
Termination	0.75 m pigtail	3.0 m pigtail

Note

- ^① Frame 2 breakers with electronic trip units do not allow access to the right accessory pocket but are automatically configured with a factory installed Form C / NO-NC auxiliary switch. These alarm switches can be field or factory installed in the left accessory pocket in place of a shunt trip or UVR.

Factory Installation of Alarm and Auxiliary Switches—Frame Size 2

Alarm and auxiliary switches are plug-and-play accessories designed to be field installable. However, Eaton also offers installation service in our factories.

Breaker catalog numbers with alarm and auxiliary switch combinations require a complete 20-digit catalog number, adding the alarm and auxiliary switch functionality in digits 15–16 and adhering to the following conditions and tables:

- Digit 15 denotes the type of accessory(-ies) installed and the terminal types

- Switches may be requested for alarm only, auxiliary only or a combination of the two
- Digit 16 denotes the number and type (NO, NC) of switches installed
- For Eaton factory installation, the same type of terminals (i.e. all pigtail 0.75 m, all screw, etc.) and same style of contact block (i.e., all 1NO/1NC, all 2NC, etc.) must be used in a factory configuration
- If no other accessories are selected, use NNNN for the final 4 digits of the catalog number
- Frame 2 breakers with electronic trip units do not allow access to the right accessory pocket but are automatically configured with a factory installed 1NO/1NC auxiliary switch. A bell alarm accessory is available for separate installation in the left accessory pocket.

Note: Though factory configuration options are limited, combinations of auxiliary switches and alarms using differing terminals and contact block styles are still available through field installation. Please see full auxiliary switch and alarm catalog numbers to order.

Pigtails—29 in / 0.75 m (A, B, C)

		Auxiliary Switch Three-Pole						Four-Pole		
		None	1NO	1NC	1NO/1NC	2NO	2NC	2NO/2NC	4NO	4NC
Alarm Switch	None	NN	AA	AB	AC	AD	AE	A1	A2	A3
	1NO	BA	CA	—	—	—	—	—	—	—
	1NC	BB	—	CB	—	—	—	—	—	—
	1NO/1NC ^①	BC	—	—	CC	—	—	C1	—	—
	2NO	BD	—	—	—	CD	—	—	C2	—
	2NC	BE	—	—	—	—	CE	—	—	C3

Screw Terminals (X, Y, Z)

		Auxiliary Switch Three-Pole						Four-Pole		
		None	1NO	1NC	1NO/1NC	2NO	2NC	2NO/2NC	4NO	4NC
Alarm Switch	None	NN	XA	XB	XC	XD	XE	X1	X2	X3
	1NO	YA	ZA	—	—	—	—	—	—	—
	1NC	YB	—	ZB	—	—	—	—	—	—
	1NO/1NC	YC	—	—	ZC	—	—	Z1	—	—
	2NO	YD	—	—	—	ZD	—	—	Z2	—
	2NC	YE	—	—	—	—	ZE	—	—	Z3

Push-In Clamps (U, V, W)

		Auxiliary Switch Three-Pole						Four-Pole		
		None	1NO	1NC	1NO/1NC	2NO	2NC	2NO/2NC	4NO	4NC
Alarm Switch	None	NN	UA	UB	UC	UD	UE	U1	U2	U3
	1NO	VA	WA	—	—	—	—	—	—	—
	1NC	VB	—	WB	—	—	—	—	—	—
	1NO/1NC	VC	—	—	WC	—	—	W1	—	—
	2NO	VD	—	—	—	WD	—	—	W2	—
	2NC	VE	—	—	—	—	WE	—	—	W3

Note

- ^① Single-pole breakers can be equipped with a 1NO/1NC alarm switch that must be factory installed; use suffix **BC** in digits 15–16. No other internal accessories are available for single-pole breakers.

Pigtails—118 in / 3.0 m (D, E, F)

		Auxiliary Switch Three-Pole						Four-Pole		
		None	1NO	1NC	1NO/1NC	2NO	2NC	2NO/2NC	4NO	4NC
Alarm Switch	None	NN	DA	DB	DC	DD	DE	D1	D2	D3
	1NO	EA	FA	—	—	—	—	—	—	—
	1NC	EB	—	FB	—	—	—	—	—	—
	1NO/1NC	EC	—	—	FC	—	—	F1	—	—
	2NO	ED	—	—	—	FD	—	—	F2	—
	2NC	EE	—	—	—	—	FE	—	—	F3

Factory Installation of Alarm Switch for Use with PXR Electronic Trip Units

Pigtails—29 in / 0.75 m

		Auxiliary Switch Three-Pole	
		None	1NO/1NC
Auxiliary switch	None	NN ^①	AC ^①
	1NO/1NC	—	CC

Pigtails—118 in / 3.0 m

		Auxiliary Switch Three-Pole	
		None	1NO/1NC
Alarm switch	None	NN ^①	DC
	1NO/1NC	—	FC

Tripping Accessories—Frame Size 2

Power Defense breakers have designated positions for shunt trips and undervoltage releases (UVRs) in the left pole accessory cavity. Each breaker has space for one tripping accessory only.

Power Defense breaker have secondary covers for ease of field installation of tripping accessories.

Shunt Trips

Voltage	Screw Terminals	Pigtail (29 in / 0.75 m)	Pigtail (118 in / 3.0 m)
12 Vdc	PDG2XST12DCT	PDG2XST12DCS	PDG2XST12DCR
48 Vdc	PDG2XST48DCT	PDG2XST48DCS	PDG2XST48DCR
60 Vdc	PDG2XST60DCT	PDG2XST60DCS	PDG2XST60DCR
24 Vac/Vdc	PDG2XST24ACDCT	PDG2XST24ACDCS	PDG2XST24ACDCR
110-130 Vac/125 Vdc	PDG2XST130ACDCT	PDG2XST130ACDCS	PDG2XST130ACDCR
200-240 Vac/250 Vdc	PDG2XST250ACDCT	PDG2XST250ACDCS	PDG2XST250ACDCR
380-440 Vac	PDG2XST440ACT	PDG2XST440ACS	PDG2XST440ACR
480-525 Vac	PDG2XST525ACT	PDG2XST525ACS	PDG2XST525ACR
600 Vac	PDG2XST600ACT	PDG2XST600ACS	PDG2XST600ACR

Undervoltage Releases (UVRs)

Voltage	Screw Terminals	Pigtail (29 in / 0.75 m)	Pigtail (118 in / 3.0 m)
12 Vdc	PDG2XUV12DCV	PDG2XUV12DCU	PDG2XUV12DCW
24 Vdc	PDG2XUV24DCV	PDG2XUV24DCU	PDG2XUV24DCW
48 Vdc	PDG2XUV48DCV	PDG2XUV48DCU	PDG2XUV48DCW
60 Vdc	PDG2XUV60DCV	PDG2XUV60DCU	PDG2XUV60DCW
125 Vdc	PDG2XUV125DCV	PDG2XUV125DCU	PDG2XUV125DCW
250 Vdc	PDG2XUV250DCV	PDG2XUV250DCU	PDG2XUV250DCW
24 Vac	PDG2XUV24ACV	PDG2XUV24ACU	PDG2XUV24ACW
130 Vac	PDG2XUV130ACV	PDG2XUV130ACU	PDG2XUV130ACW
240 Vac	PDG2XUV240ACV	PDG2XUV240ACU	PDG2XUV240ACW
440 Vac	PDG2XUV440ACV	PDG2XUV440ACU	PDG2XUV440ACW
525 Vac	PDG2XUV525ACV	PDG2XUV525ACU	PDG2XUV525ACW
600 Vac	PDG2XUV600ACV	PDG2XUV600ACU	PDG2XUV600ACW

Note

^① 1NO/1NC (AC) is always included in breakers with PXR trip units;
no selection or selection of **NN** in Digits 15–16 will result in AC.

Factory Installed Tripping Accessories—Frame Size 2

Shunt trips and under voltage releases (UVRs) are plug-and-play accessories designed to be field installable. However, Eaton also offers the service of installation in our factories.

Breaker catalog numbers with shunt trips or UVRs require a complete 20-digit catalog number, adding the tripping accessory functionality in digits 17 and 18 and adhering to the following conditions and tables.

- Digit 17 denotes the type of accessory installed and the terminal type
- Digit 18 denotes the voltage of the accessory
- If no accessories are selected, use NNNN for the final 4 digits of the catalog number
- Each breaker has space for one shunt trip or UVR tripping accessory only

Shunt Trips

Voltage	Screw Terminals	Pigtail (29 in / 0.75 m)	Pigtail (118 in / 3.0 m)
12 Vdc	TH	SH	RH
48 Vdc	TJ	SJ	RJ
60 Vdc	TK	SK	RK
24 Vac/Vdc	TN	SN	RN
110–130 Vac/125 Vdc	TP	SP	RP
200–240 Vac/250 Vdc	TR	SR	RR
380–440 Vac	TC	SC	RC
480–525 Vac	TD	SD	RD
600 Vac	TE	SE	RE

Undervoltage Releases (UVRs)

Voltage	Screw Terminals	Pigtail (29 in / 0.75 m)	Pigtail (118 in / 3.0 m)
12 Vdc	VH	UH	WH
24 Vdc	VG	UG	WG
48 Vdc	VJ	UJ	WJ
60 Vdc	VK	UK	WK
125 Vdc	VL	UL	WL
250 Vdc	VM	UM	WM
24 Vac	VF	UF	WF
130 Vac	VA	UA	WA
240 Vac	VB	UB	WB
440 Vac	VC	UC	WC
525 Vac	VD	UD	WD
600 Vac	VE	UE	WE

Note: Use suffix **US** for 18 Vdc when using Time Delay UVR.

Handle Mechanisms—Frame Size 2**2****Direct Rotary Handle Mechanism** ^①

Description	NEMA 1/12 Catalog Number	Factory Installed Digits 19–20
Standard lockable handle and mechanism	PDG2XHMCS	HA
Standard lockable handle and mechanism with door interlock	PDG2XHMCSN	HB
Standard lockable handle and mechanism with mechanical padlock	PDG2XHMCS P	HC
Standard lockable handle and mechanism with door interlock and mechanical padlock	PDG2XHMCSNP	HE
Emergency lockable handle and mechanism	PDG2XHMCE	H1
Emergency lockable handle and mechanism with door interlock	PDG2XHMCEN	H2
Emergency lockable handle and mechanism with mechanical padlock	PDG2XHMCEP	H3
Emergency lockable handle and mechanism with door interlock and mechanical padlock	PDG2XHMCENP	H5

Variable Depth Rotary Handle Mechanism ^①

Description	NEMA 1/3R/12/4/4X Catalog Number	Factory Installed Digits 19–20
Standard lockable handle and mechanism	PDG2XHMDS	DA
Standard lockable handle and mechanism with mechanical padlock	PDG2XHMDSP	DC
Emergency lockable handle and mechanism	PDG2XHMDE	D1
Emergency lockable handle and mechanism with mechanical padlock	PDG2XHMDEP	D3
12 in (307 mm) handle mechanism shaft	PDG12XHMS307	—
20 in (507 mm) handle mechanism shaft	PDG12XHMS507	—
Standard NFPA79-compliant shaft handle	PDG12XHM79S	—
Emergency NFPA79-compliant shaft handle	PDG12XHM79E	—

Flex Shaft Handle Mechanism

Cable Length (ft)	Metal Handle, NEMA 1/3R/12 Catalog Number	High Performance Handle, NEMA 1/3R/12 Catalog Number	Metal Handle, NEMA 4/4X Catalog Number	High Performance Handle, NEMA 4/4X Catalog Number
2	PDG2XFS02	PDG2XFS02HP	PDG2XFS02X	PDG2XFS02HPX
3	PDG2XFS03	PDG2XFS03HP	PDG2XFS03X	PDG2XFS03HPX
4	PDG2XFS04	PDG2XFS04HP	PDG2XFS04X	PDG2XFS04HPX
5	PDG2XFS05	PDG2XFS05HP	PDG2XFS05X	PDG2XFS05HPX
6	PDG2XFS06	PDG2XFS06HP	PDG2XFS06X	PDG2XFS06HPX
7	PDG2XFS07	PDG2XFS07HP	PDG2XFS07X	PDG2XFS07HPX
8	PDG2XFS08	PDG2XFS08HP	PDG2XFS08X	PDG2XFS08HPX
9	PDG2XFS09	PDG2XFS09HP	PDG2XFS09X	PDG2XFS09HPX
10	PDG2XFS10	PDG2XFS10HP	PDG2XFS10X	PDG2XFS10HPX

Note

^① Standard handles are black and gray; Emergency handles are red and yellow.

Accessories—Frame Size 2**External Accessories**

Description	Fit Type	Catalog Number	Factory Installed Digits 19–20
Padlockable hasp	Top	PDG2XPLKT	L4
	Left side	PDG2XPLKL	L5
	Right side	PDG2XPLKR	L6
	Snap on	PDG2XPLKSNAP	L0
Padlockable hasp OFF only	Top	PDG2XPLKT0FF	L1
	Left side	PDG2XPLKLOFF	L2
	Right side	PDG2XPLKROFF	L3
Padlockable handle block	On handle	PDG2XPHB	—
Kirk lock provision ^①	Top	PDG2XKLKPTFF	L7
Walking beam interlock ^{②③}	Two-, three-, and four-pole	PDG2XWB1234P	—
Electrical operator	24 Vdc	PDG2XROP24DC	RG
	48–60 Vdc	PDG2XROP60DC	RJ or RK
	125 Vdc	PDG2XROP125DC	RL
	250 Vdc	PDG2XROP250DC	RM
	110–130 Vac	PDG2XROP130AC	RA
	200–240 Vac	PDG2XROP240AC	RB
	380–440 Vac	PDG2XROP440AC	RC
Plug-in breaker base only	Three-pole	PDG2XPBB3P225A	—
	Four-pole	PDG2XPBB4P225A	—
Plug-in breaker parts kit	Three-pole	PDG2XPBB3P225A	—
	Four-pole	PDG2XPBB4P225A	—
Terminal covers	Two-pole	PDG2XTC2P	—
	Three-pole	PDG2XTC3P	—
	Four-pole	PDG2XTC4P	—
Interphase barriers	Single-pole	PDG2XIB	—
	Three-pole	PDG2XIB3P	—
	Four-pole	PDG2XIB4P	—
Finger protection	Three-pole	PDG2XFP3P	—
	Four-pole	PDG2XFP4P	—
60A–100 A residual current neutral sensor	Cable type	PDG2XNCTD0100	—
150A–225 A residual current neutral sensor	Cable type	PDG2XNCTD0225	—
60A–100 A residual current neutral sensor	Bus bar type	PDG2XNCTB0100	—
150A–225 A residual current neutral sensor	Bus bar type	PDG2XNCTB0225	—
Service entrance barrier kit	Three-pole	PRLSEBPD2	—

Base Mounting Hardware

Description	Catalog Number
Single-pole metric	4218B80G09
Two-pole metric	4218B80G11
Three-, four-pole metric	BMH1M
Single-pole English	624B375G01
Two-pole English	4218B80G01
Three-, four-pole English	BMH1

Note: Base mounting hardware is included with a circuit breaker or molded case switch.

Dimensions and Weights—Frame Size 2**Approximate Dimensions in Inches (mm)**

Number of Poles	Width	Height	Depth
1	1.38 (35.1)	6.00 (152.4)	3.50 (88.9)
2	2.75 (69.9)	6.00 (152.4)	3.50 (88.9)
3	4.12 (104.6)	6.00 (152.4)	3.50 (88.9)
4	5.49 (139.5)	6.00 (152.4)	3.50 (88.9)

Approximate Shipping Weight in lb (kg)

Breaker Type	1-Pole	2-Pole	3-Pole	4-Pole
PDG2 225 A	2.00 (0.91)	3.00 (1.36)	4.21 (1.82)	5.69 (2.46)

Notes

- ① Provision only. For use with Type FF Kirk keylock (sold separately). Bolt projection in withdrawn position is 0 in (0 mm).
- ② Breaker must be ordered with walking beam interlock ready modification from plant (factory suffix **WB**).
- ③ Requires two breakers.