

CS3 MULTI-AXIS JOYSTICK



The CS3 is an extremely rugged joystick in an ultra-compact and versatile design. The durable housing and center pivot design make this device resistant to abuse and ideally suited for high duty cycle applications.

STANDARD FEATURES

- Compact and rugged construction design
- Proprietary blend, ultra-tough boot
- Compression style spring return with directional feel
- Environmentally sealed mounting and corrosion resistant components



COMPACT &
ULTRA TOUGH



ECONOMICAL
DESIGN



LONG LIFE
HALL-EFFECT


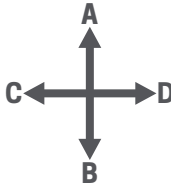
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<ul style="list-style-type: none"> ▪ HALL-EFFECT ▪ CAN BUS 	<ul style="list-style-type: none"> ▪ 4-20 mA



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AXIS OPTIONS		
	OR	
SINGLE AXIS PART #: CS3E		DUAL AXIS PART #: CS3V

JOYSTICK ACTION

SPRING RETURN Returns to center

HANDLE TRAVEL OPTIONS		
	OR	
OPEN GATE +/- 20° handle deflection		CROSS GATE +/- 20° handle deflection in each axis

SHAFT DIAMETER OPTIONS		
	OR	
STANDARD Standard shaft that allows up to 8 wires.		HEAVY DUTY (CS3HD) Heavy duty shaft that allows up to 16 wires



OUTPUT / COMMUNICATION



HALL-EFFECT

STANDARD

SUPPLY VOLTAGE:

4.5 - 5.5 VDC

OUTPUT VOLTAGE:

Ratiometric 0.5 - 2.5 - 4.5 V
±0.15 V @ 5.0 V Supply

OUTPUT CURRENT:

10 mA

POWER CONSUMPTION

7 mA typical
(5 - 10 mA max)

OR

7 - 30 VDC

SUPPLY VOLTAGE:

7 - 30 VDC

OUTPUT VOLTAGE:

0.5 - 2.5 - 4.5 V ±0.15 V

OR

REDUNDANT

SUPPLY VOLTAGE:

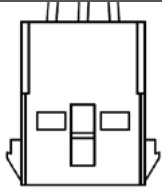
4.5 - 5.5 VDC

OUTPUT VOLTAGE:

Redundant - Ratiometric
0.5 - 2.5 - 4.5 V ±0.15 V
complimentary or identical
@ 5.0V supply

HALL-EFFECT CONNECTER SPECIFICATIONS & PIN LAYOUTS

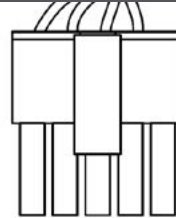
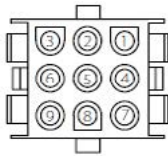
Other connectors available upon request



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

CS3E (1-AXIS) CONNECTER

20 AWG, UL1430 wire with
AMP Mate-N-Lock connector
(1-480707-0), 4" lead length



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

CS3V (2-AXIS) CONNECTER

20 AWG, UL1430 wire with
Molex mini-fit connector
(39-01-2100), 14" lead length

CAN BUS*

CAN OPEN

OR

J1939

OR

BASIC CAN

ANALOG INPUTS

4

DIGITAL INPUTS

8

DIGITAL OUTPUTS

2

See ESS408 literature
for a complete breakdown
of specifications



4-20 mA

3-WIRE CIRCUIT

SUPPLY VOLTAGE:

18 - 30 VDC

OUTPUT CURRENT

4 mA (min)

12 mA (center)

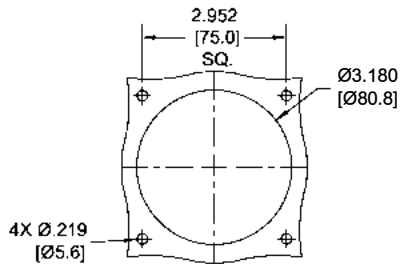
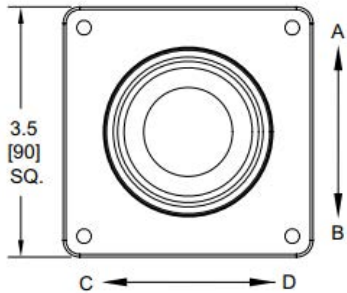
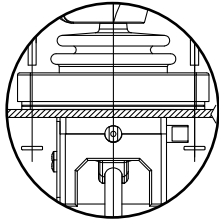
20 mA (max)

*Compatible with panel mounting only.

MOUNTING STYLE OPTIONS

DROP-IN MOUNTING

Mounts from above.

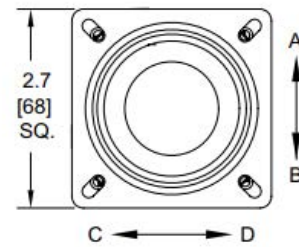
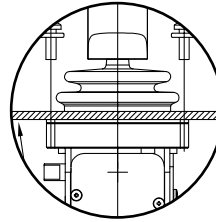


DI

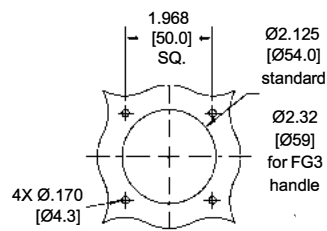
DROP-IN MOUNTING STYLE

PANEL MOUNTING

Mounts from below.

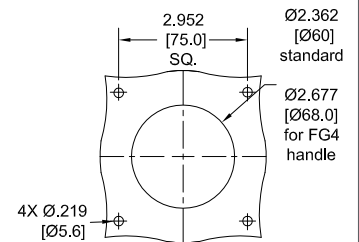


OR



P1

PANEL MOUNTING STYLE 1



P2

PANEL MOUNTING STYLE 2

All dimensions in inches [mm] and are subject to change.

HANDLE OPTIONS

BH

Lever handle with optional:

- (Top) Rocker Switch
- (Top) Momentary Push Button
- (Side) Lever Actuated Momentary Push Button



DI P1 P2 | HEIGHT: 4.9"

FG-3

Fighter grip handle with optional:

- Rocker Switches
- Thumbwheels
- Push Buttons
- Trigger



DI | HEIGHT: 7.5"

FG-4

Fighter grip handle with optional:

- Rocker Switches & Thumbwheels
- Push Buttons
- Trigger
- Hand Rest
- Twist Function



DI | HEIGHT: 8"

MG1

T Handle with optional:
Side Push Button



DI | HEIGHT: 2.9"

MG13

Twist handle with optional:
Side Push Button



DI P2 | HEIGHT: 3.2"

MG27

Options:

Extended or Recessed Push Button



DI P1 P2 | HEIGHT: 3.9"

ROUND BALL

Standard handle



DI P1 P2 | HEIGHT: 2.4"

RH

Rocker handle with handrest and optional:

- (Top) Rocker Switch
- (Top) Momentary Push Button
- (Top) Maintained Push Button
- (Side) Momentary Push Button



DI P2 | HEIGHT: 5.7"

RHS

Rocker handle with optional:

- (Top) Rocker Switch
- (Top) Momentary Push Button
- (Top) Maintained Push Button



DI P1 P2 | HEIGHT: 4.7"

TH30

Twist handle



DI P1 P2 | HEIGHT: 3.9"

CUSTOM HANDLES

Contact us today to learn more about our engineering & design services.

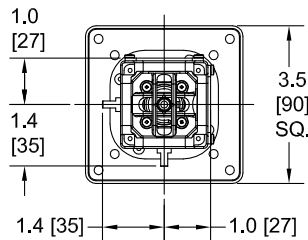
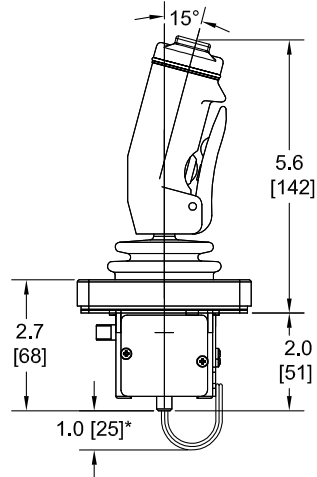
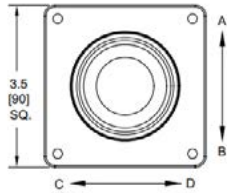
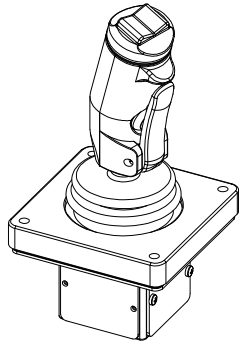


MOUNTING STYLE COMPATIBILITY: DI DROP-IN MOUNTING P1 PANEL MOUNTING STYLE 1 P2 PANEL MOUNTING STYLE 2

DIMENSIONS

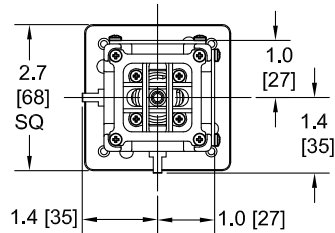
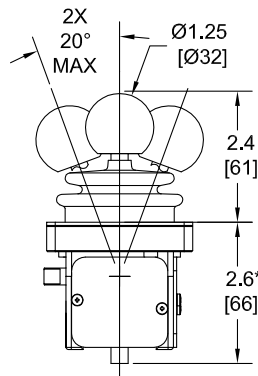
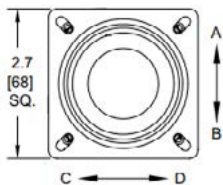
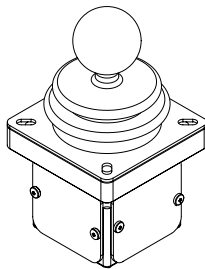
DROP-IN MOUNTING & PANEL MOUNTING STYLE 2

Shown with BH handle.



PANEL MOUNTING STYLE 1

Shown with round ball handle.



All dimensions in inches [mm] and are subject to change.

MECHANICAL DATA

Mechanical Life	20 million life cycles
Handle Travel	±20 degrees
Gear Ratio	Direct drive
Standard (CS3) Shaft	2.4" [61mm] shaft length 0.32" [8mm] shaft diameter
Heavy Duty (CS3HD) Shaft	2.4" [61mm] shaft length 0.40" [10mm] shaft diameter

ENVIRONMENTAL DATA

Operating Temperature	-13° to +158°F [-25° to +70°C]
Storage Temperature	-40° to +158°F [-40° to +70°C]
IP Rating	IP54
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

*Wired handles require additional 1" [25.4 mm] of clearance at the base of the shaft to ensure that the wire service loop can operate unobstructed in all directions.