

HR series

Proportional Hall effect thumbwheels

Distinctive features and specifications



- ☐ 5 million lifecycles (without detent)
- ☐ Sealed to IP68
- ☐ Backlighting option
- ☐ EMI/RFI shielding
- ☐ Detent options available
- ☐ Patented solution

MECHANICAL

- Operating Force at center:
2N±0.5N (without center detent)
4N±0.5N (with center detent)
- Return spring to center
- Mechanical operating angle:
±35° (versions S/G/L)
±20° (version K)
- Mechanical Life: 5 million cycles (without detent)
- APEM SAS patented design

ENVIRONMENTAL

- Operating Temperature: -30°C to +70°C (-22°F to +158°F)
- Storage Temperature: -40°C to +85°C (-40°F to +185°F)
- Sealing to IP68
- Shock resistance: 50g during 11ms
- Vibration resistance: 10-500Hz
- Salt spray: IEC 512-6, test 11f
- EMI/RF shielding: 100V/m, complies with IEC 61000-4-3 and ISO 11452-2
- ESD: Complies with 16KV EN 61000-4-2

ELECTRICAL

- Sensor type: Hall effect
- Supply voltage: 5VDC ± 0.5V
- Reverse polarity: -10V max
- Overvoltage: +20V max
- Return to center voltage (no load): ±0.2V
- Consumption: 11 mA max (single output), 22mA max (dual output)
- LED supply: 6VDC 10mA

MATERIALS

- Wheel: polyamide with coloring
- Support: polyamide, black
- Electronics sealing: epoxy
- Connector: polyester (Molex 0510210700)
- Multiwire lead: AWG28

NOTES:



plastic

Mounting accessories.

Standard hardware includes: 2 self-tapping screws DELTA PT® 22x08 for



Notice: Not all part number combinations may be available.

Please refer to the following pages for further information.

Packaging: Product is available as 20 pieces per package.



Tolerance: General tolerance for dimensions is ± 0.3 (.012).

Dimensions: First dimensions listed are in mm while inches are shown in brackets.

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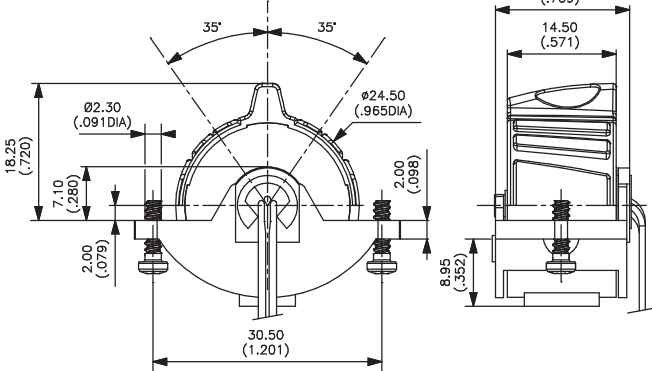

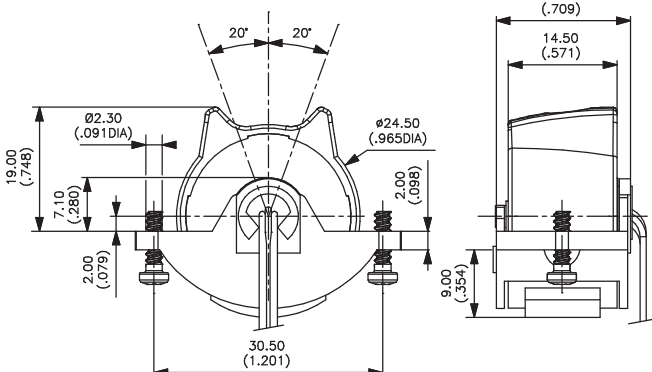

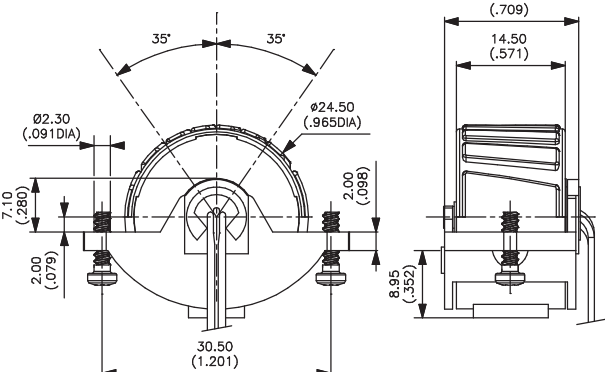
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Actuator options and dimensions

HR						
SERIES	Actuator	Backlighting	Wheel colors	Output Options	Mechanical functions	
	S Wheel with 1 tab G Reversed wheel with 1 tab K Wheel with 2 tabs L Wheel without tab	1 Yes 0 No	1 Blue B Dark blue 2 Black 3 Green 5 Yellow 6 Red 7 White 9 Orange	A Single 0V to 5V B Single 0.5V to 4.5V C Dual 0V to 5V D Dual 0.5V to 4.5V E Inverse dual 0.5V to 4.5V F Inverse dual 0V to 5V	0 Spring to center, without center detent 1 Spring to center, with center detent	
	Mounting Options					
	2 Rear					



Other detent options available upon request.

Wheel with 1 tab - (options S & G) 	
Wheel with 2 tabs - (option K) 	
Wheel without tab - (option L) 	

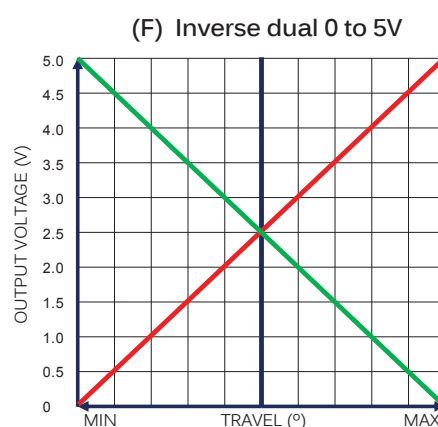
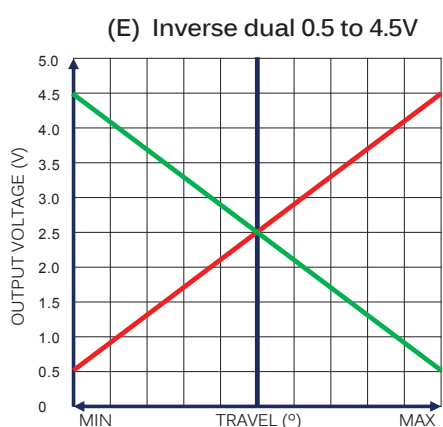
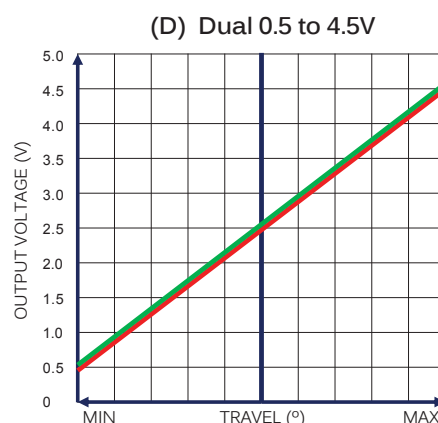
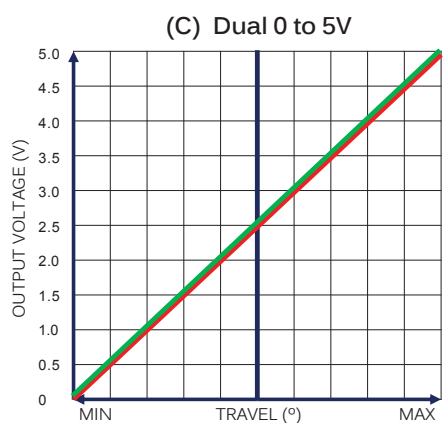
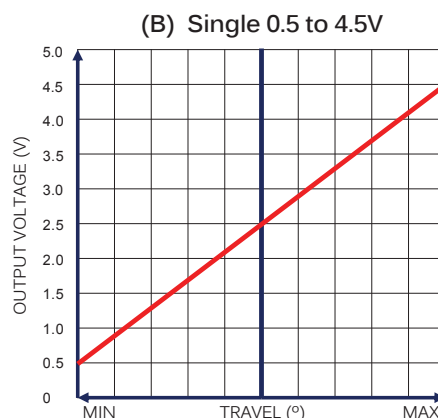
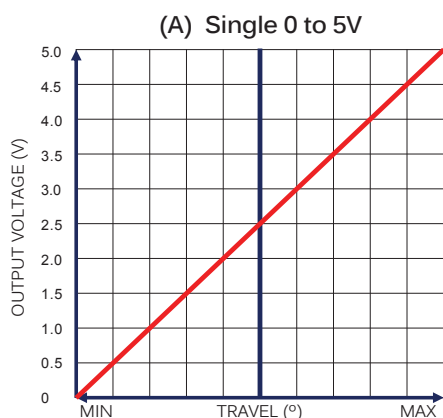
NOTE: Dimensions are in mm/(inch).

Note: The company reserves the right to change specifications without notice.

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Linear output options



— output 1
— output 2

NOTE:

Output voltage cannot be superior to the power supply voltage. For 0 to 5V versions, the power supply should not be lower than 5V.

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Connections

Single output without backlighting

Pin	Function	Color
1		
2	Power supply: +VDC 5V	Red
3		
4		
5		
6	Output	
7	Ground 0V	Black

Single output with backlighting

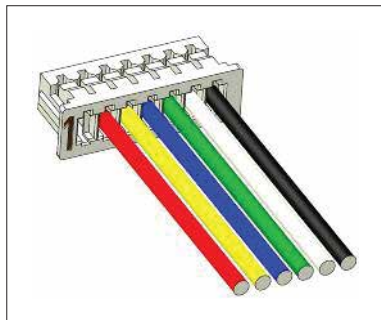
Pin	Function	Color
1		
2	Power supply: +VDC 5V	Red
3		
4		
5		
6	Output	
7	Ground 0V	Black

Dual output without backlighting

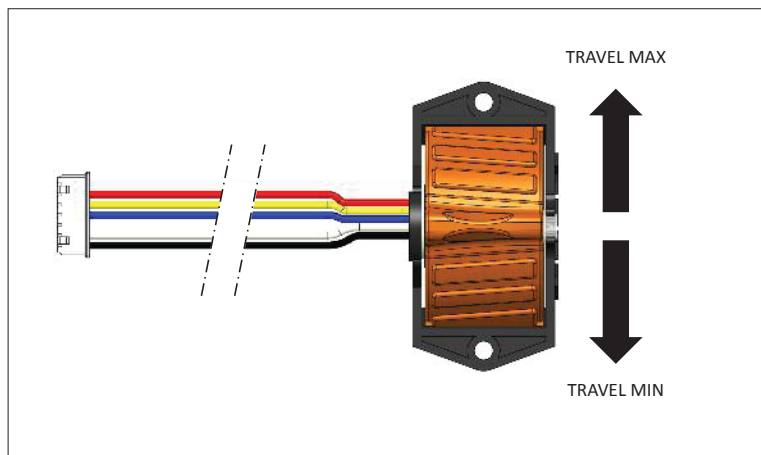
Pin	Function	Color
1		
2	Power supply: +VDC 5V	Red
3		
4		
5	Output 2	Green
6	Output 1	White
7	Ground 0V	Black

Dual output with backlighting

Pin	Function	Color
1		
2	Power supply: +VDC 5V	Red
3	LED +	Yellow
4	LED -	Blue
5	Output 2	Green
6	Output 1	White
7	Ground 0V	Black



Wiring harness with multiwire lead
AWG28 - Length 140mm (5.51in)



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