M3
ULTRA-COMPACT HALL-EFFECT JOYSTICK CONTROLLER

Construction:
The TYPE M3 compact and light weight finger operated joystick controller features a glass-filled zytel housing and non-ferrous components making it suitable for corrosive and hostile environments.

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

Application:
For use in radio control systems and portable consoles. For mobile machinery on and off-highway and for in-plant process control.

Features:
- Ultra-compact and rugged construction
- Environmentally sealed mounting and corrosion resistant components
- Conformal coated electronics to resist moisture
- Non-biasing smooth operation with high life compression style spring return
- Single and dual axis operation
- Long life Hall-effect technology
- Meets or exceeds CE EMC requirements

Options:
- Sealed push-button
- Mechanical interlock for non-simultaneous operation
- Cross gate
- Redundant output
M3 ORDERING INFORMATION

Drive Arrangement: Single axis and double axis
Basic Assembly: 2.0" [52 mm] shaft length and boot supplied standard
Handle: 0.8" [20 mm] dia. Round ball
Handle Action: Spring Return
Output: Proportional – Hall-effect
Immunity: Meets or exceeds CE EMC requirements

M3 TECHNICAL DATA

Mechanical:
- Mechanical Life: 20 million cycles
- Handle Deflection: ±20°
- Gear Ratio: Direct drive
- Mounting Footprint: 1.9" [49mm] x 1.9" [49mm]

Environmental:
- Operating Temperature: -25 to +70°C
- Storage temperature: -40 to +70°C
- Degree of protection above the panel: IP55
- EMC Emissions: Complies with EN61000-6-4:2007 Class A Group 1, 80 – 1000 MHz
- EMC Immunity: Complies with or exceeds EN61000-6-2:2005 expanded to include: RFI Immunity of 100 V/M @ 80 – 1000 MHz ESD Immunity of 15 Kv air, 8 Kv contact

Electrical:
- Hall-Effect:
  - Supply Voltage: 4.5 to 5.5VDC
  - Output Voltage: Ratiometric 0.5 – 2.5 – 4.5V ±0.15V @ 5.0V supply
  - Output Current: 10 mA
  - Power Consumption: 20 mA @ full load
  - Connections: 20 AWG, UL1430 wire with Molex mini-fit socket connector (39-01-2100), 6" lead length
- Pushbutton (Optional): Sealed pushbutton, momentary, 1 N.O., 2 A @ 24VDC

Options:
- Handle: Tapered, 2 piece, pushbutton, and Mechanical Interlock
- Gates: Cross gate
- Hall-Effect: Output Voltage: Redundant - Ratiometric: 0.5 – 2.5 – 4.5V ±0.15V complementary @5V supply

Please consult factory for other available options not listed.
M3 OVERALL DIMENSIONS

2 PIECE HANDLE

ROUND BALL HANDLE

M3 HALL-EFFECT

TAPERED KNOB

ARRANGEMENT

2 PIECE HANDLE & PUSH-BUTTON

MECHANICAL INTERLOCK

PANEL MOUNTING DIMENSIONS

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