



## Next-generation drives for today's demands



The DG1 general-purpose drives are part of the Eaton next-generation PowerXL™ series of adjustable frequency drives specifically engineered for today's more demanding commercial and industrial applications. With an industry-leading energy efficiency algorithm, high short-circuit current rating and robust design, the DG1 offers customers increased efficiency, safety and reliability.

### Features

- Graphic LCD keypad display
- Active energy control algorithm
- On-board communications:
  - EtherNet/IP, Modbus®/TCP, Modbus RTU, BACnet® MS/TP
- Onboard I/O:
  - 8DI, 1DO
  - 2AI, 2AO
  - 3 relays, one change-over contact
- Real-time clock with battery backup
- 5% DC link choke
- Standard applications:
  - Standard
  - Multi-pump and fan control
  - Multi-PID
  - Multi-purpose
- Advanced configuration PC tool

### Benefits

- Dual VT and CT ratings
- Easy menu navigation
- Two configurable keypad soft keys
- Conformal coated boards standard
- EMC filter standard
- Brake chopper standard (FR1-FR3)



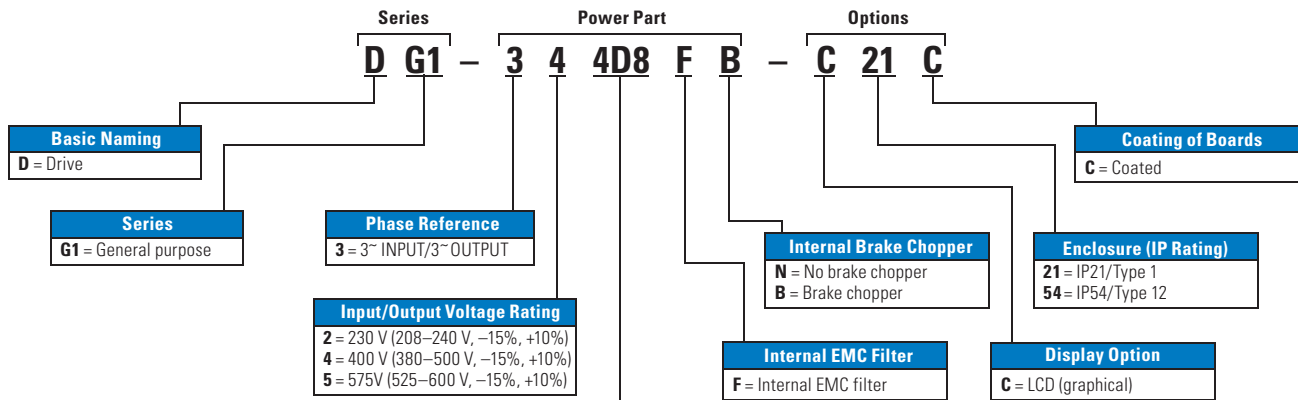
### Product range

- 230V to 125 hp, 310A, 90 kW
- 480V to 250 hp, 310A, 160 kW
- 575V to 250 hp, 250A, 160 kW
- Type 1/IP21 or Type 12/IP54 packaging

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## Catalog numbering system



Output Current Rating (CT)		
208–240 V	380–500 V	525–600 V
3D7 = 3.7 A, 0.55 kW, 0.75 HP	2D2 = 2.2 A, 0.75 kW, 1 HP	3D3 = 3.3 A, 1.5 kW, 2 HP
4D8 = 4.8 A, 0.75 kW, 1 HP	3D3 = 3.3 A, 1.1 kW, 1.5 HP	4D5 = 4.5 A, 2.2 kW, 3 HP
6D6 = 6.6 A, 1.1 kW, 1.5 HP	4D3 = 4.3 A, 1.5 kW, 2 HP	7D5 = 7.5 A, 3.7 kW, 5 HP
7D8 = 7.8 A, 1.5 kW, 2 HP	5D6 = 5.6 A, 2.2 kW, 3 HP	010 = 10 A, 5.5 kW, 7.5 HP
011 = 11 A, 2.2 kW, 3 HP	7D6 = 7.6 A, 3 kW, 5 HP	013 = 13.5 A, 7.5 kW, 10 HP
012 = 12.5 A, 3 kW, 5 HP(VT)	9D0 = 9 A, 4 kW, 7.5 HP(VT)	018 = 18 A, 11 kW, 15 HP
017 = 17.5 A, 3.7 kW, 5 HP	012 = 12 A, 5.5 kW, 7.5 HP	022 = 22 A, 15 kW, 20 HP
025 = 25 A, 5.5 kW, 7.5 HP	016 = 16 A, 7.5 kW, 10 HP	027 = 27 A, 18 kW, 25 HP
031 = 31 A, 7.5 kW, 10 HP	023 = 23 A, 11 kW, 15 HP	034 = 34 A, 22 kW, 30 HP
048 = 48 A, 11 kW, 15 HP	031 = 31 A, 15 kW, 20 HP	041 = 41 A, 30 kW, 40 HP
061 = 61 A, 15 kW, 20 HP	038 = 38 A, 18 kW, 25 HP	052 = 52 A, 37 kW, 50 HP
075 = 75 A, 18.5 kW, 25 HP	046 = 46 A, 22 kW, 30 HP	062 = 62 A, 45 kW, 60 HP
088 = 88 A, 22 kW, 30 HP	061 = 61 A, 30 kW, 40 HP	080 = 80 A, 55 kW, 75 HP
114 = 114 A, 30 kW, 40 HP	072 = 72 A, 37 kW, 50 HP	100 = 100 A, 75 kW, 100 HP
143 = 143 A, 37 kW, 50 HP	087 = 87 A, 45 kW, 60 HP	125 = 125 A, 90 kW, 125 HP
170 = 170 A, 45 kW, 60 HP	105 = 105 A, 55 kW, 75 HP	144 = 144 A, 110 kW, 150 HP
211 = 211 A, 55 kW, 75 HP	140 = 140 A, 75 kW, 100 HP	208 = 208 A, 160 kW, 200 HP
261 = 261 A, 75 kW, 100 HP	170 = 170 A, 90 kW, 125 HP	
	205 = 205 A, 110 kW, 150 HP	
	261 = 261 A, 132 kW, 200 HP	

## Framesizes and Power Range of PowerXL DG1

Frame Size	Voltage	HP (CT/H)	kW ①	Amperes (CT/H)
FR1	230 V AC	0.75–3	0.55–2.2	3.7–11
	480 V AC	1–5	0.75–3.7	2.2–7.6
	575 V AC	2–5	1.5–3.7	3.3–7.5
FR2	230 V AC	4–7.5	3–5.5	12.5–25
	480 V AC	7.5–15	5.5–11	12–23
	575 V AC	7.5–15	5.5–11	10–18
FR3	230 V AC	10–15	7.5–11	31–48
	480 V AC	20–30	15–22	31–46
	575 V AC	20–30	15–22	22–34
FR4	230 V AC	20–30	15–22	61–88
	480 V AC	40–60	30–45	61–87
	575 V AC	40–60	30–45	41–62
FR5	230 V AC	40–60	30–45	114–170
	480 V AC	75–125	55–90	105–170
	575 V AC	75–125	55–90	80–125
FR6	230 V AC	75–100	55–75	211–261
	480 V AC	150–200	110–150	205–261
	575 V AC	150–200	110–160	144–208

① kW ratings are at 400 V / 50 Hz. The above guidelines apply unless testing has been completed to validate a design outside of these recommendations.

## Input ratings

Description	Specification
Input voltage ( $V_{in}$ )	208–240 V, 380–500 V, 525–600 V, –15 to 10%
Input frequency ( $f_{in}$ )	50–60 Hz (variation up to 45–66 Hz)
Connection to power	Once per minute or less
Short-circuit rating	100 kA

## Output ratings

Description	Specification
Output voltage	0 to $V_{in}$
VT/ $I_L$ overload	Overload 1.1 x $I_L$ (1 min./10 min.)
CT/ $I_H$ overload	Overload 1.5 x $I_H$ (1 min./10 min.)
Initial output current	200% (2 sec./20 sec.)
Output frequency	0–400 Hz (standard)
Frequency resolution	0.01 Hz

## Ambient conditions

Description	Specification
Operating temperature	–10°C (no frost) to +40°C, up to +60°C with derating
Storage temperature	–40° to +70°C
Relative humidity	0–95% RH, noncondensing, non-corrosive
Altitude	100% without derating up to 3280 ft (1000 m); 1% derating for each 328 ft (100 m) above 3280 ft (1000 m) 9843 ft (3000 m) maximum

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