

# VCS2

## COMPACT / RUGGED JOYSTICK CONTROLLERS

### Application:

The **TYPE VCS2** Joystick Controller is rugged, compact and offers excellent application versatility. VCS2 series E and V Joysticks are commonly utilized in Material Handling, Process Control, Manufacturing, and on Mobile Equipment; especially where precise proportional and step control of Variable Speed Drives and Electro-Hydraulics is desired.

The all plastic Zytel housing and specially treated rugged metal components make this device ideal for use in corrosive environments. These devices control equipment in Petro-Chemical, Food Processing plants and in Marine applications where corrosion is a significant problem.

Single and dual axis control is available as well as twist handle functions. Both separate and simultaneous operation of each axis is achieved with standard and custom gate patterns.

### Features:

- Rugged construction
- Compact design (3 contacts & potentiometer in each axis)
- Corrosion resistant components
- Single and dual axis operation.
- Standard and custom switching gates.
- 3 Single Pole Double Throw 5A 125V field replaceable contacts, each axis.
- Potentiometer- High life conductive plastic
- 10 million plus operations with friction brake.
- (P.F.C.) Proportional Feathering Control electronics each axis.
- Neutral normally closed contacts mounted in main housing.
- Variety of handle actuated deadman functions.
- Mechanical Interlock to prevent inadvertent operation.



## VCS2 ORDERING INFORMATION

- Basic Assembly:** 4 1/8" Shaft length, 2 piece handle, boot, and 2.84" sq. mounting plate supplied standard.
- Drive Arrangement:** E=1 Axis, V=2 Axis
- Handle:** Reference Section 5 for a selection of custom handles and handle operated deadman functions.
- Contacts:** 5A 125 VAC supplied standard. Main housing can be supplied with or without normally closed neutral contact.  
Maximum number of Contacts in each axis = 3.
- Potentiometers:** 0.5 Watt 5 million operations conductive plastic 5K 3 wire and 10KCT standard. (consult factory for custom requirements). Internal or external options available.
- Electronics:** See PFC or PFC/CR or MPFC, (Proportional Feathering Control electronics) for ordering information.

## VCS2 Technical Data

### Mechanical:

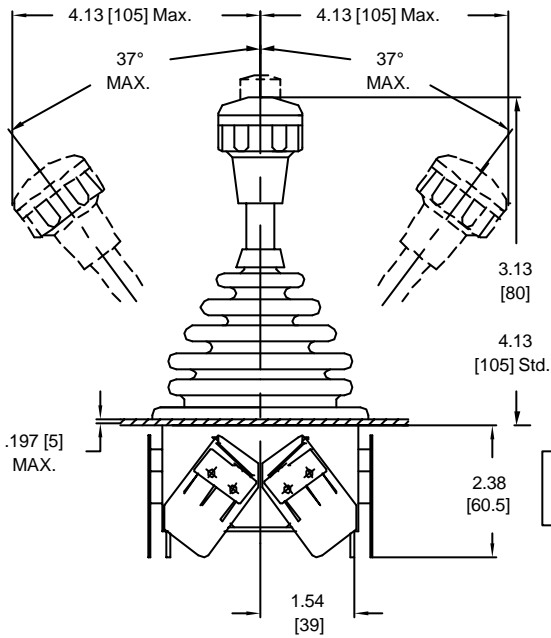
- **Operating Temperature:** -40° to +70°C
- **Detented Positions:** 0° neutral and 1-0-1 – 3-0-3 steps
- **Mechanical Life:** 5 million plus operations spring return; 10 million operations friction brake
- **Gear Ratio:** 3.78:1 (handle travel  $\pm 37^\circ$ , cam and potentiometer rotation  $\pm 140^\circ$ )

### Electrical:

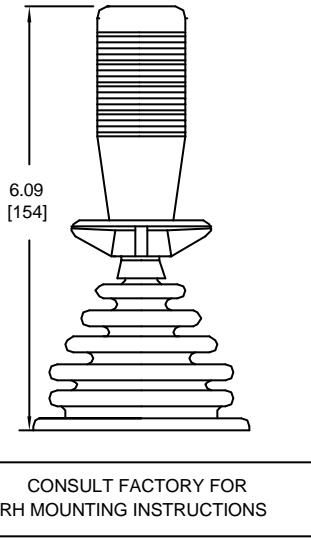
- **Contacts:** 3 Single Pole Double Throw Microswitch contacts per axis maximum with or without potentiometer.
- **Terminals:** .020 x .110 Quick Disconnect
- **Rating AC:** 5 Amps resistive 125 VAC  
3 Amps inductive 250 VAC

# VCS2 DIMENSIONS

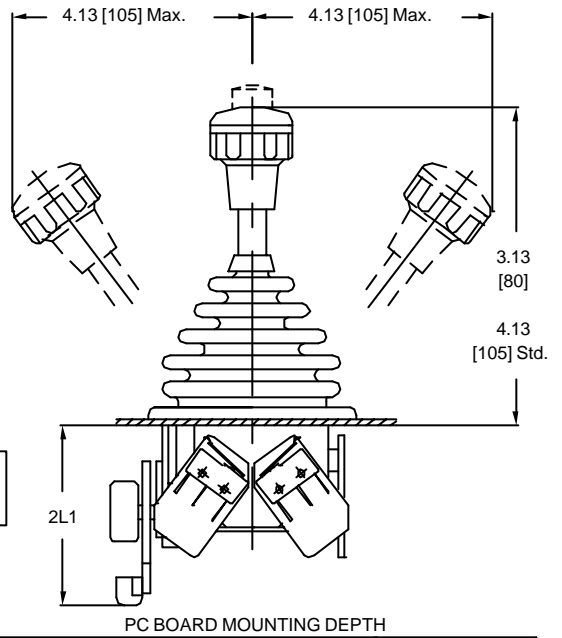
## CONTACT ASSEMBLY



## OPTIONAL RH HANDLE

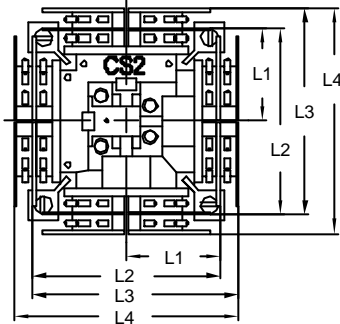


## POTENTIOMETER ASSEMBLY

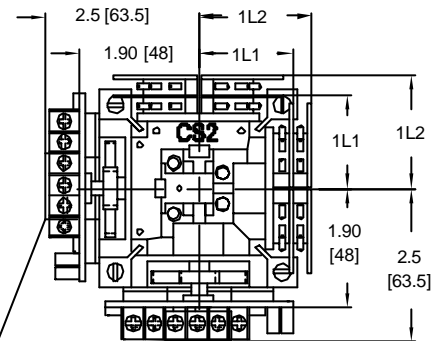


REF.	2L1
STANDARD POT BOARD*	3.32" [84]
ESS420 BOARD	3.32" [84]
PFC VOLTAGE BD*	3.56" [91]
PFC-CR CURRENT REGULATED BOARD	4.38" [111]

\*LOW PROFILE VERSION AVAILABLE UPON REQUEST



NUMBER OF MICROSWITCHES				
REF.	1-2	3-4	5-6	7-8
L1	1.54 [39]			
L2		3.08 [78]		
L3			3.40 [86]	
L4				3.71 [94]

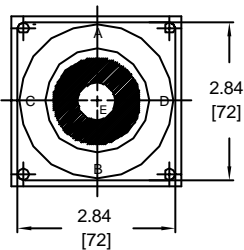


Dimensions for standard potentiometer.  
Consult factory for special potentiometer requirements.

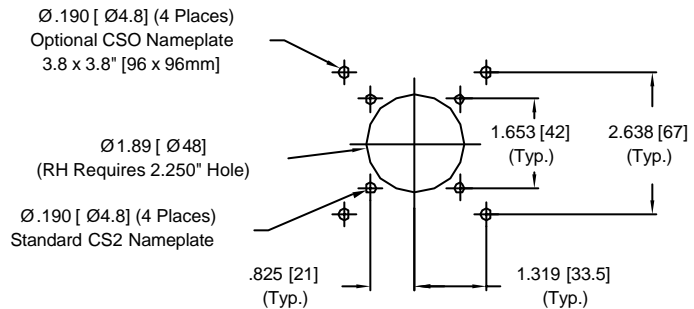
NUMBER OF MICROSWITCHES		
REF.	1-2	3-4
1L1	1.54 [39]	
1L2		1.81 [46]

IMPORTANT: FOR CRITICAL DIMENSIONS WE SUGGEST YOU REQUEST A CERTIFIED DRAWING

## STANDARD MOUNTING PLATE



## MOUNTING DETAIL



**J.R. MERRITT**  
**CONTROLS, INC.**

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