

# Power Defense molded case circuit breakers



## Power Xpert Release (PXR) trip units

- Breaker health for diagnostics and predictive maintenance
- Communications and energy metering at 1% accuracy level
- Zone selective interlocking (ZSI) with local and remote indication
- Programmable relays for situational awareness and flexibility
- Programmable Arcflash Reduction Maintenance System™
- Power Xpert Protection Manager software for setup and testing

## PD G 3 3 M 0400 P5M J

Certifications	Frame	Poles	Interrupting ratings—CL denotes current limiting: (for 600 V and IEC ratings, see additional table)								Continuous current rating	Trip units (# values detailed in PXR table)
			240 V: 25 kA	35 kA	65 kA	85 kA	100 kA	150 kA	200 kA	200 kA		
G UL/CSA/CCC/IEC	1	1, 2, 3, 4, 0	C	F	G	K	M (CL)	N (CL)	P (CL)	0015, 0020, 0025, 0030, 0035, 0040, 0045, 0050, 0060, 0070, 0080, 0090, 0100, 0110, 0125	TFF, VFF	
G UL/CSA/CCC/IEC		3, 4			G		M			0125	KNS	
G UL/CSA/CCC/IEC	2	1		F	G	K	M	N	P	0015, 0020, 0025, 0030, 0035, 0040, 0045, 0050, 0060, 0070, 0080, 0090, 0100, 0110, 0125, 0150	TFF, VFF	
G UL/CSA/CCC/IEC		2, 3, 4, 6, 0		F	G	K (CL)	M (CL)	N (CL)	P (CL)	0015, 0020, 0025, 0030, 0035, 0040, 0045, 0050, 0060, 0070, 0080, 0090, 0100, 0110, 0125, 0150, 0175, 0200, 0225	TFF, VFF	
G UL/CSA/CCC/IEC		2, 3, 4				G		M		0060, 0100, 0150, 0225	B2N, E##, D##, P##	
F UL (100% rated)/CSA/CCC/IEC		3, 4		F	G	K (CL)	M (CL)	N (CL)	P (CL)	0100, 0150, 0225	KNS	
D UL/CSA rated up to 240 Vac		2, 3		F	G	K	M	N	P	0060, 0100, 0150, 0225	B2N, E##, D##, P##	
G UL/CSA/CCC/IEC	3	2, 3, 4, 6, 0		F	G	K	M (CL)	N (CL)	P (CL)	0015, 0020, 0025, 0030, 0035, 0040, 0045, 0050, 0060, 0070, 0080, 0090, 0100, 0110, 0125, 0150, 0175, 0200, 0225	TFF, VFF	
G UL/CSA/CCC/IEC		2, 3, 4		F	G	K	M (CL)	N (CL)	P (CL)	0100, 0125, 0150, 0175, 0200, 0225, 0250, 0300, 0350, 0400, 0500, 0600	TFA, VFA	
G UL/CSA/CCC/IEC		2, 3, 4			F	G	K	M (CL)	N (CL)	P (CL)	0125, 0250, H250, 0400, H400, 0600	B2N, E##, D##, P##
F UL (100% rated)/CSA/CCC/IEC		3, 4		F	G	K	M (CL)			0400, 0600	FNN	
F UL (100% rated)/CSA/CCC/IEC		3, 4		F	G	K	M			0400, 0600	KNS	
D UL/CSA rated up to 240 Vac		2, 3		F	G	K	M	N	P	0125, 0250, H250, 0400, H400, 0600	B2N, E##, D##, P##	
F UL (100% rated)/CSA/CCC/IEC		3, 4		F	G	K	M (CL)			0400, 0600	FNN	
G UL/CSA/CCC/IEC	4	2, 3, 4, 6, 0			G	K	M			0300, 0350, 0400, 0450, 0500, 0600, 0700, 0800	TFA, VFA	
G UL/CSA/CCC/IEC		2, 3, 4			G	K	M			0800	B2N, E##, D##, P##	
G UL/CSA/CCC/IEC		2, 3, 4			G	K	M			0800	FNN	
F UL (100% rated)/CSA/CCC/IEC		3, 4			G	K	M			0800	KNS	
F UL (100% rated)/CSA/CCC/IEC		3, 4			G	K	M			0800	B2N, E##, D##, P##	
F UL (100% rated)/CSA/CCC/IEC		3, 4			G	K	M			0800	FNN	
G UL/CSA/CCC/IEC	5	2, 3, 4				K	M	N	P	0800, 1200	E##, D##, P##	
G UL/CSA/CCC/IEC		3, 4				K	M	N	P	0800, 1200	FNN	
F UL (100% rated)/CSA/CCC/IEC		3, 4				K	M	N	P	0800, 1200	KNS	
F UL (100% rated)/CSA/CCC/IEC		3, 4				K	M	N	P	0800, 1200	E##, D##, P##	
F UL (100% rated)/CSA/CCC/IEC		3, 4				K	M	N	P	0800, 1200	FNN	
J UL/CSA rated up to 600 Vac		3							T	0800	E##, D##, P##	
G UL/CSA/CCC/IEC	6	2, 3, 4				M	N	P		1600, 2000, 2500	E##, D##, P##	
G UL/CSA/CCC/IEC		3, 4				M	N	P		1600, 2000, 2500	FNN	
F UL (100% rated)/CSA/CCC/IEC		3, 4				M	N	P		1600, 2000	KNS	
F UL (100% rated)/CSA/CCC/IEC		3, 4				M	N	P		1600, 2000	E##, D##, P##	
F UL (100% rated)/CSA/CCC/IEC		3, 4				M	N	P		1600, 2000	FNN	

Terminal options	Continuous current range	Standard		Alternate		Non-aluminum		Strandable	
		Type	Wire range	Type	Wire range	Type	Wire range	Type	Wire range
N S, D, E J, K, L T, U, V	15–125 A	Box (steel)	14–3/0 [2.08–85]	Tunnel (Al)	14–1/0 [2.08–53.5]	N/A	N/A	N/A	N/A
N S, D, E J, K, L T, U, V W, Y, Z	Up to 50 A	Box (steel)	14–3/0 [2.08–53.5]	Tunnel (Al)	14–4 [2.08–21.2]	Box (st. steel)	4–4/0 [21.2–107]	N/A	N/A
	50–100 A			Tunnel (Al)	14–1/0 [2.08–53.5]				
	110–150 A	Tunnel (Al)	4–4/0 [21.2–107]	Tunnel (Al)	14–4/0 [2.08–107]	Tunnel (Cu)	4–4/0 [21.2–107]		
	175–200 A			Tunnel (Al)	6–3/0 [13.3–152]				
	200–225 A								
N S, D, E J, K, L T, U, V W, Y, Z A, B, C	100–225 A	Tunnel (Al)	3–350 [26.7–177]	Tunnel (Al)	500–750 [253–380]	Tunnel (Cu)	6–350 [13.3–177]	Tunnel (Al)	(2) 3/0–250 (2) [85–127]
	250–350 A	Tunnel (Al)	250–500 [127–253]			Tunnel (Cu)	250–500 [127–253]		
	400 A	Tunnel (Al)	(2) 3/0–250 (2) [85–127]			Tunnel (Cu)	(2) 3/0–250 (2) [85–127]		
	H250–H400 A	Tunnel (Al)	500–750 [253–380]	Tunnel (Al)	3–500 [26.7–253]	Tunnel (Cu)	500–750 [253–380]	Tunnel (Al)	(2) 2–500 (2) [33.6–253]
	450–600 A	Tunnel (Al)	(2) 2–500 (2) [33.6–253]	N/A	N/A	Tunnel (Cu)	(2) 2–500 (2) [33.6–253]		
N S, D, E J, K, L T, U, V W, Y, Z A, B, C	300–600 A	Tunnel (Al)	(2) 1–500 (2) [42.4–253]	Tunnel (Al)	(2) 500–750 (2) [253–380]	Tunnel (Cu)	(2) 2/0–500 (2) [67.4–253]	Tunnel (Al)	(2) 3/0–400 (2) [85–203]
	700 A					Tunnel (Cu)	(3) 3/0–300 (3) [85–152]		
	800 A	Tunnel (Al)	(3) 3/0–400 (3) [85–203]						
N, M	800 A	Tunnel (Al)	(3) 3/0–400 (3) [85–203]	Tunnel (Al)	(3) 500–750 (3) [253–380]	Tunnel (Cu)	(3) 3/0–500 (3) [85–253]	Tunnel (Al)	(4) 4/0–500 (4) [107–253]
	1200 A	Tunnel (Al)	(4) 4/0–500 (4) [107–253]			Tunnel (Cu)	(4) 3/0–400 (4) [85–203]		
N, M	1600 A	Tunnel (Al)	(4) 500–1000 (4) [253–507]	N/A	N/A	Tunnel (Cu)	(4) 1–600 (4) [42.4–304]	N/A	N/A
	2000 A	Tunnel (Al)	(6) 2–600 (6) [33.6–304]			N/A	N/A		
	2500 A	N/A	N/A						

**Notes:**  
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. Other options and configurations are available. Consult with product line or terminal offering literature.  
For PD-1 through PD-4, No Terminals and Screw Terminals (end cap kit) are also available:  
N—No terminals  
S—Line and load side screw terminals  
D—Line side only screw terminals  
E—Load side only screw terminals  
For PD-5 and PD-6, only configuration on Digit 14 is No Terminals:  
N—No terminals (imperial tapped terminals)—Default option  
M—No terminals (metric tapped terminals)  
Accessories may also be configured for factory installation by adding Digits 15–20 to the catalog number. If no accessories are needed, Digits 15–20 default to NNNNNN, but are not required for order entry. Consult catalog or product selector tool for additional details.

## Interrupting ratings

Values listed in kAIC	C	F	G	K	M	N	P	T
ANSI 240 Vac	25	35	65	85	100	150	200	200
480 Vac	18	25	35	50	65	85	100	150
600 Vac	10	14	18	25	35	50	65	65
600 Vac	10	14	18	22	25	30	35	35
250 Vdc	10	22	22	22	42	42	42	42

  

IEC	240 Vac	380–415 Vac	440 Vac	690 Vac
$I_{CU}$	35	25	25	N/A
$I_{CS}$	55	36	30	8
$I_{CU}$	85	50	35	10
$I_{CS}$	100	70	50	5
$I_{CU}$	100	53	40	10
$I_{CS}$	150	70	50	5
$I_{CU}$	200	70	100	5
$I_{CS}$	150	70	100	5

- Note:** The interrupting rating of individual frames may vary, consult the specific frame information for exact ratings.
- 1 For four-pole thermal-magnetic breakers, 4 = 100% neutral protection; 6 = 60% neutral protection; 0 = 0% neutral protection.
  - 2 Neutral protection is programmable to 0, 60 and 100% for all PXR trip units; use 4 to order.
  - 3 Two-pole PDG2 breakers are not offered with ETU.
  - 4 For PDG1, N and P interrupting ratings available on three- and four-pole breakers.
  - 5 Single-pole N and P interrupting ratings only available to 30 A.
  - 6 H as the leading character of the ampacity indicates a high instantaneous version of the breaker for coordination purposes. H ratings must use 600 A frame.
  - 7 PD-3, PD-4, PD-5 and PD-6 ratings.
  - 8 PD-1 and PD-2 ratings. PD-1 rated for 347/600 V applications. PD-2 rated for 600 V applications.
  - 9 PD-2 N and P interrupting ratings with PXR trip units rated to 25 kA at 600 Vac.
  - 10 PDF2 breakers may be configured only with specific terminals, using J (Standard) or W (non Al) for digit 14. However, when using J for 225 A, the oversized terminal presented as T will be used. Other terminals are as presented for J and W.
  - 11 PD-3 M interrupting rating breakers are current limiting for the 400 A frame only; 400 A and 600 A frames are current limiting for N and P interrupting ratings.

## P 5 M Power Xpert Release (PXR) trip units

PXR ETU (Character 11)	LSI	# = Protection type (character 12)			# = Available configured options (character 13)							
		LSIG	ARMS	ARMS	None	Relays	Relays	Relays	Relays	Relays	Relays	Relays
PXR 10	B	2			N	R	M	Z	C	W	X	
PXR 20	E	2			N	R	M	Z	C	W	X	
PXR 20D	D	2	3	4	5	M	M	Z	C	W	X	
PXR 25	P	2	3	4	5	M	M	W			D	Y

**Note:**  
Relays—Form A contacts programmable for external indication.  
Modbus—Modbus RTU directly from trip unit.  
ZSI—Zone selective interlocking.  
CAM—CAM Link for connection to external communications adapter module (CAM); contact product line or catalog for ordering information.

## Available I settings on PXR electronic trip units

Setting	PD-2				PD-3				PD-4				PD-5				PD-6			
	60 A	100 A	150 A	225 A	125 A	250 A	400 A	600 A	800 A	800 A	1200 A	1600 A	2000 A	2500 A	1600 A	2000 A	2500 A			
PXR 10	15 A	32 A	50 A	80 A	45 A	90 A	160 A	250 A	320 A	320 A	500 A	700 A	1000 A	1600 A						
PXR 20	16 A	35 A	60 A	90 A	50 A	100 A	175 A	275 A	350 A	350 A	550 A	800 A	1100 A	1700 A						
	20 A	40 A	63 A	100 A	60 A	110 A	200 A	300 A	400 A	400 A	600 A	900 A	1200 A	1800 A						
	25 A	50 A	70 A	110 A	63 A	125 A	225 A	320 A	450 A	450 A	630 A	1000 A	1250 A	1900 A						
	30 A	60 A	80 A	125 A	70 A	150 A	250 A	350 A	500 A	500 A	700 A	1100 A	1400 A	2000 A						
	35 A	63 A	90 A	150 A	80 A	160 A	275 A	400 A	550 A	550 A	800 A	1200 A	1600 A	2100 A						
	40 A	70 A	100 A	160 A	90 A	175 A	300 A	450 A	600 A	600 A	900 A	1250 A	1700 A	2200 A						
	45 A	80 A	110 A	175 A	100 A	200 A	320 A	500 A	630 A	630 A	1000 A	1400 A	1800 A	2300 A						
	50 A	90 A	125 A	200 A	110 A	225 A	350 A	550 A	700 A	700 A	1100 A	1500 A	1900 A	2400 A						
	60 A	100 A	150 A	225 A	125 A	250 A	400 A	600 A	800 A	800 A	1200 A	1600 A	2000 A	2500 A						
PXR 20D & PXR 25	Programmable from minimum to maximum values in 1 A increments								Programmable from minimum to maximum values in 10 A increments											

## T F A Thermal-magnetic trip units

Type	Character 11	Thermal type	Character 12	Magnetic type	Character 13
TMTU	T	Fixed	F	Fixed	F
TMTU—50 °C (not UL)	V			Adjustable	A
Molded case switch	K	None	N	Molded case switch	S
Frame only	F	None	N	None	N

**Note:** Adjustable thermal/adjustable magnetic trip units are available for IEC applications; please consult with product line for additional information.



**Product selector and technical data**  
Scan the QR code for additional assistance in selecting a breaker or to obtain data sheets and 2D or 3D drawings.  
You can also visit our website at [eaton.com/PowerDefense](http://eaton.com/PowerDefense).