



MODEL 212 Multi Axis Joystick

- Different handle Designs Available
- Optional Push buttons
- Optional Roller Rockers
- Contactless Hall Effect Technology
- Corrosion & Weather Resistant materials
- EMI & RFI resistant

The Model 212 series provides a robust, weather resistant joystick for usage in many different environments. This model uses Hall effect sensing, which eliminates wearing contacts between moving electrical parts, while improving overall precision and resolution. The 212 comes with many other hand grip styles to fit your operating needs.



SHOWN WITH
BALL KNOB GRIP

Electrical Data

Sensor	Hall Effect
Supply Voltage	5-60 VDC (determined by electrical option)
Current Consumption Max	Varies with Board, Call us for help
Protection	Reverse Polarity, Over-Voltage, Open/Shorted
	Signal leads, EMI/RFI Hardened, Transient
	Voltage. Sealed in Epoxy potting.
Output impedance	Varies with Board, Call us for help
Return to Center Voltage (No load)	See Electrical Options for details (Page 2)
Output Voltages	See Electrical Options for details (Page 2)

Mechanical Data

Expected Life	Tested to 10 million cycles
Mechanical Angle of Movement	On Axis $\pm 20^\circ$, between axes $+ 27^\circ$
	also available are single axis, no diagonals("+")
Operating Force	Varies on grip style
Maximum Applied Force	Varies on grip style
Sealing	Equivalent up to IP66
Operating Temperature	-40° to 85°C (-40° to 185°F)
EMC Immunity Level /V/M)	100 V/M
Weather and Hazardous Environment Resistance:	Sun/UV Exposure, Water/Rain, Humidity,
	Engine Oil, Engine Coolant, Salt water/De-Icer
	Fluid, Phosphate Washdown Cleaner



MODEL 212 Multi Axis Joystick

MODEL 212 Part Numbering *(Half effect only)* For special configurations, please call for assistance

212	S	15	S	56	56
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MODEL
212 Multi-Axis Joystick

BEZEL TYPE

S Small (for below-panel mounting)
L Large (for above-panel mounting)

*See installation drawings (datasheet)
cut-out dimensions.*

ELECTRICAL OPTION (Y Axis)

ELECTRICAL OPTION (X-Axis)

SPRING

L Light
S Standard (for most applications)
H Heavy

*Ordering non-standard spring may
increase lead time*

GRIP STYLE

05 = 2-AXIS, NO HANDGRIP
10 = 2-AXIS, BALL KNOB GRIP with SLIDELOCK
15 = 2-AXIS, BALL KNOB GRIP
BALL KNOB GRIP (Styles 10 & 15) Available in: BLACK (Standard) ORANGE (Add -OR at the end of the Part Number) YELLOW (Add -YL at the end of the Part Number)
28 = 2-AXIS, RSG GRIP (ROCKER: LEFT, RIGHT)
29 = 2-AXIS, RSG GRIP (ROCKER: PUSH-BUTTON)
30 = 2-AXIS, RSTG ROCKER GRIP
31 = 2-AXIS, RSTG ROCKER GRIP WITH SIDE PUSH-BUTTON
32 = 2-AXIS, RSTG NO ROCKER, TRIGGER ONLY
33 = 2-AXIS, RSTG NO ROCKER, TRIGGER & SIDE PUSH-BUTTON
35 = 2-AXIS, RSTG NO ROCKER, TRIGGER & TOP PUSH-BUTTON
38 = 2-AXIS, TRS GRIP
39 = 2-AXIS, RSTG, NO RCKR, TRIGGER, TOP&SIDE BTTN TOGGLE
41 = 2-AXIS, RSTG, ROCKER, TRIGGER & MAINTAINED LEFT SIDE PB
43 = 2-AXIS, MSG, 3 TOGGLE SWITCHES
44 = 2-AXIS, MSG, 4 TOGGLE SWITCHES
46 = 2-AXIS, MSG, 6 PUSH-BUTTONS
48 = 2-AXIS, MSG, 3 PUSH-BUTTONS
49 = 2-AXIS, MSG, 4 PUSH-BUTTONS
50 = 2-AXIS, TRS, NO ROCKER SWITCHES (PLASTIC CAP)
51 = 3-AXIS, MSG, 6 TOGGLE SWITCHES
52 = 2-AXIS, MSG, 4 TOGGLE & 2 PUSH BUTTON SWITCHES
53 = 2-AXIS, PISTOL, TRIGGER, PUSH-BUTTON ON TOP
54 = 3-AXIS, PISTOL, TWIST, TRIGGER WITH PUSH BUTTON ON TOP
55 = 5&1/2-AXIS, MFHG, TWIST, MINI-JOYSTICK, PRPRTNL TRGR
56 = 5&1/2-AXIS, MFHG, PUSH-PULL, MINI-JYSTCK, PRPRTNL TRGR
57 = 3-AXIS, PISTOL, TRIGGER, SWITCH ROCKER & PRPRTNL TWIST
58 = 2-AXIS, MFHG, HALL TRIGGER
59 = 3-AXIS, PISTOL, TRIGGER, PROPORTIONAL TWIST
60 = 4-AXIS, PISTOL, TRIGGER, PRPRTNL ROCKER & TWIST
61 = 3-AXIS, PISTOL, TRIGGER, PROPORTIONAL ROCKER
62 = 2-AXIS, PISTOL, TRIGGER & SWITCHED ROCKER
63 = 2-AXIS, PISTOL, TRIGGER, NO PUSH-BUTTON ON CAP
64 = 3-AXIS, ERGO, TRIGGER & PROPORTIONAL ROCKER
65 = 2-AXIS, PISTOL, TRIGGER & SWITCH RCKR, 2 PSH-BTTNS (L)
66 = 3-AXIS, PISTOL, TRIGGER & PRPRTNL RCKR, 2 PSH-BTTNS (L/R)
67 = 2-AXIS, PISTOL, TRIGGER & SWITCH SEP COMMONS, RCKR, 2 PSH-BTTNS (L)
68 = 2-AXIS, MULTI-SWITCH GRIP WITH 2 TOGGLE AND 4 PUSH-BUTTONS

GRIP STYLE CONTINUED

69 = 3-AXIS, PLASTIC PISTOL GRIP TRIGGER & PROPORTIONAL ROCKER W/TWO SIDE PUSH-BUTTONS, BOTH PUSH-BUTTONS ON LEFT SIDE OF GRIP
70 = 4-AXIS, PLASTIC PISTOL GRIP, TRIGGER, PROPORTIONAL ROCKER & PROPORTIONAL TWIST W/TWO SIDE PUSH-BUTTONS, BOTH PUSH-BUTTONS ON LEFT SIDE OF GRIP
71 = 2-AXIS, RSG WITH YELLOW P9 PUSH BUTTON SWITCH
72 = 2-AXIS, RSG NO ROCKER
73 = 2-AXIS, MULTI-SWITCH GRIP WITH 5 PUSH-BUTTONS AND 1 TOGGLE
74 = 2-AXIS, LEFT HANDED ERGO GRIP WITH SWITCHED ROCKER
75 = 2-AXIS, ERGO GRIP WITH SWITCHED ROCKER
76 = 2-AXIS, ERGO GRIP TRIGGER & SWITCHED ROCKER W/TWO SIDE PUSH-BUTTONS, BOTH PUSH-BUTTONS ON LEFT SIDE OF GRIP
77 = 2-AXIS, TRS GRIP with P9 OTTO PUSH BUTTON SWITCH
78 = 3-AXIS, PLASTIC PISTOL GRIP, TRIGGER, SWITCHED ROCKER & PROPORTIONAL TWIST W/TWO SIDE PUSH-BUTTONS, BOTH PUSH-BUTTONS ON LEFT SIDE OF GRIP
79 = 3-AXIS, LEFT HANDED ERGO GRIP, PROPORTIONAL ROCKER
81 = 3-AXIS, PLASTIC PISTOL GRIP, TRIGGER, PROPORTIONAL PUSH PULL
82 = 3-AXIS, PLASTIC PISTOL GRIP, TRIGGER, PROPORTIONAL PUSH PULL WITH PUSH-BUTTON ON TOP COVER
83 = 3-AXIS, PLASTIC PISTOL GRIP, TRIGGER, PROPORTIONAL PUSH PULL WITH SWITCHED ROCKER
84 = 4-AXIS, PLASTIC PISTOL GRIP, TRIGGER, PROPORTIONAL PUSH PULL WITH PROPORTIONAL ROCKER
85 = 3-AXIS, ERGO GRIP, TRIGGER & PROPORTIONAL ROCKER W/TWO SIDE PUSH-BUTTONS, BOTH PUSH-BUTTONS ON LEFT SIDE OF GRIP
86 = 2-AXIS, PLASTIC PISTOL GRIP TRIGGER & SWITCHED ROCKER W/TWO SIDE PUSH-BUTTONS, ONE ON LEFT AND ONE ON RIGHT
87 = 3-AXIS, TWIST KNOB GRIP, PROPORTIONAL TWIST
88 = 2-AXIS, MULTI-SWITCH GRIP WITH 3 TOGGLE & 2 PUSH BUTTON SWITCHES
89 = 4-AXIS, PLASTIC PISTOL GRIP, TRIGGER, PROP. ROCKER & PROP. TWIST, W/ 2 SIDE PUSH-BUTTONS ONE ON LEFT AND ONE ON RIGHT
90 = 2-AXIS, MULTI-SWITCH GRIP WITH 1 PUSH BUTTON



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GRIP STYLES CONTINUED

- 91 = 3-AXIS, LEFT HANDED ERGO GRIP, PROPORTIONAL ROCKER w/2 Side Push-Buttons one on left and one on right
92 = 2-AXIS, MULTI-SWITCH GRIP WITH 6 TOGGLE SWITCHES
93 = 2-AXIS, RSTG NO ROCKER TRIGGER & MAINTAINED SIDE PUSH-BUTTON
94 = 2-AXIS, LEFT HANDED ERGO GRIP, SWITCHED ROCKER, w/2 Side Push-Buttons one on left and one on right
95 = 2-AXIS, MULTI-SWITCH GRIP WITH 3 TOGGLE & 3 PUSH BUTTON SWITCHES
98 = 2-AXIS, MULTI-SWITCH GRIP WITH 1 TOGGLE & 2 PUSH BUTTON SWITCHES
100 = 2-AXIS, MULTI-SWITCH GRIP WITH 2 TOGGLE & 1 PUSH BUTTON SWITCHES
101 = 5-AXIS, MSG 2.0 WITH 5 PUSH BUTTON SWITCHES & Capacitive SENSOR (No Trigger)
102 = 3-AXIS, PLASTIC PISTOL GRIP, TRIGGER, PROP. TWIST, SWITCHED ROCKER, W/2 SIDE PB's 1 LEFT & 1 RIGHT (C-14934)
103 = 2-AXIS, METAL PISTOL GRIP TRIGGER & SWITCHED ROCKER W/TWO SIDE PUSH-BUTTONS, BOTH PUSH-BUTTONS ON LEFT SIDE OF GRIP
106 = 5-AXIS, MSG 2.0 WITH 3 PROPORTIONAL ROLLER ROCKERS & Capacitive SENSOR (No Trigger)
107 = 3-AXIS, MSG 2.0 WITH 1 PROPORTIONAL ROLLER ROCKER ON LEFT SIDE, 2 PUSH BUTTONS & TRIGGER
108 = 2-AXIS, RSTG NO ROCKER, TRIGGER with MAINTAINED TOP & LEFT SIDE PUSH-BUTTONS
109 = 2-AXIS, MULTI-SWITCH GRIP WITH 4 MAINTAINED PUSH-BUTTONS
110 = 4-AXIS, MSG 2.0 WITH 1 DUAL AXIS MINI-JOYSTICK ON LEFT SIDE, 2 PUSH BUTTONS & TRIGGER
111 = 3-AXIS, MSG 2.0 WITH 1 PROPORTIONAL ROLLER ROCKER IN CENTER, 2 PUSH BUTTONS (1 LEFT & 1 RIGHT) & TRIGGER
112 = 2-AXIS, MSG 2.0 WITH 2 TOGGLES, 3 PUSH BUTTONS
113 = 2-AXIS, MSG 2.0 WITH 1 TOGGLE, 5 PUSH BUTTONS
114 = 2-AXIS, MSG 2.0 WITH 2 TOGGLE 5 PUSH BUTTONS
115 = 2-AXIS, MSG 2.0 WITH 6 PUSH BUTTON SWITCHES
116 = 2-AXIS, MSG 2.0 WITH 2 ROLLER ROCKERS
117 = 2-AXIS, MSG 2.0 WITH 4 TOGGLES, 2 PUSH BUTTONS
118 = 2-AXIS, MSG 2.0 WITH TRIGGER & 4 PUSH BUTTON SWITCHES
119 = 2-AXIS, MSG 2.0 WITH TRIGGER, 2 PUSH BUTTONS & 2 TOGGLES
120 = 3-AXIS, TWIST KNOB GRIP, PROPORTIONAL TWIST with PUSH BUTTON
121 = 2-AXIS, MSG 2.0 WITH TRIGGER, Prop. Mini-Joystick, 3 PUSH BUTTONS & 1 TOGGLES
123 = 2-AXIS, MSG 2.0 3 Maintained TOGGLES
124 = 3-AXIS, MSG 2.0 WITH 1 PROPORTIONAL ROLLER ROCKER IN CENTER, 4 PUSH BUTTONS (2 LEFT & 2 RIGHT) & TRIGGER
125 = 2-AXIS, RSTG NO ROCKER, TRIGGER with 5 SIDE PUSH-BUTTONS
126 = 2-AXIS, MSG 2.0 WITH 4 Switched Rockers(Toggles)
127 = 2-AXIS, MSG 2.0 WITH 5 Switched Rockers(Toggles)
128 = 2-AXIS, RSTG NO ROCKER TRIGGER & TOP MAINTAINED PUSH-BUTTON
129 = 2-AXIS, MSG 2.0 WITH 1 TOGGLE, 3 PUSH BUTTONS, AND TRIGGER
131 = 3-AXIS, Palm grip 2.0 PROPORTIONAL TWIST, Push Button on Left
134 = 3-AXIS, Palm grip 2.0 PROPORTIONAL TWIST, 2 Push Buttons on Left

ELECTRICAL OPTIONS

- 56 = 10-30VDC, 2.5V NTRL \pm 1.5V, 1.5 AMP DIR. AUX OUT
57 = 10-30VDC, 2.5V NTRL \pm 1.25V, 1.5 AMP DIR. AUX OUT
58 = 5VDC, \pm 30%, NO DIRECTIONAL AUX OUT
59 = 5VDC, \pm 40%, NO DIRECTIONAL AUX OUT
60 = 18-60VDC, SEVCON, 1.5 AMP DIR. AUX OUT
61 = 10-30VDC, 2.5V NTRL \pm 2.0V, 1.5 AMP DIR AUX OUT
62 = 10-30VDC, DANFOSS
63 = 10-30VDC, 0.0V NTRL + 10.0V, 1.5 AMP DIR AUX OUT
64 = 10-30VDC, 2.5V NTRL \pm 1.5V, 1.5 AMP 50% DIR. AUX OUT
65 = 18-60VDC, PWR PAK SVCN, 0.2 AMP SINK DIR. AUX OUT
67 = 10-30VDC, 0.0V NTRL + 5.0V, 1.5 AMP DIR AUX OUT
68 = 10-30VDC, 2.5V NTRL \pm 2.0V, 1.5 AMP 50% DIR. AUX OUT
69 = 5VDC, \pm 10%, NO DIRECTIONAL AUX OUT
70 = 5VDC, \pm 25%, NO DIRECTIONAL AUX OUT
71 = 10-30VDC, 4-20mADC (4mADC NTRL, 20mADC ends) 1.5 AMP DIR. AUX OUT
72 = 10-30VDC, 4-20mADC (12mADC NEUT, 4 and 20mADC ends) 1.5 AMP DIR. AUX OUT
73 = SPLIT SUPPLY INPUT (0vdc NEUT, POS. VS & NEG. VS @ ENDS) 15mAMP DIR. AUX OUT
74 = 10-30VDC, 5.0V NEUTRAL \pm 5.0V SWING, 1.5 AMP DIR AUX OUT
75 = 18-60VDC, 0.0V NEUTRAL \pm 5.0V SWING, 1.5 AMP DIR AUX OUT
76 = 5VDC, 40% SIGNAL SWING, 1.5 AMP DIR AUX OUT
77 = 5VDC, 25% SIGNAL SWING, NO DIRECTIONAL AUX OUT
78 = 10-30VDC, 0-20mADC (0 mADC NEUT, 20mADC ends) 1.5 AMP DIR. AUX OUT
79 = 10-30VDC, PWM out sig 50%duty cycle NEUTRAL 10% and 90% ends, no DIR. AUX OUT
80 = 10-30VDC, 4-20mADC (4mADC \pm 1mA NEUT, 20mADC \pm 1mA ends) 1.5 AMP DIR. AUX OUT
82 = 10-30VDC, 5V NEUTRAL \pm 4.5V SWING
83 = 5VDC, USB board
84 = 10-30VDC, CANbus (J1939) board
85 = SPLIT SUPPLY INPUT (0vdc NEUT, POS. VS & NEG. VS @ ENDS) 15mAMP 5% DIR. AUX OUT
86 = 5VDC \pm 40% WITH INVERTED OUT, 1.5 AMP SINKING DIR AUX OUT
87 = 10-30VDC, 2.5V NEUTRAL \pm 2.5V SWING, 1.5 AMP DIR AUX OUT
88 = 5VDC, DUAL DIE SENSOR, INVERTED OUTPUT, 40% SWING, NO AUX
89 = 10-30VDC, DUAL DIE SENSOR, INVERTED OUTPUT, 40% SWING, NO AUX
90 = 12-30VDC, 0.0 V NEUTRAL +10V/-10V ENDS, 1.5AMP DIR. AUX OUTPUT
91 = 10-30VDC, 0.0V NEUTRAL \pm 10.0V SWING, 1.5 AMP DIR. AUX AT +/-0.5V
92 = 12-30VDC, 0.0 V NEUTRAL +5V/-5V ENDS, 1.5AMP DIR. AUX OUTPUT
93 = 12-30VDC, 0.0 V NEUTRAL +10V/-10V ENDS, 1.5AMP DIR. AUX OUTPUT AT +/-0.5V
94 = 10-30VDC, 40% SWING, SINKING DIR. AUX OUTPUTS

If you do not see your option listed, please call for assistance. Valve Drive Board may be required to control most hydraulic valves (sold separately)

Note:

1. If you would like a custom made grip, please call for specifications.
2. Not all grips are listed, please call for further assistance.
3. Grips and Electrical Options get added all the time, please call for assistance.



Ball Knob Grip w/o Slide Lock