



ELECTROMEN - EM-347 BLDC MOTOR 4Q DRIVE 12-48 V DC, 30-40 A

EM-347

BLDC motor 4Q drive 12-36 V dc, 40A



- 12-48 V dc, *30-40 A continuous, 80-100 A peak
- Open & closed loop (hall sensor feedback) control operation
- Speed, direction, current limiting, soft start/stop and braking control
- Compact, din rail mountable
- EM-A1 card slot option for symmetrical control $\pm 5V$ or $\pm 10V$ (rev-stop-fwd)

PRODUCT DESCRIPTION

EM-347 is brushless DC-motor driver with hall sensor feedback. The unit has a mosfet power stage with good efficiency and it also meets today's EMC requirements. The driver can be used with 120° commutation. This driver has true 4Q power stage, and it makes possible to use regenerative braking. In this braking method the supply voltage rises at braking. The voltage rising can be controlled with braking resistor. If uses battery supply then the braking energy can be leaded back to the battery and braking resistor will not be required.

The unit has the basic digital command inputs like direction, brake, start/stop, disable and there is analog inputs for speed and current control. One digitally presettable second speed (speed-2) is possible to activate with digital command input. EM-347 has two NPN outputs for fault and overcurrent indication use. Some input and output functions can be modified with parameters.

Driver includes overvoltage, undervoltage and overtemperature protections. These fault situations are indicated with fault on-board LED.

Overtemperature and current limit situations can be reset with reset input, reset-timer or by setting analog speed control to value to 0.

There are two control options for speed. Direct control (open loop) sets motor voltage in proportion to control voltage as with a standard DC-motor. Closed loop uses hall sensor feedback for speed control, this mode offers good speed regulation.

Start and stop ramps work in both mode. Speed adjust range, closed loop rpm range and ramp can be set with parameter.

Analog input are filtered so that there can be used also PWM signal for control speed and current.

Setting can be done digitally with EM-236 interface unit or with Emen-Tool lite program installed in PC and EM-268 or EM-328 adapter cable. Parameters stored into nonvolatile memory of device. This interface unit can also be monitored the current and rpm of motor. Device has also output for cooling fan, it can be controlled optional fan if needed.

This output switch on fan, when temperature rises over 65 deg.

Device can be installed in DIN-rail base and some enclosure options are also available.

FEATURES

- To the motors with HALL sensors
- Three phase output
- Speed and torque adjustment
- Open/closed loop modes
- Dynamic braking
- Control output for cooling fan.
- True 4Q-power stage
- Braking resistor output
- Selectable brake mode
- Current limit and trip
- Symmetrical control option $\pm 5V$ or $\pm 10V$
- Fault and overcurrent outputs
- Good efficiency
- Low EMC emissions
- DIN-rail mountable
- Rpm-pulse output option

* Max current 40A cont (Tamb. 50 °C)

Max current 50A cont. with fan cooling

TECHNICAL DATA

| | |
|------------------------------------|--|
| Analogue input | 0-5V or +/---0-10V or 0-5V or 0-10V |
| Compatible motor technology | BLDC |
| Control type | Speed, Braking, Direction, Torque, Soft start / stop |
| Current setting range | 1-100 A |
| Dimensions length x width x height | 140x122x50mm mm |
| Logic input high | >4V = ON |
| Logic input low | <1V = OFF |
| Max continuous current | *40 A |
| Mounting | DIN rail |
| Peak current | 100 A |
| PWM frequency | 16kHz |
| Supplier | Electromen |
| Supply voltage | 12 V DC, 24 V DC, 36 V DC |
| Weight | 650 g |

