

Servo Amplifier

2-Quadrant PWM

For combination with:
Brushless DC-Servomotors

Series BLD 5018

	BLD 5018-SC2P	
Power supply	20 ÷ 50	V DC
Switching frequency	20	kHz
Continuous output current @ TA = 22°C	18	A
Analog input command: ¹⁾ – Voltage range	0 ÷ 5	V DC
Logic input	TTL	
Supply voltage for Hall sensors (max. 20 mA)	5	V DC
Maximum controllable speed ²⁾	12 000	rpm
Minimum controllable speed ³⁾	800	rpm
External inductance ⁴⁾	200 ÷ 300	µH
Temperature range: – Operating temperature	–10 ... + 45	°C
– Storage temperature	–40 ... + 85	°C
Dimension and Weight: – Dimensions (L x W x H)	170 x 90 x 45	mm
– Weight	366	g

¹⁾ Analog input command may be set by an external potentiometer or an external voltage.

²⁾ The maximum controllable speed depends on the power supply, the motor type and the load.

³⁾ The minimum controllable speed depends on the motor type and the load.

⁴⁾ The appropriate value depends on the operating cycle and working conditions. An external inductance from 200 to 300 µH can be used to reduce the temperature of the motor series 4490 ... B.

Note: The Servo Amplifier is supplied with an operating instruction manual for installation and start-up.

General description

The Servo Amplifier BLD 5018 is a powerful 2-Quadrant PWM Speed Controller with electronic commutation for our three-phase brushless DC-Servomotors with Hall sensors.

Operating mode:

- Speed control by Hall Sensors

This controller checks the rotor position over the integrated Hall sensors. The commutation logic controls a MOSFET power stage with high efficiency rate which supplies the specific coil winding segment of the motor.

A protection device against thermal overload is integrated.

The compact design of the Servo Amplifier allows the installation close to the motor, using short connection lines for best efficiency.

The adjustment of the motor speed set value and the speed adaptation as well as the current limitation can be set by internal trimmers.

Control inputs for the direction of rotation and enable function are included.

The connections are made with robust screw terminals.

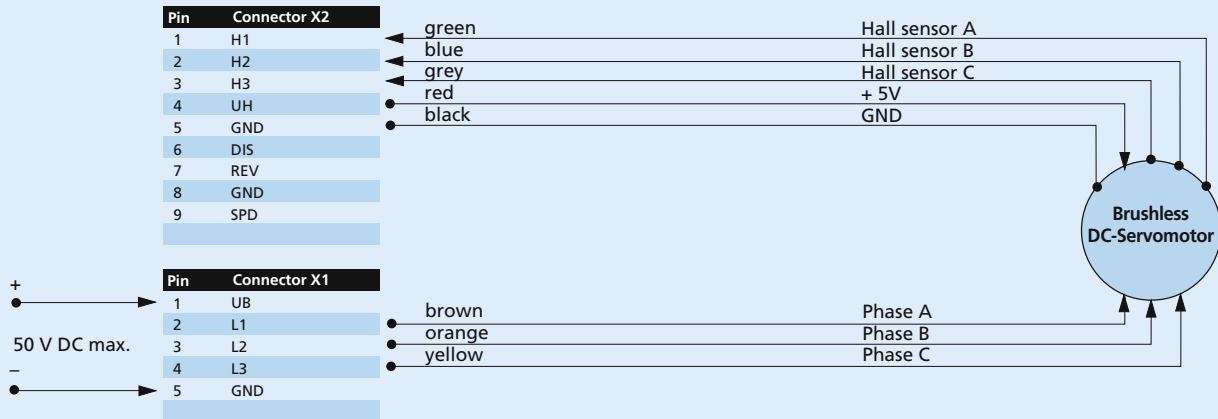
Features:

- Operation from a single supply source
- 2-Quadrant PWM
- Efficiency 95%
- User friendly
- Internal potentiometer for speed set value
- Screw terminals

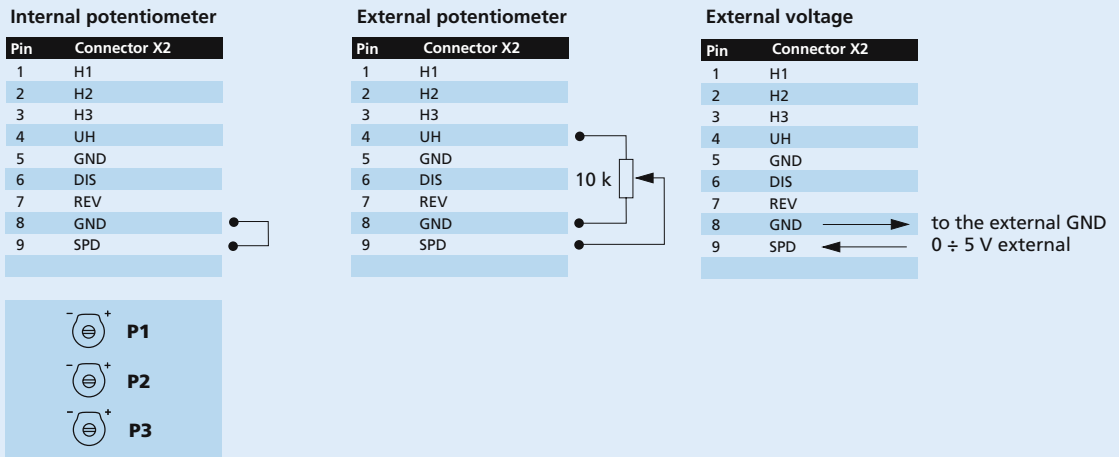
Full product description:

Servo Amplifiers	Brushless DC-Servomotors
BLD 5018-SC2P	4490 H 024 B
BLD 5018-SC2P	4490 H 036 B
BLD 5018-SC2P	4490 H 048 B

Block diagram of the Servo Amplifier BLD 5018 for speed control with Hall sensor feedback



Connection diagram



Dimensional drawing

