

## AGS 200 Series

“Non-contact, Hall-effect Technology”



- Hall-effect measurement technology
- Quadrature square wave output
- Direction information with 90° phase shifted dual output signal
- Wide frequency range
- Different cable length and connector options
- Wide temperature range
- Resistant to electromagnetic field
- Easy installation and use
- IP67 protection

Atek AGS 200 series speed and direction sensors are designed to provide both speed and direction information. Speed information is provided as a digital square wave output, and direction information is provided using a quadrature output with 90° phase-shifted signals. The target direction is determined by the lead/lag phase shifting.

The AGS 200 series are designed for high accuracy detection of small targets with hall-effect measurement technology.

Also, it is suitable for working in harsh environments thanks to its wide operating temperature range, resistance to electromagnetic field and high IP protection class.

## APPLICATIONS

- Speed and rotation direction of gear wheels
- Mobile machinery and electric drive applications
- Speed and position control in escalators and elevators
- Control of power regulation in hybrid engine systems
- Wheel speed detection in material handling, agricultural and construction machinery

## TECHNICAL FEATURES

### ELECTRICAL SPECIFICATIONS

	<b>Supply Voltage</b>	8VDC ... 30VDC
<b>Output Signal</b>	<b>Type</b>	NPN
	<b>Duty cycle (time high/time total)</b>	%50 ±%10
	<b>Phase shift</b>	90° ±45°
	<b>High</b>	>Vs - 0.6 V
	<b>Low</b>	<0.6 V @40mA
	<b>Load current</b>	40 mA max.
	<b>Rise time</b>	10 µs max. (1kOhm pull-up resistor, depend on load resistor)
	<b>Fall time</b>	5 µs max. (1kOhm pull-up resistor, depend on load resistor)
	<b>Frequency</b>	2Hz ... 16kHz
	<b>Short circuit protection</b>	Yes (50 mA max.)
	<b>Current consumption</b>	11mA @5V 14mA @12V 17mA @24V
	<b>Reverse polarity protection</b>	Yes
	<b>Overload protection</b>	Yes

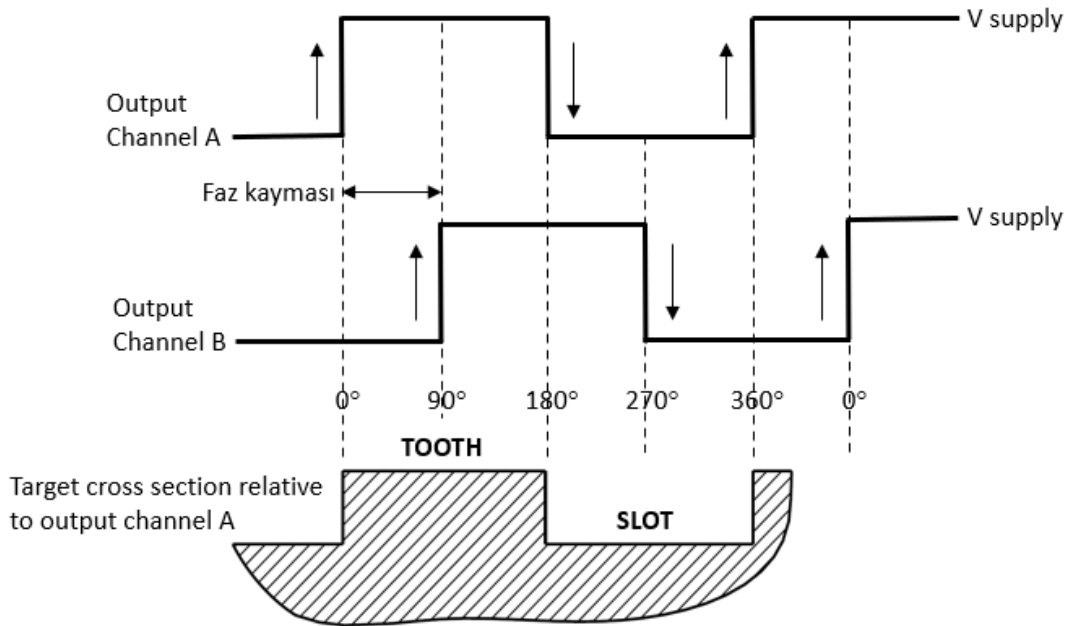
### ENVIRONMENTAL SPECIFICATIONS

	<b>Operating temperature</b>	-40°C...+85°C
	<b>Humidity</b>	%95 @ 38°C
	<b>Protection</b>	IP67

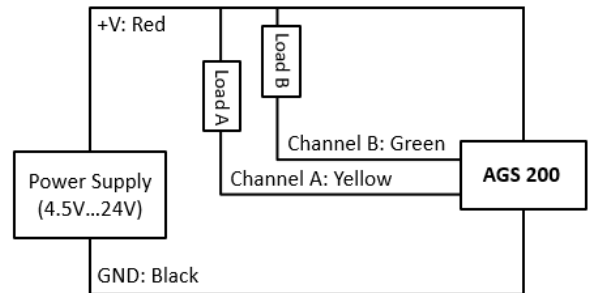
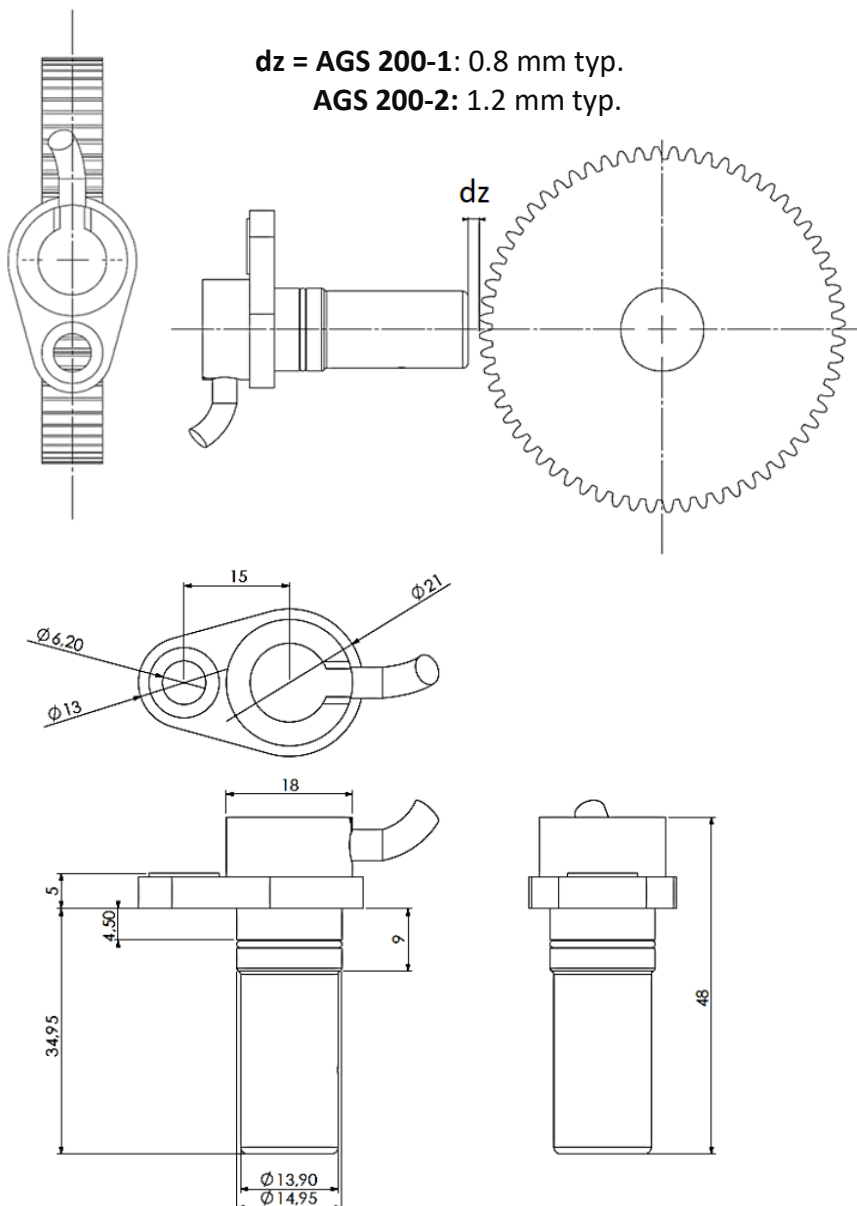
### MECHANICAL SPECIFICATIONS

<b>Sensing air gap</b>	<b>AGS 200-1</b>	Min:0mm, Typ:0.8mm, Max:1.6mm
	<b>AGS 200-2</b>	Min:0mm, Typ:1.2mm, Max:2.4mm
<b>Target</b>	<b>Width</b>	>5,0 mm recommended; 10 mm typ.
	<b>Slot width</b>	2,0 mm min.
	<b>Tooth width</b>	1,6 mm min.
	<b>Tooth height</b>	>2,0 mm ecommended; 4,0 mm typ.
<b>Material</b>	<b>Housing</b>	Delrin
	<b>Bushing</b>	Brass
	<b>O-ring</b>	FKM
	<b>Cable</b>	4x0,14 mm <sup>2</sup> PUR
<b>Mounting</b>	<b>Bore size</b>	Ø15,15 mm ... Ø15,40 mm
	<b>Torque</b>	10 Nm max, with M6 X 1.0 bolt

## SENSOR SIGNAL OUTPUT



## MECHANICAL DIMENSIONS (mm) AND ELECTRICAL CONNECTIONS



SIGNAL	CABLE COLOR
+V	Red
GND	Black
Output channel A	Yellow
Output channel B	Green

Note: The load resistor values should be such that the output current does not exceed the maximum load current of 40 mA.

Use Ohm's Law to calculate the load resistor based on the supply/load voltage used:

$$R = V / 0.04 \text{ A}$$

## ORDER CODE

### Model

### Cable Length

0,5M : 0.5m (standard)  
\*Optional others

AGS 200

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X

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XXX

### Sensing Air Gap

1: Min:0mm, Typ:0.8mm, Max:1.6mm

2: Min:0mm, Typ:1.2mm, Max:2.4mm