

Rotary Angle Sensor

DIGITAL ADVANCED SENSORS **DAS**

DRS

CE FC

DRS series is hall-effect based non-contacting rotary angle sensor to measuring absolute angle degree of a rotating consisting of a concentric rotary sensor and a magnet in 1 set.

DRS series are applicable with various equipments and vehicles, medical devices, motors and other rotating bodies.

- Hall-effect based non-contacting rotary angle sensor
- Continuous rotating, precise rotary angle measurement
- Powerful waterproof and protection circuit, compact size



General Specifications

Item	Specification
Measuring Range ¹⁾	0 ... 360 deg 0 ... 3,600 deg
Resolution	0.1 deg
Accuracy	0.5 deg
Non-Linearity	1% FS
Output	0.5 ... 4.5Vdc
Power Source	10 ... 30VDC
Current Drain	<15mA @12Vdc
Operating Temp.	-20 ... +85 celsius
Waterproof	IP68
Mechanical Life	Semi-permanent
Magnet	Ferrite
Dimensions	W48 x D26 x H9mm
Weight	28g

¹⁾ Infinite rotation from the origin-mark.

Wiring Connections

DRS series is wired by MG610331-5 plug (Korea Electric Terminal Co., Ltd.). The plug can be deleted when placed order.

	Color	Description
DRS-10/M10	RED	V+
	BLACK	GND (COM)
	GREEN	Output+

Installation

- 1) Attach and fix the sensor and magnet to rotating concentrically with center of the rotating.
- 2) The section of origin-mark of the magnet must be fixed toward + mark of the sensor and the gap between the sensor and the magnet must be within 1mm.
- 3) There is immeasurable section near zero position as 0 degrees and 360 degrees are same position and moreover output at this point is not continuous.
- 4) Image shows sensing directions of DRS.



Ordering Code

Format : DRS-(1)-(2)

(1)	10 M10	0 ... 360 deg 0 ... 3,600 deg
(2)	CW CCW	Clockwise (default) Counter-clockwise

e.g. DRS-10-CW

Options

- 1) Receptacle P/N : MG64REC
- 2) Cable length : additional cost per meter
- 3) The plug can be deleted when placed order.

Data Descriptions

$$= \left(\frac{\text{Measuring Range}}{\text{Output V Range}} \right) \times (\text{Output V} - \text{Zero Offset})$$

Measuring Range : 360 or 3,600

Output V Range : 4.5V – 0.5V = 4V

Zero Offset : 0.5V

e.g. DRS-10, Output 2.5V,

$$\left(\frac{360}{4} \right) \times (2.5 - 0.5) = 180^\circ$$

NOTES

- 1) Ground connection is recommended in noise occurred environment.
- 2) Check installation and sensing directions before use.
- 3) Check wiring connections before use.
- 4) 12 months warranty is provided after released. Warranty provided only in case of using for designed purpose correctly.
- 5) Specifications, design and components can be changed without prior notice to improve its performances.

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