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EM-241B-PLI

DC motor drive 12-24 V dc, 15 A, pulse counts for end limits

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DC motor drive 12-24 V dc, 15 A, pulse counts for end limits



- 12-24 V dc, 15A continuous, 30A peak
- Speed, direction, current limiting, soft start/stop and auto-reverse control
- 2ch pulse count inputs for end of travel
- Compact, DIN rail mountable

PRODUCT DESCRIPTION

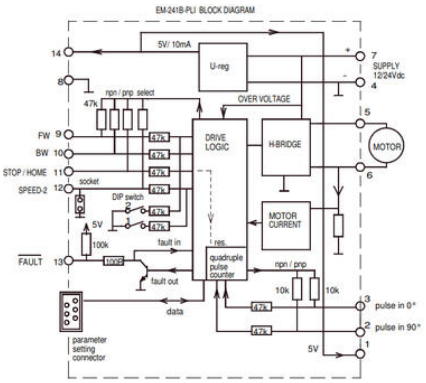
EM-241 is a full bridge DC-motor starter. It is designed to work with DC-motor in applications where some special functions are needed. Starter has adjustable acceleration and deceleration ramps, which make possible the smooth starts and stops. Adjustable current limit protects motor against overcurrent and it can also be used as an end-stop. This device has also two settable speeds, which are usefull in positioning applications. Control inputs FW and BW start the forward and backward run. STOP is for the motor shut-down. In -PLI version there are also PULSE COUNTER which can be used for end limit use. This counter value keep in memory of card also when power is turned off. SPEED-2 input activates preset speed-2, but it can also be used as input for analog speed control signal 0-5V. FAULT terminal has at the same time input and output function, the pin is normally high, but is pulled down in overheat and conditionally also in current trip situation. If FAULT-line is pulled down externally it will cause a stop and prevent the new start. For example, it is possible to link fault pins of several units together and achieve a syncronous stop. There are two selectable control modes, continuous and impulse. In continuous mode the motor runs as long as the control is active. In impulse mode a short comand starts the motor, and only a new impulse will change the status. There is also few special settings start-kick and auto reverse. The card has selectable input logics. Inputs are divided in two groups, control and limit -inputs. Groups can be individually set for NPN or PNP logic. The parameters are set with EM-236 interface unit. Operation of the controller and some of its functional values can also be monitored with EM-236 interface unit.

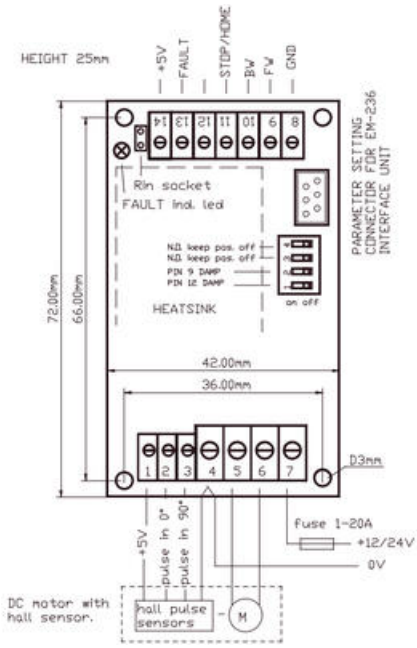
FEATURES:
- small size
- high current output
- 2ch pulse counter inputs
- Pulse counter limits.
- current limit
- zero current limit
- overvoltage brake
- speed setting
- PWM 2 or 16 kHz
- flexible control inputs
- impulse / continuous mode
- rail base mountable
- dip switch only in PCB. version B
- A softwares compatible for B ver. PCB.
- digital parameter setting

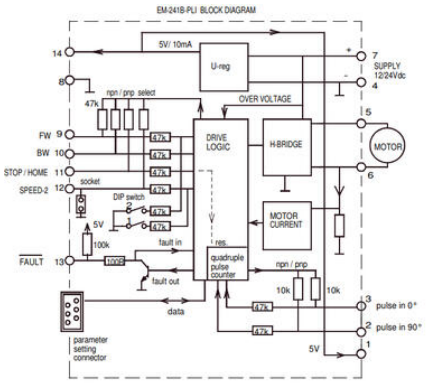
* Continuous current output when ambient temp is <50°C)
15A at 100% speed / 10A at 5-99% speed pwm=2kHz
10A at 100% speed / 5A at 5-99% speed pwm=16kHz
Peak (5s.) 30A at 2khz pwm and 25A at 16kHz pwm

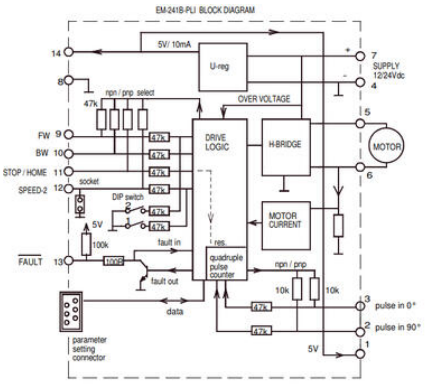
TECHNICAL DATA

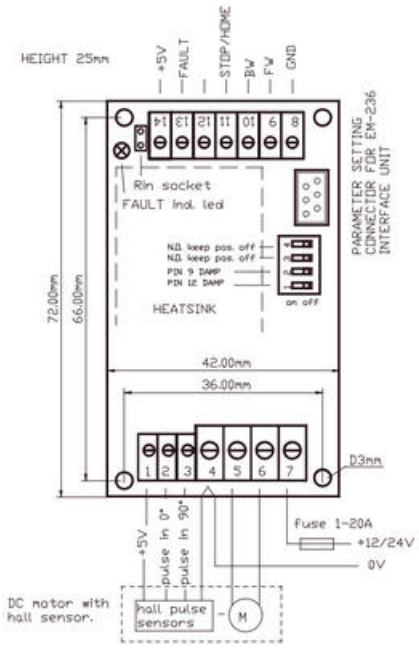
2421_Peak current (A)	30
5646_Dimensions length x width x height (mm)	72x42x25mm
Analogue input	0-5V
Control type	Speed, Direction, Torque, Soft start / stop
Current setting range	0.1-20 A
Logic input high	>4V = ON
Logic input low	<1V = OFF
Max continuous current	*15 A
Mounting	DIN rail
Operating temperature	-40°C...+60°C
PWM frequency	2kHz/16kHz
Suitable engine	DC
Supplier	Electromen
Supply voltage	12 V DC, 24 V DC
Weight	75 g

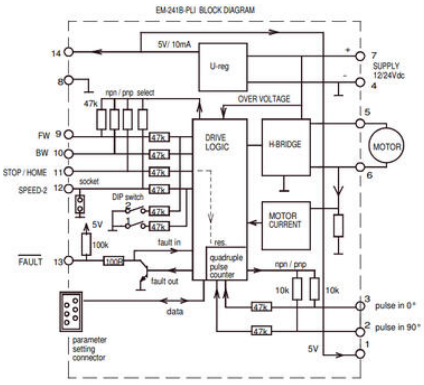







EM-241B-PLI BLOCK DIAGRAM
5V/ 10mA
U-reg
SUPPLY 12/24Vdc
npn / pnp select
47k
OVER VOLTAGE
FW
BW
STOP / HOME
SPEED-2
socket
DIP switch
DRIVE LOGIC
H-BRIDGE
MOTOR
MOTOR CURRENT
5V
100k
fault in
FAULT
100nF
fault out
quadruple pulse counter
res.
npn / pnp
10k
data
pulse in 0°
pulse in 90°
parameter setting connector


HEIGHT 25mm
+5V
FAULT
STOP/HOME
BW
FW
GND
PARAMETER SETTING CONNECTOR FOR EM-236 INTERFACE UNIT
Rin socket
FAULT ind. led
N.O. keep pos. off
N.O. keep pos. off
PIN 9 DAMP
PIN 12 DAMP
on off
HEATSINK
72.00mm
66.00mm
42.00mm
36.00mm
D3mm
fuse 1-20A
+12/24V
0V
+5V
pulse in 0°
pulse in 90°
DC motor with hall sensor.
hall pulse sensors
M


EM-241B-PLI BLOCK DIAGRAM
5V/ 10mA
U-reg
SUPPLY 12/24Vdc
npn / pnp select
47k
OVER VOLTAGE
FW
BW
STOP / HOME
SPEED-2
socket
DIP switch
DRIVE LOGIC
H-BRIDGE
MOTOR
MOTOR CURRENT
5V
100k
fault in
FAULT
100nF
fault out
quadruple pulse counter
res.
npn / pnp
10k
data
pulse in 0°
pulse in 90°
parameter setting connector