



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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M series

Miniature resistive joysticks

Distinctive features and specifications



- World's #1 selling joystick for CCTV applications
- Potentiometric sensing
- One, two or three axis
- Low profile design with 17 handle options
- RoHS

MECHANICAL (FOR X AND Y AXIS)

- Break Out Force: 0.7N (0.16lbf)
- Operating Force: 1.3N (0.29lbf)
- Maximum Applied Force: 100N (22.48lbf)
- Mechanical Angle of Movement: 56°
- Expected Life: See potentiometer options
- Mass/weight: Varies
- Package Size (mm) (L x W x H) or (Dia x H): Varies
- Lever Action (Centering): Spring or Friction

MECHANICAL (FOR Z AXIS)

- Break Out Torque: 0.022N·m (0.19lbf-in)
- Operating Torque: 0.040N·m (0.35lbf-in)
- Maximum Allowable Torque: 0.049N·m (0.43lbf-in)
- Mechanical Angle: 90°
- Handle Action: Spring

ENVIRONMENTAL

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

POTENTIOMETER OPTIONS

Potentiometer	P	M	R
Electrical Element	Conductive Plastic	Conductive Plastic	Conductive Plastic
Track Resistance	5K	5K	5K
Linearity	±1.0%	±5.0%	±1.0%
Track Operating Angle	220°	56°	50°
CRV	±1.5%	±1.5%	±1.0%
Power Dissipation	0.25W@40°C	0.5W@70°C	1W
Rotational Life	1,000,000	1,000,000	10,000,000

CENTERING OPTIONS

- **SPRING CENTERING:** The joystick returns to center when the handle is released.
- **TORQUE SET:** Torque set provides absolute positioning with uniform friction applied to "X" and "Y" axis.

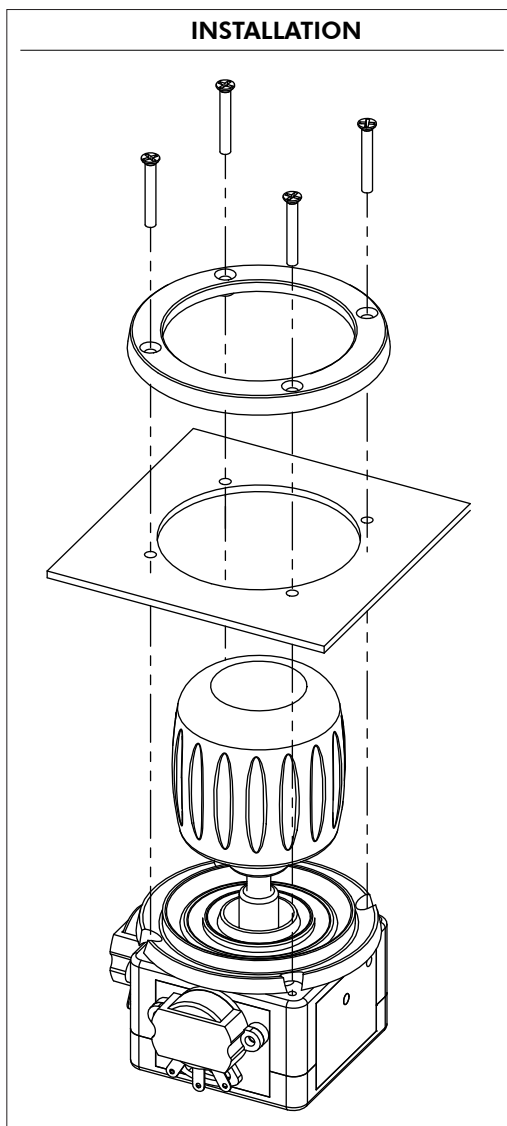
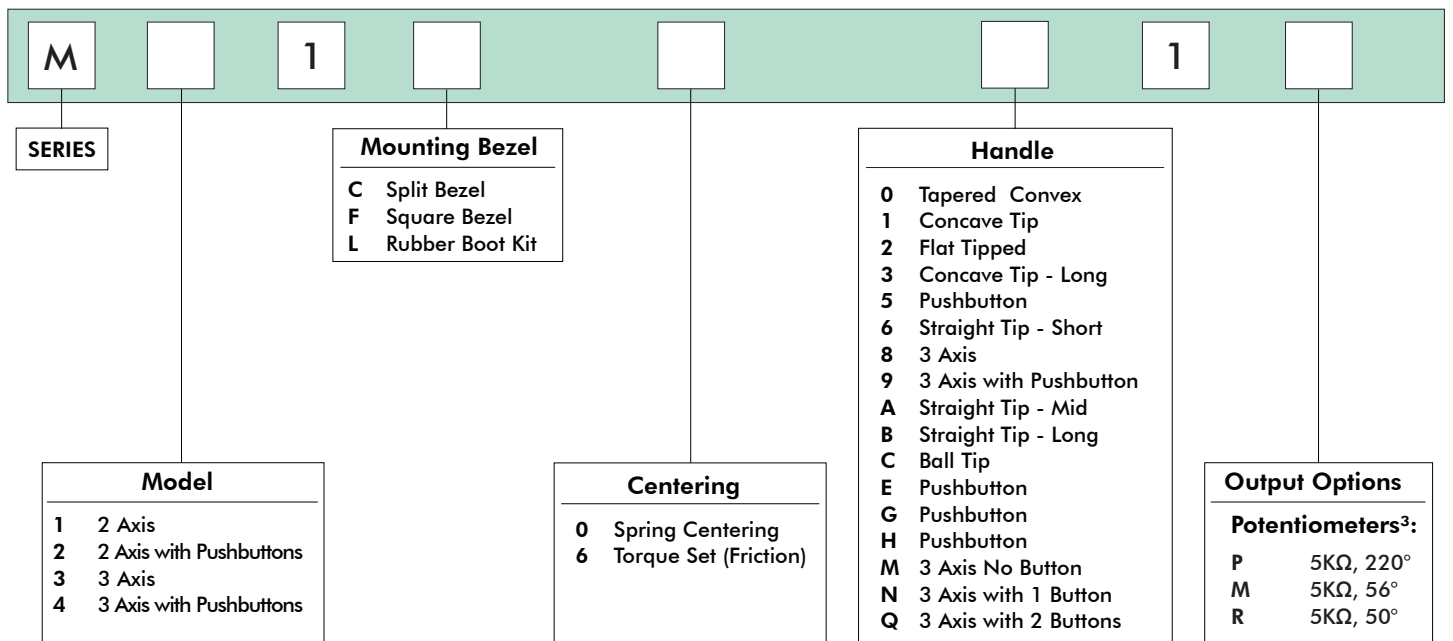
- NOTES:
- All values are nominal.
 - Specifications are subject to the joystick configuration.
Contact Technical Support for the performance of your specific configuration.
 - The M Series is intended for internal applications.

Note: The company reserves the right to change specifications without notice.

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Miniature resistive joysticks

Overview



NOTES:

1. Front Mounting Bezels (FM)

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

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

2. Rear mounting bezels (RM)

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

3. Potentiometer specifications are located on the previous page.



Mounting accessories.

Standard hardware includes:

C= Ring, cup, and 4 black Phl screws 2-56x1/2in

L= Ring and 4 black Phl screws 2-56x1/2in

F= Square bezel, 4 screws 2-56x1/2in Phl, and 4 screws 2-56x1/4in Phl

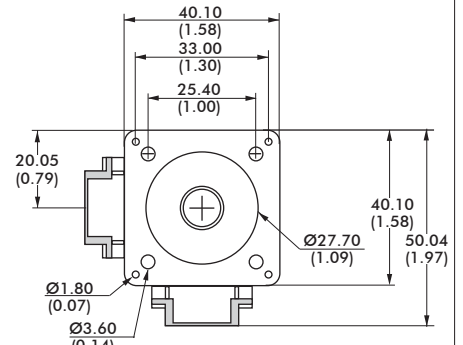
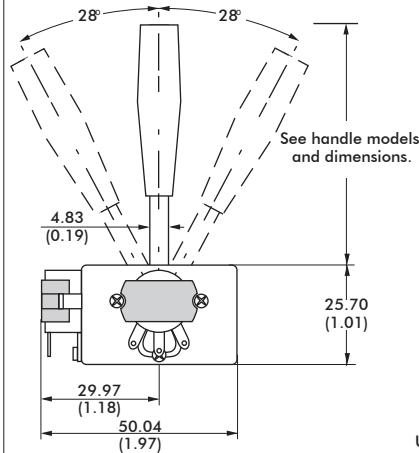
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M series

Miniature resistive joysticks

Overview

2 AXIS WITH OPTION A HANDLE



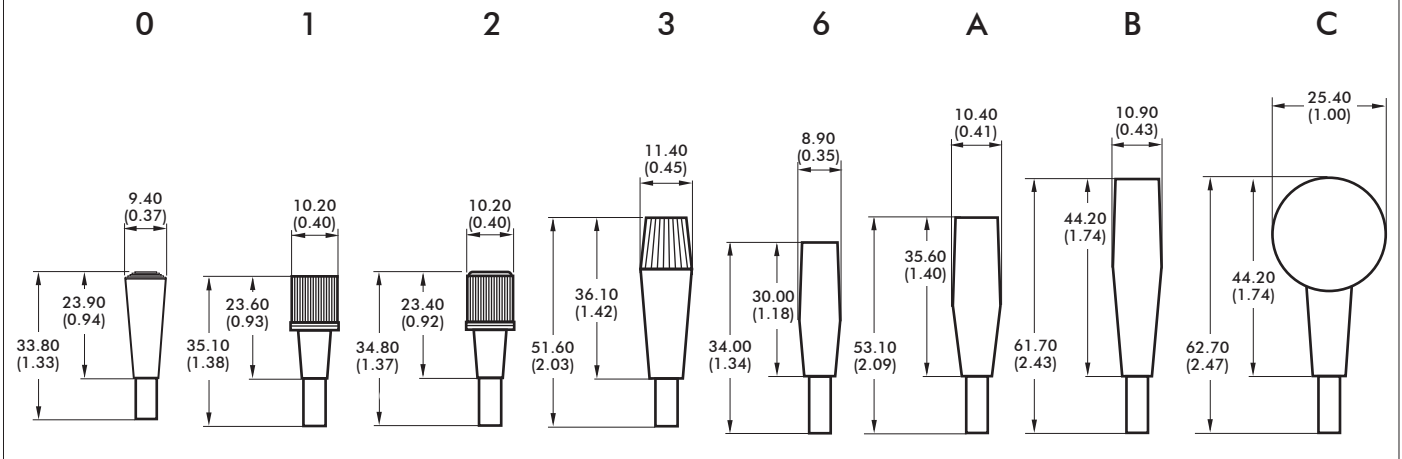
Used for Rear Mount "Square bezel"

NOTES:

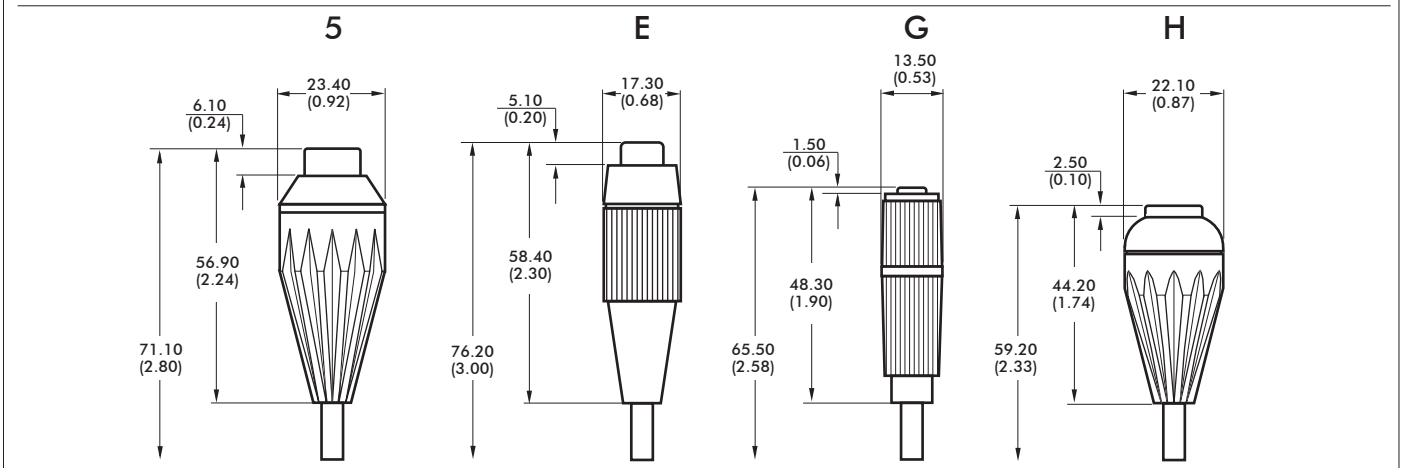
1. Mechanical dimensions represent a joystick with the largest potentiometer option.
2. Potentiometer size will vary according to selected option.

HANDLES

2 AXIS



2 AXIS WITH PUSHBUTTON¹



NOTES:

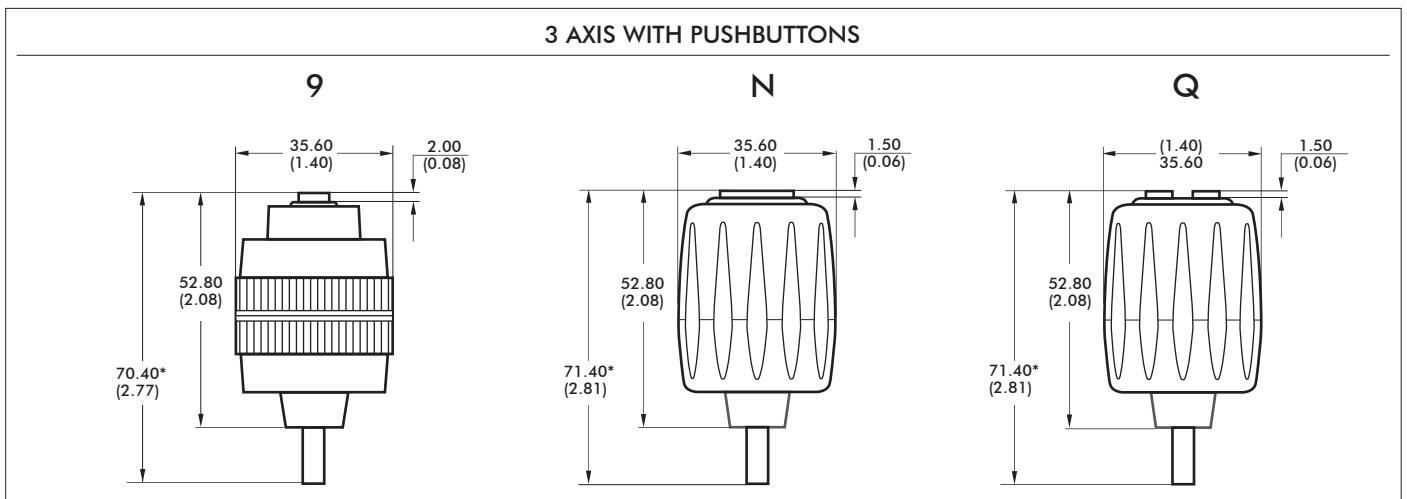
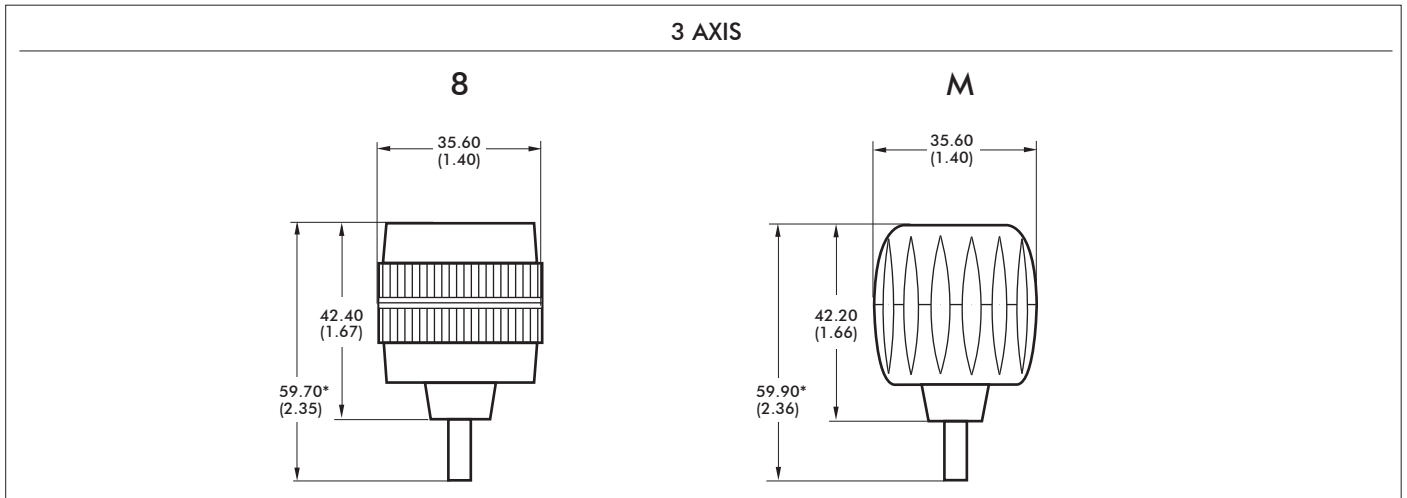
1. Pushbuttons are not sealed. Joysticks are intended for internal applications only.
2. Dimensions are in mm/(inch).

Note: The company reserves the right to change specifications without notice.

M series

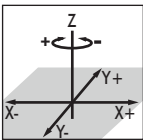
Miniature resistive joysticks

Overview



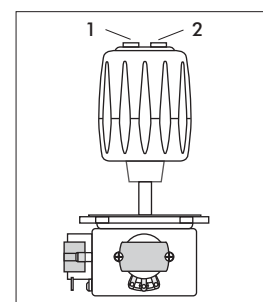
NOTES:

1. Dimensions are in mm/(inch).
2. Pushbuttons are not sealed. Joysticks are intended for internal applications only.
3. Axis orientation:


4. Wiring information:
 - Cables are provided for pushbuttons and the Z axis.
 - Cables are not supplied for the potentiometers (axis X and Y).

DEFAULT WIRE COLOR CODE*		
COLOR	FUNCTION	AWG
2 OR 3 AXIS JOYSTICK WITH 1 PUSHBUTTON - OPTIONS 5,E,G,H,9,N		
ORANGE	Switch 1	28
ORANGE	Switch Common	
3 AXIS JOYSTICK WITH 2 PUSHBUTTONS - Option Q**		
ORANGE	Switch 1	28
BROWN	Switch 2	
GREEN	Switch Common	
Z AXIS IN A 3 AXIS JOYSTICK - OPTIONS 8,9,M,N,Q		
RED	Supply	28
WHITE	Signal	
BLUE	Return	

- NOTES:**
- * Wires for the Z axis and for the pushbuttons are 292mm (11.5in) and stripped.
 - ** Handle "Q" pushbuttons are shown in the following drawing:



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