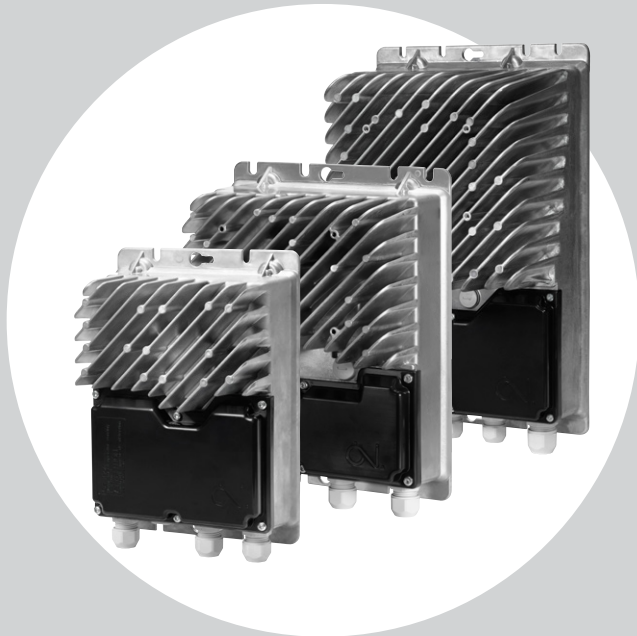


OJ Drives™



OJ DV GEN II

- 1.5 - 15 kW / 2.0 - 20.0 Hp
- 380 - 480 V three phase supply
- IM, PMSM, PMSynRM motor
- Ignition-protected
- CE, UL, CSA
- Ambient temperature up to +70°C/+158°F

OJ DV GEN II series

OJ DV GEN II is the upgraded version of our successful series of dedicated drives for ventilation applications.

This new version is fully backwards compatible with the same power variants, which hold the exact mechanical dimensions and comes with the same Modbus and BACnet protocols.

This new generation of drives offers excellent possibilities for customization.

Design

The OJ DV Gen II offers a flexible installation design – they can be mounted inside or outside the airflow.

OJ DV GEN II is suitable for any system, as it can be configured specifically for your application. Adding option modules and mounting a cooling fan on the OJ DV GEN II enlarge the application use.

Moreover, the OJ DV GEN II series has been extended and can now be provided with a local user interface.

The OJ DV GEN II removable front cover design allows easy access to the connection compartment and provides sufficient space for connecting the option module cables. The OJ DV GEN II front cover facilitates safe mounting on the aluminium frame, securing the desired sealing grade.

Controlling




The OJ DV GEN II can be controlled using a 0-10 V or a 4-20 mA signal and through Modbus RTU or BACnet MS/TP. In addition, the digital input and output interfaces can be used to determine and configure the control method.

Grid immunity

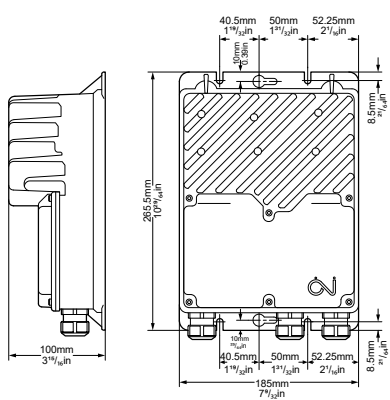
The OJ DV GEN II offers Over Voltage Detection, allowing the drives to survive in most types of grids worldwide. Our drives are robust and handle grid disturbances, such as notches, spikes and transients.

Built-in EMC filter

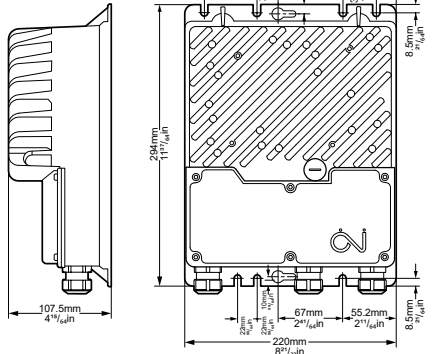
The OJ DV GEN II series comes with a fully integrated EMC filter and therefore meets the emissions and immunity norms for industrial and residential areas according to EN 61800-3 (C1 and C2) and FCC §47 part 15 B. and ICES-003.

| | Type | DV-3015 | DV-3024 | DV-3030 | DV-3040 | DV-3055 | DV-3065 | DV-3075 | DV-3110 | DV-3150 |
|--|--------|--|---------|---------|------------------|---------|---------|---------|-------------------|---------|
| Frame size | | H3 | | | H4 | | | | H5 | |
| Power size | kW | 1.5 | 2.4 | 3.0 | 4.0 | 5.5 | 6.5 | 7.5 | 11 | 15 |
| Horsepower 380-480V supply | Hp | 2.0 | 3.2 | 4.0 | 5.5 | 7.5 | 8.7 | 10.0 | 15.0 | 20.0 |
| Horsepower 208-240V supply | Hp | 1.2 | 1.9 | 2.3 | 3.1 | 4.3 | 5.0 | 5.8 | 8.5 | 11.6 |
| Efficiency | % | > 96.5% | | | > 96.5% | | | | > 97.5% | |
| Power supply | | | | | | | | | | |
| Voltage | VAC | 3 x 208 - 240 V AC 50/60 Hz +/-10% *1 3 x 380 - 480 V AC 50/60 Hz +/-10% | | | | | | | | |
| Supply current at max. load at nominal supply voltage (208-380/480 V) @+50°C/+122°F | A | 3.2 | 5.0 | 6.3 | 8.4 | 11.5 | 13.6 | 15.7 | 23.0 | 30.0 *4 |
| Supply current at max. load at nominal supply voltage (208-380/480 V) @+60°C/+140°F *6 | A | 3.2 | 5.0 | 6.3 | 8.4 | 11.5 | 13.6 *4 | 15.7 *4 | 23.0 | 23.0 |
| Supply current at max. load at nominal supply voltage (208-380/480 V) @+65°C/+149°F *6 | A | 3.2 | 5.0 | 5.0 | 8.4 | 11.5 | 11.5 | - | 23.0 *4 | 23.0 *4 |
| Supply current at max. load at nominal supply voltage (208-380/480 V) @+70°C/+158°F *6 | A | 3.2 | 4.0 | - | 8.4 | 11.5 | 11.5 | - | 20.0 *4 | - |
| Power factor (cos-phi) at max. load | | > 0.9 | | | | | | | | |
| Motor output | | | | | | | | | | |
| Nominal motor power (on shaft) *2 | kW | 1.5 | 2.4 | 3.0 | 4.0 | 5.5 | 6.5 | 7.5 | 11 | 15 |
| Frequency | Hz | AC motor: 0-120 PM motor: 0-595 | | | | | | | | |
| Max. output voltage | Vrms | 3 x 0 - 0.9 x Vin | | | | | | | | |
| Max. output current 208-480 V @+50°C/+122°F | Arms | 4.0 | 5.6 | 7.2 | 9.5 | 12.0 | 14.5 | 16.4 | 24.0 | 32.5 *4 |
| Max. output current 208-480 V @+60°C/+140°F *6 | Arms | 4.0 | 5.6 | 7.2 | 9.5 | 12.0 | 14.5 *4 | 16.4 *4 | 24.0 | 29.0 |
| Max. output current 208-480 V @+65°C/+149°F *6 | Arms | 4.0 | 5.6 | 6.8 | 9.5 | 12.0 | 14.0 | - | 24.0 | 29.0 *4 |
| Max. output current 208-480 V @+70°C/+158°F *6 | Arms | 4.0 | 5.6 | - | 9.5 | 12.0 | 14.0 | - | 24.0 *4 | - |
| Protection | | | | | | | | | | |
| Max. fuse | A | 16 | | | | | | | 32 | |
| Short circuit capacity | A | 5000 | | | | | | | | |
| Motor output | | Short-circuit protected between phases, Current and temperature overload protection, Thermal Memory Retention | | | | | | | | |
| Max over-voltage | | <565 V | | | | | | | | |
| Environment | | | | | | | | | | |
| Operating temperature | °C/°F | -40°C to +50°C / -40°F to +122°F (Up to +70°C / +158°F depending on variant, see above) | | | | | | | | |
| Storage temperature | °C/°F | -40°C to +70°C / -40°F to +158°F | | | | | | | | |
| Protection rating | | IP 54 & 65 / NEMA 4x | | | | | | | | |
| Enclosure material | | Aluminium | | | | | | | | |
| Front cover | | Plastic (Black front cover is UV resistant) | | | | | | | | |
| Weight | kg/lbs | 3.0 kg / 6.6 lbs | | | 3.9 kg / 8.6 lbs | | | | 9.5 kg / 20.9 lbs | |
| Humidity | % rh | 10-95% rh, non-condensing | | | | | | | | |
| Surface | | Corrosion resistant according to EN/ISO 9223 Class 4 | | | | | | | | |
| Air flow / cooling | | Turbulent air speed of min. 3 m/s or 9.84 ft/s to achieve max. output power at max. ambient temperature. Turbulent air speed below 3m/s or 9.84 ft/s and higher ambient temperature might lead to reduced output power. (3 m/s or 9.8 4 ft/s turbulent air speed is equivalent to 6.5 m/s or 21.32 ft/s laminar air speed) | | | | | | | | |
| Interfaces | | | | | | | | | | |
| Field bus | | Modbus RTU , BACnet MS/TP | | | | | | | | |
| Analogue Inputs | | 1 input: 0-10 V DC or 4-20 mA or PWM | | | | | | | | |
| Analogue Output | | 1 output: +10 V DC or +24 V DC | | | | | | | | |
| Digital Inputs | | 2 inputs: Internal pull-up to +24 V DC | | | | | | | | |
| Digital Output | | 1 output: Open collector, Internal pullup to +10 V DC or +24 V DC | | | | | | | | |
| Status LED | | Green/yellow/red | | | | | | | | |
| Features | | | | | | | | | | |
| Technology | | Sinusoidal back-EMF signal controlled via FOC (Field Oriented Control) | | | | | | | | |
| Software updating | | Yes, via serial interface | | | | | | | | |
| Motor parameters | | Preprogrammed by OJ or on-site configuration | | | | | | | | |
| Integrated EMC filters | | Yes, C1 and C2 | | | | | | | | |
| Approvals | | | | | | | | | | |
| EMC | | EN/BS 61800-3 (C1 & C2) / FCC §47 part 15 B. and ICES-003 | | | | | | | | |
| LVD | | EN/BS 61800-5-1 / UL 61800-5-1 | | | | | | | | |
| Product standard | | IEC/BS 61800 Part 2 | | | | | | | | |
| North America *3 | | UL-61800-5-1 / CS22.2 No. 274 | | | | | | | | |
| Ignition-protected components | | IEC/UL60335-2-40, cl.22.116 & cl.22.117 / UL 121201 Class1, Div2.*5 | | | | | | | | |
| Overvoltage category | | III | | | | | | | | |
| Pollution degree | | 2 | | | | | | | | |
| Altitude | | 1.000 m / 3.280 ft: Without derating and 2.000 m / 6.560 ft: With 1% derating per 100 meter/328 ft. above 1000 meter / 3280 ft. | | | | | | | | |
| Supply earthing system | | TN / TT | | | | | | | | |
| RoHS Directive | | Yes | | | | | | | | |
| Product approvals | |  /   | | | | | | | | |

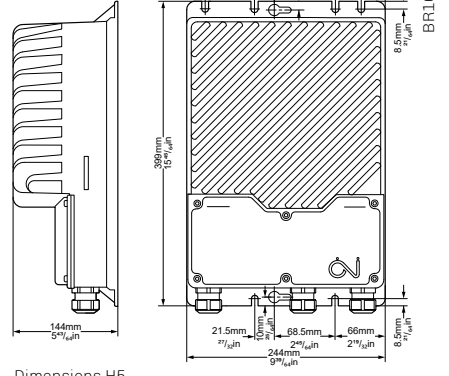
Note: Data are valid at: nominal supply voltage, +25°C or +77°F and sufficient air flow
 *1: At 3 x 230 V supply the output power is derated to 58% *2: Motor Power Factor = 0.8 and efficiency = 90% *3: Only available with black front cover *4: Reduced when with cooling fan
 *5: max. +50°C/+122°F ambient temp. *6: Special part number



BR1014A51a



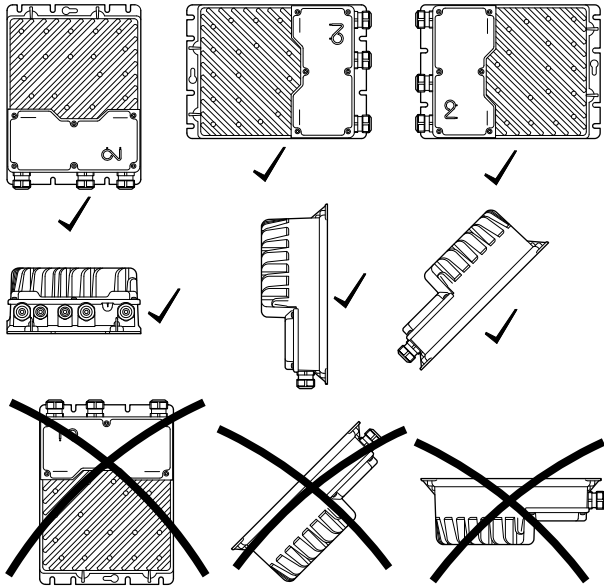
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Dimensions H3

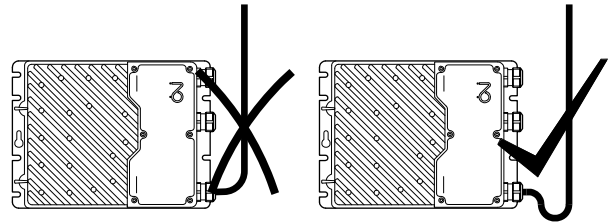
Dimensions H4

Dimensions H5



Correct mounting

BR1014A55a



Correct mounting

BR1014A56a