

CS3 & CS3HD ULTRA COMPACT EXTREMELY RUGGED 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 CS3 Joystick is a rugged, compact device that offer excellent application versatility.

General Care

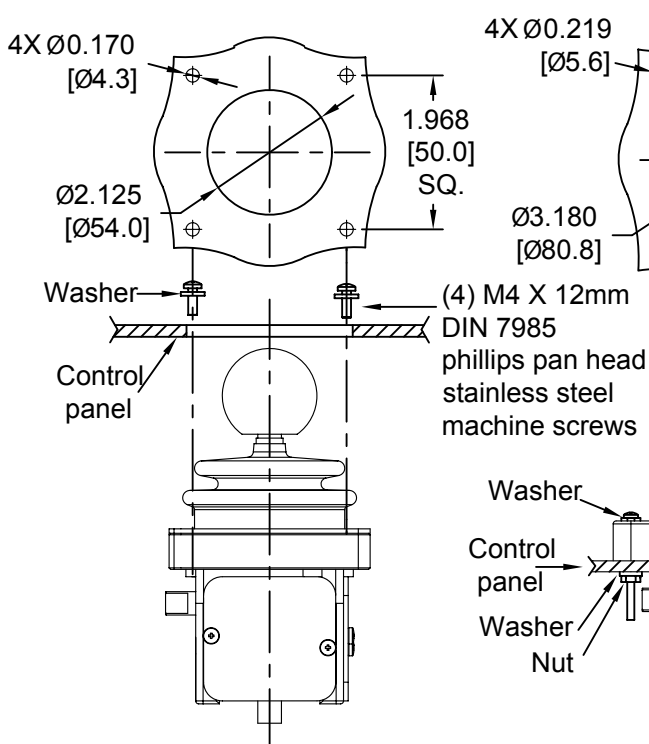
Access to the controller should be comfortable and unobstructed. Care should also be taken in console and cab and design to **AVOID LOCATIONS:**

- 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 guardian in portable consoles or where inadvertent operation will cause an unsafe condition.

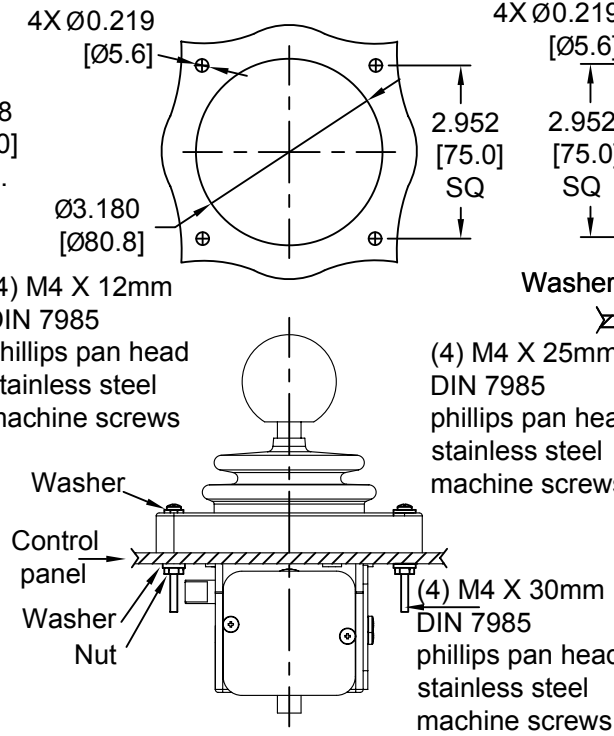
Installation

CS3 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.

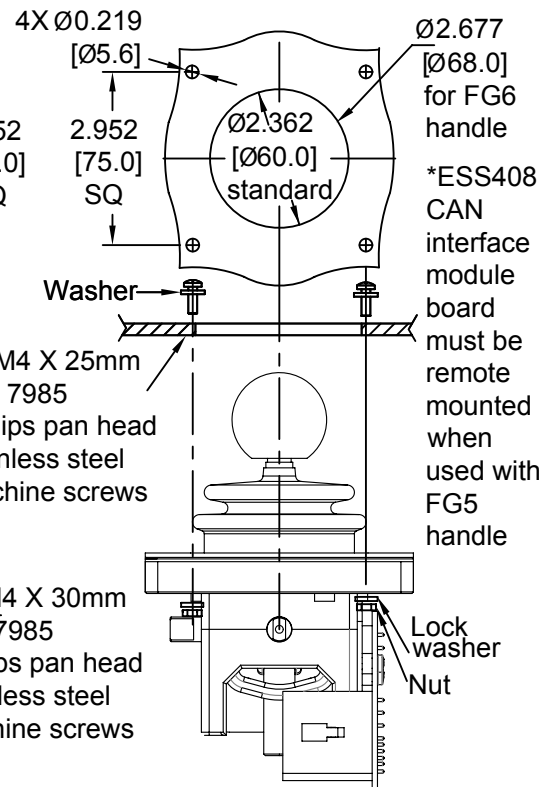
CS3 PANEL MOUNTING



CS3 DROP-IN MOUNTING



CS3 PANEL MOUNTING



Service

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

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Contacts

The 11A 125, 250VAC form C, V series snap-action switches on the CS3 B/B are field replaceable by removing the mounting screws.

Hall-effect

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

Wiring

Bang/Bang

The **CS3B/B** uses a V series snap-action switch with 0.187" quick connect tab or can be directly soldered to. The recommended maximum wire size is 18 AWG.

Hall-effect

4.5 to 5.5 VDC Supply:

CS3E - 1 Axis Single Sensor

PIN	COLOR	FUNCTION
7	WH/RED	+5.00 VDC Supply
8	WH/BLK	Ground
9	BLU	A-B Output

Connections:

9-position AMP MATE-N-LOCK with female contacts - mates with connector 1-480706-0 and male contacts 350690-1 (24-18 AWG).

CS3V - 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

Connections:

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

Handle Operated Functions

The maximum allowable voltage for a wired handle is 30 Volts. Wired handles require that wires pass through 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 shaft and that loop can operate in all directions unobstructed. See **FIG.1**

Disclaimer

Joysticks are supplied with deadman spring return to neutral and the BH handle is available with enable lever for deadman control for added safety.

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 to agree identify 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.

