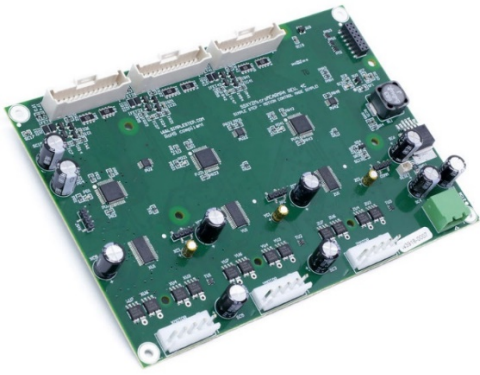
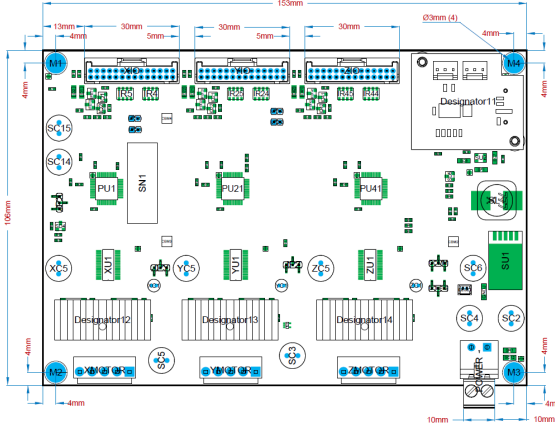


# Triple Axis Microstepping Controller (SSXYZMicroMC-4x) (Medium Current)



**Communication board not Included**

**Dimensions:**



**6.04" x 4.18" x 0.8"**  
**153.416mm x 106.172mm x 20.00mm**

## Specifications

|  | Minimum  | Maximum                         |
|--|--|---------------------------------|
| RoHS Compliant                                   | Yes  |                                 |
| Total Motor Axis/Board:                          | 3  |                                 |
| Motor Driver Type (per axis):                    | Bipolar Stepper Driver   |                                 |
| Motor Driver Stepping Range (per axis):          | Full, 1/2, 1/4, 1/8, 1/16, 1/32  |                                 |
| Motor Stepping Speeds (per axis):                | 1 sps  | 30,000 sps                      |
| Motor Stepping Prescaler (per axis):             | Yes (1 (default) to 255) (prescaler=255=0.003922 sps)  |                                 |
| Motor Idle Power Modes (per axis):               | OFF to Maximum Setting   |                                 |
| Maximum Current Control Setting (per axis):      | Software Controlled Single 8 bit DAC   |                                 |
| Driver Current Decay Control (per axis)          | Yes  |                                 |
| Driver Phase Short Circuit Protection:           | Yes  |                                 |
| Driver Thermal Shutdown Protection:              | Yes  |                                 |
| Driver Junction Temperature (Thermal Shutdown):  | -  | +165 degrees C (+329 degrees F) |
| Motor Current Limits (per axis)                  |  |                                 |
| Running:   | 0.100 amps/phase   | 3.125 amps/phase                |
| Idle:  | 0.00 amps/phase  | To maximum setting              |
| Operating Voltages:                              | 12.0VDC  | 50.0VDC                         |
| Ambient Temperature Range                        |  |                                 |
| Operating:                                       | 0 degrees C (32 degrees F)   | +70 degrees C (158 degrees F)   |
| Storage:   | -40 degrees C (-40 degrees F)  | +125 degrees C (257 degrees F)  |
| Maximum Controller Boards on One (1) Serial Line | 16 (up to 255 if 2-digit address is used)  |                                 |
| Communications:                                  | Communications boards sold separately  |                                 |
| Communication Baudrates:                         | 9600, 19200, 38400, 57600 (default), 115200, 230400, 460800  |                                 |
| Home Sensor Input (per axis):                    | Infrared (Current Limited to 25ma) Sensor Input or direct drive 5VDC   |                                 |
| Limit Sensor Input (per axis):                   | Microswitch type Input (Normally Open)   |                                 |
| Dedicated User Input Lines (per axis):           | 3-Inputs with on board 10K pull-ups, 0-5.0VDC Input, 0-3.3VDC Output<br>3-Inputs with no pull-ups, 0-3.3VDC Input/Output |                                 |
| Dedicated User Output Lines (per axis):          | 2 - MOSFET 0.5 amp - 0VDC to Board operating voltage with diode clamp  |                                 |
| Outputs (each):                                  | 2 - Open Collector MOSFET and 5 - TTL 0 to 3.3VDC PWM's  |                                 |
| PWM Outputs (per axis):                          | 2 - Open Collector MOSFET and 5 - TTL 0 to 3.3VDC PWM's  |                                 |
| ADC Inputs (per axis):                           | 1 - (SPARE 1) 0 to 3.3VDC, 12-bit ADC  |                                 |
| Quadrature Encoder Interface (per axis):         | Yes (Single ended only)  |                                 |
| Quadrature Encoder Maximum Frequency (per axis): | 1.5MHz   |                                 |
| Quadrature Encoder Modes (per axis):             | x1, x2 and x4  |                                 |
| Quadrature Encoder scaling (per axis):           | Double Precision Floating Point  |                                 |
| PCB Flammability Rating:                         | UL 94V-0   |                                 |

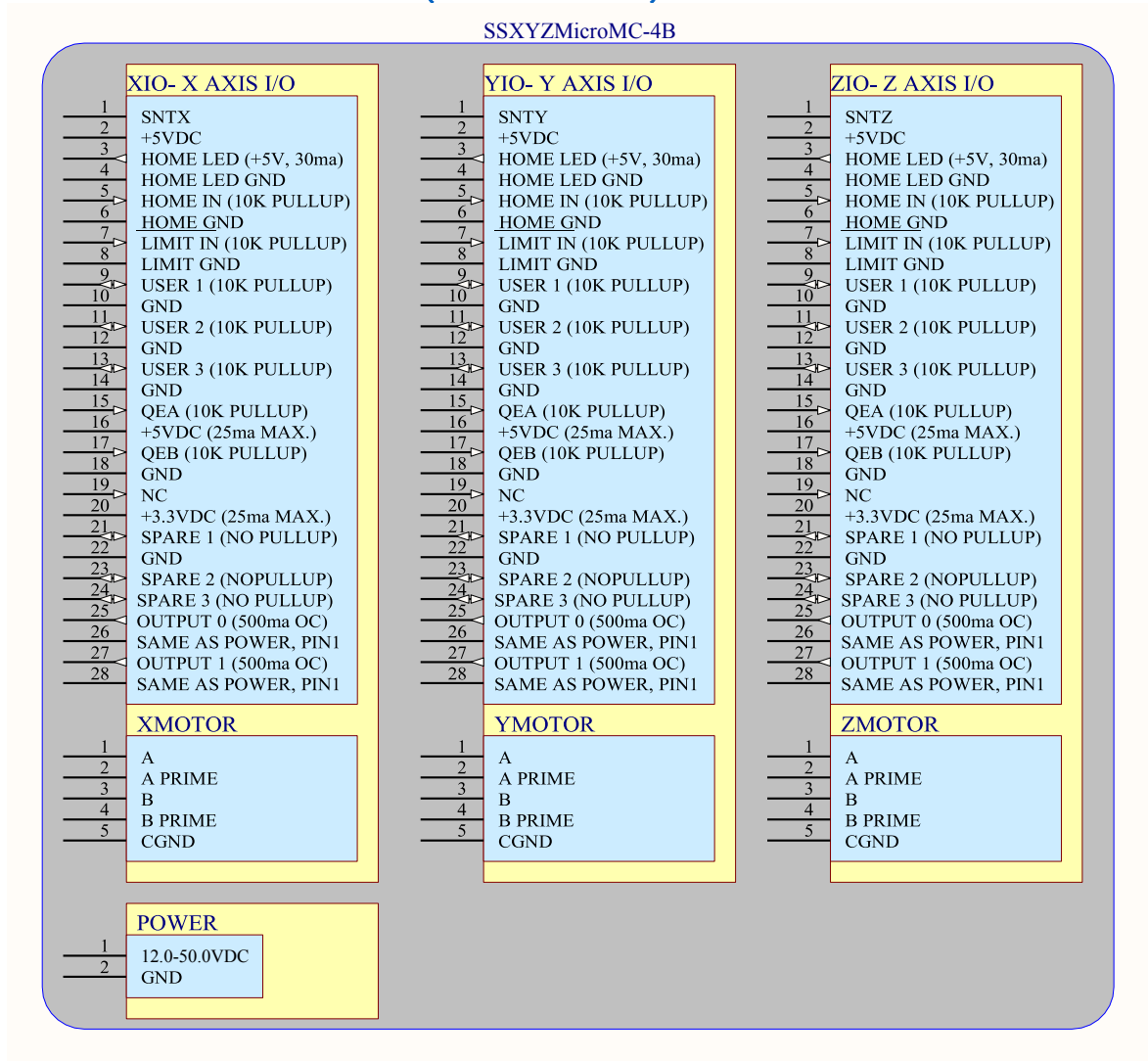


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# Triple Axis Microstepping Controller (SSXYZMicroMC-4x) (Medium Current)



| Connector Name         | Connector Type  | Mating Connector P/N |
|------------------------|-----------------|----------------------|
| POWER                  | Phoenix Contact | 1754449              |
| XIO, YIO, ZIO          | Molex iGrid     | 501646-2800          |
| XMOTOR, YMOTOR, ZMOTOR | JST Sales       | VHR-5N               |



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