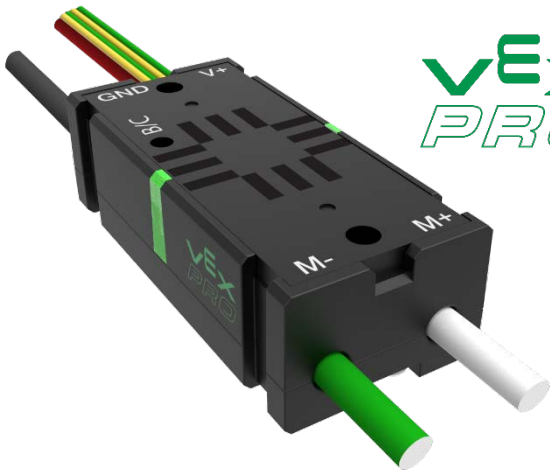
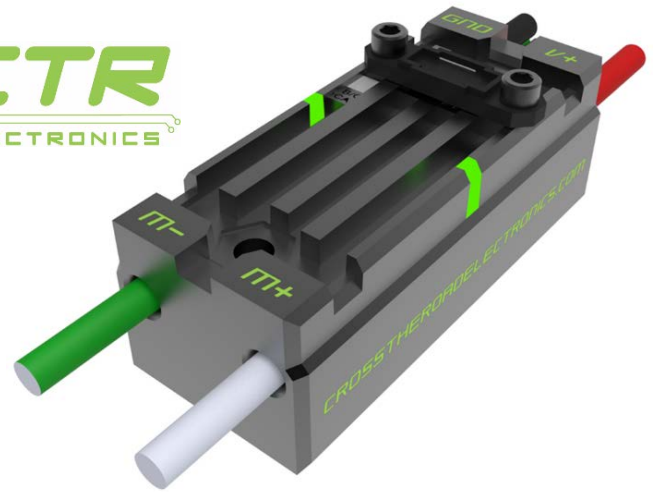


# Victor SPX & Talon SRX Info Sheet



**VEX  
PRO**

**CTR  
ELECTRONICS**



**Victor SPX: 217-9191**

**Talon SRX: 217-8080**

The Victor SPX and Talon SRX motor controllers were developed for the *FIRST®* Robotics Competition and hobbyist markets through a collaborative partnership between VEX Robotics & CTR Electronics.

## Features

- Completely sealed enclosure prevents debris from entering case and causing shorts
- LED indicators blink proportionately to output speed for easy debugging
- Illuminated "Brake/Coast Calibration" button enables one-touch changes and calibration
- Embedded power & output cables will never shake loose during a match
- Sign-magnitude synchronous rectification reduces heat generation at full motor stall
- 15 KHz output switching frequency ensures smooth and precise motor control
- Mirroring of other Victor SPX/Talon SRX controllers (Victors SPX follow Talon SRX, Talon SRX follow Victor SPX, Victor SPX follow Victor SPX)
- Both PWM & CAN support
- Position / Velocity Control using external CAN bus sensor
- Programmable deadband from 0.1% - 25% (4% default)
- Can leverage Pigeon IMU for go-straight/turning/arcing

|   | Victor SPX                      | Talon SRX |
|---|---------------------------------|-----------|
| Housing   | Plastic w/<br>Aluminum Heatsink | Aluminum  |
| Percent output control  | ✓                               | ✓         |
| Voltage output control  | ✓                               | ✓         |
| Current limiting & measurement  | ✗                               | ✓         |
| Ramping   | ✓                               | ✓         |
| Vbat measurement  | ✓                               | ✓         |
| Follow the leader (Talons follow Victor, Victor follow Talon, Victor follow Victor, Talon follow Talon) | ✓                               | ✓         |
| Data port   | ✗                               | ✓         |
| On board closed-loop PID control using CAN bus sensors  | ✓                               | ✓         |





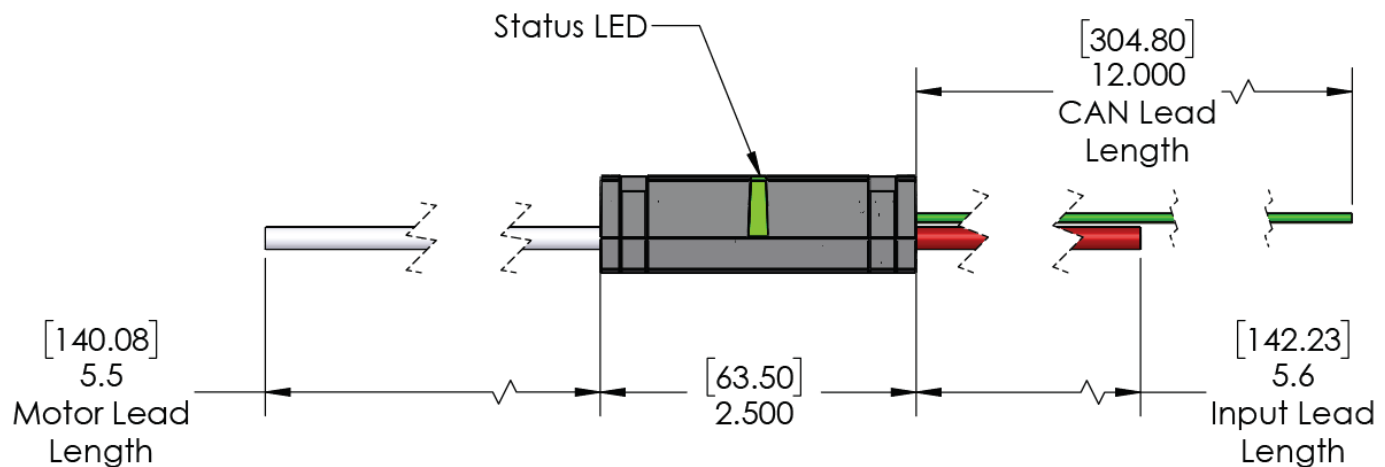
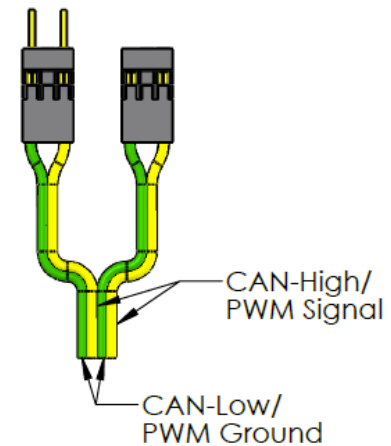
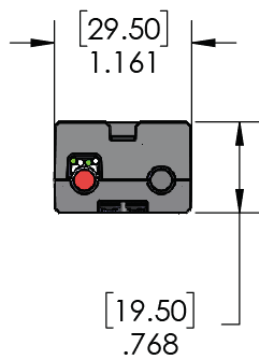
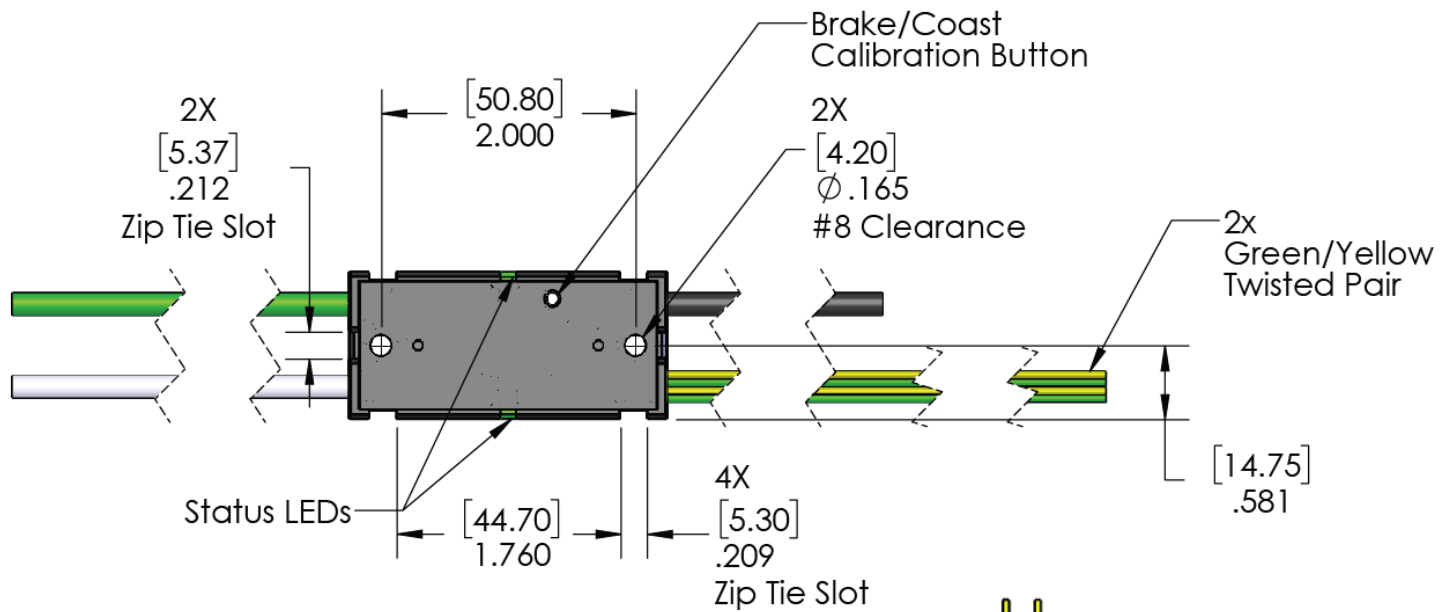
# Motor Speed Controller Technical Comparison



|  | Victor SPX                         | Talon SRX                          | Victor SP                          |
|--|------------------------------------|------------------------------------|------------------------------------|
| Dimensions                                 | 2.50" x 1.16" x 0.77"              | 2.75" x 1.185" x 0.96"             | 2.5" x 1.125" x 0.875"             |
| Weight (without wires)                     | 0.12 lb                            | 0.19 lb                            | 0.16 lb                            |
| Communication Protocols                    | PWM, CAN                           | PWM, CAN, SPI, USART (serial)      | PWM                                |
| Direct Sensor Input                        | No                                 | Yes                                | No                                 |
| Nominal Voltage                            | 12V                                | 12V                                | 12V                                |
| Min/Max Voltage                            | 6 - 16V                            | 6 - 28V                            | 6 - 16V                            |
| Continuous Current                         | 60A                                | 60A                                | 60A                                |
| Surge Current (2 sec)                      | 100A                               | 100A                               | 100A                               |
| PWM Input Pulse (high time)                | 1 - 2 ms nominal                   | 1 - 2 ms nominal                   | 1 - 2 ms nominal, 0.6 - 2.4 ms max |
| PWM Input Rate (period)                    | 2.9 - 100 ms                       | 2.9 - 100 ms                       | 2.9 - 100 ms                       |
| PWM Output Chop Rate (Switching Frequency) | 15 kHz                             | 15 kHz                             | 15 kHz                             |
| Minimum Throttle (Deadband)                | Adjustable 0.1% - 25% (4% Default) | Adjustable 0.1% - 25% (4% Default) | 4%                                 |

# Victor SPX Interface Dimensions

217-9191



# Talon SRX Interface Dimensions

217-8080

