

## Installation instructions

**i** Refer to installation use and maintenance manual for more information.



### BLDC motor with integrated driver

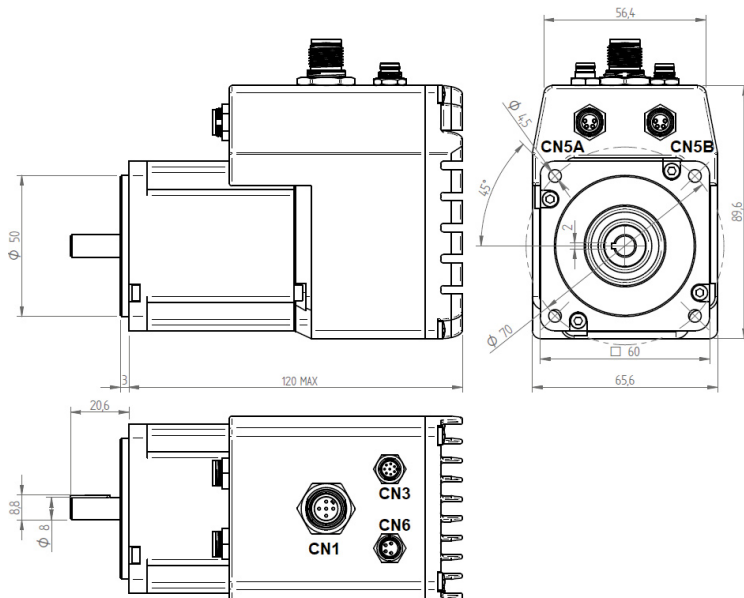
- DC power Supply: 48 Vdc – 6A MAX
- DC Logic Supply: 24 Vdc mandatory but NOT isolated - 500mA MAX
- Protections: over-current, over-temperature, short circuit phase-phase motor and phase-ground
- Canbus interface
- Absolute Multiturn Encoder
- Service interface for programming and real time debugging (isolated)
- 4 Digital inputs
- 2 Digital outputs (supplied from 24Vdc logic supply)
- 1 Analog input
- Dimensions: 65.6 x 89.6 x 120 mm (without connectors)
- Protection degree: IP65
- Pollution degree 2
- Overvoltage Category II (not directly connected to supply mains)
- Working temperature: 5°C + 40°C
- Storage temperature: -25°C + 55°C
- Humidity: 5% + 85% not condensing

**Platino**  
BLDC · SERVO · DRIVES

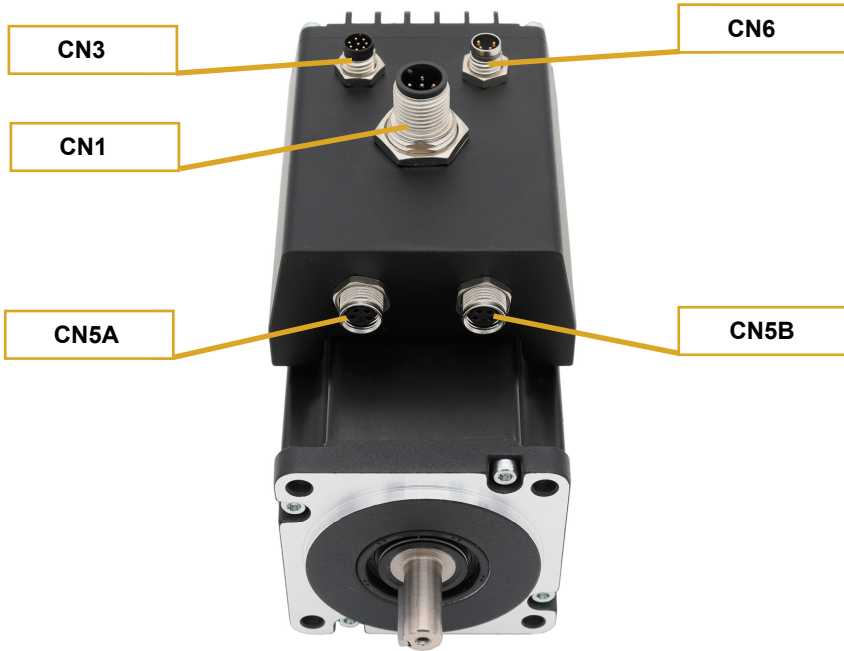


### Mechanical data and models

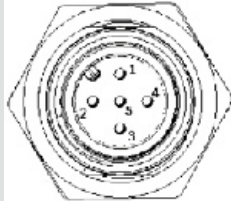
**i** Handle systems with care by taking them from the motor side and not from the electronics side.



System part number	Rated Torque (Nm)	Rated Power (Watts)	Rated Speed (rpm)	Max Shaft Axial Load (N)	Max Shaft Radial Load (N)
DM4D2200-PS1	0.52	200	3800 rpm	15	75 (on front shaft end)



CN1: Power and Logic Supply		
M12 A-Code, 5 pins, Male		
CN1.1	VLOG	Positive 24 Vdc Logic Supply <b>(mandatory but not isolated)</b>
CN1.2	PGND	Negative DC Power Supply <b>(Both pins must be connected)</b>
CN1.3	PGND	
CN1.4	VIN	Positive 48 Vdc Power Supply <b>(Both pins must be connected)</b>
CN1.5	VIN	



**Note: VIN and PGND are each available in two terminal. Make sure that both terminal are connected in order to split the supply current in two terminal and thereby avoid an overload of the connector.**

CN3: Inputs and Outputs		
M8 A-Code, 8 pins, Male		
CN3.1	B0_IN0	Digital input 0
CN3.2	B0_IN1	Digital input 1
CN3.3	B0_IN2	Digital input 2
CN3.4	B0_IN3	Digital input 3
CN3.5	B0_OUT0	Digital output 0
CN3.6	B0_OUT1	Digital output 1
CN3.7	GND	Negative reference for all I/O
CN3.8	IN_AN0	Analog input 0

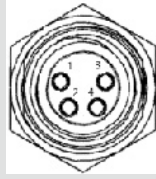


# Connections

## CN5A and CN5B: Canbus interface

### M8 A-Code, 4 pins, Female

CN5x.1	CAN_H
CN5x.2	CAN_L
CN5x.3	GND
CN5x.4	Not connected



## CN6: Service interface

### M8 A-Code, 4 pins, Male

CN6.1	TX/RX
CN6.2	DE/RE
CN6.3	+5V
CN6.4	GND



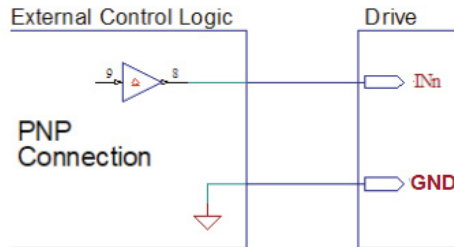
*This connection is only possible with hardware and software provided by Ever.  
Kit code: SM4D\_SERV00-EE*

# Digital inputs



5-24 V PNP type,  $F_{max} = 500 \text{ kHz}$

## 5-24V digital inputs



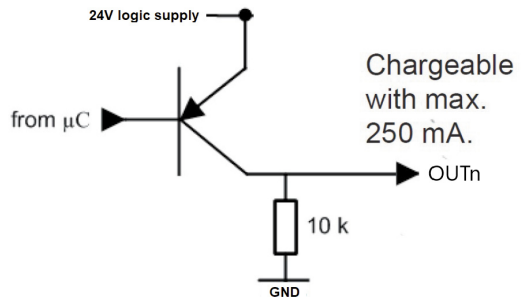
# Digital outputs



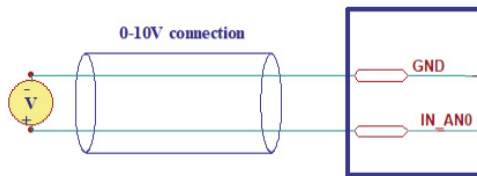
*Digital outputs are supplied from the 24Vdc of logic supply*



24 Vdc PNP type,  $I_{OUTmax} = 250\text{mA}$ ,  $F_{max} = \text{type}$ ,  $F_{max} = 1 \text{ kHz}$



## Analog input



**GND is internally in common with PGND (power ground), this is potentially dangerous. Take all necessary measures to avoid possible contacts in the final installation.**

## Mating connectors

Connector	Description
CN1	M12 A-Code 5 pins female
CN3	M8 A-Code 8 pins female
CN5A / CN5B	M8 A-Code 4 pins male

## Verify the installation

- Check all connections: power supply and inputs/outputs.
- Make sure that all settings right for the application.
- Make sure the power supply is suitable for the system.
- If possible, remove the load from the motor shaft to avoid that wrong movements cause damages.
- Enable the current to the motor and verify the applied torque.
- Enable a movement at very low speed and verify if the rotation direction is the desired one.
- Disconnect the power supply, connect the load on the motor and check the full functionality.

## Drive's fault analysis



**When any of the following situations occur, the drive is placed in a fault condition.**

DEFECT	CAUSE	ACTION
Intervention of the thermal protection.	Can be caused by a heavy working cycle or a high current in the motor.	Improve the drive cooling by a natural or fan air flow. Consider to use a motor with a higher torque vs current rating.
Intervention of the over/under voltage protection.	Supply voltage out of range.	Check the value of the supply voltage.



**When any of the following situations occur, the drive doesn't work and isn't placed in an error condition.**

DEFECT	CAUSE	ACTION
Noisy motor movement with vibrations.	Can be caused by a lack of power supply to a phase of the motor or a poor regulation of the winding currents.	Check the cables and connections of the motor and/or change the motor speed to avoid a resonance region.
The external fuse on the power supply of the drive is burned.	Can be caused by a wrong connection of the power supply.	Connect the power supply correctly and replace the fuse.

## Ever Motion Solutions

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