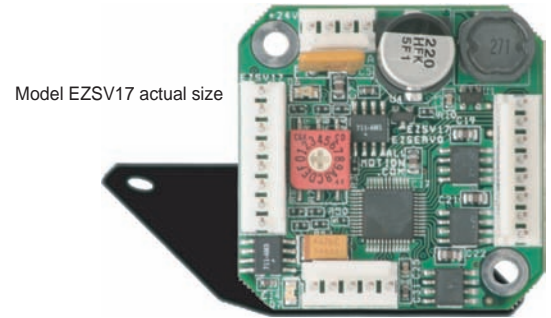


Electrical Specifications

| | |
|------------------------------|---|
| Supply Input | 20V to 40V 2A |
| Dimensions | Examples: Digikey part 271-1112 or Digikey part Z1158 1.6" x 1.6" (40mm x 40mm) square, 0.6" (15.24mm) thick |
| Operating Modes | PC controlled or standalone. Position, velocity, and torque. |
| 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 2" and smaller DC brush or brushless servo motors without tuning. Best performance is with motor rated at about 1/2 of supply voltage. Outputs short protected. |
| Mating Connectors..... | AMP MTA 100 series. Recommended tool: Digikey part A9982, or better Digikey parts A2031 + A1998 |
| I/O Interface..... | Accepts 2 opto-electronic and two mechanical switch inputs, or 4 mechanical switch inputs. Also ADC and encoder inputs. Signal Levels: <0.8V Vlow; >2V Vhigh (TTL compatible) Optical switch specifications: Transistor optical switch with IC > 1 mA @ IF=20mA. Examples: OPTEK part OPB841W55 or Digikey part 365-1103-ND (prewired); Honeywell HOA1870-33 (prewired) |
| Encoder interface..... | Primary and secondary quadrature encoders, max. freq. 4 MHz |
| Operating Temperature | 0 to 45° C standard, -20 to 50° C upon special request |
| Relative Humidity..... | 10% to 90% non condensing (operating and storage) |

Fully intelligent Servo Motor Controller + Driver with Encoder Feedback



Model EZSV17 actual size

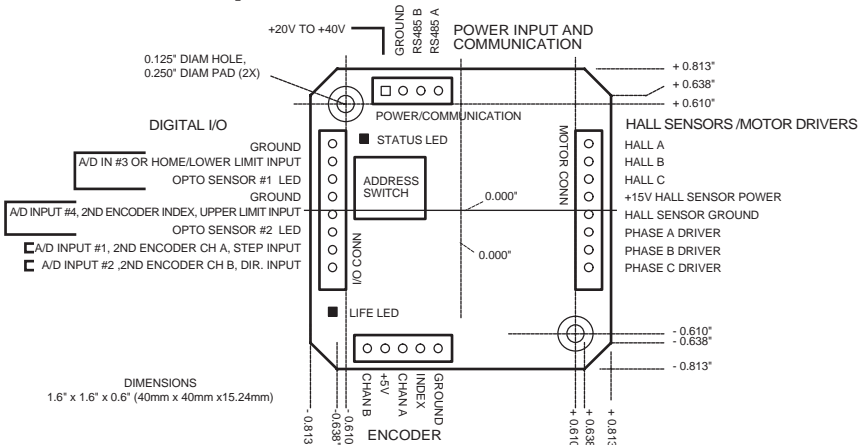
| HALL SENSOR & MOTOR CONNECTOR | | |
|--|---|--|
| Mating Connector: AMP MTA 100 series 8 pin, 22 GA, part 3-643813-8 Digikey part A31111 | | |
| Pin | Name | Notes |
| 1 | Hall sensor A | AllMotion will provide assistance determining correct hookup |
| 2 | Hall sensor B | |
| 3 | Hall sensor C | |
| 4 | +15V Hall sensor power | If +5V needed, use encoder power. |
| 5 | Ground | Ground for Hall sensors |
| 6 | Phase A driver (BLDC) Motor+ (brush DC) | 2A peak PWM |
| 7 | Phase B driver (BLDC) Not used (brush DC) | 2A peak PWM |
| 8 | Phase C driver (BLDC) Motor- (brush DC) | 2A peak PWM |

| POWER AND COMMUNICATION CONNECTOR | |
|---|----------------------------------|
| Mating connector: AMP MTA 100 series 4 pin, 22GA, part 3-643813-4 Digikey part A31108 | |
| Pin | Function |
| 1 | V+ (external supply) +20V to 40V |
| 2 | GROUND |
| 3 | RS485 B |
| 4 | RS485 A |

| I/O CONNECTOR | | |
|--|--|---------------------------------------|
| Mating Connector: AMP MTA 100 series 8 pin, 26 GA, part 3-643814-8 Digikey part A31030 | | |
| Pin | Name | Notes |
| 1 | A/D in #2, secondary encoder Chan B, or Direct input | Includes 10k Ω pullup to 3.3V. |
| 2 | A/D in #1, secondary encoder Chan A, or Step input | Includes 10k Ω pullup to 3.3V. |
| 3 | LED Drive #2 | Includes series 200 Ω resistor to 5V. |
| 4 | A/D in #4, secondary encoder Index, or Upper Limit input | Includes 10k Ω pullup to 3.3V. |
| 5 | Ground | Common input ground |
| 6 | LED Drive #1 | Includes series 200 Ω resistor to 5V. |
| 7 | A/D in #3 or Home/Lower Limit input | Includes 10k Ω pullup to 3.3V. |
| 8 | Ground | Common input ground |

| ENCODER CONNECTOR | | | | | |
|--|--------|----------------------------|-----|----------|---|
| Mating Connector: AMP MTA 100 series 5 pin, 26 GA, part 3-643815-5 Digikey part A31027 | | | | | |
| Pin | Name | Notes | Pin | Name | Notes |
| 1 | Ground | Ground for primary encoder | 4 | +5V (V+) | Power to encoder; also use for Hall sensors requiring +5V |
| 2 | Index | Input from primary encoder | 5 | Chan B | Input from primary encoder |
| 3 | Chan A | Input from primary encoder | | | |

Mechanical Specifications



Key Features

- Single 4-wire bus linking up to 16 drives
- 2A BLDC or DC brush motor drivers, short protected
- Operates from 20V to 40V.
- RS232, RS485, or USB-based control communications
- Optional standalone operation with no connection to PC
- On-board EEPROM for user program storage
- Homes to opto or encoder index with single command.
- Execution halt/branch pending switch closure
- ADC inputs, halt/branch to ADC value
- Position, velocity, and torque modes. Velocity mode possible with only Hall sensor feedback.
- Quadrature encoder-based feedback for position mode
- Step & Direction mode, 4MHz step frequency
- Secondary encoder mode
- 4MHz max encoder frequency
- Prewired for optoswitch inputs
- Cavro DT or OEM protocol compatible
- Fully programmable ramps and speeds
- Switch-selectable device address
- Software-settable maximum currents

Ordering Information

| | |
|--------------------------------------|--------------|
| Name | Order Number |
| EZSV17 Servo Drive..... | EZSV17 |
| RS232 to 485 Converter (option)..... | RS485 |
| USB to 485 Converter (option)..... | USB485 |