

# M series

Proportional resistive fingertip controllers •  
potentiometer technology



## DISTINCTIVE FEATURES

- One, two or three axis
- Analog output
- Low profile mounting depth
- Friction centering option
- Low profile design with multiple handle options



## ENVIRONMENTAL SPECIFICATIONS

- Operating Temperature: -25 °C to +70 °C (-13 °F to +158 °F)
- Storage Temperature: -40 °C to +70 °C (-40 °F to +158 °F)



## MECHANICAL SPECIFICATIONS (X & Y AXIS)

- Operating Force: 1.3 N (0.29 lbf)
- Maximum Vertical Load: 100 N (22.5 lbf)
- Maximum Horizontal Load: 100 N (22.5 lbf)
- Mechanical Angle of Movement: 56°
- Expected Life: See potentiometer options
- Mass/weight: Varies
- Lever Action (centering): Spring or friction



## MECHANICAL SPECIFICATIONS (Z AXIS)

- Operating Torque: 0.040 Nm (0.35 lbf in)
- Break out Torque: 0.022 Nm (0.19 lbf in)
- Maximum Allowable Torque: 0.049 Nm (0.43 lbf in)
- Mechanical Angle of Movement: 90°
- Lever Action (centering): Spring



## MATERIALS

- Body: Nylon
- Actuator: Nylon

The company reserves the right to change specifications without notice.



# M series

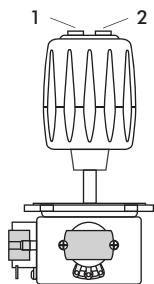
Proportional resistive fingertip controllers • potentiometer technology



## WIRING DIAGRAM

DEFAULT WIRE COLOR CODE *		
COLOR	FUNCTION	AWG
2 OR 3 AXIS JOYSTICK WITH 1 PUSHBUTTON: OPTIONS 5, E, G, H, 9, N		
Orange Orange	Switch 1 Switch Common	28
3 AXIS JOYSTICK WITH 2 PUSHBUTTONS: OPTION Q**		
Orange Brown Green	Switch 1 Switch 2 Switch Common	28
Z AXIS IN A 3 AXIS JOYSTICK: OPTION 8, 9, M, N, Q		
Red White Blue	Supply Signal Return	28

\* Wires for the Z axis and the pushbuttons are 292 mm (11.5in) and stripped  
\*\* Handle Q pushbuttons are shown in the following drawing



## OUTPUTS

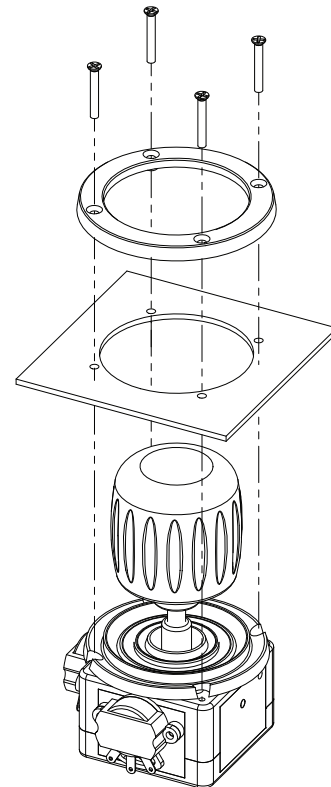
### POTENTIOMETER OPTIONS

POTENTIOMETER	P	R
Electrical Element	CONDUCTIVE PLASTIC	
Track Resistance	5K	
Linearity	±1.0%	±1.0%
Track Operating Angle	220°	50°
CRV	±1.5%	±1.0%
Power Dissipation	0.25W@40 °C	1 W
Rotational Life	1,000,000	10,000,000



## MOUNTING

### INSTALLATION



### FRONT MOUNTING BEZEL (FM)

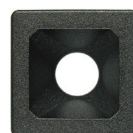


C = Split Bezel  
Cutout dimensions = 39.70 mm (1.562 in)



L = Rubber Boot  
Cutout dimensions = 39.70 mm (1.562 in)

### REAR MOUNTING BEZEL (RM)



F = Square Bezel  
Cutout dimensions = 30.15 mm (1.187 in)

### MOUNTING ACCESSORIES

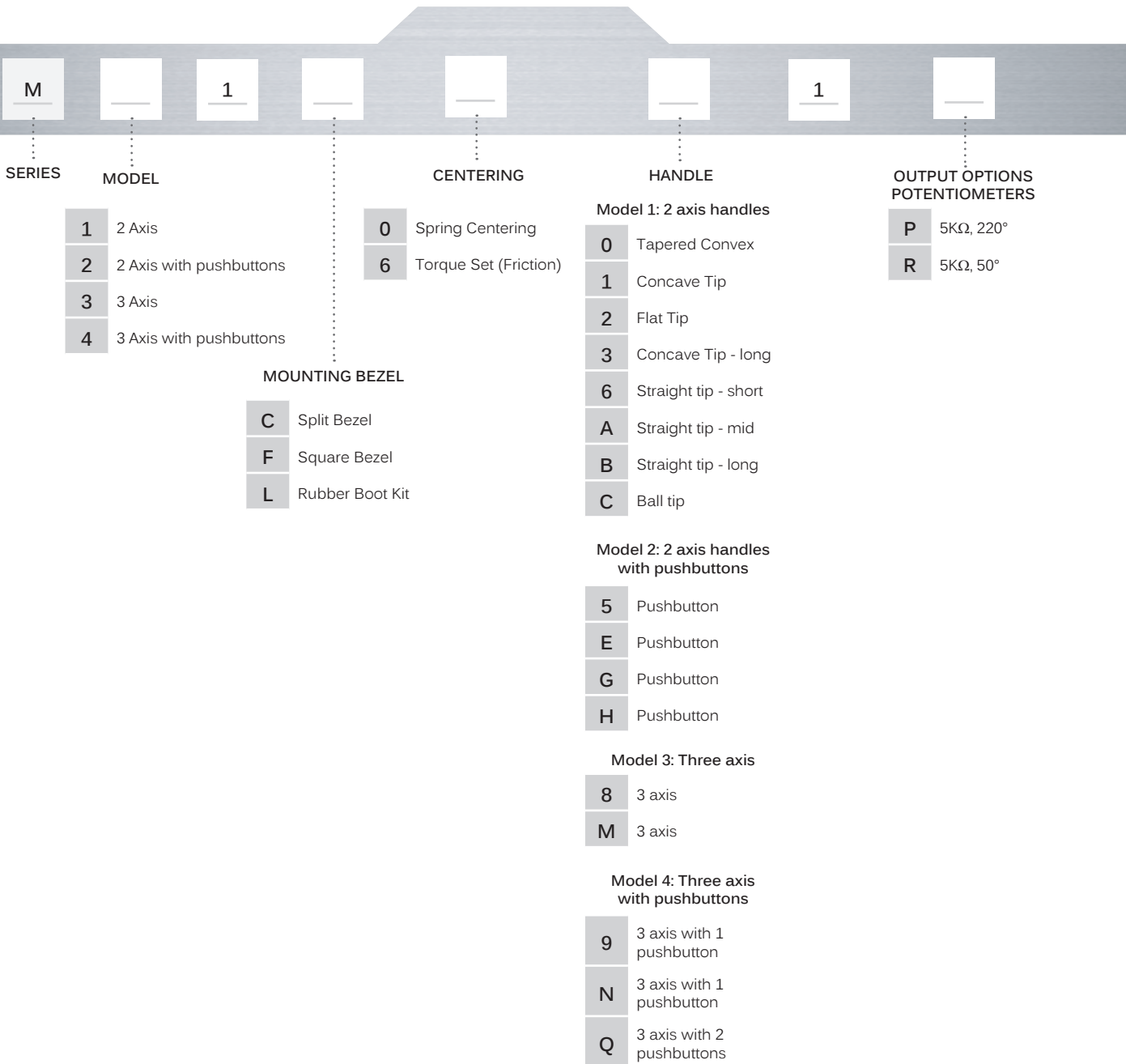
Standard hardware includes:  
C=Ring, cup and 4 black Phl screws 2-56x 1/2 in  
L=Ring and 4 black Phl screws 2-56x 1/2 in  
F=Square bezel, 4 screws 2-56x1/2 in Phl and 4 screws 2-56x 1/2 in Phl

# M series

Proportional resistive fingertip controllers • potentiometer technology



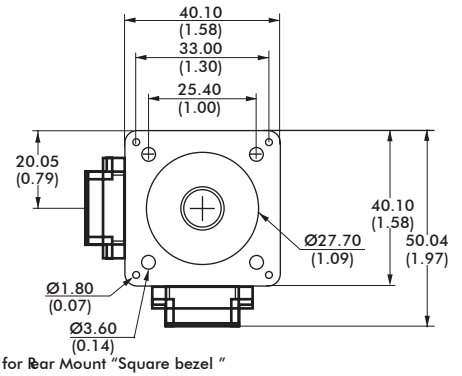
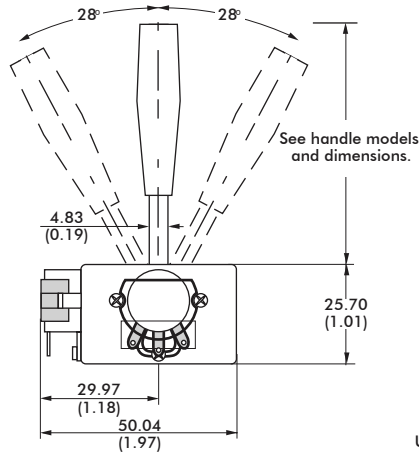
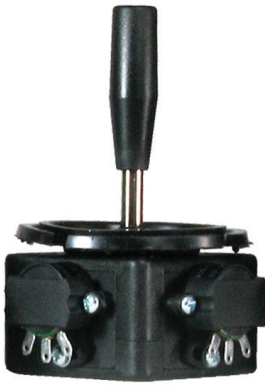
## BUILD YOUR PART NUMBER



# M series

Proportional resistive fingertip controllers • potentiometer technology

## 2 AXIS - OPTION A HANDLE

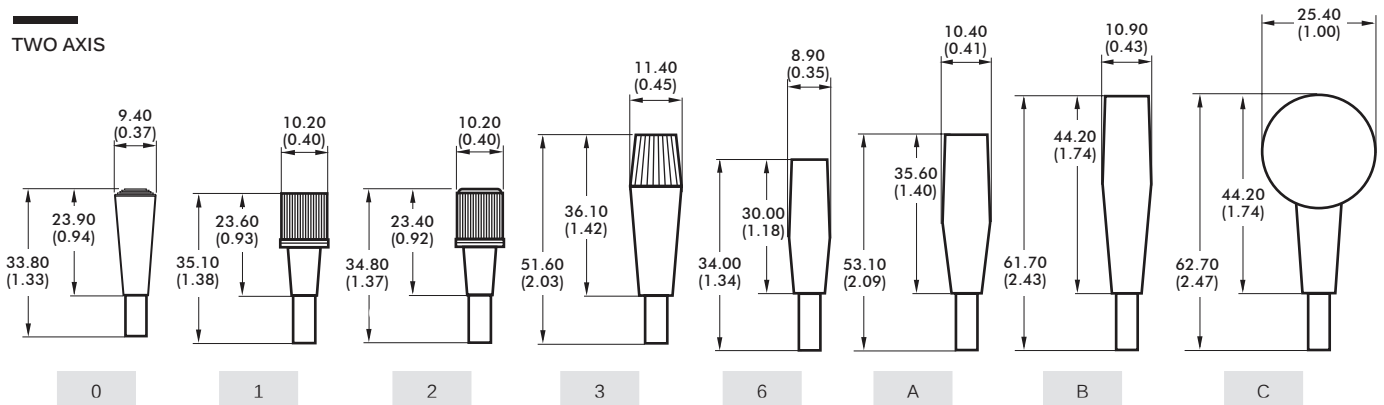


Mechanical dimensions represent a joystick with the largest potentiometer option. Potentiometer size will vary according to selected option

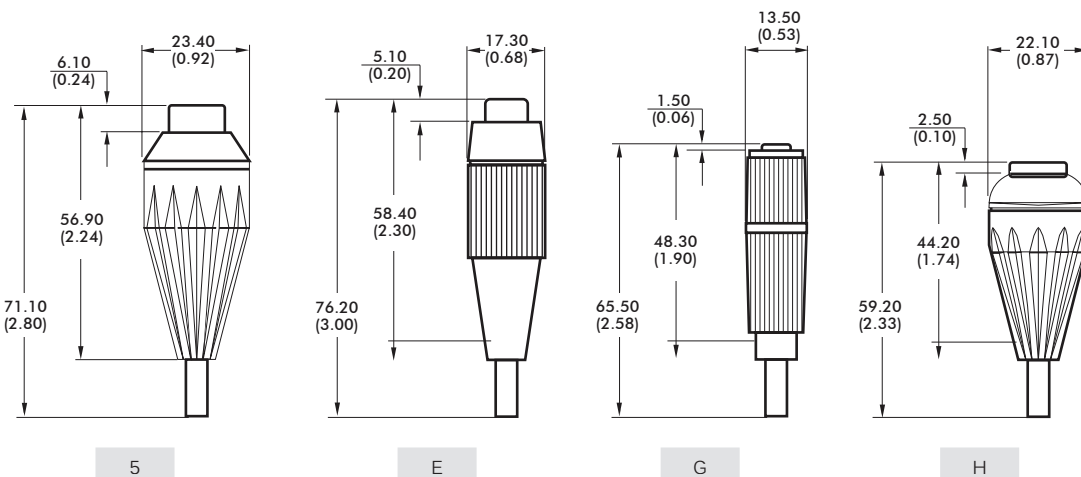


## HANDLE OPTIONS

### TWO AXIS



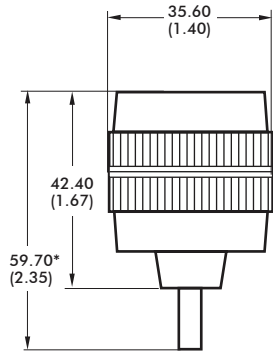
### TWO AXIS WITH PUSHBUTTONS



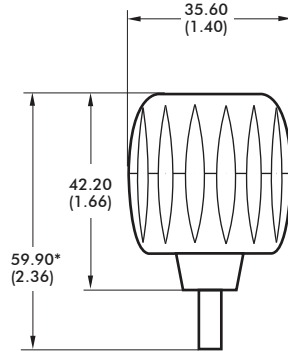
# M series

Proportional resistive fingertip controllers • potentiometer technology

## THREE AXIS

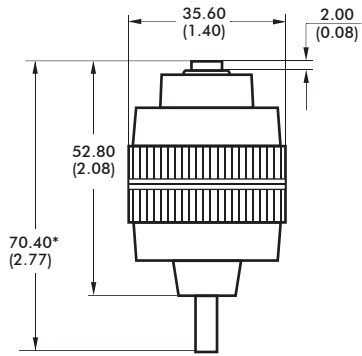


8

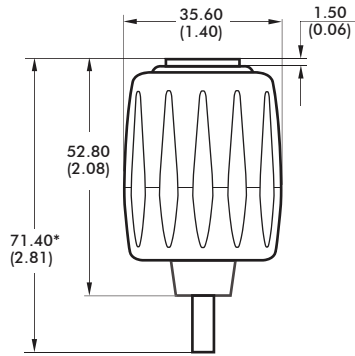


M

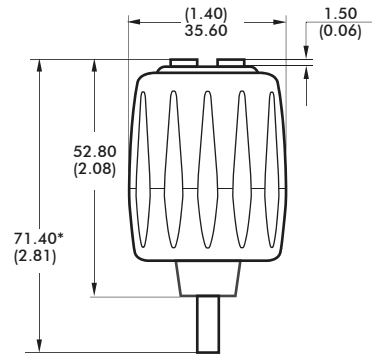
## THREE AXIS WITH PUSHBUTTONS



9



N



Q

## X-ON Electronics

Largest Supplier of Electrical and Electronic Components

*Click to view similar products for [Joysticks](#) category:*

*Click to view products by [Apem](#) manufacturer:*

Other Similar products are found below :

[C1000C1P](#) [JOY-THUMB](#) [G3-A1AM151NNNN](#) [C1000C1PMJ0](#) [S10L061J](#) [3140AAK000](#) [M41L091R](#) [S30L081J](#) [M11L001C](#) [M11L0X1P](#)  
[C2000E1F](#) [HRS202B1](#) [S30L0M1CSJBLK](#) [04J-BP-C11](#) [HF11R11](#) [HG-44MIS000-2654](#) [4P182F1E55475](#) [TS4A1S00A](#) [BD140D01GR0000](#)  
[BD150SD4BL1200](#) [3140SAL6475](#) [TW01GRY1](#) [3D1ZBE08478](#) [4P282F1E55475](#) [HS1T22SA](#) [TW01GRY11](#) [TW01BLU11](#) [TW01BLK1](#)  
[67B-R4-3C-S-04C](#) [MS-42N20S000](#) [9SA50RE6500](#) [TSAT1S02A](#) [TSAA1P00A](#) [M31C0M1P](#) [M21C051P](#) [8BE2SE-65-249](#) [8AC2AK65249](#)  
[HF44S10](#) [HF50S10](#) [HG-2120S000](#) [HFX44R10](#) [HFX33R13](#) [HFX11S10](#) [ZD4PA203](#) [9SA50RR6559](#) [4R252S1E5500](#) [2V17F1100](#)  
[5S251S0F1000](#) [HF46Y10](#) [67C08-8-M-040C](#)