

AR5

Analog Rocker

Introduction

The AR5 Analog Rocker has been developed to provide the reliability required in demanding environments - such as dashboards or armrest controls - for heavy duty industrial and off-road applications. The unique design makes the rocker module an ideal proportional function solution for off-road machinery for cost-effective custom designs. The AR5 has been designed to simplify the customization of fingertip rockers in an off-road vehicle application.



Main Features

- Contactless sensing – Hall effect
- Rocker life > 2 million cycles
- Optional:
 - detent, life > 200K cycles
 - latching, life > 100K cycles
- Single sensor – optional second sensor for redundancy
- Integrated temperature compensation
- Short circuit protection
- Ideal solution for fingertip rocker designs
- Potted electronics

Custom Modifications

- Deflection angle
- Detent / Latching detent
- Lever design allows for usage of longer levers
- Connector / Harness

SPECIFICATIONS

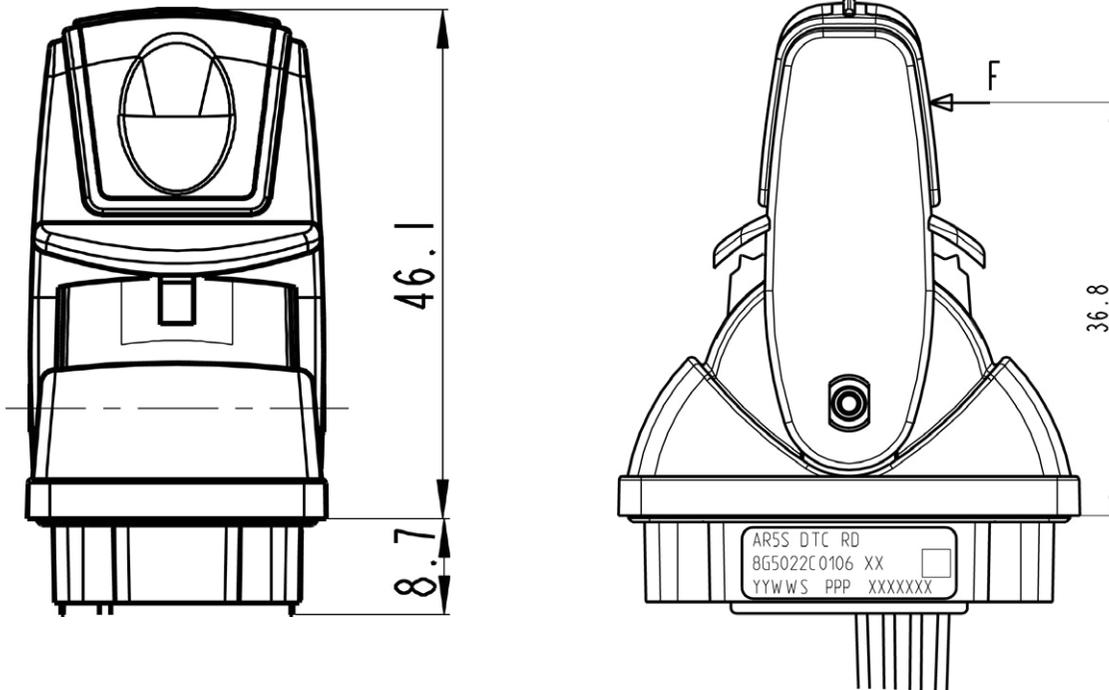
Electrical

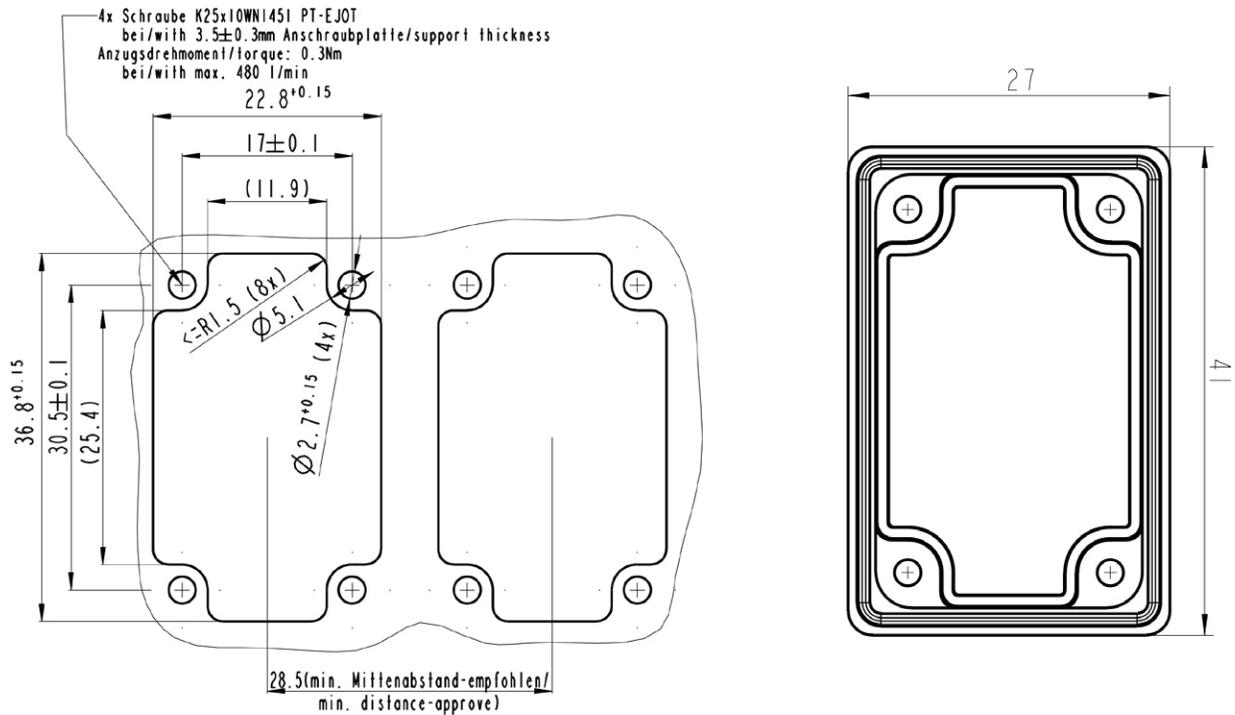
Supply Ratings	Voltage range DC current	9V ... 30V or 5.0 V ± 5% 50 mA at 24V
Voltage Output	Output 1 Output 2 ^(A)	0.5V ... 4.5V at 5Vcc 4.5V ... 0.5V at 5Vcc Output proportional to Vcc
Pull-down resistor	Recommendation	4.7 kΩ
Output current		max. 1 mA
Other electrical Characteristics	EMI	> 100 V/m

Mechanical

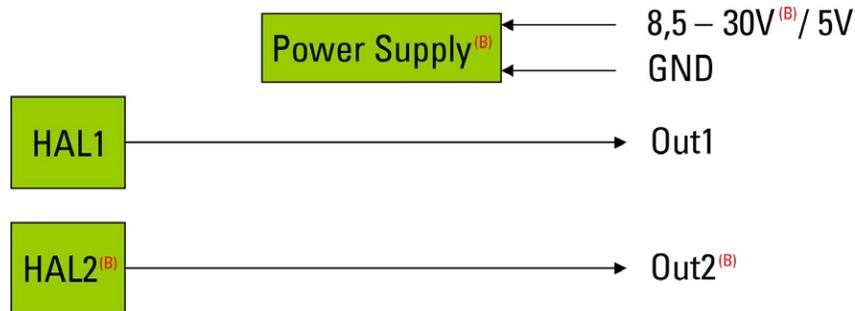
Life - rocker - detent - latching	> 10 million cycles (equivalent > 20 million movements) > 200k cycles > 100k cycles
Operating temperature - Storage - Working	- 40°C to 85°C - 40°C to 85°C
Operating force	4-6 N
Vertical load maximum	30 N
Protection Level	IP 67
Rocker deflection angle	± 40° max.

DIMENSIONS





BLOCK SCHEMATIC



PIN ASSIGNMENT

PIN	SIGNAL	FUNCTION (9-30V)	FUNCTION (5V)
1	UB (B)	SUPPLY VOLTAGE	NOT CONNECTED
2	GND	REFERENCE GROUND	REFERENCE GROUND
3	VCC (B)	NOT CONNECTED	SUPPLY VOLTAGE
4	OUT	OUTPUT SIGNAL	OUTPUT SIGNAL
5	OUT (B)	OPTIONAL REDUNDANT OUTPUT SIGNAL	OPTIONAL REDUNDANT OUTPUT SIGNAL



ORDERING OPTIONS

Example : AR5-S-40/40-xN-D26/26-L32/32-1-V-2-00

Family	AR5	S	40/40	xN	D26/26	L32/32	1	V	2	00
AR5: analog rocker 5										
Lever										
C: customized lever S: standard lever										
Deflection Angle										
40/40: ± 40° x/x: customized ± 0-40° (left/right)										
Operation Force										
xN: operation force depends on lever										
Detent (C)										
-/-: no detent D26/26: standard ± 26° detent Dx/x: customized ± x° detent										
Latching (C)										
-/-: no latching D32/32: standard ± 32° latching Lx/x: customized ± x° latching										
Electrical supply										
0: voltage 9 ... 30 V 1: 5 V ± 5%										
Output										
V: voltage										
Sensors										
1: 1 sensor 2: 2 sensors (for redundancy)										
Output Voltage Code (D)										
00: output 1 / 0.5V ... 4.5V; 1mA output 2 / 4.5V ... 0.5V; 1mA 02: output 1 / 0.5V ... 4.5V; 1mA 03: output 1 / 4.5V ... 0.5V; 1mA										



GENERAL NOTES

- (A) **for redundant version**
- (B) **optional**
- (C) **detent and latching positions must be teached-in in application**
- (D) **ratiometric to 5V supply**

Sensata Technologies, Inc. ("Sensata") data sheets are solely intended to assist designers ("Buyers") who are developing systems that incorporate Sensata products (also referred to herein as "components"). Buyer understands and agrees that Buyer remains responsible for using its independent analysis, evaluation and judgment in designing Buyer's systems and products. Sensata data sheets have been created using standard laboratory conditions and engineering practices. Sensata has not conducted any testing other than that specifically described in the published documentation for a particular data sheet. Sensata may make corrections, enhancements, improvements and other changes to its data sheets or components without notice.

Buyers are authorized to use Sensata data sheets with the Sensata component(s) identified in each particular data sheet. HOWEVER, NO OTHER LICENSE, EXPRESS OR IMPLIED, BY ESTOPPEL OR OTHERWISE TO ANY OTHER SENSATA INTELLECTUAL PROPERTY RIGHT, AND NO LICENSE TO ANY THIRD PARTY TECHNOLOGY OR INTELLECTUAL PROPERTY RIGHT, IS GRANTED HEREIN. SENSATA DATA SHEETS ARE PROVIDED "AS IS". SENSATA MAKES NO WARRANTIES OR REPRESENTATIONS WITH REGARD TO THE DATA SHEETS OR USE OF THE DATA SHEETS, EXPRESS, IMPLIED OR STATUTORY, INCLUDING ACCURACY OR COMPLETENESS. SENSATA DISCLAIMS ANY WARRANTY OF TITLE AND ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, QUIET ENJOYMENT, QUIET POSSESSION, AND NON-INFRINGEMENT OF ANY THIRD PARTY INTELLECTUAL PROPERTY RIGHTS WITH REGARD TO SENSATA DATA SHEETS OR USE THEREOF.

All products are sold subject to Sensata's terms and conditions of sale supplied at www.sensata.com SENSATA ASSUMES NO LIABILITY FOR APPLICATIONS ASSISTANCE OR THE DESIGN OF BUYERS' PRODUCTS. BUYER ACKNOWLEDGES AND AGREES THAT IT IS SOLELY RESPONSIBLE FOR COMPLIANCE WITH ALL LEGAL, REGULATORY AND SAFETY-RELATED REQUIREMENTS CONCERNING ITS PRODUCTS, AND ANY USE OF SENSATA COMPONENTS IN ITS APPLICATIONS, NOTWITHSTANDING ANY APPLICATIONS-RELATED INFORMATION OR SUPPORT THAT MAY BE PROVIDED BY SENSATA.

Mailing Address: Sensata Technologies, Inc., 529 Pleasant Street, Attleboro, MA 02703, USA.

CONTACT US

INDUSTRIAL SOLUTIONS DIVISION Americas
+1 (800) 350 2727
sensors.deltatech@sensata.com
Europe, Middle East & Africa
+359 (2) 809 1826
ost-info.eu@sensata.com
Asia Pacific
sales.isasia@list.sensata.com
China +86 (21) 2306 1500
Japan +81 (45) 277 7117
Korea +82 (31) 601 2004
India +91 (80) 67920890
Rest of Asia +886 (2) 27602006 ext 2808

HEAVY VEHICLE & OFF-ROAD DIVISION Americas
+1 508 236 2196
products@sensata.com
Europe, Middle East & Africa
+49 30 43 999 0
products@sensata.com
Asia Pacific
products@sensata.com
China +86 (21) 2306 1500
Japan +81 (45) 277 7001
Korea +82 (31) 601 2004