

General Specifications

Supply Input	12V to 40V 1.25A <i>Examples:</i> Digikey part 285-1820 or 1470-10158
Dimensions	1.6" X 1.6" (40mm X 40mm) square
Step Resolution	1/2 to 1/64 step
Operating Modes	PC controlled or standalone
PC Control.....	Can control up to 16 drives daisy-chained together.
Communications protocol.....	RS485. Can convert to RS232/USB with appropriate converters.
Control protocol	Compatible with devices that use the Cavro DT or OEM protocol. Can use EZCommander™ Windows application or serial terminal program such as HyperTerminal to issue commands.
Motor compatibility.....	Accommodates most size 23 (3") and smaller stepper motors, including bipolar or unipolar-wound motors. Best performance is with motor rated at about 1/4 of supply voltage.
Mating Connectors.....	AMP MTA 100 series. Recommended tool: Digikey part A9982, or better Digikey parts A2031 + A1998. (See Application Note 131021 for non-standard connector options.)
I/O Interface.....	Accepts 2 opto-electronic and two mechanical switch inputs, or 4 mechanical switch inputs. Signal Levels: <0.8V Vlow; >2V Vhigh (TTL compatible) Optical switch specifications: Transistor optical switch with IC > 1 mA @ IF=20mA. <i>Examples:</i> OPTEK part OPB841W55 or Digikey part 365-1103-ND (prewired); Honeywell HOA870-33 (prewired)
Operating Temperature	-20 to 85 °C PCB copper temperature
Relative Humidity.....	10% to 90% non condensing (operating and storage)

High Resolution Intelligent Stepper Motor Controller + Driver



Model EZHR17 actual size

MOTOR CONNECTOR

Mating connector: AMP MTA 100 series 8 pin, 22 GA, part 3-643813-8
Digikey part A31111-ND

Pin	Function	Notes
1	ON/OFF driver #1 (V+)	2A peak; 1A continuous
2	ON/OFF driver #1 (V-)	Open collector
3,4	Stepper winding A	1.25A bipolar chopper
5,6	Stepper winding B	1.25A bipolar chopper
7	ON/OFF driver #2 (V+)	2A peak; 1A continuous
8	ON/OFF driver #2 (V-)	Open collector

INPUT CONNECTOR (POWER AND CONTROL)

Mating connector: AMP MTA 100 series 4 pin, 22GA, part 3-643813-4
Digikey part A31108-ND

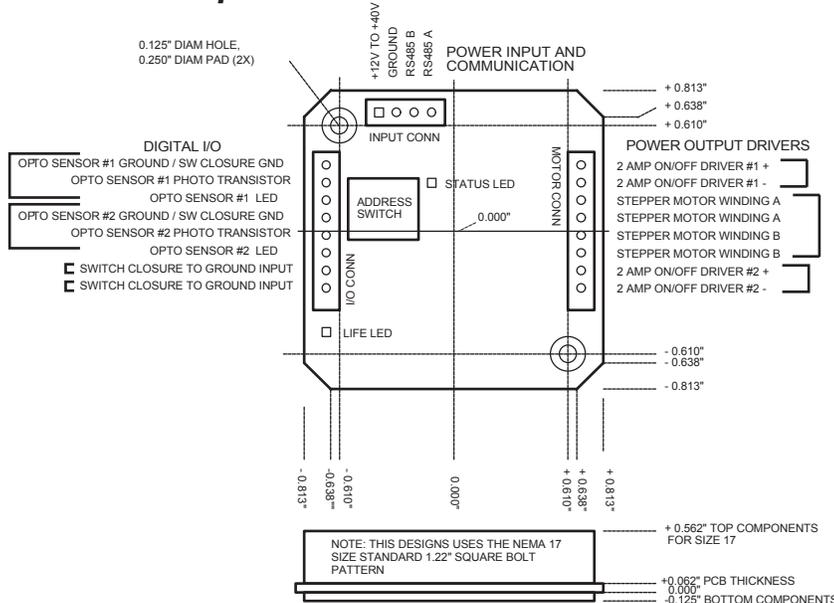
Pin	Function
1	V+ (external supply) +12V to 40V
2	GROUND
3	RS485 B
4	RS485 A

I/O CONNECTOR

Mating connector: AMP MTA 100 series 8 pin, 26 GA, part 3-643815-8
Digikey part A31030-ND

Pin	Name	Notes
1	Switch #2 input	Senses closure to ground
2	Switch #1 input	Senses closure to ground
3	LED Drive	Includes series 200 Ω resistor to 5V
4	Sensor #2 phototransistor or switch closure	Includes 10k Ω pullup to 5V for open collector
5	Sensor #2 ground/switch closure ground	Ground
6	LED Drive	Includes series 200 Ω resistor to 5V
7	Sensor #1 phototransistor or switch closure	Includes 10k Ω pullup to 5V for open collector
8	Sensor #1 ground/switch closure ground	Ground

Mechanical Specifications



Key Features

- Single 4-wire bus linking up to 16 drives
- 1.25A chopper (PWM) stepper driver
- Operates from 12V to 40V
- RS232, RS485 or USB based control communications
- On-board EEPROM for user program storage
- Optional standalone operation with no connection to PC
- Execution halt/branch pending switch closure
- Prewired for optoswitch inputs
- 1/2 to 1/64 step bipolar control
- Cavro DT or OEM protocol compatible
- Homes to an optical or mechanical switch closure with a single command
- Fully programmable ramps and speeds
- Four digital I/O; and two 1A power On/Off drivers for driving relay, dc motors, solenoids, etc. included
- Switch-selectable device address
- Software-settable "Move" and "Hold" currents
- Hold current auto selected upon move completion

Ordering Information

Name	Order Number
EZHR17 Stepper Drive.....	EZHR17
RS232 to 485 Converter (option).....	RS485
USB to 485 Converter (option).....	USB485
Enclosure for drive (option).....	EZENC17