M3 HALL-EFFECT FINGER OPERATED JOYSTICK SERVICE BULLETIN

IMPORTANT:

- Disconnect all power prior to servicing the controller.
- Immediately report any abnormal operation characteristics of the controller to the proper authority. Do not continue to operate the equipment until the problem is resolved.

Description

The type M3 Joystick is a rugged, finger operated compact device that offers excellent application versatility.

General Care

Access to the controller should be comfortable and unobstructed. Care should also be taken in console and cab design to **AVOID LOCATIONS:**

- Where inadvertent operation is possible.
- Where the operator is able to apply an excessive amount of force to the control lever.
- Where the control handle could be used as a means of supporting entrance and exit from the equipment.
- Where hand and knuckle clearance is limited.
- Handle is not protected by guarding in portable consoles or where inadvertent operation will cause an unsafe condition.

Installation

M3 controller requires a 5 hole mounting pattern (see panel hole detail). It is not necessary to remove the operating handle or boot to install the controller.

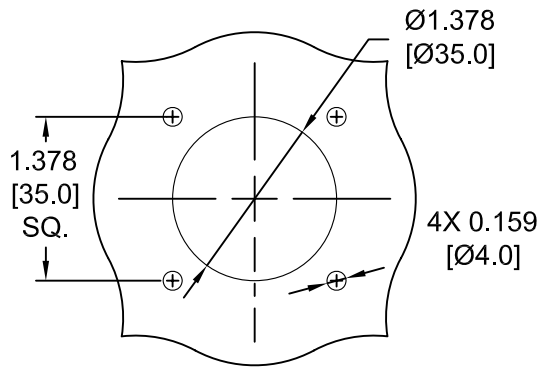
Service

- Inspect for torn or damaged boots and replace them immediately.
- Check mounting bolts for tightness.

Hall-effect

Hall-effect boards and their components are not field replaceable and must not be moved.

M3 PANEL MOUNTING



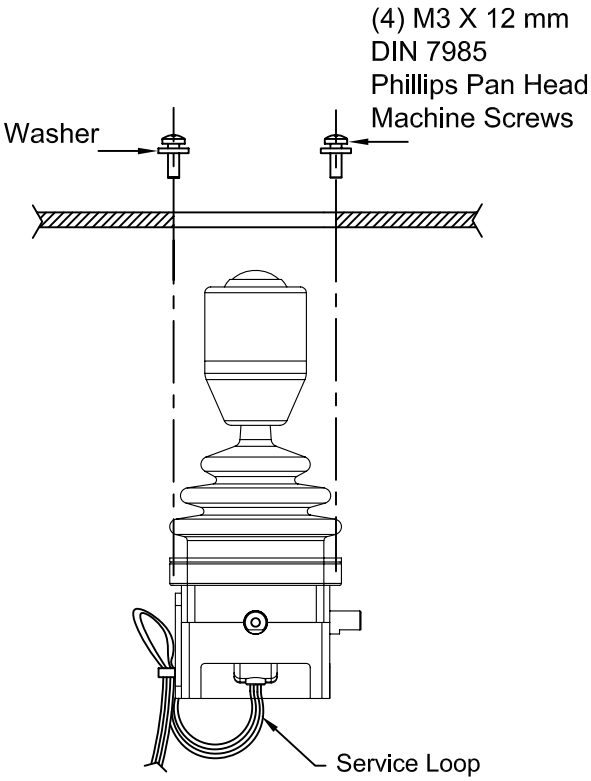


FIG.1

Handle Operated Functions

The maximum allowance voltage for a wired handle is 30 Volts. Wired handles require that the wires pass though the steel operating shaft. At the base of the operating shaft the wire is formed into a service loop, this service loop provides the needed flex for the shaft to operate in all directions successfully.

Do not alter the service loop to a different bend configuration. If the loop is pushed down toward the body, the wires can potentially be trapped between the shaft and body, thus resulting in a broken wire. Insure wire service loop has panel clearance at base of controller and that loop can operate in all directions unobstructed. See **FIG.1.**

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Wiring
4.5 to 5.5 VDC Supply:

M3E - 1 Axis Single Sensor

PIN	COLOR	FUNCTION
1	ORN	+5.00 VDC Supply
2	GRN	Ground
3	BLU	Output

M3V - 2 Axis Single Sensor

PIN	COLOR	FUNCTION
1	ORN	+5.00 VDC Supply
2	GRN	Ground
3	BLU	A-B Output
4	GRY	C-D Output

M3E - 1 Axis Redundant

PIN	COLOR	FUNCTION	PIN	COLOR	FUNCTION
1	BLU	A-B Main output	4	WH/ORN	+5.00 VDC A-B Redundant supply
2	WH/BLU	A-B Redundant output	5	GRN	A-B Main ground
3	ORN	+5.00 VDC A-B Main supply	6	WH/GRN	A-B Redundant ground

Connections:

10-position MOLEX Minifit with female contacts - mates with connector 39-01-2101 and male contacts 39-00-0041 (24-18 AWG).

M3V - 2 Axis Redundant

PIN	COLOR	FUNCTION	PIN	COLOR	FUNCTION
1	BLU	A-B Main output	7	WH/GRY	C-D Redundant output
2	WH/BLU	A-B Redundant output	8	BLK	C-D Main ground
3	ORN	+5.00 VDC A-B Main supply	9	WH/BLK	C-D Redundant ground
4	WH/ORN	+5.00 VDC A-B Redundant supply	10	RED	+5.00 VDC C-D Main supply
5	GRN	A-B Main ground	11	WH/RED	+5.00 VDC C-D Redundant supply
6	WH/GRN	A-B Redundant ground	12	GRY	C-D Main output

Connections:

12-position MOLEX Minifit with female contacts - mates with connector 39-01-2121 and male contacts 39-00-0041 (24-18 AWG).

Disclaimer

M3 finger operated joysticks are supplied with deadman spring return to neutral.

The customer is responsible for meeting OSHA compliance of deadman safety devices, providing operator safety and proper equipment use training, and for maintaining the equipment and controls in a safe working condition. Customer agrees to indemnify and hold J.R. Merritt Controls, Inc. harmless and defend at its expense, all claims and suits asserted or brought against J.R. Merritt Controls, Inc. due to the absence, removal, tampering, improper installation or improper use of this equipment and associated deadman safety devices.