

DG1 General Purpose Drive

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PowerXL DG1 Series Drives

Product Description

The DG1 general purpose drives are part of Eaton's next generation PowerXL Series of adjustable frequency drives specifically engineered for today's more demanding commercial and industrial applications. The power unit makes use of the most sophisticated semiconductor technology and a highly modular construction that can be flexibly adapted to meet the customer's needs.

The control module was designed to include today's standard communication protocols and I/O while still having the modularity to add additional option cards.

Eaton's patented Active Energy Control is also a standard feature on DG1 drives, offering customers increased efficiency, safety and reliability.

These drives continue the tradition of robust performance and raise the bar on features and functionality, ensuring the best solution at the right price.

Product Range

230 V to 125 hp, 312 A, 90 kW

480 V to 250 hp, 310 A, 160 kW

575 V to 250 hp, 250 A, 160 kW

Features and Benefits

Hardware

- Brake chopper standard on Frames 1, 2, 3
- Dual overload ratings
 - 110% variable torque (I_L)
 - 150% constant torque (I_H)
- Type 1/IP21 and Type 12/IP54 enclosures available
- Integrated common mode reduction 5% DC link choke with input surge protection
- EMI/RFI filters standard on all drives—meets EMC Category C2
- Real-time clock—supports calendaring and PLC functionality
- Graphic LCD display and keypad—supports simple menu navigation as well as on-screen diagnostics and troubleshooting
- LOCAL/REMOTE operation from keypad and two configurable soft keys
- Conformal coated control and power boards standard

- Control logic can be powered from an external auxiliary control panel—internal drive functions and fieldbus if necessary
- Standard I/O:
 - 8DI, 1DO
 - 2AI, 2AO
 - 2FC, 1FA relays
- Standard communications:
 - EtherNet/IP, Modbus TCP
 - RS-485: Modbus RTU, BACnet MS/TP
- Seamless integration into EtherNet/IP networks via EIP-Assist I/O tag-generation tool
- Two expansion slots—intended to support additional I/O or communication protocols as necessary
- Quick disconnect terminals for I/O connections—supports fast easy installation
- Safe Torque Off (STO) built-in with functional safety SIL1 certification

Software

- Active energy control—minimizes energy losses in your motor, resulting in industry-leading energy efficiency for your application
- Quick Start Wizard upon initial power-up supports fast, easy installation
- Standard applications:
 - Standard
 - Multi-pump and fan Control
 - Multi-PID
 - Multi-purpose
- Copy/paste functionality on drive keypad—allows for fast setup of multiple drives
- Pre-programmed I/O—supports fast, easy installation for most applications
- Dynamic motor regenerative energy management
- Advanced PC Tool with diagnostic capabilities
- Two keypad software keys for easy menu navigation and shortcuts

Standards and Certifications

Product

- IEC/EN 61800-5-1
- IEC/EN 61800-5-2
- UL 508C
- IEC 61508
- EN 62061
- EN ISO 13849-1

EMC

- Immunity: IEC/EN 61800-3
- Category C2

Certification

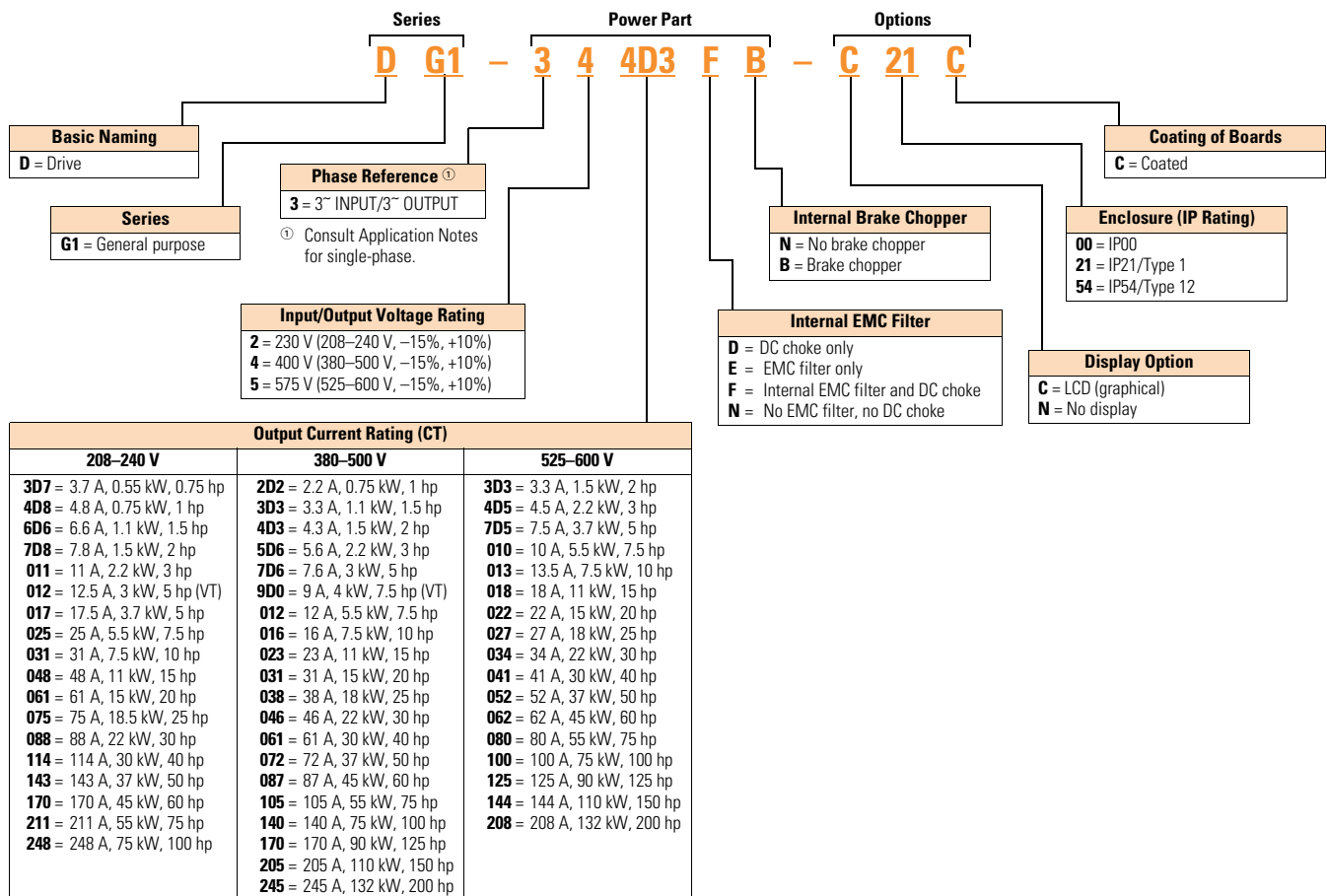
- UL
- cUL
- CE
- C-Tick
- RoHS
- EAC
- Plenum rated



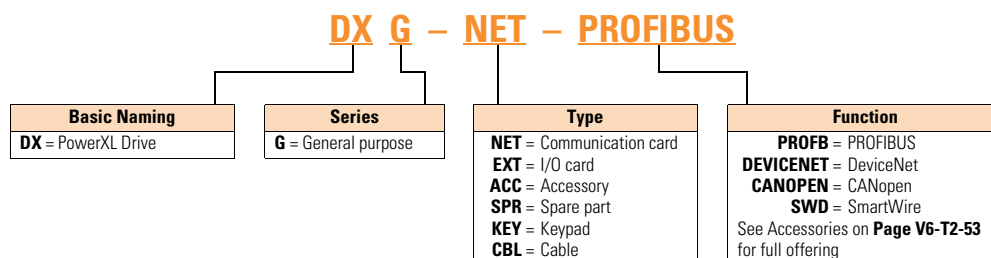
Catalog Number Selection

Catalog Number Selection is for illustrative purposes only and not to be used to create new catalog numbers.

PowerXL Series—DG1 General Purpose Drive



PowerXL Series—DG1 General Purpose Drive Option Boards



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Adjustable Frequency Drives

PowerXL DG1 Series Drives

Product Selection

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DG1 Series Drives—208–240 Volt

PowerXL Series—DG1 Type 1/IP21



Frame Size	Constant Torque (CT) / High Overload (I_H)			Variable Torque (VT) / Low Overload (I_L)			Catalog Number
	230 V, 50 Hz kW Rating	230 V, 60 Hz hp	Current A	230 V, 50 Hz kW Rating	230 V, 60 Hz hp	Current A	
FR1	0.55	0.75	3.7	0.75	1	4.8	DG1-323D7FB-C21C
	0.75	1	4.8	1.1	1.5	6.6	DG1-324D8FB-C21C
	1.1	1.5	6.6	1.5	2	7.8	DG1-326D6FB-C21C
	1.5	2	7.8	2.2	3	11	DG1-327D8FB-C21C
	2.2	3	11	3	—	12.5	DG1-32011FB-C21C
	3	—	12.5	3.7	5	17.5	DG1-32012FB-C21C
FR2	3.7	5	17.5	5.5	7.5	25	DG1-32017FB-C21C
	5.5	7.5	25	7.5	10	31	DG1-32025FB-C21C
	7.5	10	31	11	15	48	DG1-32031FB-C21C
FR3	11	15	48	15	20	61	DG1-32048FB-C21C
	15	20	61	18.5	25	75	DG1-32061FN-C21C
	18.5	25	75	22	30	88	DG1-32075FN-C21C
FR4	22	30	88	30	40	114	DG1-32088FN-C21C
	30	40	114	37	50	143	DG1-32114FN-C21C
	37	50	143	45	60	170	DG1-32143FN-C21C
FR5	45	60	170	55	75	211	DG1-32170FN-C21C
	55	75	211	75	100	261	DG1-32211FN-C21C
	75	100	248	90	125	312	DG1-32248FN-C21C

PowerXL Series—DG1 Type 12/IP54



Frame Size	Constant Torque (CT) / High Overload (I_H)			Variable Torque (VT) / Low Overload (I_L)			Catalog Number
	230 V, 50 Hz kW Rating	230 V, 60 Hz hp	Current A	230 V, 50 Hz kW Rating	230 V, 60 Hz hp	Current A	
FR1	0.55	0.75	3.7	0.75	1	4.8	DG1-323D7FB-C54C
	0.75	1	4.8	1.1	1.5	6.6	DG1-324D8FB-C54C
	1.1	1.5	6.6	1.5	2	7.8	DG1-326D6FB-C54C
	1.5	2	7.8	2.2	3	11	DG1-327D8FB-C54C
	2.2	3	11	3	—	12.5	DG1-32011FB-C54C
	3	—	12.5	3.7	5	17.5	DG1-32012FB-C54C
FR2	3.7	5	17.5	5.5	7.5	25	DG1-32017FB-C54C
	5.5	7.5	25	7.5	10	31	DG1-32025FB-C54C
	7.5	10	31	11	15	48	DG1-32031FB-C54C
FR3	11	15	48	15	20	61	DG1-32048FB-C54C
	15	20	61	18.5	25	75	DG1-32061FN-C54C
	18.5	25	75	22	30	88	DG1-32075FN-C54C
FR4	22	30	88	30	40	114	DG1-32088FN-C54C
	30	40	114	37	50	143	DG1-32114FN-C54C
	37	50	143	45	60	170	DG1-32143FN-C54C
FR5	45	60	170	55	75	211	DG1-32170FN-C54C
	55	75	211	75	100	261	DG1-32211FN-C54C
	75	100	248	90	125	312	DG1-32248FN-C54C

DG1 Series Drives—380–500 Volt

PowerXL Series—DG1 Type 1/IP21



Frame Size	Constant Torque (CT) / High Overload (I_H)			Variable Torque (VT) / Low Overload (I_L)			Catalog Number
	400 V, 50 Hz kW Rating	460 V, 60 Hz hp	Current A	400 V, 50 Hz kW Rating	460 V, 60 Hz hp	Current A	
FR1	0.75	1	2.2	1.1	1.5	3.3	DG1-342D2FB-C21C
	1.1	1.5	3.3	1.5	2	4.3	DG1-343D3FB-C21C
	1.5	2	4.3	2.2	3	5.6	DG1-344D3FB-C21C
	2.2	3	5.6	3	5	7.6	DG1-345D6FB-C21C
	3	5	7.6	4	—	9	DG1-347D6FB-C21C
	4	—	9	5.5	7.5	12	DG1-349D0FB-C21C
FR2	5.5	7.5	12	7.5	10	16	DG1-34012FB-C21C
	7.5	10	16	11	15	23	DG1-34016FB-C21C
	11	15	23	15	20	31	DG1-34023FB-C21C
FR3	15	20	31	18.5	25	38	DG1-34031FB-C21C
	18.5	25	38	22	30	46	DG1-34038FB-C21C
	22	30	46	30	40	61	DG1-34046FB-C21C
FR4	30	40	61	37	50	72	DG1-34061FN-C21C
	37	50	72	45	60	87	DG1-34072FN-C21C
	45	60	87	55	75	105	DG1-34087FN-C21C
FR5	55	75	105	75	100	140	DG1-34105FN-C21C
	75	100	140	90	125	170	DG1-34140FN-C21C
	90	125	170	110	150	205	DG1-34170FN-C21C
FR6	110	150	205	132	200	261	DG1-34205FN-C21C
	132	200	245	160	250	310	DG1-34245FN-C21C

PowerXL Series—DG1 Type 12/IP54



Frame Size	Constant Torque (CT) / High Overload (I_H)			Variable Torque (VT) / Low Overload (I_L)			Catalog Number
	400 V, 50 Hz kW Rating	460 V, 60 Hz hp	Current A	400 V, 50 Hz kW Rating	460 V, 60 Hz hp	Current A	
FR1	0.75	1	2.2	1.1	1.5	3.3	DG1-342D2FB-C54C
	1.1	1.5	3.3	1.5	2	4.3	DG1-343D3FB-C54C
	1.5	2	4.3	2.2	3	5.6	DG1-344D3FB-C54C
	2.2	3	5.6	3	5	7.6	DG1-345D6FB-C54C
	3	5	7.6	4	—	9	DG1-347D6FB-C54C
	4	—	9	5.5	7.5	12	DG1-349D0FB-C54C
FR2	5.5	7.5	12	7.5	10	16	DG1-34012FB-C54C
	7.5	10	16	11	15	23	DG1-34016FB-C54C
	11	15	23	15	20	31	DG1-34023FB-C54C
FR3	15	20	31	18.5	25	38	DG1-34031FB-C54C
	18.5	25	38	22	30	46	DG1-34038FB-C54C
	22	30	46	30	40	61	DG1-34046FB-C54C
FR4	30	40	61	37	50	72	DG1-34061FN-C54C
	37	50	72	45	60	87	DG1-34072FN-C54C
	45	60	87	55	75	105	DG1-34087FN-C54C
FR5	55	75	105	75	100	140	DG1-34105FN-C54C
	75	100	140	90	125	170	DG1-34140FN-C54C
	90	125	170	110	150	205	DG1-34170FN-C54C
FR6	110	150	205	132	200	261	DG1-34205FN-C54C
	132	200	245	160	250	310	DG1-34245FN-C54C

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Adjustable Frequency Drives

PowerXL DG1 Series Drives

DG1 Series Drives—575 Volt

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PowerXL Series—DG1 Type 1/IP21



Frame Size	Constant Torque (CT) / High Overload (I _H)			Variable Torque (VT) / Low Overload (I _L)			Catalog Number
	575 V, 60 Hz kW Rating	575 V, 60 Hz hp	Current A	575 V, 60 Hz kW Rating	575 V, 60 Hz hp	Current A	
FR1	1.5	2	3.3	2.2	3	4.5	DG1-353D3FB-C21C
	2.2	3	4.5	3.7	5	7.5	DG1-354D5FB-C21C
	3.7	5	7.5	5.5	7.5	10	DG1-357D5FB-C21C
FR2	5.5	7.5	10	7.5	10	13.5	DG1-35010FB-C21C
	7.5	10	13.5	11	15	18	DG1-35013FB-C21C
	11	15	18	15	20	22	DG1-35018FB-C21C
FR3	15	20	22	18.5	25	27	DG1-35022FB-C21C
	18.5	25	27	22	30	34	DG1-35027FB-C21C
	22	30	34	30	40	41	DG1-35034FB-C21C
FR4	30	40	41	37	50	52	DG1-35041FN-C21C
	37	50	52	45	60	62	DG1-35052FN-C21C
	45	60	62	55	75	80	DG1-35062FN-C21C
FR5	55	75	80	75	100	100	DG1-35080FN-C21C
	75	100	100	90	125	125	DG1-35100FN-C21C
	90	125	125	110	150	144	DG1-35125FN-C21C
FR6	110	150	144	150	200	208	DG1-35144FN-C21C
	132	200	208	187	250	250	DG1-35208FN-C21C

PowerXL Series—DG1 Type 12/IP54



Frame Size	Constant Torque (CT) / High Overload (I _H)			Variable Torque (VT) / Low Overload (I _L)			Catalog Number
	575 V, 60 Hz kW Rating	575 V, 60 Hz hp	Current A	575 V, 60 Hz kW Rating	575 V, 60 Hz hp	Current A	
FR1	1.5	2	3.3	2.2	3	4.5	DG1-353D3FB-C54C
	2.2	3	4.5	3.7	5	7.5	DG1-354D5FB-C54C
	3.7	5	7.5	5.5	7.5	10	DG1-357D5FB-C54C
FR2	5.5	7.5	10	7.5	10	13.5	DG1-35010FB-C54C
	7.5	10	13.5	11	15	18	DG1-35013FB-C54C
	11	15	18	15	20	22	DG1-35018FB-C54C
FR3	15	20	22	18.5	25	27	DG1-35022FB-C54C
	18.5	25	27	22	30	34	DG1-35027FB-C54C
	22	30	34	30	40	41	DG1-35034FB-C54C
FR4	30	40	41	37	50	52	DG1-35041FN-C54C
	37	50	52	45	60	62	DG1-35052FN-C54C
	45	60	62	55	75	80	DG1-35062FN-C54C
FR5	55	75	80	75	100	100	DG1-35080FN-C54C
	75	100	100	90	125	125	DG1-35100FN-C54C
	90	125	125	110	150	144	DG1-35125FN-C54C
FR6	110	150	144	150	200	208	DG1-35144FN-C54C
	132	200	208	187	250	250	DG1-35208FN-C54C

PowerXL Series—DG1 Technical Data and Specifications, continued

Attribute	Description	Specification
Ambient conditions, continued	Vibration:	5–150 Hz
	• EN 61800-5-1	Displacement amplitude: 1 mm (peak) at 5 Hz to 15.8 Hz (FR1–FR6)
	• EN 60668-2-6	Maximum acceleration amplitude: 1g at 15.8 Hz to 150 Hz (FR1–FR6)
	Shock:	Storage and shipping: maximum 15 g, 11 ms (in package)
	• ISTA 1 A	
	• EN 60068-2-27	
	Overvoltage	Overvoltage Category III
	Pollution degree	Pollution Degree 2
	Enclosure class	IP21/Type 1 standard in entire kW/hp range IP54/Type 12 option Note: Keypad or keypad hole plug required to be mounted in drive for IP54/Type 12 rating
	Immunity	Fulfills EN 61800-3 (2004), first and second environment
MTBF		FR1: 165,457 hours
		FR2: 134,833 hours
		FR3: 102,515 hours
		FR4: 121,567 hours
		FR5: 108,189 hours
		FR6: 100,000 hours
Noise		FR1: 51.2 dB
		FR2: 58.6 dB
		FR3: 61.0 dB
		FR4: 68.0 dB
		FR5: 69.1 dB
		FR6: 73.2 dB
Standards	Safety	UL 508C, CSA C22.2 No. 274-13 and EN 61800-5-1
	EMC	+EMC2: EN 61800-3 (2004), Category C2 The drive can be modified for IT networks and corner grounding TN system
	Electrostatic discharge	Second environment, IEC 61000-4-2, 4 kV CD or 8 kV AD, Criterion B
	Fast transient burst	Second environment, IEC 61000-4-4, 2 kV/5 kHz, Criterion B
	Dielectrical strength	Primary to secondary: 3600 Vac/5100 Vdc Primary to earth: 2000 Vac/2828 Vdc
	Approvals	EAC, RCM (C-Tick), RoHS, CE, UL and cUL (see nameplate for more detailed approvals)
Fieldbus connections	Onboard: EtherNet/IP, Modbus® TCP, Modbus RTU, BACnet	

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Adjustable Frequency Drives

PowerXL DG1 Series Drives

PowerXL Series—DG1 Technical Data and Specifications, continued

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Attribute	Description	Specification
Safety/protections	Oversvoltage protection	Yes
	Oversvoltage trip limit	230 V drives: 456 V 480 V drives: 911 V 575 V drives: 1100 V
	Undersvoltage protection	Yes
	Undersvoltage trip limit	230 V drives: 211 V 480 V drives: 370 V 575 V drives: 550 V
	Earth fault protection	Yes Default: 15% motor FLA Minimum: 0% motor FLA Maximum: 30% motor FLA
	Input phase supervision	Yes
	Motor phase supervision	Yes
	Overcurrent protection	Yes
	Unit overtemperature protection	Yes
	Motor overload protection	Yes
	Motor stall protection	Yes
	Motor underload protection	Yes
	DC bus oversvoltage control	Yes
	Short-circuit protection of 24 V reference voltages	Yes
	Surge protection	Yes (differential mode 2 kV; common mode 4 kV 230 V drives: 275 Vac, 10,000 A 480 V drives: 320 Vac, 8000 A 575 V drives: 385 Vac, 10,000 A
Common coated boards	Yes (prevents corrosion)	

PowerXL Series—DG1 Technical Data and Specifications—Efficiency

230 V

Frame Size	Load Torque	Efficiency		
		VT	CT	Input THDi
FR1	25%	92.10%	90.90%	42.8%
	50%	95.20%	95.20%	35.2%
	100%	96.70%	96.20%	29.9%
FR2	25%	90.80%	94.20%	70.0%
	50%	96.64%	97.09%	46.6%
	100%	97.30%	97.30%	33.3%
FR3	25%	97.23%	97.06%	53.1%
	50%	97.37%	97.17%	43.6%
	100%	97.00%	97.20%	30.8%
FR4	25%	94.60%	94.30%	39.4%
	50%	97.20%	97.10%	32.4%
	100%	97.60%	97.60%	25.6%
FR5	25%	94.5	94.30%	30.50%
	50%	97.80%	97.60%	30.8%
	100%	97.70%	97.80%	25.0%

480 V

Frame Size	Load Torque	Efficiency		Input THDi
		VT	CT	
FR1	25%	93.30%	90.70%	54.0%
	50%	97.10%	96.98%	46.8%
	100%	97.61%	97.67%	35.3%
FR2	25%	95.90%	94.20%	59.8%
	50%	97.81%	98.34%	42.7%
	100%	98.11%	98.20%	33.8%
FR3	25%	96.40%	95.20%	69.2%
	50%	97.87%	97.99%	45.2%
	100%	97.79%	98.15%	32.6%
FR4	25%	98.00%	97.80%	56.5%
	50%	97.97%	97.89%	39.8%
	100%	97.96%	98.17%	31.5%
FR5	25%	97.8	97.60%	50.3%
	50%	98.39%	98.10%	37.0%
	100%	98.14%	98.19%	29.5%

575 V

Frame Size	Load Torque	Efficiency		Input THDi
		VT	CT	
FR1	25%	97.48%	97.25%	62.6%
	50%	97.79%	97.66%	45.6%
	100%	98.10%	97.60%	36.8%
FR2	25%	98.06%	97.98%	60.6%
	50%	98.19%	98.11%	47.2%
	100%	98.20%	98.10%	36.7%
FR3	25%	97.98%	97.77%	78.9%
	50%	98.32%	98.18%	55.5%
	100%	98.10%	98.10%	36.3%
FR4	25%	98.27%	97.96%	66.1%
	50%	98.57%	98.44%	41.6%
	100%	98.30%	98.30%	31.2%
FR5	25%	98.60%	98.50%	52.80%
	50%	98.81%	98.78%	35.9%
	100%	98.60%	98.70%	28.4%

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Adjustable Frequency Drives

PowerXL DG1 Series Drives

Wiring Diagram

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PowerXL Series—DG1 Control Wiring Diagram

External Wiring	Pin	Signal Name	Signal	Default Setting	Description
	1	+10 V	Ref. Output Voltage	—	10 Vdc Supply Source
	2	AI1+	Analog Input 1	0–10 V	Voltage Speed Reference (Programmable to 4 mA to 20 mA)
	3	AI1–	Analog Input 1 Ground	—	Analog Input 1 Common (Ground)
	4	AI2+	Analog Input 2	4 mA to 20 mA	Current Speed Reference (Programmable to 0–10 V)
	5	AI2–	Analog Input 2 Ground	—	Analog Input 2 Common (Ground)
	6	GND	I/O Signal Ground	—	I/O Ground for Reference and Control
	7	DIN5	Digital Input 5	Preset Speed B0	Sets frequency output to Preset Speed 1
	8	DIN6	Digital Input 6	Preset Speed B1	Sets frequency output to Preset Speed 2
	9	DIN7	Digital Input 7	—	—
	10	DIN8	Digital Input 8	Force Remote (TI+)	Input takes VFD from Local to Remote
	11	CMB	DI5 to DI8 Common	Grounded	Allows source input
	12	GND	I/O Signal Ground	—	I/O Ground for Reference and Control
	13	24 V	+24 Vdc Output	—	Control voltage output (100 mA max.)
	14	DO1	Digital Output 1	Ready	Shows the drive is ready to run
	15	24 Vo	+24 Vdc Output	—	Control voltage output (100 mA max.)
	16	GND	I/O Signal Ground	—	I/O Ground for Reference and Control
	17	AO1+	Analog Output 1	Output Frequency	Shows Output frequency to motor 0–60 Hz (4 mA to 20 mA)
	18	AO2+	Analog Output 2	Motor Current	Shows Motor current of motor 0–FLA (4 mA to 20 mA)
	19	24 Vi	+24 Vdc Input	—	External control voltage input
	20	DIN1	Digital Input 1	Run Forward	Input starts drive in forward direction (start enable)
	21	DIN2	Digital Input 2	Run Reverse	Input starts drive in reverse direction (start enable)
	22	DIN3	Digital Input 3	External Fault	Input causes drive to fault
	23	DIN4	Digital Input 4	Fault Reset	Input resets active faults
	24	CMA	DI1 to DI4 Common	Grounded	Allows source input
	25	A	RS-485 Signal A	—	Fieldbus Communication (Modbus, BACnet)
	26	B	RS-485 Signal B	—	Fieldbus Communication (Modbus, BACnet)
	27	R3NO	Relay 3 Normally Open	At Speed	Relay output 3 shows VFD is at Ref. Frequency
	28	R1NC	Relay 1 Normally Closed	Run	Relay output 1 shows VFD is in a run state
	29	R1CM	Relay 1 Common		
	30	R1NO	Relay 1 Normally Open		
	31	R3CM	Relay 3 Common	At Speed	Relay output 3 shows VFD is at Ref. Frequency
	32	R2NC	Relay 2 Normally Closed	Fault	Relay output 2 shows VFD is in a fault state
	33	R2CM	Relay 2 Common		
	34	R2NO	Relay 2 Normally Open		

Notes

The above wiring demonstrates a SINK configuration. It is important that CMA and CMB are wired to ground (as shown by dashed line).

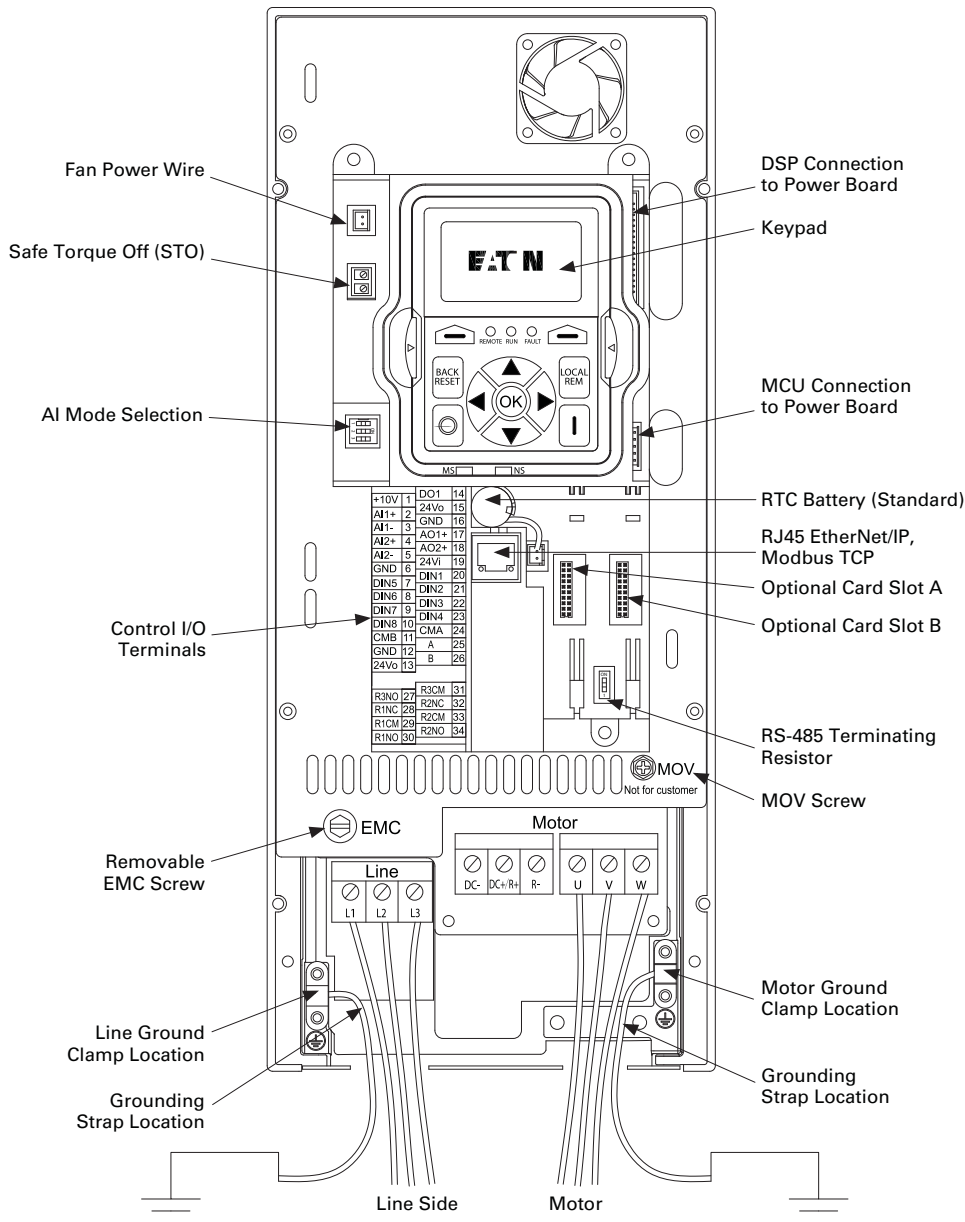
If a SOURCE configuration is desired, wire 24 V to CMA and CMB and close the inputs to ground.

When using the +10 V for AI1, it is important to wire AI1– to ground (as shown by dashed line).

If using +10 V for AI1 or AI2, terminals 3, 5 and 6 need to be jumpered together.

Control Board Layout

PowerXL Series—DG1 Control Board Layout



2.6

Adjustable Frequency Drives

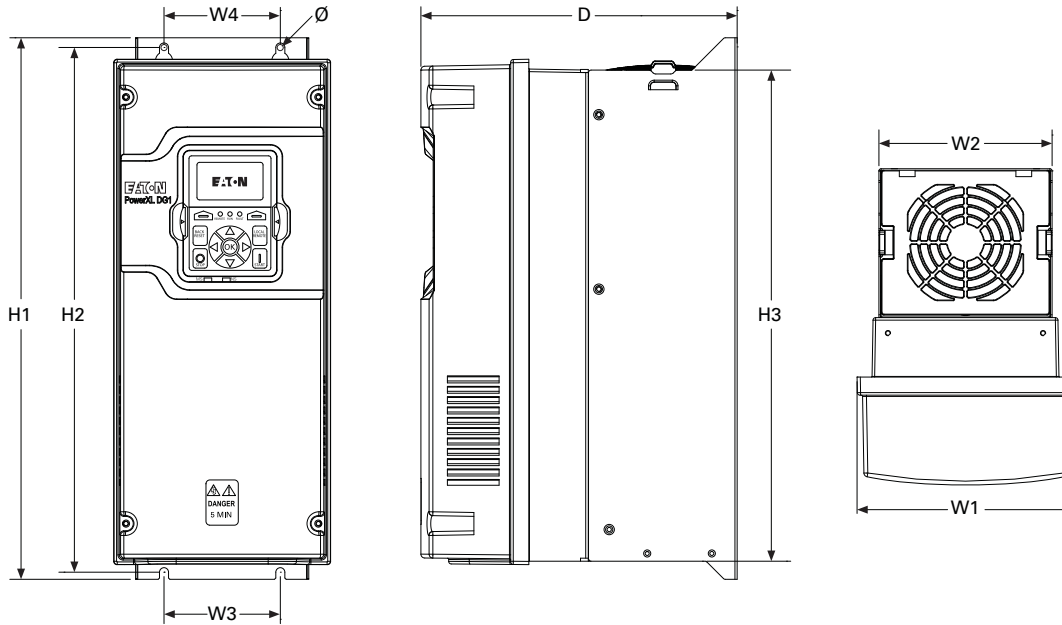
PowerXL DG1 Series Drives

Dimensions

Approximate Dimensions in Inches (mm)

2

PowerXL Series—DG1 Dimensions



Frame Size	Voltage	hp (CT/I _H)	kW	Amperes (CT/I _H)	Approximate Dimensions in Inches (mm)									Weight Lb (kg)
					D	H1	H2	H3	W1	W2	W3	W4	Ø	
FR1	230 Vac	0.75–3	0.55–2.2	3.5–11	7.91	12.87	12.28	11.50	6.02	4.80	3.94	3.94	0.28	14.33
	480 Vac	1–5	0.75–3.7	2.3–7.6	(200.9)	(326.9)	(311.9)	(292.1)	(153.0)	(121.9)	(100.1)	(100.1)	(7.0)	(6.5)
	575 Vac	2–5	1.5–3.7	3.3–7.5										
FR2	230 Vac	5–7.5	3–5.5	12.5–25	9.63	16.50	15.98	14.96	6.61	5.28	3.54	3.54	0.28	23.37
	480 Vac	7.5–15	5.5–11	12–23	(244.7)	(419.1)	(405.9)	(380.0)	(167.8)	(134.1)	(90.0)	(90.0)	(7.0)	(10.6)
	575 Vac	7.5–15	5.5–11	10–18										
FR3	230 Vac	10–15	7.5–11	31–48	10.44	21.97	21.46	20.41	8.06	7.24	4.92	4.92	0.35	49.82
	480 Vac	20–30	15–22	31–46	(265.1)	(558.0)	(545.0)	(518.5)	(204.6)	(183.9)	(125.0)	(125.0)	(9.0)	(22.6)
	575 Vac	20–30	15–22	22–34										
FR4	230 Vac	20–30	15–22	61–88	11.57	24.80	24.31	23.27	9.36	9.13	8.07	8.07	0.35	77.60
	480 Vac	40–60	30–45	61–87	(294.0)	(629.9)	(617.5)	(591.1)	(237.7)	(231.9)	(205.0)	(205.0)	(9.0)	(35.2)
	575 Vac	40–60	30–45	41–62										
FR5	230 Vac	40–60	30–45	114–170	13.41	34.98	29.65	27.83	11.34	11.10	8.66	8.66	0.35	154.32
	480 Vac	75–125	55–90	105–170	(340.7)	(888.5)	(753.1)	(706.9)	(288.0)	(281.9)	(220.0)	(220.0)	(9.0)	(70.0)
	575 Vac	75–125	55–90	80–125										
FR6	230 Vac	75–100	55–75	211–248	14.61	34.04	33.27	40.75	19.13	18.90	15.75	15.75	0.35	281.3
	480 Vac	150–200	110–150	205–261	(371.0)	(864.5)	(845.0)	(1035.0)	(486.0)	(480.0)	(400.0)	(400.0)	(9.0)	(127.6)
	575 Vac	150–200	110–160	144–208										

DG1 General Purpose Enclosed Drive**PowerXL DG1 Series Enclosed Drives****Product Description**

The DG1 Enclosed Drive family incorporates the latest Eaton drive technology into pre-engineered enclosed solutions covering the industry's most common applications. Using the benefits of the PowerXL DG1, the enclosed family provides enhanced user safety with the Safe Torque feature as well as industry-leading energy efficiency from the patented Active Energy Control algorithm. Eaton further raises the bar by providing customers with industry best lead times with the Rapid Response System. This system allows customers to select from 9 million standard configurations that have been pre-engineered with each configuration having a set lead time. The Rapid Response System delivers an improved quotation process and a faster delivery.

Features and Benefits

- Dual rated for both constant torque (CT) / high overload (I_H) and variable torque (VT) / low overload applications
- Optional Brake Chopper for external braking applications
- Available circuit breaker, motor circuit protector, fused disconnect, isolation fusing and surge protection device options to provide input power protection
- Optional 3% input and output reactors provide a reduction in voltage and current harmonics on both line and load side
- Bypass options include a standard three-contactor design and a reduced voltage soft starter design
- Output contactor option provides a means for positive disconnection of the drive output from the motor terminals
- MotoRX and dV/dt filter options are used to reduce transients voltages at the motor terminals
- Customizable cover control options
- Padlockable disconnect

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Standards and Certifications

- UL 508C



- The PowerXL DG1 comes standard with the following communication protocols:

- EtherNet/IP
- Modbus/TCP
- Modbus RTU
- BACnet MS/TP

Communication Options

- PROFIBUS-DP
- LonWorks
- CANopen
- DeviceNet

Enclosure Ratings

- NEMA Type 1
- NEMA Type 12
- NEMA Type 3R

Mounting

- Wall mount
- Floor mount: 12-inch legs
- Floor mount: 22-inch legs

Product Range

- 208 V: 0.75–100 hp
- 230 V: 0.75–125 hp
- 480 V: 1–250 hp
- 230 V single-phase: 1–30 hp
- 480 V single-phase: 1.5–60 hp