



## AR3

### Analog Rocker

#### Introduction

The AR3 Analog Rockers have been developed to provide the reliability required in demanding environmental conditions such as multifunction grips, dashboards or armrest controls for heavy duty industrial applications.

The unique sensing design makes the rocker module an ideal proportional function solution for off-road machinery.

The Analog Rockers have been designed to be integrated into standard and custom designed grips, panels and electronic controls.



#### Main Features

- Contactless sensing – Hall effect
- Life greater than 2 million cycles
- One sensor – optional second sensor for redundancy
- Integrated temperature compensation
- Short circuit protection

#### Custom Modifications

- Output characteristics
- Actuator colour



## SPECIFICATIONS

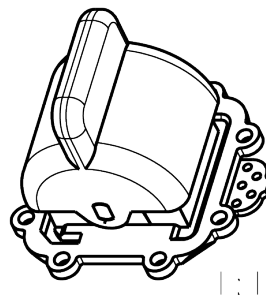
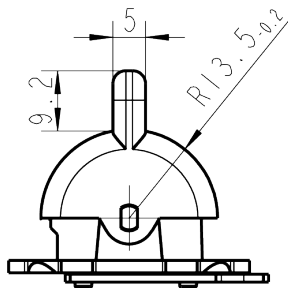
### Electrical

<b>Supply Ratings</b>	Voltage range DC current	8.5V ... 30V or 5.0 V ± 10% 50 mA at 24V
<b>Voltage Output</b>	Output 1 Output 2 <sup>(A)</sup>	0.5V ... 4.5V 4.5V ... 0.5V
<b>Pull-down resistor</b>	Recommendation	4.7 kΩ
<b>Total error</b>		< 10%
<b>Output current</b>		max. 1 mA
<b>Other electrical Characteristics</b>	EMI	> 100 V/m

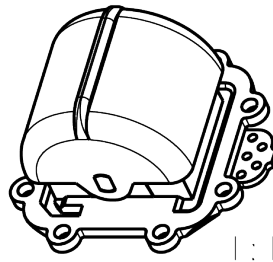
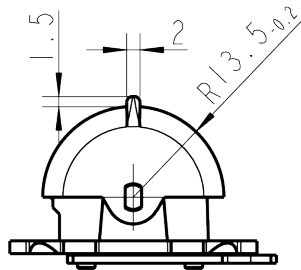
## Mechanical

<b>Life</b>	> 2 million cycles
<b>Operating temperature</b> - Storage - Working	- 40°C to 85°C - 35°C to 70°C
<b>Operating force</b>	4-6 N
<b>Vertical load maximum</b>	30 N
<b>Protection Level</b>	IP 65 (from above when mounted)
<b>Rocker deflection angle</b>	± 30°

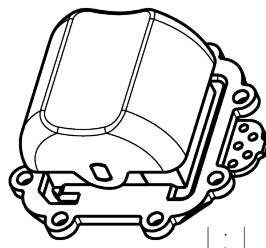
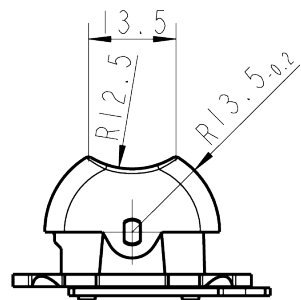
## DIMENSIONS



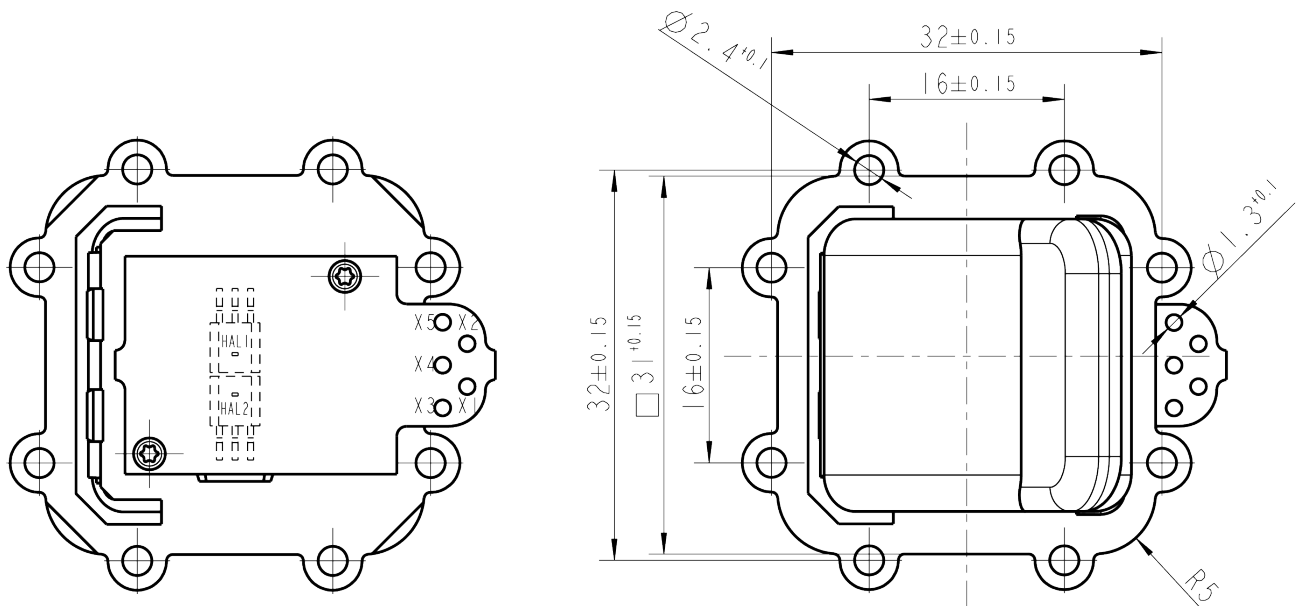
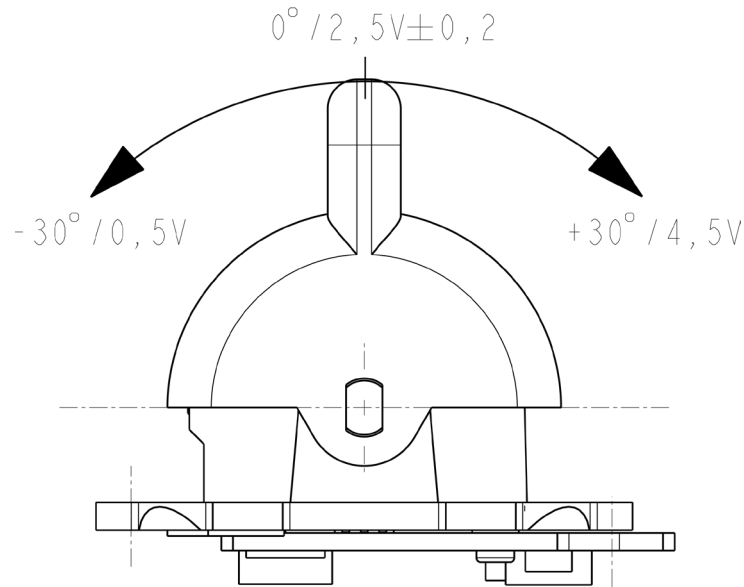
Module actuator shape 01



Module actuator shape 02



Module actuator shape 05



**Pin Assignment:**

PIN	ALLOCATION	FUNCTION (8.5-30V)	FUNCTION (5V)
X5	OUT 1	OUTPUT 1 (HAL1)	OUTPUT 1 (HAL1)
X4	OUT 2	OUTPUT 2 (HAL2) <sup>(A)</sup>	OUTPUT 2 (HAL2) <sup>(A)</sup>
X3	V	RESERVED	5V ± 10%
X2	GND <sub>IN1</sub>	REFERENCE GROUND	REFERENCE GROUND
X1	U <sub>BAT</sub>	VOLTAGE SUPPLY 8.5-30V	NOT CONNECTED



## ORDERING OPTIONS

Example : AR3S-01-GY-30/30-4N-0-V-2-00

<b>Family</b>	AR3S	01	GY	30/30	4N	0	V	2	00
<b>AR3:</b> analog rocker 3 <b>S:</b> varnished PCB <b>N:</b> non varnished PCB									
<b>Actuator Shape</b>		01							
<b>01:</b> long lever <b>02:</b> short lever <b>05:</b> thumb lever									
<b>Actuator Colour</b>			GY						
<b>GY:</b> grey									
<b>Actuator Angle</b>				30/30					
<b>30/30:</b> left 30° / right 30°									
<b>Operation Force</b>					4N				
<b>4N:</b> lever shape 01 <b>5N:</b> lever shape 02 <b>6N:</b> lever shape 05									
<b>Electrical Supply</b>						0			
<b>0:</b> voltage 8,5 ... 30 V <b>1:</b> 5V ± 10%									
<b>Output</b>							V		
<b>V:</b> voltage									
<b>Sensors</b>								2	
<b>1:</b> 1 sensor <b>2:</b> 2 sensors (for redundancy)									
<b>Output Voltage Code (B)</b>									00
<b>00:</b> output 1 / 0.5V ... 4.5V; 1mA output 2 / 4.5V ... 0.5V; 1mA <b>02:</b> output 1 / 0.5V ... 4.5V; 1mA <b>03:</b> output 1 / 4.5V ... 0.5V; 1mA									



## GENERAL NOTES

- (A) **for redundant version**
- (B) **ratiometric to 5V elec. supply**

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