

# MO ULTRA-COMPACT JOYSTICK CONTROLLER

## Construction:

The **TYPE MO** Joystick Controller is ideally suited for use in Remote Control Systems for industrial use.

The glass-filled Zytel housing, non-ferrous components and sealed construction make this device suitable for corrosive and hostile environments.

1 & 2 Axis Control is available as well as a handle activated auxiliary functions. Separate and simultaneous switching action is achieved with standard and cross gate patterns.

## Application:

These devices are commonly utilized to control Material Handling and Processing machinery used in Metals, Mining, Marine, Construction and Forestry Industries where durability and resistance to corrosion is paramount.

## Features and Options:

- Ultra-compact and rugged construction.
- Environmentally sealed mounting and corrosion resistant components.
- High life compression style spring return.
- Single and dual axis operation.
- Standard and custom switching patterns.
- Detented steps up to 5-0-5 positions.
- Standard and custom potentiometers each axis.
- Push-button actuated deadman functions.



## MO ORDERING INFORMATION

- Basic Assembly:** 2.30" Shaft length, 1 piece handle, gasket and 2.50" diameter boot supplied standard, 2" diameter available upon request for limited travel.
- Drive Arrangement:** Single Axis (E), Dual Axis (V)
- Handle:** Reference Handle Section for a selection of custom handles and handle operated deadman functions.
- Contacts:** A 2 pole modular contact block or micro-switches are available in silver or flashed over gold contact tips. Gold contacts are designated by a prefix "K" e.g. KMO.  
Maximum number of Contacts in each axis = 8 (6 with potentiometer).
- Potentiometers:** 0.5 Watt 5 million operations standard. Specify resistance and type required (Consult factory for custom requirements)
- Electronics:** See PFC or PFC/CR (Proportional Feathering Control electronics) for ordering information.

## MO Technical Data

### Mechanical:

- **Operating Temperature:** -25° to +70°C
- **Detented Positions:**  
0° neutral and 1-0-1 – 5-0-5 steps
- **Mechanical Life:**  
3-5 million cycles each direction.
- **Gear Ratio:** 5:1
- **Handle Travel:**  
Cam rotation  $\pm 28^\circ$   
Potentiometer Rotation  $\pm 140^\circ$
- **Potentiometer Values:**  
3 Terminal: 5K  
Center Tap: 2 x 5K

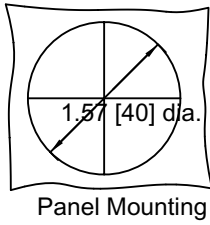
### Electrical:

- **Micro-switch Rating:** (4), Single Pole Double Throw micro-switch contacts per axis.
- **Terminals:** .020 x .110 QC
- **Terminals:** Solder
- **Wire Size:** 18 AWG
- **Rating AC:**  
5 Amps 125 VAC  
2 Amps 250 VAC
- **Contact Block Rating:**  
2 Amps @ 250VAC  
Gold: 4mA 30VDC

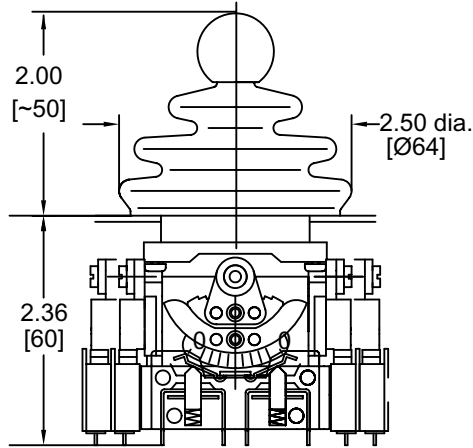
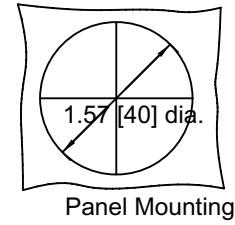
Consult factory for low voltage gold contacts

# MO DIMENSIONS

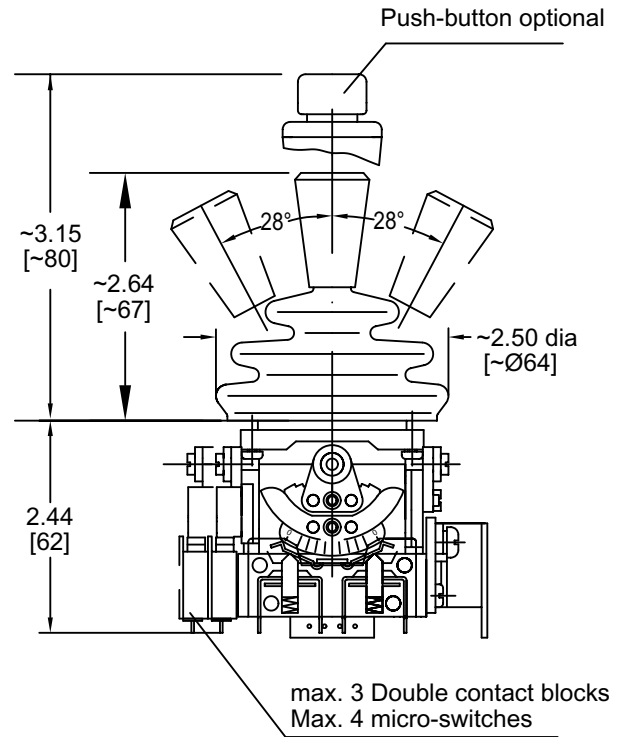
Type MO with contacts only  
for step control



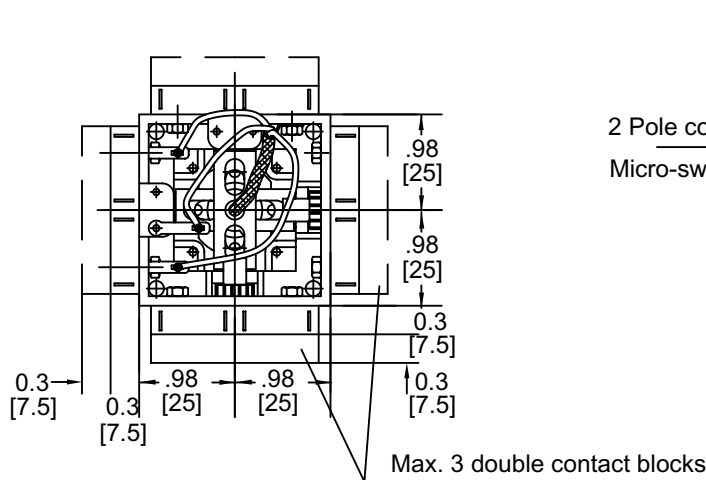
Type MO with contact blocks  
or Micro-switches and Potentiometers  
for stepless control



Type MOE  
Type MOV



Up to 5-0-5 Steps furnished with or without spring return.  
Contact blocks with force actuated silver or gold contacts.



2 Pole contact block dimension  
Micro-switch dimension 0.37" [9.4]

