

Analog Rocker – AR3



DTCs 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.

DTCs 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

| Electrical Data | | | | | | |
|---|-----------------------------|---|--|--|--|--|
| Supply Ratings | Voltage range DC current | 8.5V 30V or 5.0 V ± 10% 50 mA at 24V | | | | |
| Voltage Output | Output 1 Output 2* | 0.5V 4.5V 4.5V 0.5V | | | | |
| Total error | | < 10% | | | | |
| Output current | | max. 1 mA | | | | |
| | | | | | | |
| Other electrical Characteristics | EMI | > 100 V/m | | | | |
| Mechanical Data | · | | | | | |
| Life | | > 2 million cycles | | | | |
| Operating temperature - Storage - Working | e | - 40°C to 85°C - 35°C to 70°C | | | | |
| Operating force | | 4-6 N | | | | |
| Vertical load maximur | n | 30 N | | | | |
| Protection Level | | IP 65 (from above when mounted) | | | | |
| Rocker deflection ang | le | ± 30° | | | | |

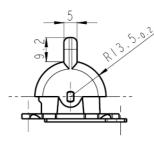
* for redundant version

Custom modifications

- Output characteristics
- Actuator colour

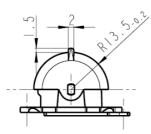


| Ordering code | | | • | 1 | 2 | 3 | | 4 | 5 | 6 | 7 | 8 | 9 |
|---------------|--------------------------------|---|----------|-----|----|----|-----|------|----|---|---|---|----|
| | | Example | AŖ | 23S | 01 | G' | Y 3 | 0/30 | 4Ņ | 0 | V | 2 | 00 |
| 1 | Туре | AR3 = analog rocker 3 S = varnished PCB N = non varnished PCB | | | Î | | | Î | | | Î | Î | Î |
| 2 | Actuator Shape | 01 = long lever 02 = short lever 05 = thumb lever | | | | | | | | | | | |
| 3 | Actuator Colour | GY = grey | - | | | | | | | | | | |
| 4 | Actuator Angle | 30/30 = left 30° / right 30° | | | | | | | | | | | |
| 5 | Operation Force | 4N = lever shape 01 5N = lever shape 02 6N = lever shape 05 | | | | | | | | | | | |
| | operation force depends on act | • | | | | | | | | | | | |
| 6 | Electrical supply | 0 = voltage 8.5 30 V 1 = 5 V ± 10% | | | | | | | | | | | |
| 7 | Output | V = voltage | | | | | | | | | | | |
| 8 | Sensors | 1 = 1 sensor 2 = 2 sensors (for redundancy) | | | | | | | | | | | |
| 9 | Output Voltage Co | $(00 = output 1 / 0.5V \dots 4.5V; 1mA)$ output 2 / 4.5V \dots 0.5V; 1mA 02 = output 1 / 0.5V \dots 4.5V; 1mA 03 = output 1 / 4.5V \dots 0.5V; 1mA | | | | | | | | | | | |

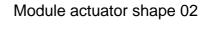


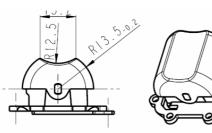


Module actuator shape 01



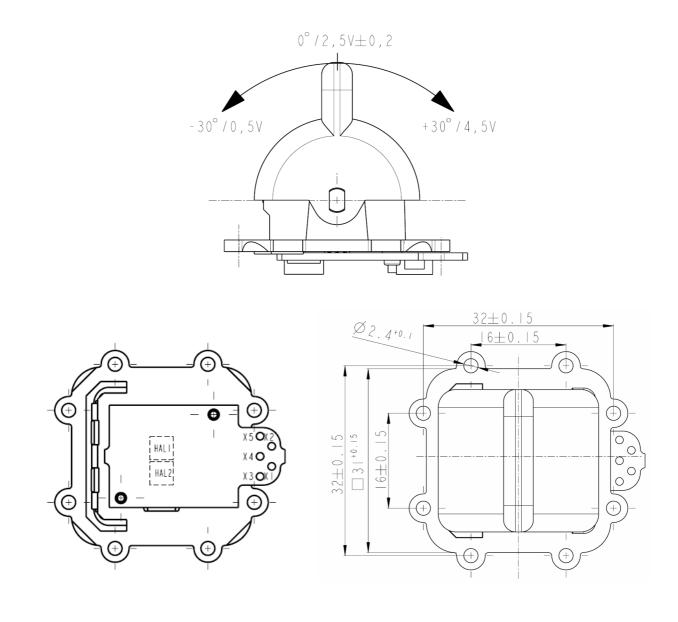






Module actuator shape 05





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) * | OUTPUT 2 (HAL2)* |
| XЗ | V | RESERVED | 5V±10% |
| X2 | GND IN 1 | REFERENCE GROUND | REFERENCE GROUND |
| X1 | U _{bat} | VOLTAGE SUPPLY 8,5-30V | NOT CONNECTED |

* FOR REDUNDANT VERSION ONLY



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