

# ULV Drives

## Ultra Low Voltage Drives 10-90 Vdc

Nidec brings you the latest in ULV Drive technology with five power ranges. Supporting EtherCAT & CAN Open protocols and the latest features in servo motor control.

**Amp Range (Continuous):** 10 – 100 Amps

**Amp Range (Peak):** 20 – 150 Amps

**Speed Range:** Up to 10,000 RPM

**Mounting:** Chassis

**Rated Voltages:** 10Vdc – 90Vdc

**Power:** Up to 13,500 Watts

**Warranty:** One year limited warranty



### Product Features

- EtherCat, CanOpen, RS-485, USB
- Trapezoidal or Sinusoidal Commutation
- Hall Effect and Encoder Feedback
- Safety Torque Off (STO)
- Safety Speed
- Safe Stop
- Open Loop Speed, Closed Loop Speed
- Closed Loop Current, Closed Loop Position, Trajectory

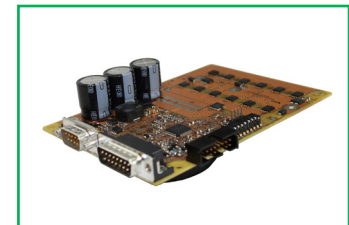
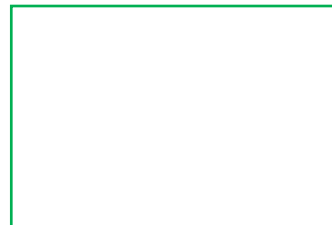
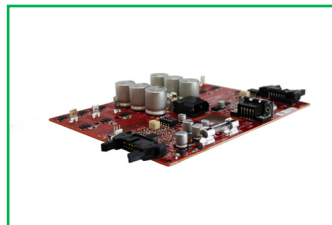
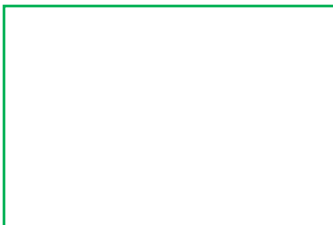
### Product Overview and Options

#### The ULV Drive is designed to provide:

- Maximum application flexibility
- Increased reliability
- Compact
- 4 quadrant closed loop or 2 quadrant open loop
- Operates in speed or torque mode
- Affordable Servo Control

#### Typical Applications:

- AGV applications
- Robotics
- Medical analyzers
- Pumps
- Indexing and positioning
- Mail processing and sorter
- General purpose equipment



## Ratings and Specifications

		Drive Model				
		Osprey 40	Green Drive II	Eagle 50 - Dual Motor	Hawk 100	Falcon 150
Inputs	Voltage	10-60V DC	10-60V DC	35-60V DC	10-60V DC	20-90V DC
	Peak Current	40A	30A	50A (each motor)	100A	150A
	Continuous Current	20A	15A	40A (each motor)	60A	100A
Output	Peak Current	40A	30A	50A (each motor)	100A	150A
	Continuous Current	20A	15A	40A (each motor)	60A	100A
Motor Options	Commutation	Trapezoidal or Sinusoidal	Trapezoidal or Sinusoidal	Sinusoidal	Trapezoidal or Sinusoidal	Sinusoidal
	Type	Brushless PM	Brushless PM	Brushless PM	Brushless PM	Brushless PM
	Poles	2,4,6,8,10	6,8,10	2,4,6,8,10	2,4,6,8,10	2,4,6,8,10,12,14
	Sensor Options	Hall Effect	Hall Effect	Hall Effect	Hall Effect	Hall Effect
	Encoder Options	Incremental A/B w/index	Incremental A/B	Full Quadrature	Incremental A/B w/index	Full Quadrature
Operating Modes	Open Loop Speed	Yes	Yes	Yes	Yes	Yes
	Closed Loop Speed	Yes	Yes	Yes	Yes	Yes
	Closed Loop Current	Yes	Yes	Yes	Yes	Yes
	Closed Loop Position	Yes	Yes	Yes	Optional	Optional
Communication Interface	CANopen	Yes	Yes	Yes	Yes	Yes
	CANopen Over Ethernet (COE)	No	No	Yes	Yes	Yes
	RS-485	Yes	No	No	Yes	Yes
	USB	Yes	No	No	Yes	Yes
	0-5V	Yes	Yes	No	Yes	Yes
	PWM	Yes	Yes	No	Yes	Yes
Safety Features	Safe Torque Off (STO)	Yes	No	Yes	Yes	Yes
	Safe Speed	Yes	Yes	Yes	Yes	Yes
	Safe Stop	Compliant	-	Compliant	Compliant	Compliant
	Reverse Battery Protection	Yes	Yes	No	Yes	Yes
	Internal Thermal Protection	Yes	Yes	Yes	Yes	Yes
	External TC Connection	Yes	Yes	Yes	Yes	Yes
Environment Rating	Storage Temperature	-40C to 125C	-40C to 125C	-40C to 125C	-40C to 125C	-40C to 125C
	Operating Temperature	-30C to 55C	-30C to 55C	-30C to 55C	-30C to 55C	-30C to 55C
	Humidity	95% RH Non Condensing	95% RH Non Condensing	95% RH Non Condensing	95% RH Non Condensing	95% RH Non Condensing
Dimensions	Weight	40mm	-	172mm	134mm	134mm
	Length	40mm	-	140mm	95mm	95mm
	Diameter	-	79.75mm	-	-	-
	Height	19.1mm	38mm	60mm	72mm	72mm
Weight	PCB Mount (light-duty)	55g (1.94oz) [0.12lb]	-	320g (11.28oz) [.71lb]	-	-
	Industrial Terminals (Heavy -duty)	100g (3.5oz) [0.22lb]	68g (2.4oz) [.15 lb]	-	700g (24.7oz) [1.5lb]	700g (24.7oz) [1.5lb]
Drive Status Indicator	LED's	Power -Red	-	Power -Red	Power -Red	Power -Red
		Status - Green	-	Power -Red	Status - Green	Status - Green
Connectors	Power	Terminals	Terminals	Terminals	Terminals	Terminals
	Communication	Terminals	Terminals	Connector	Connector	Connector
Agency Approval	IEC 61800-5-1	Yes	No	Yes	Yes	Yes
	UL 61800-5-1	Yes	No	No	Yes	Yes
	UL 60730-1	No	Yes	Yes	No	No
	IEC 60730-1	No	Yes	No	No	No
	CSA-E60730	No	Yes	No	No	No
	CSA C22.2 NO.14-13	Yes	No	Yes	Yes	Yes
Programming	Field Programmable	Yes	Yes	No	No	No
	Programmable I/O	Yes	Yes	No	No	No

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