

PowerXL™ Series DC1 compact variable frequency drives



Compact solution for your general-purpose applications



The Eaton DC1 variable frequency drive is compact and simple to mount and install. Constant torque ratings make the DC1 ideal for conveyors, packaging machines, pumps and fans. Unique capabilities include single-phase output and Eaton SmartWire-DT™ connectivity.

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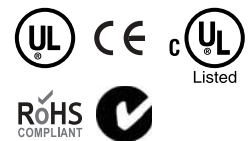
Powering Business Worldwide

Features

- High overload capability: 150% for 60 sec, 175% for 2 sec
- Integrated Modbus® RTU and CANopen
- SmartWire-DT and EtherNet/IP communication modules
- Standard IP20 protection
- Integrated PID controller
- Fire mode
- V/Hz control with voltage boost
- Onboard I/O:
 - 4 inputs (2 DI and 2 DI/AI)
 - 1 output (1 DO/AO)
 - 1 relay output
- Plug-in modules to expand the number of relays
- Optional high protection degree (IP66)
- Higher ambient temperature: +50 °C
- Ability to work with single-phase motor applications
- Contactor style wiring
- Sensorless vector control
- Permanent magnet motor compatibility

Benefits

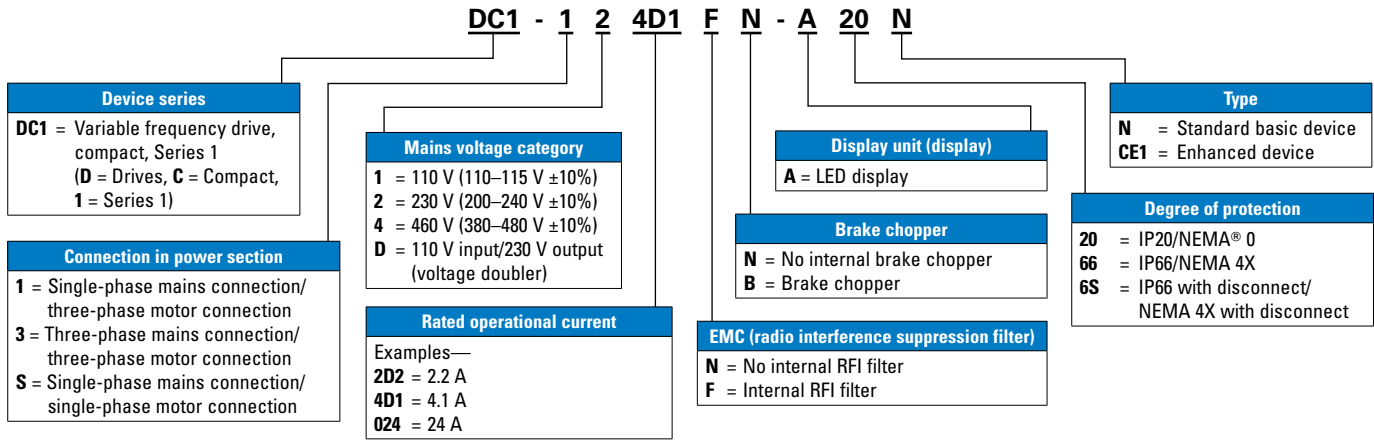
- Easy menu navigation
- Ease of control wiring—detachable terminal pad
- Lean connectivity through use of SmartWire-DT
- Optional RFI filter
- PC tool for easy configuration



Product range

- 0.5–0.75 hp at 115 V (single-phase in and single-phase out)
- 0.5–1.5 hp at 115 V (single-phase in and 230 V three-phase out)
- 0.5–1.5 hp at 230 V (single-phase in and single-phase out)
- 0.5–5 hp at 230 V (single-phase in and three-phase out)
- 0.5–15 hp at 230 V (three-phase in and three-phase out)
- 1–30 hp at 480 V (three-phase in and three-phase out)

Catalog numbering system



Dimensions

Approximate dimensions in inches (mm).

Product	Dimensions
FR1	7.24 x 3.19 x 4.88 (184.0 x 81.0 x 124.0)
FR2	9.09 x 4.21 x 5.98 (231.0 x 107.0 x 152.0)
FR3	10.75 x 5.08 x 6.89 (273.0 x 129.0 x 175.0)
FR4	16.48 x 6.81 x 8.31 (418.5 x 173.0 x 211.0)

Input ratings

Description	Specification
Input voltage (V_{in})	110–115 V, 200–240 V, 380–480 V, ±10%
Input frequency (f_{in})	50–60 Hz (variation up to 48–62 Hz)
Short-circuit withstand rating	100 kAIC

Output ratings

Description	Specification
Output voltage	0 to V_{in}
Overload	1.5 x I_e (1 min. / 10 min.) 1.75 x I_e (2 sec. / 20 sec.)
Output frequency	0–500 Hz (standard)
Frequency resolution	0.1 Hz

Ambient conditions

Description	Specification
Operating temperature	–10 °C to +50 °C (–10 °C to +40 °C for IP66)
Storage temperature	–40 °C to +60 °C
Relative humidity	0–95% RH, noncondensing, non-corrosive
Altitude	100% load capacity (no derating) up to 3280 ft (1000 m); 1% derating for each 328 ft (100 m) above 3280 ft (1000 m) Maximum altitude is 13,123 ft (4000 m)

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