

# Power Defense moulded 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:								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 Ø, 2	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, 0150	TFF, VFF	
		3, 4, 0	C	F	G	K	M (CL)	N (CL)	P (CL)	0125	KNS	
G UL/CSA/CCC/IEC	2	1 Ø	F	G	K	M				0015, 0020, 0025, 0030, 0035, 0040, 0045, 0050, 0060, 0070, 0080, 0090, 0100, 0110, 0125, 0150	TFF, VFF	
		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	B2N, E##, D##, P##	
G UL/CSA/CCC/IEC	3	2, 3, 4	F	G	K	M (CL)	N (CL)	P (CL)		0060, 0100, 0150, 0225	B2N, E##, D##, P##	
		3, 4	F	G	K (CL)	M (CL)	N (CL)	P (CL)		0060, 0100, 0150, 0225	B2N, E##, D##, P##	
G UL/CSA/CCC/IEC	4	2, 3, 4, 6, 0	F	G	K	M (CL)	N (CL)	P (CL)		0100, 0125, 0150, 0175, 0200, 0225, 0250, 0300, 0350, 0400, 0500, 0600	TFA, VFA	
		2, 3, 4	F	G	K	M (CL)	N (CL)	P (CL)		0400, 0600	FNN	
F UL (100% rated)/CSA/CCC/IEC	5	3, 4	F	G	K	M (CL)	N (CL)	P (CL)		0400, 0600	FNN	
		3, 4	F	G	K	M (CL)	N (CL)	P (CL)		0400, 0600	FNN	
D UL/CSA rated up to 240 Vac	6	2, 3	F	G	K	M	N	P		0100, 0125, 0150, 0175, 0200, 0225, 0250, 0300, 0350, 0400, 0500, 0600	TFA, VFA	
		2, 3, 4, 6, 0	F	G	K	M	N	P		0300, 0350, 0400, 0450, 0500, 0600, 0700, 0800	TFA, VFA	
G UL/CSA/CCC/IEC	7	2, 3, 4	F	G	K	M (CL)	N (CL)	P (CL)		0800	B2N, E##, D##, P##	
		3, 4	F	G	K	M	N	P		0800	FNN	
F UL (100% rated)/CSA/CCC/IEC	8	3, 4	F	G	K	M (CL)	N (CL)	P (CL)		0800	B2N, E##, D##, P##	
		3, 4	F	G	K	M	N	P		0800	FNN	
J UL/CSA rated up to 600 Vac	9	3								0800	E##, D##, P##	
		2, 3, 4								1600, 2000, 2500	E##, D##, P##	
G UL/CSA/CCC/IEC	10	3, 4								1600, 2000, 2500	FNN	
		3, 4								1600, 2000	KNS	
F UL (100% rated)/CSA/CCC/IEC	11	3, 4								1600, 2000	E##, D##, P##	
		3, 4								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
	Up to 50 A	Box (steel)	14-1/0 [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
N S, D, E J, K, L T, U, V W, Y, Z	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]		
	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]
N S, D, E J, K, L T, U, V W, Y, Z A, B, C	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 (UL/CSA)	240 Vac	25	35	65	85	100	150	200
	480 Vac	18	25	35	50	65	85	100
	600 Vac	14	18	25	35	50	65	75
	600 Vac	10	14	18	22	25	30	35
	250 Vdc	10	22	22	22	42	42	42
IEC	240 Vac	35	35	55	55	85	85	100
	380-415 Vac	25	25	36	36	50	50	70
	440 Vac	25	20	30	23	35	35	50
	690 Vac	N/A	N/A	8	4	10	5	10

- Note:** The interrupting rating of individual frames may vary, consult the specific frame information for exact ratings from the catalog.
- For four-pole thermal-magnetic breakers, 4 = 100% neutral protection; 6 = 60% neutral protection; 0 = 0% neutral protection.
  - Neutral protection is programmable to 0, 60 and 100% for all PXR trip units; use 4 to order.
  - PD1 rated for: 480V/277 (1-pole), 600V/347 (1-, 2-, 3-, 4-pole).
  - PD2 rated for: 480V/277 (1-pole), 600V/347 (1-pole).
  - PD-2 N and P interrupting ratings with PXR trip units rated to 25 kA at 600 Vac.
  - H ratings for ampacity must use 600 A frame. H stands for high instantaneous override version of breaker for coordination purposes.
  - PD-3, PD-4, PD-5 and PD-6 ratings.
  - PD-1 and PD-2 ratings.
  - PD-3: 400 A frame is current limiting for M, N, P interrupting ratings; 600 A frame is current limiting for N, P interrupting ratings.
  - 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.

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

PXR ETU (character 11)	LSI	# = Protection type (character 12)				# = Available configured options (character 13)											
		LSIG	LSIG with ARMS	LSIG with ARMS	LSIG with ARMS	Relays	Relays Modbus	Relays ZSI	Relays CAM	Relays Modbus ZSI	Relays Modbus CAM	Relays Modbus ZSI CAM					
PXR 10	B	2				N											
PXR 20	E	2				N	R	M	Z	C	W	X					
			3	4	5		R	M	Z	C	W	X					
PXR 20D	D	2	3	4	5			M			W				D	Y	
PXR 25	P	2	3	4	5			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.

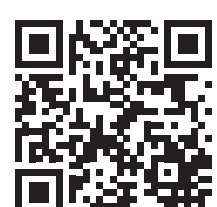
## Available settings on PXR electronic trip units

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	800 A	800 A	1200 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						
3	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						
4	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						
5	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						
6	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						
7	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						
8	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						
9	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						
10	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
Moulded case switch	K	None	N	Moulded 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 [EatonCanada.ca/PowerDefense](http://EatonCanada.ca/PowerDefense).