


## SA-GYxxxV4-000


## Yaw-rate-sensor (gyro)

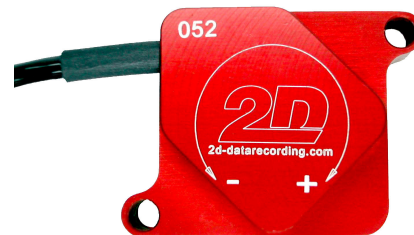
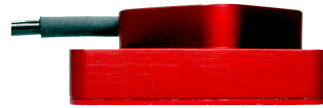
### Functions

- To measure pitch-, roll- and yaw-speed
- To measure banking angle speed of a bike
- To calculate the inclination of the bike (the required function is included in the software).

### Notice

 The sensor should be mounted vertically to the bike.

 Avoid strong vibrations of the sensor !



### Technical specifications

#### Electrical characteristics

Power supply.....	4.75 - 5.25 V DC
Operating current.....	max. 50 mA
Range:	
SA-GY200V4-000.....	-200°/s@0.5V 200°/s@4.5V
SA-GY500V4-000.....	-573°/s@0.5V 573°/s@4.5V
Sensitivity:	
SA-GY200V4-000.....	± 200 ° / s
SA-GY500V4-000.....	± 573 ° / s
Resolution.....	0.1 ° / s
Linearity.....	< 0.5% FS

#### Calibration

Use the formulas on 2<sup>nd</sup> page to calculate the physical values

#### Mechanical characteristics

Dimensions.....	40 x 30 x 16 mm
Weight (inc. cables).....	22 g
Housing material.....	aluminium
Cable	
type.....	PUR-cable
wire cross section.....	3 x AWG 26
length.....	800 mm

#### Environmental data

Ambient operating range.....	-40° to +100 °C
Humidity.....	5 to 95 %
Sealing class.....	IP 67

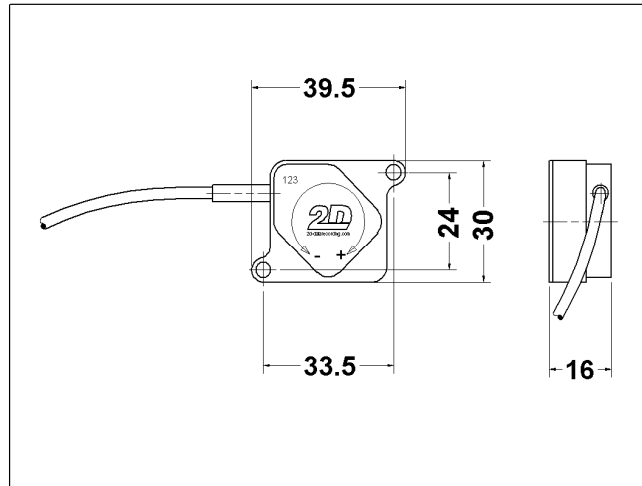
#### Ordering information

Art.No.:	
Gyro ± 200°/s.....	SA-GY200V4-000
Gyro ± 500°/s.....	SA-GY500V4-000

## SA-GYxxxV4-000

## Yaw-rate-sensor (gyro)

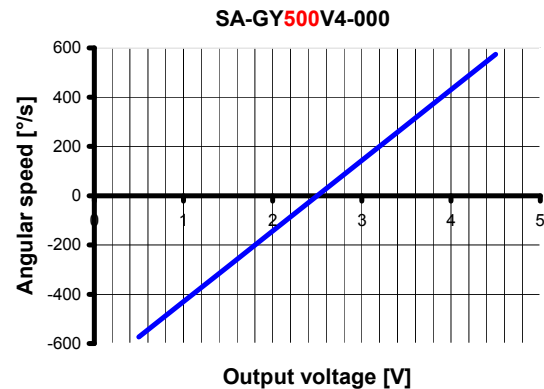
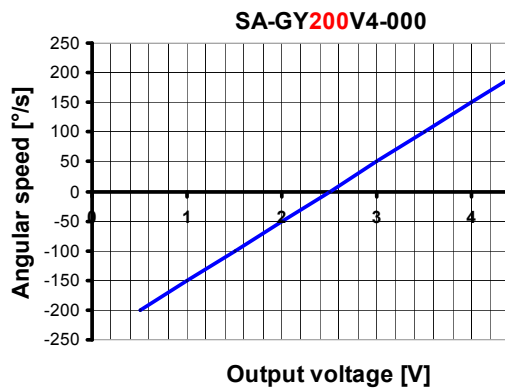
### Dimensions



### Formula

	SA-GY200V4-000	Multiplicator	Offset
12 Bit A/D	Angular speed [°/s] = 400 / 3276	* Digits	- 250
16 Bit A/D	Angular speed [°/s] = 400 / 52428	* Digits	- 250
Voltage	Angular speed [°/s] = 100	* Volt	- 250

	SA-GY500V4-000	Multiplicator	Offset
12 Bit A/D	Angular speed [°/s] = 1146 / 3276	* Digits	- 716
16 Bit A/D	Angular speed [°/s] = 1146 / 52428	* Digits	- 716
Voltage	Angular speed [°/s] = 286,5	* Volt	- 716



### Connector layout

#### Analog (from serial n°32)

Pin	Name	Description	Color (standard)
1	AGND	Analog Ground	black
2	VCC+5V	Power supply	red
3	n.c.	Not connected	-
4	n.c.	Not connected	-
5	Signal	Analog signal	white

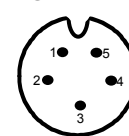
### Connector type

#### Mating plug



Binder 719, 5 PF  
(front side)

#### Plug at sensor



Binder 719, 5 PM  
(front side)

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