Power Defense Molded Case Circuit Breakers—Frame Size 3



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Power Defense Molded Case Circuit Breakers—Frame Size 3

Product Description

Frame Size 3 covers a range of 45 A through 600 A with a complete offering of trip units, including PXR electronic trip units and fixedadjustable thermal-magnetic trip units. PD-3 is available in two versions, with 400 A and 600 A constructions to optimize performance in multiple applications.

Application Description

Frame Size 3 can be used to meet a wide range of circuit protection and power distribution needs, including ground fault protection, current limiting, 100% UL ratings, and high instantaneous settings for selective coordination. PXR trip units in PD-3 provide all levels of protection, including energy metering with multiple communication schemes, breaker health indication, and arc flash reduction options.

Features and Benefits

Frame Size 3 breakers are modular and available as complete breakers from the factory, or as modular components, including frames, trip units, accessories and terminals to provide flexibility for customers. 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)



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Catalog Number / Product Selection

Power Defense—Frame Size 3 (45–600 A)

Frame Size 3 covers a range of 45 A through 600 A using electronic trip units, and 100 A through 600 A using thermal-magnetic trip units. It is available in configurations of 2-pole, 3-pole and 4-pole, with the 2-pole being in the same physical size of a 3-pole variant. Frame 3 has two unique constructions: one for 400 A and a second one for 600 A. The 600 A construction provides a unique capability to be used at 400 A and below in critical coordination applications where a high level fixed instantaneous is required. This is accomplished by using a letter **H** in the 7th digit of the catalog number, as shown below.

Interrupting Ratings

Catalog Designator	lesignator F		G		К		M 1		N ①		P 1		
ANSI (UL/CSA)	kA rms		kA rms	kA rms		kA rms		kA rms		kA rms		kA rms	
240 Vac	35		65		85		100		150	150		200	
480 Vac	25		35	35		50		65		85			
600 Vac	14		18	18		25		35		50			
250 Vdc @3	10 / 22		10 / 22	10 / 22		10 / 22		22 / 42		22 / 42		22 / 42	
IEC	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	50	
480 Vac	20	20	25	20	35	22.5	50	30	65	40	85	40	
525 Vac	18	5	20	7.5	25	10	30	15	35	25	40	25	
660–690 Vac		—	8	4	10	5	15	7.5	20	10	20	10	
250 Vdc @3	10 / 22	10 / 22	10 / 22	10 / 22	10 / 22	10 / 22	22 / 42	22 / 42	22 / 42	22 / 42	22 / 42	22 / 42	

Notes

① UL current limiting. M interrupting rating only current limiting for the 400 A construction breakers.

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

③ First rating listed is for 400 A frame, second rating is for 600 A frame.

Molded Case Circuit Breaker

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

Molded Case Circuit Breaker with Thermal-Magnetic Trip Units (TMTU) - Globally Rated



Molded Case Circuit Breakers with TMTU-Globally Rated (100% UL Rated)

PD	F = UL/CSA/IEC/CC (100% UL Rated

3 = 3

3 = 3-pole 4 = 4-pole (100% N) 0 = 4-pole (0% N) 6 = 4-pole (60% 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	
	F = 14 kA at 600 V G = 18 kA at 600 V K = 25 kA at 600 V M= 35 kA at 600 V	

180 V	H250 = 250 A 3
180 V	H300 = 300 A 3
180 V	H350 = 350 A 3
180 V	H400 = 400 A 3
	0500 = 500 A
500 V	0600 = 600 A
500 V	
500 V	
500 V	

TFA = Fixed thermal /	N = N
Adjustable magnetic	J = L
	K = L
	L = 1

N = No terminals
J = Line and load terminals
K = Line only terminals
L = Load only terminals

Molded Case Circuit Breakers with TMTU-UL/CSA Rated to 240 Vac





Notes

① All PD-3 2-pole breakers are physically the same size as a 3-pole frame with the outer poles used for electrical connections.

⁽²⁾ Not available in 4-pole 60% neutral protection.

③ High override (600 A frame).

In Molded case switches may open above 4000 A for the 400 A frame, and above 6300 A for the 600 A frame.

Molded Case Circuit Breakers with Power Xpert Release (PXR) Electronic Trip Units (ETU)

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 PXR ETU–Globally Rated



Molded Case Circuit Breakers with PXR ETU-Globally Rated (100% UL Rated)



Note

① All PD-3 2-pole breakers are physically the same size as a 3-pole frame with the outer poles used for electrical connections.

^② See PXR Trip Unit Options table on Page V4-T2-48 for protection type (#₍₁₎) and available configured options (#₍₂₎).

Globally Rated Frame Only

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PD-3 thermal-magnetic and electronic breakers may also be purchased as separate frames, trip units, terminals and accessories for field configuration of a final breaker. Each Frame Only device is marked with interrupting ratings and a maximum continuous current rating; each trip unit is also marked with a maximum continuous current rating, which must not exceed that of the frame. Additionally, 100% UL Rated frames are marked as such on the Frame Only device.

Frame Only-Globally Rated



Frame Only-Globally Rated (100% UL Rated)



Note

① All PD-3 2-pole breakers are physically the same size as a 3-pole frame with the outer poles used for electrical connections.

Trip Units

PD-3 thermal-magnetic and electronic breakers may also be purchased as separate frames, trip units, terminals and accessories for field configuration of a final breaker. The 400 A frame must use trip units of ratings 0100–0400, while the 600 A frame must use trip units of ratings 0500, 0600 or designated by **H**, such as *H250*. Additionally, for 2-pole breakers using electronic trip units, 3-pole trip units are used. PDG designated trip units are for use with PDG and PDF breaker frames. The 100% rating for PDF (100% UL Rated) is marked on the frame, not the trip unit.

Trip Units Only

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

Thermal-Magnetic Trip Units



Power Xpert Release (PXR) Electronic Trip Units

Power Xpert Release (PXR) Electronic Trip Units



Notes

① Not available in 4-pole 60% neutral protection.

⁽²⁾ See tables and descriptions on Page V4-T2-48 for protection type (#(1)) and available configured options (#(2)).

Power Xpert Release (PXR) Trip Unit Options—Frame Size 3

Power Xpert Release (PXR) Trip Unit Options #(2)—Available Configured Options #(1)—Protection Type Relays Relays Relays Relays Relays Relays Relays Relays Modbus Modbus Modbus Modbus LSIG with _ ZSI 7SI LSI with _ ZSI **ZSI** ARMS PXR ETU LSI LSIG CAM CAM ARMS _ _ _ CAM CAM PXR 10 В 2 Ν **PXR 20** Ε 2 Ν R Μ Ζ C W Х 3 4 5 R Μ z C w Х PXR 20D D 3 5 м w γ 2 4 _ _ _ D PXR 25 Ρ 2 3 4 5 М w D γ _

Descriptions of PXR Configured Options

Relays—2 Form A contacts (rated for 240 Vac, 1 A)

- Interface: 3 wires (ALM1, ALM2, ALM Common)
- Programmable to indicate breaker conditions

Modbus—Modbus RTU directly from breaker

- Interface: 3 wires (MODBA, MODBB, MODBG)
- No additional modules required

ZSI—Zone Selective Interlocking

- Interface: 3 wires (Zin, Zout, Zcomm)
- Includes ability to turn ON and OFF, and indicate signals

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

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

ARMS—Arcflash Reduction Maintenance System, or Maintenance Mode

- Available as trip unit Protection Type 4 or 5
- Interface: Switch and LED on face of trip unit (selfpowered) and two wires for remote switch enable option (24 Vdc required)
- A programmable relay will be factory defaulted to remote indication of ARMS

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 (Ir) Settings on PXR Electronic Trip Units

Catalog Number Selection and Maximum Setting (In)								
Option	Setting	0125 125 A	0250/H250 250 A	0400/H400 400 A	0600 600 A			
PXR 10, PXR 20	1	45 A	90 A	160 A	250 A			
	2	50 A	100 A	175 A	275 A			
	3	60 A	110 A	200 A	300 A			
	4	63 A	125 A	225 A	320 A			
	5	70 A	150 A	250 A	350 A			
	6	80 A	160 A	275 A	400 A			
	7	90 A	175 A	300 A	450 A			
	8	100 A	200 A	320 A	500 A			
	9	110 A	225 A	350 A	550 A			
	$10 = I_n$	125 A	250 A	400 A	600 A			
PXR 20D, PXR 25 Programmable from minimum to maximum values in 1 A increments.								

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Terminals—Frame Size 3

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*: PDG3**X3**TA300 becomes PDG3**X2**TA300 for two-pole.

Terminal Types



Note: Pictures are for reference only.

Terminals

Maximum					Number of	AWC / komil	Motria (mm ²)			Digit 14 D	esignati	on	Factory
Breaker Amperes	Breaker Frame	Terminal Body Type	Wire Type	Wire Class	Conductors per Phase	Range per Conductor	Range per Conductor	3-Pole Catalog Number	Included Accessories	Line and Load	Line Only	Load Only	Ampere Range
Standard	Terminals	;											
300	400	Aluminum	Cu/Al	В, С	1	3–350	26.7-177	PDG3X3TA300	_	J	К	L	100-225
350	400	Aluminum	Cu/Al	В, С	1	250-500	127–253	PDG3X3TA350	_	J	К	L	250-350
400	400	Aluminum	Cu/Al	В, С	2	3/0-250	85–127	PDG3X3TA400	Terminal shield	J	Κ	L	400
400	600	Aluminum	Cu/Al	В, С	1	500-750	253-380	PDG3X3TA401H	Terminal shield	J	К	L	H250-H400
630	600	Aluminum	Cu/Al	В, С	2	2–500	33.6–253	PDG3X3TA630	Terminal shield	J	Κ	L	450-600
Optional	Aluminun	n Terminals											
400	400	Aluminum	Cu/Al	В, С	1	500-750	253-380	PDG3X3TA402	Terminal shield	Т	U	V	100-400
400	400	Aluminum	Cu/Al	В, С	2	2/0–250 (2) or 2/0–500 (1)	67.4–127 (2) or 67.4–253 (1)	PDG3X3TA401	Terminal shield	I	0	F	100-400
400	600	Aluminum	Cu/Al	В, С	1	3–500	26.7–253	PDG3X3TA400H	_	Т	U	V	H250-H400
Optional	Copper Te	rminals											
300	400	Copper	Cu	В, С	1	3–350	26.7-177	PDG3X3T300	_	W	Y	Ζ	100-225
350	400	Copper	Cu	В, С	1	250-500	127–253	PDG3X3T350	_	W	Y	Ζ	250-350
400	400	Copper	Cu	В, С	2	3/0-250	85–127	PDG3X3T400	Terminal shield	W	Y	Ζ	400
400	400	Copper	Cu/Al	В, С	1	Al: 500–750 Cu: 500 Only	—	PDG3X3T402	Terminal shield	—	_	—	—
400	600	Copper	Cu	В, С	1	3–500	26.7–253	PDG3X3T400H	_	_		—	_
400	600	Copper	Cu	В, С	1	500-750	253-380	PDG3X3T401H	Terminal shield	W	Y	Ζ	H250-H400
630	600	Copper	Cu	В, С	2	2-500	33.6 –253	PDG3X3T630	Terminal shield	W	Y	Z	450-600
StrandAt	ole Termin	als											
400	400	Aluminum	Cu/Al	В, С	2	3/0-250	85–127	PDG3X3TA400SW	Terminal shield	А	В	С	100-400
				D, G, H, I, K, M	_	3/0-4/0	85–107						
350	400	Aluminum	Cu/Al	В, С	1	250-500	127-253	PDG3X3TA350SW	_	_		—	_
				D, G, H, I, K, M	_	250-350	127–177						
630	600	Aluminum	Cu/Al	В, С	2	2–500	33.6–253	PDG3X3TA630SW	Terminal shield	А	В	С	H250-600
				D, G, H, I, K, M		2–350	33.6–177						

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Power Defense Molded Case Circuit Breakers

Terminals—Frame Size 3

Terminals, continued

Maximum					Number of	AWG / kcmil	Metric (mm ²))		Digit 14 D	esignat	ion	Factory Config.
Breaker Amperes	Breaker Frame	Terminal Body Type	Wire Type	Wire Class	Conductors per Phase	Range per Conductor	Range per Conductor	3-Pole Catalog Number	Included Accessories	Line and Load	Line Only	Load Only	Ampere Range
Control V	Control Wire Aluminum Terminals												
400	400	Aluminum	Cu/Al	В, С	2	3/0-250	85–127	PDG3X3TA400CW	Terminal shield	1	2	3	100-400
400	400	Aluminum	Cu/Al	B, C	2	2/0-250 (2) or 2/0-500 (1)	67.4–127 (2) or 67.4–253 (1)	PDG3X3TA401CW	Terminal shield	4	5	6	100-400
400	600	Aluminum	Cu/Al	В, С	1	500-750	253-380	PDG3X3TA401HCW	Terminal shield	1	2	3	H250-H400
630	600	Aluminum	Cu/Al	В, С	2	2–500	33.6–253	PDG3X3TA630CW	Terminal shield	1	2	3	450-600
Control V	Vire Copp	er Terminals	5										
400	400	Copper	Cu	В, С	2	3/0-250	85–127	PDG3X3T400CW	Terminal shield	7	8	9	100-400
400	600	Copper	Cu	В, С	1	500-750	253-380	PDG3X3T401HCW	Terminal shield	7	8	9	H250-H400
630	600	Copper	Cu	В, С	2	2-500	33.6-253	PDG3X3T630CW	Terminal shield	7	8	9	450-600
Multi-wi	re Termina	ls											
400	400	Aluminum	Cu/Al	В, С	3	12-2/0	3.31-67.4	PDG3X3TA4003W	Terminal shield	_	_	Н	100-400
400	400	Aluminum	Cu/Al	В, С	6	14–3	2.08-26.7	PDG3X3TA4006W	Terminal shield	_	_	G	100-400
600	600	Aluminum	Cu/Al	В, С	6	14-1/0	2.08-53.5	PDG3X3TA6006W	Terminal shield	_	_	G	H250-600
StrandAl	ole Multi-v	wire Termina	als										
600	600	Aluminum	Cu/Al	В, С	6	12-2/0	_	PDG3X3TA6006WSW	Terminal shield	_	_	—	_
				D, G, H, I, K, M		8-1/0							
Rear-fed	Terminals												
400	400	Aluminum	Cu/Al	B, C	1	250-500	127–253	PDG3X3TA400RF (1)	Interphase barriers	—	—	—	—
400	600	Aluminum	Cu/Al	B, C	1	2–500	33.6–253	PDG3X3TA400HRF 1	Interphase barriers	—	_	_	_
630	600	Aluminum	Cu/Al	B, C	2	2–500	33.6–253	PDG3X3TA630RF 1	Interphase barriers	—	—		_
Rear Con	Rear Connectors												
400	_	_	_		_	—	_	PDG3X3T400RC	_	R	_	_	100-400
630	—	_	_	_	_	_	_	PDG3X3T630RC	_	R	_	_	250-600
End Cap	Kits/Screv	w Terminals											
400	_	_			_	_	_	PDG3X3TS400	_	S	D	Е	100-400
600	_	_	_	_	_	_	_	PDG3X3TS600	_	S	D	Е	250-600

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.

Control Wire Tabs

Use	Package Qty.	Catalog Number
100–400 A	12	ксштк

Note

① Terminals not UL Listed.

Accessories

Internal Accessory Configurations—Frame Size 3

3-Pole Circuit Breakers



Tripping Accessory Options	Alarm Options (2 Spaces) ⁽¹⁾	Aux Options (2 Spaces)		
Shunt Trip	None	None		
	1NO (1 space)	1NO (1 space) 1NC (1 space)		
(ST)	1NC (1 space)			
	1NO/1NC (2 spaces)	1NO/1NC (2 spaces)		
UVR	2NO (2 spaces)	2NO (2 spaces)		
UV	2NC (2 spaces)	2NC (2 spaces)		

4-Pole Circuit Breakers



Notes

^① Frame 3 Power Defense breakers with electronic trip units AND communication only have access to one alarm space. Breakers with thermal-magnetic trip units or electronic trip units without communication have access to two alarm spaces.

⁽²⁾ Neutral pole includes two additional auxiliary spaces.

Alarm and Auxiliary Contact Blocks—Frame Size 3

Power Defense breakers have designated positions for alarm and auxiliary switches in the right pole accessory cavity. For Frame 3, 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.

Electronic breakers with communications options (Modbus RTU or CAM Link) lose one alarm switch position, but are also able to provide trip position via communications and the PXR programmable relays.

Contact Blocks

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

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

Factory Installation of Alarm and Auxiliary Switches—Frame Size 3

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
- For Eaton factory installation, the same type of terminals (i.e., all pigtail 0.75 m, all screw, etc.) must be used. If a combination of alarm and auxiliary switches is selected, they must be the same type (i.e., all 1NC, all 1NO/1NC, etc.)
- Digit 16 denotes number and type (NO, NC) of switches installed
- If no other accessories are selected, use NNNN for the final 4 digits of the catalog number
- Electronic breakers with communications lose one alarm switch position in order to provide trip status via communications. They do not lose an auxiliary position for this purpose.

Pigtails-29 in / 0.75 m (A, B, C)

		Auxiliary S	Auxiliary Switch								
		Three-Pol	e					Four-Pole			
		None	1N0	1NC	1N0/1NC	2N0	2NC	2N0/2NC	4N0	4NC	
Alarm Switch	None	NN	AA	AB	AC	AD	AE	A1	A2	A3	
	1N0	BA	CA	—	_	_	_	_	_		_
	1NC	BB	—	CB	—	_	_	_	_		
	1N0/1NC	BC	—	_	CC	—	_	C1	—		
	2N0	BD	—		_	CD	—	_	C2	—	
	2NC	BE	_	_	_	_	CE	—	_	C3	

Screw Terminals (X, Y, Z)

		Auxiliary	Auxiliary Switch							
		None	1N0	1NC	1N0/1NC	2N0	2NC	2NO/2NC	4N0	4NC
Alarm Switch None 1NO 1NC 1NO/1N 2NO	None	NN	ХА	XB	XC	XD	XE	X1	X2	Х3
	1N0	YA	ZA	—	_	_	_	_		
	1NC	YB	—	ZB	—	_	_	_		
	1N0/1NC	YC	—	_	ZC	—	_	Z1	—	
	2N0	YD	—	_	_	ZD	—	_	Z2	—
	2NC	YE	-	_	_	_	ZE	—	_	Z3

Push-In Clamps (U, V, W)

		Auxiliary S	Auxiliary Switch								
		Three-Pol	е					Four-Pole	Four-Pole		
		None	1N0	1NC	1N0/1NC	2N0	2NC	2N0/2NC	4N0	4NC	
Alarm Switch	None	NN	UA	UB	UC	UD	UE	U1	U2	U3	
	1N0	VA	WA	—	_	_	_			_	
	1NC	VB	_	WB	—	_	_	_	_	—	
	1N0/1NC	VC	_		WC	—	_	W1	—	—	
	2N0	VD	—		_	WD	—		W2	—	
	2NC	VE	_		—	_	WE	_	_	W3	

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2.2

Factory Installation of Alarm and Auxiliary Switches—Frame Size 3

Pigtails-11	Pigtails—118 in / 3.0 m (D, E, F)									
		Auxiliary S Three-Pol None	Switch e 1NO	1NC	1N0/1NC	2N0	2NC	Four-Pole 2NO/2NC	4N0	4NC
Alarm Switch	None	NN	DA	DB	DC	DD	DE	D1	D2	D3
	1N0	EA	FA	-	—	_	_	_	_	—
	1NC	EB	—	FB	—	_	_	_	_	—
	1NO/1NC	EC	-	_	FC	-	_	F1	-	—
	2N0	ED	-	_	_	FD	—	_	F2	—
	2NC	EE	-	_		_	FE	—	_	F3

For PXR Trip Units with Communication ⁽¹⁾

		Auxiliary Swit Three-Pole	Auxiliary Switch Fhree-Pole						Four-Pole		
		None	1N0	1NC	1N0/1NC	2N0	2NC	2N0/2NC	4N0	4NC	
Alarm Switch	None	NN	AA	AB	AC	AD	AE	A1	A2	A3	
	1N0	BA	CA	_	CF	CG	_	СР	CQ	_	
	1NC	BB		CB	СН	—	CI	CR	—	CS	

Tripping Accessories—Frame Size 3

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 breakers 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	PDG3XST12DCT	PDG3XST12DCS	PDG3XST12DCR
48 Vdc	PDG3XST48DCT	PDG3XST48DCS	PDG3XST48DCR
60 Vdc	PDG3XST60DCT	PDG3XST60DCS	PDG3XST60DCR
24 Vac/Vdc	PDG3XST24ACDCT	PDG3XST24ACDCS	PDG3XST24ACDCR
110-130 Vac/125 Vdc	PDG3XST130ACDCT	PDG3XST130ACDCS	PDG3XST130ACDCR
200–240 Vac/250 Vdc	PDG3XST250ACDCT	PDG3XST250ACDCS	PDG3XST250ACDCR
380–440 Vac	PDG3XST440ACT	PDG3XST440ACS	PDG3XST440ACR
480–525 Vac	PDG3XST525ACT	PDG3XST525ACS	PDG3XST525ACR
600 Vac	PDG3XST600ACT	PDG3XST600ACS	PDG3XST600ACR

Undervoltage Releases (UVRs)

Voltage	Screw Terminals	Pigtail (29 in / 0.75 m)	Pigtail (118 in / 3.0 m)
12 Vdc	PDG3XUV12DCV	PDG3XUV12DCU	PDG3XUV12DCW
24 Vdc	PDG3XUV24DCV	PDG3XUV24DCU	PDG3XUV24DCW
48 Vdc	PDG3XUV48DCV	PDG3XUV48DCU	PDG3XUV48DCW
60 Vdc	PDG3XUV60DCV	PDG3XUV60DCU	PDG3XUV60DCW
125 Vdc	PDG3XUV125DCV	PDG3XUV125DCU	PDG3XUV125DCW
250 Vdc	PDG3XUV250DCV	PDG3XUV250DCU	PDG3XUV250DCW
24 Vac	PDG3XUV24ACV	PDG3XUV24ACU	PDG3XUV24ACW
130 Vac	PDG3XUV130ACV	PDG3XUV130ACU	PDG3XUV130ACW
240 Vac	PDG3XUV240ACV	PDG3XUV240ACU	PDG3XUV240ACW
440 Vac	PDG3XUV440ACV	PDG3XUV440ACU	PDG3XUV440ACW
525 Vac	PDG3XUV525ACV	PDG3XUV525ACU	PDG3XUV525ACW
600 Vac	PDG3XUV600ACV	PDG3XUV600ACU	PDG3XUV600ACW

Note: Use PDG3XUV18DCW when using Time Delay UVR.

Note

① All options shown have 29 in/0.75 m pigtail termination. For alternate termination options, contact the product line.

Factory Installed Tripping Accessories—Frame Size 3

Shunt trips and undervoltage releases (UVRs) are plug-andplay 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 additional accessories are selected, use NN for digits 15-16 and 19-20 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.

2

Handle Mechanisms—Frame Size 3

Direct Rotary Handle Mechanism ^①

Description	NEMA 1/12 Catalog Number	Factory Installed Digits 19–20
Standard lockable handle and mechanism	PDG3XHMCS	HA
Standard lockable handle and mechanism with door interlock	PDG3XHMCSN	HB
Standard lockable handle and mechanism with mechanical padlock	PDG3XHMCSP	HC
Standard lockable handle and mechanism with door interlock and mechanical padlock	PDG3XHMCSNP	HE
Emergency lockable handle and mechanism	PDG3XHMCE	H1
Emergency lockable handle and mechanism with door interlock	PDG3XHMCEN	H2
Emergency lockable handle and mechanism with mechanical padlock	PDG3XHMCEP	H3
Emergency lockable handle and mechanism with door interlock and mechanical padlock	PDG3XHMCENP	H5

Variable Depth Rotary Handle Mechanism ()

Description	NEMA 1/3R/12/4/4X Catalog Number	Factory Installed Digits 19–20
Standard lockable handle and mechanism	PDG3XHMDS	DA
Standard lockable handle and mechanism with mechanical padlock	PDG3XHMDSP	DC
Emergency lockable handle and mechanism	PDG3XHMDE	D1
Standard lockable handle and mechanism with mechanical padlock	PDG3XHMDEP	D3
9 in (245 mm) handle mechanism shaft	PDG34XHMS245	_
17 in (445 mm) handle mechanism shaft	PDG34XHMS445	_
Standard NFPA79-compliant shaft handle	PDG34XHM79S	_
Emergency NFPA79-compliant shaft handle	PDG34XHM79E	_

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	PDG3XFS02	PDG3XFS02HP	PDG3XFS02X	PDG3XFS02HPX
3	PDG3XFS03	PDG3XFS03HP	PDG3XFS03X	PDG3XFS03HPX
4	PDG3XFS04	PDG3XFS04HP	PDG3XFS04X	PDG3XFS04HPX
5	PDG3XFS05	PDG3XFS05HP	PDG3XFS05X	PDG3XFS05HPX
6	PDG3XFS06	PDG3XFS06HP	PDG3XFS06X	PDG3XFS06HPX
7	PDG3XFS07	PDG3XFS07HP	PDG3XFS07X	PDG3XFS07HPX
8	PDG3XFS08	PDG3XFS08HP	PDG3XFS08X	PDG3XFS08HPX
9	PDG3XFS09	PDG3XFS09HP	PDG3XFS09X	PDG3XFS09HPX
10	PDG3XFS10	PDG3XFS10HP	PDG3XFS10X	PDG3XFS10HPX

Note

 $\textcircled{\sc 0}$ Standard handles are black and gray; Emergency handles are red and yellow.

Accessories—Frame Size 3

External Accessories

Description	Fit Type	Catalog Number	Factory Installed Digits 19–20
Padlockable hasp	Тор	PDG3XPLKT	L4
Padlockable hasp, OFF only	Тор	PDG3XPLKTOFF	L1
Padlockable handle block	On handle	PDG3XPHB	—
Kirk lock provision— left side, Type F ①	Left side	PDG3XKLKPSF	L8
Kirk lock provision— right side, Type F ^①	Right side		L9
Kirk lock provision— left/right side, Type FF ①	Left/right side	PDG3XKLKPSFF	—
Walking beam interlock ⁽²⁾	400 A frame, two-, three- and four-pole	PDG3XWBI234P	—
	600 A frame, two- and three-pole	PDG3XWBI23P	—
	600 A frame, four-pole	PDG3XWBI4P	_
Electrical operator	24 Vdc	PDG3XR0P24DC	RG
	48–60 Vdc	PDG3XR0P60DC	RJ or RK
	125 Vdc	PDG3XR0P125DC	RL
	250 Vdc	PDG3XR0P250DC	RM
	110–130 Vac	PDG3XROP130AC	RA
	200–240 Vac	PDG3XR0P240AC	RB
	380–440 Vac	PDG3XROP440AC	RC
Plug-in breaker	Three-pole	PDG3XPIBB3P600A	_
base only	Four-pole	PDG3XPIBB4P600A	_
Plug-in breaker	Three-pole, 400 A	PDG3XPIBK3P400A	_
parts kit	Three-pole, 600 A	PDG3XPIBK3P600A	_
	Four-pole, 400 A	PDG3XPIBK4P400A	_
	Four-pole, 600 A	PDG3XPIBK4P600A	_
Terminal covers ④	Three-pole (400 A frame)	PDG3XTC3P400A	_
	Three-pole	PDG3XTC3P	_
	Four-pole	PDG3XTC4P	_
Interphase barriers	Single-pole	PDG3XIB	_
	Three-pole	PDG3XIB3P	_
	Four-pole	PDG3XIB4P	_
Finger protection	Three-pole	PDG3XFP3P	_
	Four-pole	PDG3XFP4P	_
Neutral CTs for ground fault (PXR)	Bus bar type	PDG3XNCTB0600	_
Service entrance barrier kit	Three-pole	PRLSEBPD3	_

Base Mounting Hardware

Description	Catalog Number
Two-, three-, four-pole metric (400 A)	BMH3M
Two-, three-, four-pole English (400 A)	BMH3
Two-, three-, four-pole metric (600 A)	66A4560G03

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

Dimensions and Weights—Frame Size 3

Approximate Dimensions in Inches (mm)

Number of Poles	Width	Height	Depth
2	5.47 (138.9)	10.13 (257.1)	4.30 (109.1)
3	5.47 (138.9)	10.13 (257.1)	4.30 (109.1)
4	7.22 (182.9)	10.13 (257.1)	4.30 (109.1)

Approximate Shipping Weight in Ib (kg)

reaker Type	2-Pole	3-Pole	4-Pole
G3 400 A	8.05 (3.65)	11.02 (5.0)	13.77 (6.25)
0G3 600 A	10.43 (4.73)	12.36 (5.61)	16.27 (7.39)
0G3 600 A	10.43 (4.73)	12.36 (5.61)	16.27 (7.39)

Notes

 $^{\odot}$ Provision only. Kirk keylock sold separately. Bolt projection in withdrawn position is 0.375 in (9.525 mm) for F-lock and 0 in (0 mm) for FF-lock.

⁽²⁾ Breaker must be ordered with walking beam interlock ready modification from plant (factory suffix WB in digits 19-20).

^③ Requires two breakers.

PDG3 with 0400 or below rating ship from the factory with the 400 A frame terminal cover, but can be fitted with either in the field. 600 A frames, including H250, H400, etc ship with the standard terminal cover.