



ROTARY HALL 112 CONTROL KNOB

- Hall Effect Technology
- Weather Resistant Construction
- EMI & RFI resistant
- Single-axis proportional control
- Compact operating package with "Pure Touch" knob
- Contactless Position-sensing

The Rotary Hall Knob provides a weather resistant, heavy-duty mechanism to convert operators manual commands into electrical output over an extended life of operation.

The key to the Rotary Hall's long life is the elimination of potentiometers and their wiping electrical contacts. Rotary motion is instead sensed by a hall sensor, which eliminates any contact between moving electrical parts. The elimination of resistive wiping elements also improves position accuracy due to finer resolution per degree of rotary motion. The elimination of internal gears and traverse linkages further adds to the reliability and extended service of this control. The spring action detent mechanism provides a long lasting locking actuation with a smooth out-of-detent feel. Optionally included is a "Pure Touch" knob.



Electrical Data

Input	5 VDC or 10-30 VDC contactless Hall Effect
Output	Max (+) Travel: 4.0 VDC Max (-) Travel: 1.0 VDC
Protection	All inputs & Outputs
Output impedance	220 OHMS
Centered Output	2.5 VDC

Mechanical Data

Travel	Bidirectional $\pm 87.5^\circ$ Unidirectional + 175°
Operating Force	Detent 3.2 in-lbs. Running 0.7 in-lbs.
Optional "Pure Touch" knob	The pure touch knob fits onto standard 1/4" shaft. See attached installation drawing for more details. Others options available.
Operating Temperature	-40° to 85°C (-40° to 185° F)
Weather Resistant packaging	
All electronics potted in Epoxy	



ROTARY HALL 112

CONTROL KNOB

ROTARY HALL PART NUMBERING

For special configurations, please call for assistance

RH112	BD	58	P	RP
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MODEL

RH112 (175 Degree Travel)
RH113 (270 Degree Travel)

MECHANICAL

BD (Bi-Directional, Center Detent)
CW (Uni-Directional Clock-Wise)
CCW (Uni-Directional Counter-Clockwise)
ND No Detent, Uni-Directional Clockwise*

Uni-Directional options begin at neutral electrical position (ex. RH112CW56P begins at 2.5V in fully CCW position, and swings to 4V in fully CW position.). If a full swing is required, please call for special configuration number.

BOARD STYLE

BLANK Standard Potting Cup
RP Round Potting Cup

KNOB

N No Knob
P Standard Knob, 1.5" dia.
L Spinner Knob, 2.0" dia.
S Spinner Knob, 1.5" dia.
C Raised Notch Knob, 1.38" dia.

ELECTRICAL OPTIONS

56 = 10-30VDC, 2.5V NTRL ± 1.5V, 1.5 AMP DIR. AUX OUT
57 = 10-30VDC, 2.5V NTRL ± 1.25V, 1.5 AMP DIR. AUX OUT
58 = 5VDC, ± 30%, NO DIRECTIONAL AUX OUT
59 = 5VDC, ± 40%, NO DIRECTIONAL AUX OUT
60 = 18-60VDC, SEVCON, 1.5 AMP DIR. AUX OUT
61 = 10-30VDC, 2.5V NTRL ± 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 ± 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 ± 2.0V, 1.5 AMP 50% DIR. AUX OUT
69 = 5VDC, ± 10%, NO DIRECTIONAL AUX OUT
70 = 5VDC, ± 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 ± 5.0V SWING, 1.5 AMP DIR AUX OUT
75 = 18-60VDC, 0.0V NEUTRAL ± 5.0V SWING, 1.5 AMP DIR AUX OUT
76 = 5VDC, 40% SIGNAL SWIING, 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±1mA NEUT, 20mADC±1mA ends) 1.5 AMP DIR. AUX OUT
82 = 10-30VDC, 5V NEUTRAL ± 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 ± 40% WITH INVERTED OUT, 1.5 AMP SINKING DIR AUX OUT
87 = 10-30VDC, 2.5V NEUTRAL ± 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 ± 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)

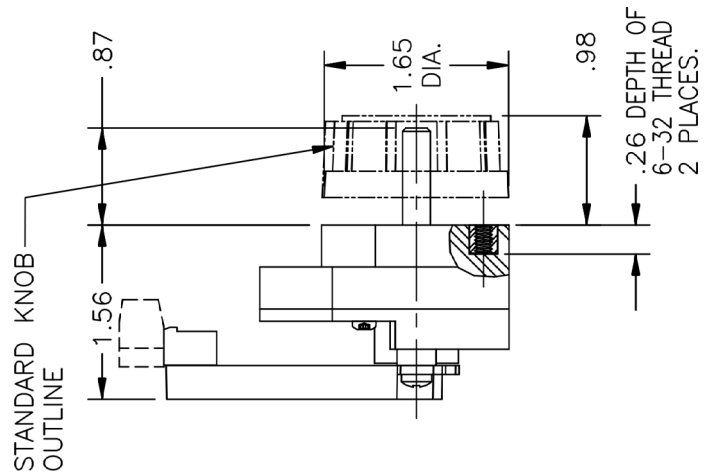
For more details of electrical options, please see pages 4-5.



ROTARY HALL 112 CONTROL KNOB

Technical Drawing Example

Standard Knob
1.5" dia.



Large Spinner Knob
2.0" dia.



Small Spinner Knob
1.5" dia.



Raised Notch Knob
1.38" dia

Note:

1. If you require a custom knob, please call to inquire your specifications.

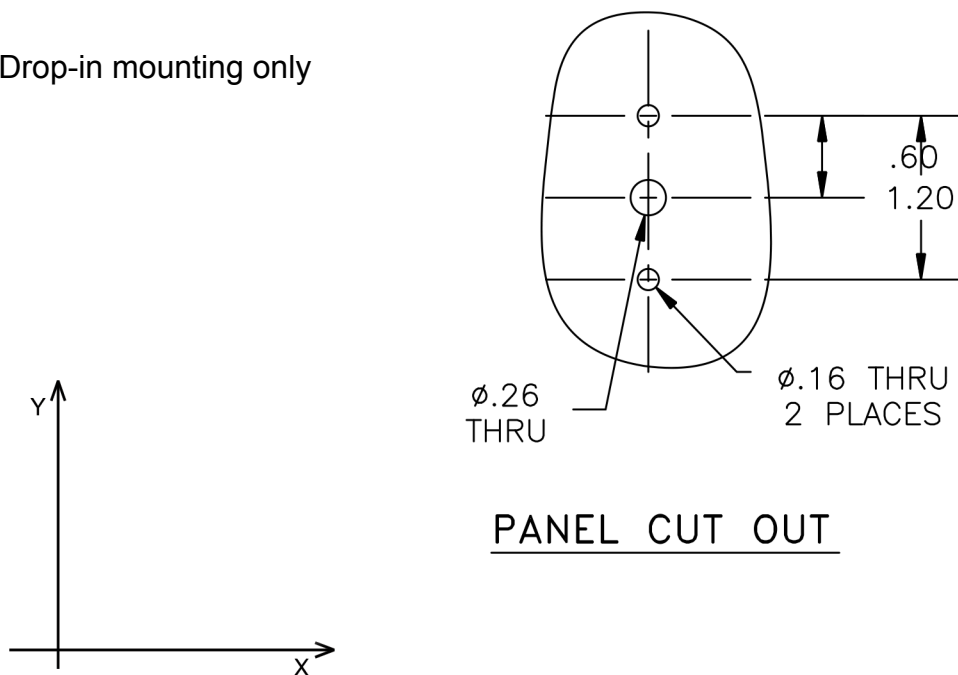


ROTARY HALL 112

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Mounting Cutout Dimensions

Drop-in mounting only



All dimensions in inch

Wiring (RH112 model)

Color	Function
Brown	Signal output
Red	VS
Black	Ground

Note:

1. Rotary action has friction drag with positive detent. Detent at center for Bi-directional control and at start for Uni-directional control.
2. The RH112 has a rotation of 175° and the RH113 has a rotation of 270°