

SAS-S (SHAFT)



SAS- B (SEMI HOLLOW SHAFT)



SAS-K (SLEEVED)

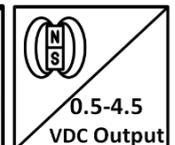
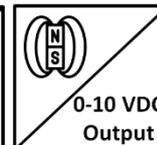
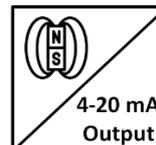


GENERAL FEATURES

The SAS series encoders operate absolute. In other words, unlike the incremental systems, they do not lose their positions in power outages and continue to measure from where they left off.

The SAS series single turn absolute rotary encoders offer highly flexible solutions in use, with different analog output signals, shaft types and user-adjustable measuring range. The SAS single turn absolute rotary encoder with integrated reference provides high quality feedback.

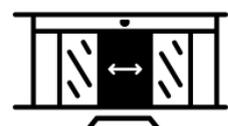
- Absolute measurement with magnetic principle
- 37 mm body diameter
- Shaft, semi hollow shaft and sleeved options
- 14 bit angular resolution
- Redundant analogue output
- 4-20 mA, 0-10 V, 0.5- 4.5 V, 20-4 mA, 10-0 V, 4.5-0.5V analogue output options
- Analogue output signal forms can be selected according to 3 selected points
- High sensitivity
- IP68 Protection class



APPLICATION AREAS

Speed and position accuracy in one application; If it is more important than fault tolerance and system simplicity, absolute encoders should be used. Absolute encoders provide precise operation in applications.

- Identifying multi-axis orientation in CNC machines used in component manufacturing
- Automatically determine the height of the scissor bearings used in hospitals
- Correct placement of multiple stabilizers for large vehicles such as cranes or air lifts
- Automatic doors or slots to move without limiting key
- Continue robotic movement even after a power failure



TECHNICAL SPECIFICATIONS

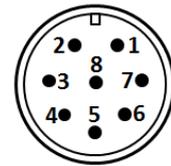
Electrical Specifications		Output Load	Mechanical Specifications
Working Principle	Hall Effect	For current output model; min 250 Ω For voltage output model; min 1 KΩ	Maximum Speed
Supply Voltage	15 ... 26 VDC		
Current Consumption	40 mA	Body Diameter	37 mm
Reverse Polarity Protection	Yes, there is	*Shaft Diameter	6 mm or 8 mm
*Measuring Range	0° ... 360°	Weight	≈150 gr
Accuracy	±0,1°	Protection Class	IP 67
Repeatability	0,1°	Operating Temperature	-20 ... +70 °C
Angular Resolution	14 Bit	Relative Humidity	%10 ... %90
Answering Frequency	333 Hz	Material	Shaft: Stainless Steel Body: Aluminium
*Electrical Interface	4-20 mA, 0-10 V, 0.5- 4.5 V, 20-4 mA, 10-0 V, 4.5-0.5V		
Electrical Connection	8 x 0,14 mm ² shielded cable or M12 socket		

Note: The specifications indicated by (*) vary according to the model selected. The detailed code table for product selection is shown on page 5.

ELECTRICAL CONNECTION

Connector (Signal)	Cable	M12 Socket
U+ (+15...+26 VDC)	Red	Pin 1
Output 1: 0.5-4.5 /0.1-10VDC / 4-20mA	Gray	Pin 2
GND (0V)	Black	Pin 3
Output 2: 0.5-4.5 /0.1-10VDC / 4-20mA	White	Pin 4
Direction Change	Pink	Pin 5
Reset	Green	Pin 6
Programming Tips (these ends should not touch each other and should not be connected anywhere)	Yellow, Blue	Pin 7 (Empty)
-	-	Pin 8 (Empty)

M12 8 PIN MALE SOCKET



RESET: With the reset function you can set the desired location to 0. The reset end is shorted and released with GND. The sensor accepts the position where it is located after two seconds.

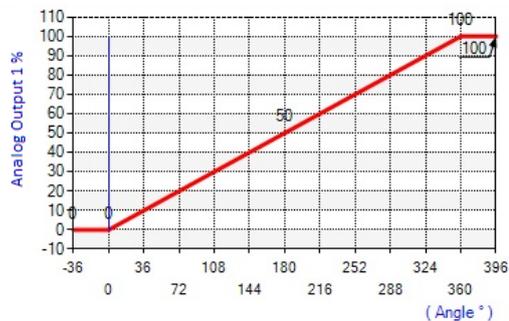
DIRECTION CHANGE: You can change the direction increase direction with the direction change function. The direction switch is shorted and released with GND. After two seconds, the sensor reverses the angle direction (CW is CCW and CCW is CW).

DETERMINATION OF OUTPUT SIGNAL FORM

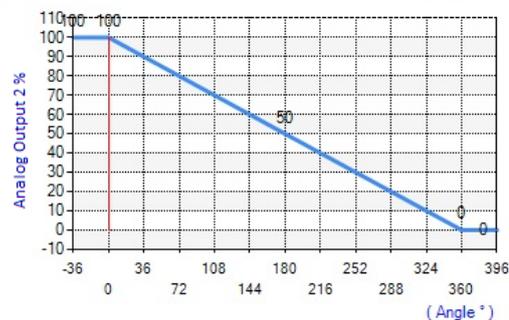
Analog output signal forms can be specified according to request for 3 points as low point, middle point and high point. The requested signal form must be specified at the order stage. Examples of output signal forms are shown below.

Note: The diagrams shown below are for illustrative purposes. Scale value can be selected between 0° - 360° and Output value between 0% and 100%.

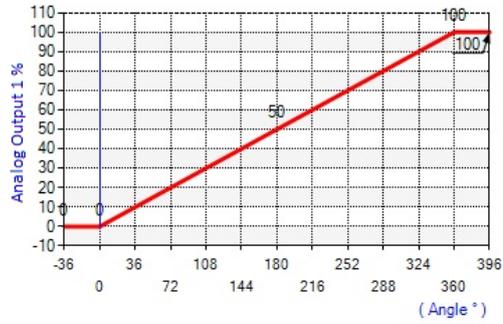
Analog Output 1		
Point	Scale	Output
Low Point	0°	%0
Middle Point	180°	%50
High Point	360°	%100



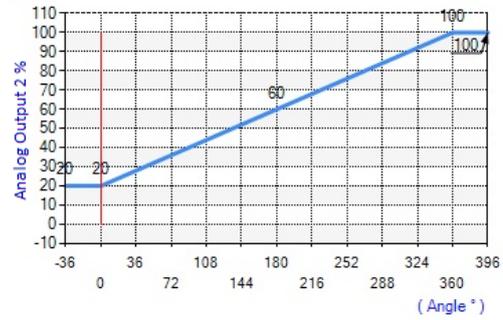
Analog Output 2		
Point	Scale	Output
Low Point	360°	%0
Middle Point	180°	%50
High Point	0°	%100



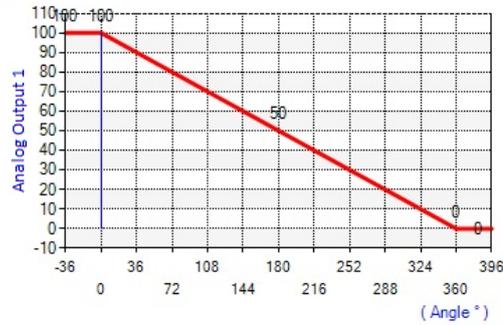
Analog Output 1		
Point	Scale	Output
Low Point	0°	%0
Middle Point	180°	%50
High Point	360°	%100



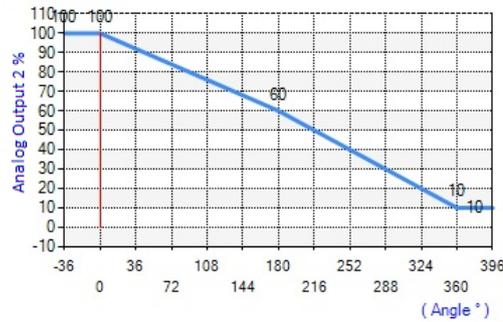
Analog Output 2		
Point	Scale	Output
Low Point	0°	%20
Middle Point	180°	%60
High Point	360°	%100



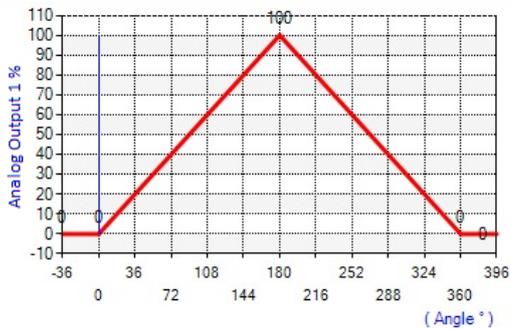
Analog Output 1		
Point	Scale	Output
Low Point	0°	%100
Middle Point	180°	%50
High Point	360°	%0



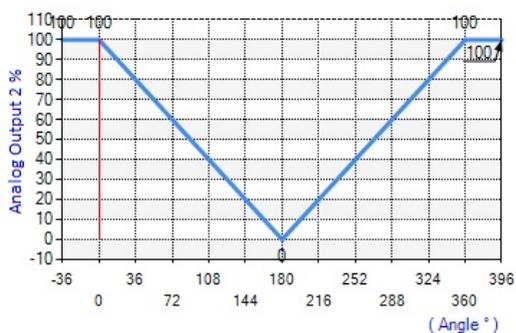
Analog Output 2		
Point	Scale	Output
Low Point	0°	%100
Middle Point	180°	%60
High Point	360°	%10



Analog Output 1		
Point	Scale	Output
Low Point	0°	%0
Middle Point	180°	%100
High Point	360°	%0

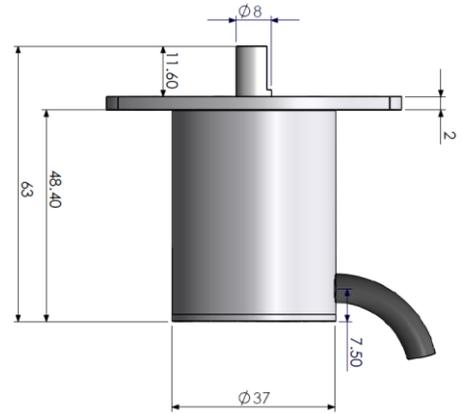
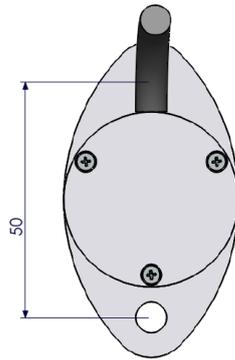
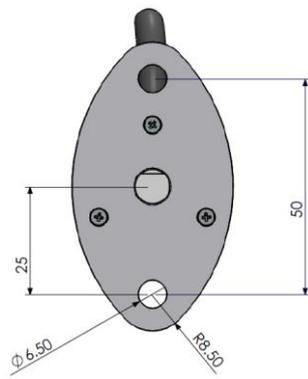


Analog Output 2		
Point	Scale	Output
Low Point	0°	%100
Middle Point	180°	%0
High Point	360°	%100

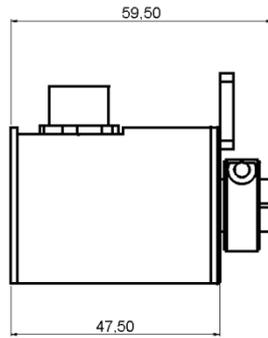
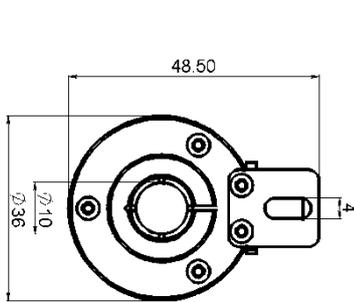


MECHANICAL DIMENSIONS

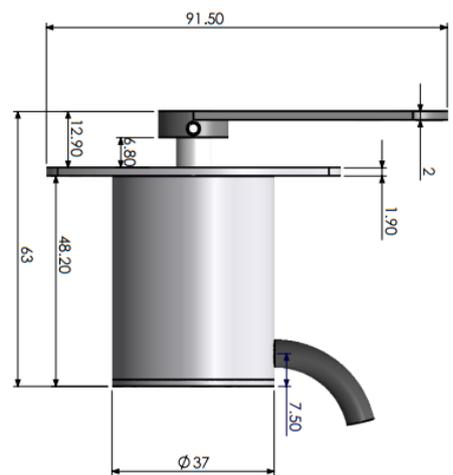
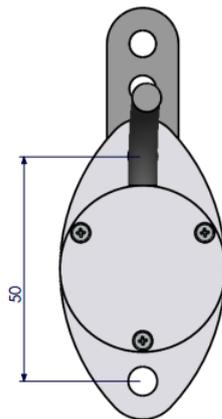
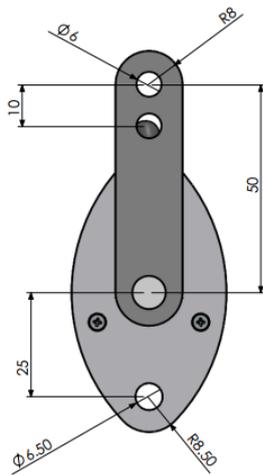
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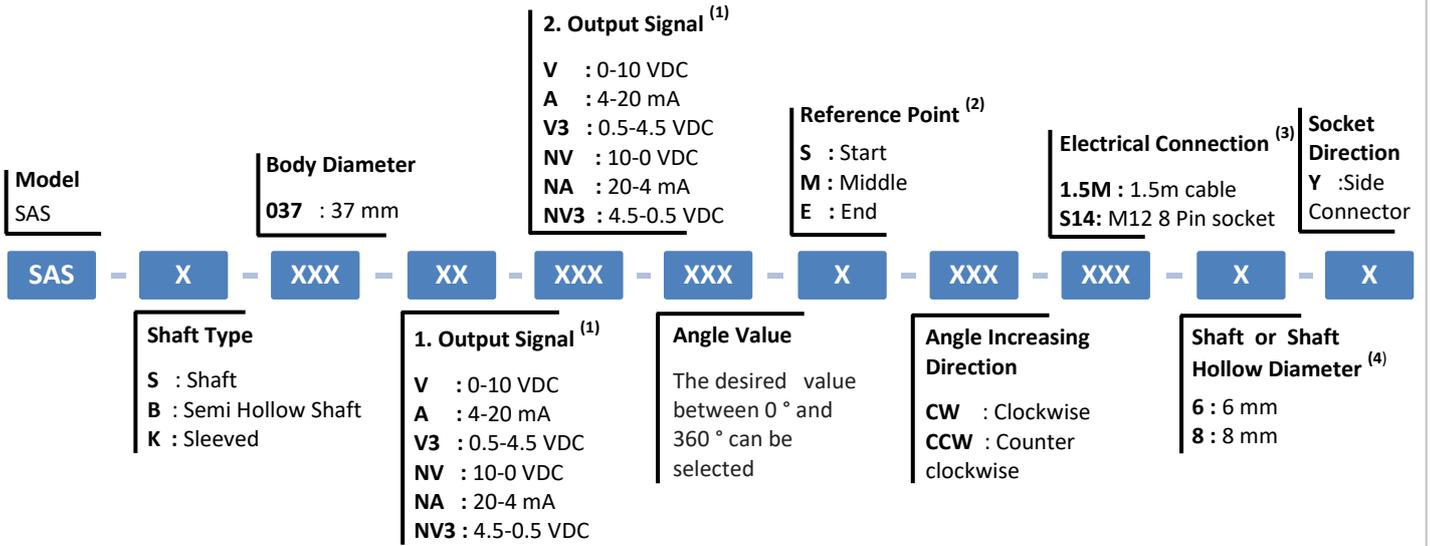
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SAS- K (SLEEVED)



ORDER CODE



(1) The direction of the output signals can be changed optionally. In the coding, when 'N' is placed at the beginning of the normal signal, it refers to the opposite. For example; in case of **V**: 0-10 VDC, then **NV**: 10-0 VDC

(2) Reference point; refers to the selection of one of the starting, middle, or end points used for the scale of the analog outputs.

(3) Cable length can be requested to a minimum of 1.5 m.

(4) In the SAS-K (sleeved) model, the shaft diameter is only 8 mm.

*** Please contact us for your non-standard (special production) product requests.**

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