

Falcon 150

Brushless Permanent Magnet Motor Drive

As part of Nidec's diverse lineup of Ultra Low Voltage drives, the Falcon 150 offers additional flexibility to drive larger motors. Multiple communication interfaces allow the Falcon 150 to be a versatile solution that provides up to 150A of peak current, while remaining compatible with a wide variety of brushless motors.

Input Voltage: 20 Vdc – 55 Vdc

Continuous Current: 85 Amps

Peak Current: Up to 150 Amps

Motor Speed: Up to 10,000 rpm

Warranty: One year limited warranty



Motor Options

- Sinusoidal or trapezoidal commutation
- Designed for Brushless Permanent Magnet motors
- Compatible with 4, 6, 8, 10, 12, or 14 pole motors
- Hall Effect Sensors (differential, push-pull, open collector)
- Encoders (incremental A/B with index, differential, push-pull)
- Brake option (open drain FET, 24V 1.0A output)

Communication Interfaces and I/O

- CANopen - DS301 and DS402
- Digital I/O: 3 inputs/3 outputs (5V non-isolated)
- Analog I/O: 1 single ended input (0-5V)
- STO: 2 inputs/1 output (isolated)
- 5V supply output: 100mA
- PWM

Environment Ratings

- Storage: -40°C to 85°C
- Operating temperature: -30°C to 50°C
- Withstands 95% relative humidity (non-condensing)

Agency Approvals

- IEC/UL 61800-5-1
- IEC/UL 61800-5-2

Safety Features

- STO - SIL3/PLe
- Overcurrent protection
- Reverse polarity protection
- Internal thermal protection
- External NTC connection
- i2t protection
- Over speed protection
- Encoder fault protection
- Under/over voltage protection

Operating Modes

- Homing
- Profile velocity
- Velocity
- Profile position
- Position
- Torque

Dimensions and Weight

- Length: 105 mm
- Width: 145 mm
- Height: 57.15 mm
- Weight: 700 g (24.7 oz) [1.5 lb]

Programming and Indicators

- Field programmable firmware
- Nidec Motion Control Studio - setup and commission tool