

### BLDC58 Series - Brushless motor with integrated electronics

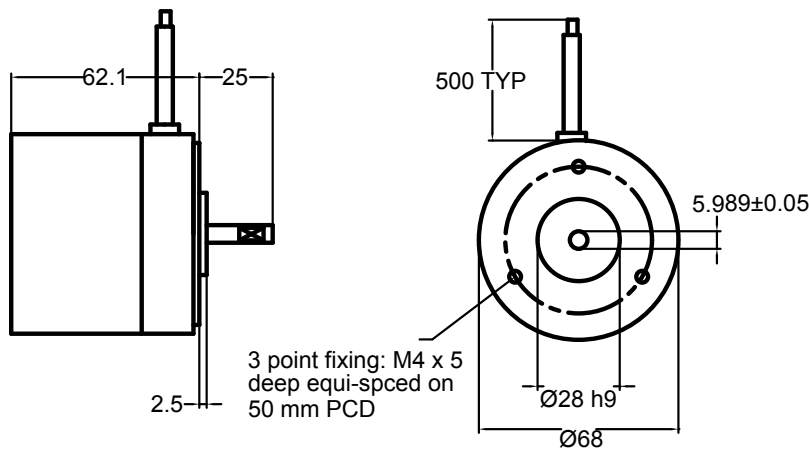
The BLDC58 is a variable speed 24V DC brushless motor with integrated drive electronics, providing a compact solution, to a variety of light industrial applications.

#### Features:

- Up to 50 watts of continuous output power
- Variable speed proportional to 0-5V control signal
- Long life due to the nature of the brushless design
- Suited to a number of gearboxes and drives, available from stock.
- Models with electronic brake also available from stock



#### Outline dimensions (mm)



#### Specification

Part Number		BLDC58-35L	BLDC58-35LEB	BLDC58-50L
Continuous output power	Watts	35	35	50
Internal electronic control circuit		Velocity loop	Velocity loop	Velocity loop
Maximum speed	rpm	3650	3650	3650
Minimum regulated speed	rpm	<100	1000	<100
Maximum speed @rated torque	rpm	3000	3000	3000
Rated torque	Nm	0.11	0.11	0.17
Braking torque	Nm	N/A	0.16	N/A
Rotor inertia	Kg cm <sup>2</sup>	1.2	1.2	1.2
Motor supply voltage	V DC	24	24	24
Motor supply current	Amps	1.9	1.9	2.9
Analogue speed control signal	V/1000 rpm	1.0	0.9 approx	1.0
Digital output speed monitor	ppr	36	36	36
Internal Over-temperature protection		Standard	Standard	Standard
Bearing type		Ball	Ball	Ball



## Wiring

### Connections:

Motor supply voltage (14-32 Vdc)

Motor supply Ground

Analogue speed control input (0-4V)

Frequency generator signal (36ppr)

Direction control input\*

Lead wire shield connect to motor ground

### Lead Colours:

Red

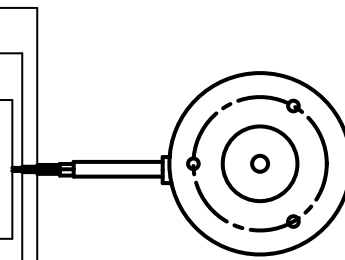
Black

White

Green

Brown

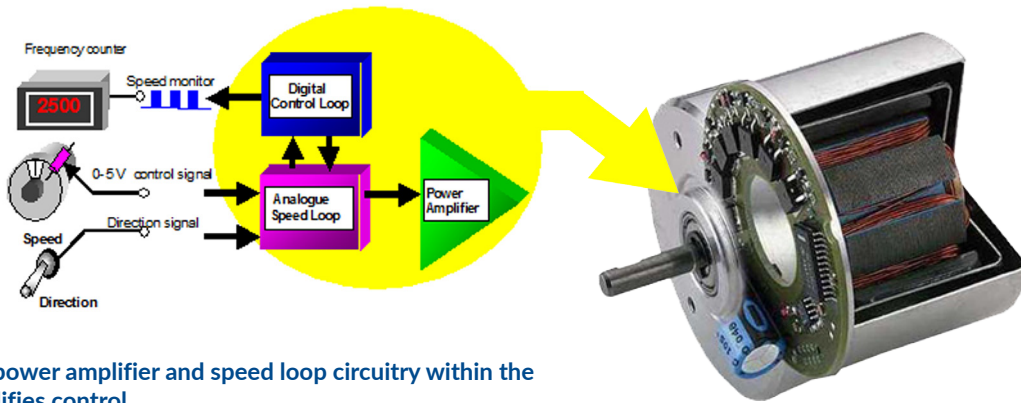
Shielded



BLDC58 Brushless motor

Note\* Do not leave open circuit

## BLDC58 Integrated electronics for complete drive solution



The integration of power amplifier and speed loop circuitry within the motor greatly simplifies control.

Simply connector a speed control potentiometer and direction switch for bi-directional velocity control. A digital output signal also enables motor speed to be accurately monitored.

## Version with Brake

When the control signal is  $< 0.5V$  the internal electronics brake is activated to achieve a rapid stop. The brake circuit is not active when the motor is stationary condition. However, the de-energised detent torque is usually sufficient to retain the position of unbalanced loads when the motor drives through trough a gear reduction. When the control signal is  $> 0.5$  but  $< 0.9V$  the motor is disabled, thereby creating a deadband for control purposes.

## BLDC58 Typical connections for simple speed control

