Orion is a new line of fieldbus vector drives characterised by innovative performance; these drives allow to command BLDC motor with less heating and extremely smooth movements. Suitable for driving 3-phase BLDC motors, they can be coupled mainly with the series of motors up to 100 Watt. Completely digital and made using Arm Core M4 technology, Orion drives offer exceptional reliability combined with mechanical compactness and a competitive price. They can be used in many types of machines where there is already a fieldbus master controller to control single or multi-axle systems. Their use is of the 'general purpose' type and they are particularly suitable in coveyors, robot arms, separators etc.

CANopen Modbus EtherCAT

Principal features

1. Multiple control modes
2. Equipped with advanced safety features: integrated diagnostic separated power supply for logic and power fault monitoring and Handling
3. Main characteristics of the drive: low motor vibrations high speed and torque low mechanical noise low heat production no resonance high reliability
4. Vector control: the sinusoidal regulation keeps the motor torque constant, allowing smooth and silent movements
5. Closed loop
6. Compact sizes
7. Auto tuning of motor control parameters
8. High efficiency current set up

Functions

Control modes:

1. Velocity control mode
2. Wide range of Positioning Control Modes (homing, relative, absolute, target)
3. Electric Gear with programmable gear ratio to track external master reference (from fieldbus or incremental encoder) of motor Speed and Position
4. High speed I/O triggered motor start & stop to event syncronizing for fast response demanding application: labeling, nick_finder, on fly cut., etc ...
5. Multi Axis movements syncronization capabilitye
6. On fly change among any Motion Module Control Mode
7. On fly Electric Gear Enable/Disable capability
8. Closed Loop of torque, speed and position thanks to an encoder.
9. NodeID e Baud Rate configurable both via software or via dip-switches.
10. Drive control through commands by Master Controller. Suitable for multi axes systems (up to 127 drives).

Technical Data

Driver Type

	Brushless DC Motor	Up to 25 watt

Interface control mode

	CANopen
	Serial RS485 Modbus-RTU
	EtherCAT CoE (DS402)
	Close Loop

Electrical data

	Operating voltage (min.)	12 [Vcc]
	Operating voltage (max.)	36 [Vcc]
	Separated logic power supply	24 [Vcc]
	Rated Current	up to 3 [A/ph rms]
	Peak Current	4.2 [A/ph peak]

Operating Mode

	Step resolution	Stepless Control Technology (65536 emulated positions per turn)

Inputs

	Digital inputs	4 not isolated
	Analog inputs	1 for potentiometer or ±10 Vdc

Output

	Digital outputs	3 not isolated digital outputs

Feedback interface

	Encoder	1 incremental encoder interface

Protective functions

Over/UnderVoltage, OverCurrent, OverTemperature, Phase/Phase and Phase/Ground Short

Mechanical Data

	Weight	120 g
	Dimension (length)	42.0 [mm]
	Dimension (width)	20.0 [mm]
	Dimension (height)	61.0 [mm]
	Protection class	IP20
	Status monitoring	2 LED (green, red)

Ambient conditions

	Temperature – Operation (min.)	0 [°C]
	Temperature – Operation (max.)	40 [°C]
	Temperature – Storage (min.)	-25 [°C]
	Temperature – Storage (max.)	55 [°C]
	Humidity (non-condensing) (min.)	5 [%]
	Humidity (non-condensing) (max.)	90 [%]

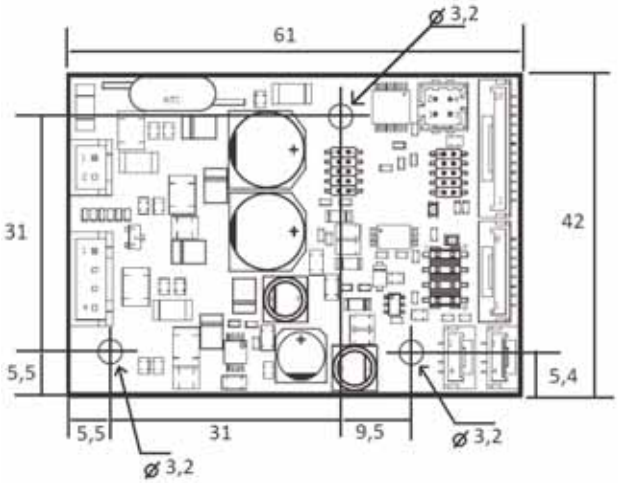
Software

	Setup and configuration	E&D Studio
	Programming	E&D Space

Version

	Power Supply Voltage Vcc. Min. | Max.	Output Current [A/ph rms] Min. | Max.	Output Current [A/ph peak] Max.	Interface Control Mode	Open or Close Loop
B025O04C001-S200	12 | 36	0.0 | 3	4.2	CANopen (Programmable)	Close Loop
B025O04C001-S402	12 | 36	0.0 | 3	4.2	CANopen (DS402)	Close Loop
B025O04M001-S200	12 | 36	0.0 | 3	4.2	Serial RS485 Modbus-RTU	Close Loop
B025O04E001-S402	12 | 36	0.0 | 3	4.2	EtherCAT CoE (DS402)	Close Loop

B025O04C001 / B025O04M001-S200



B025O04E001-S402