

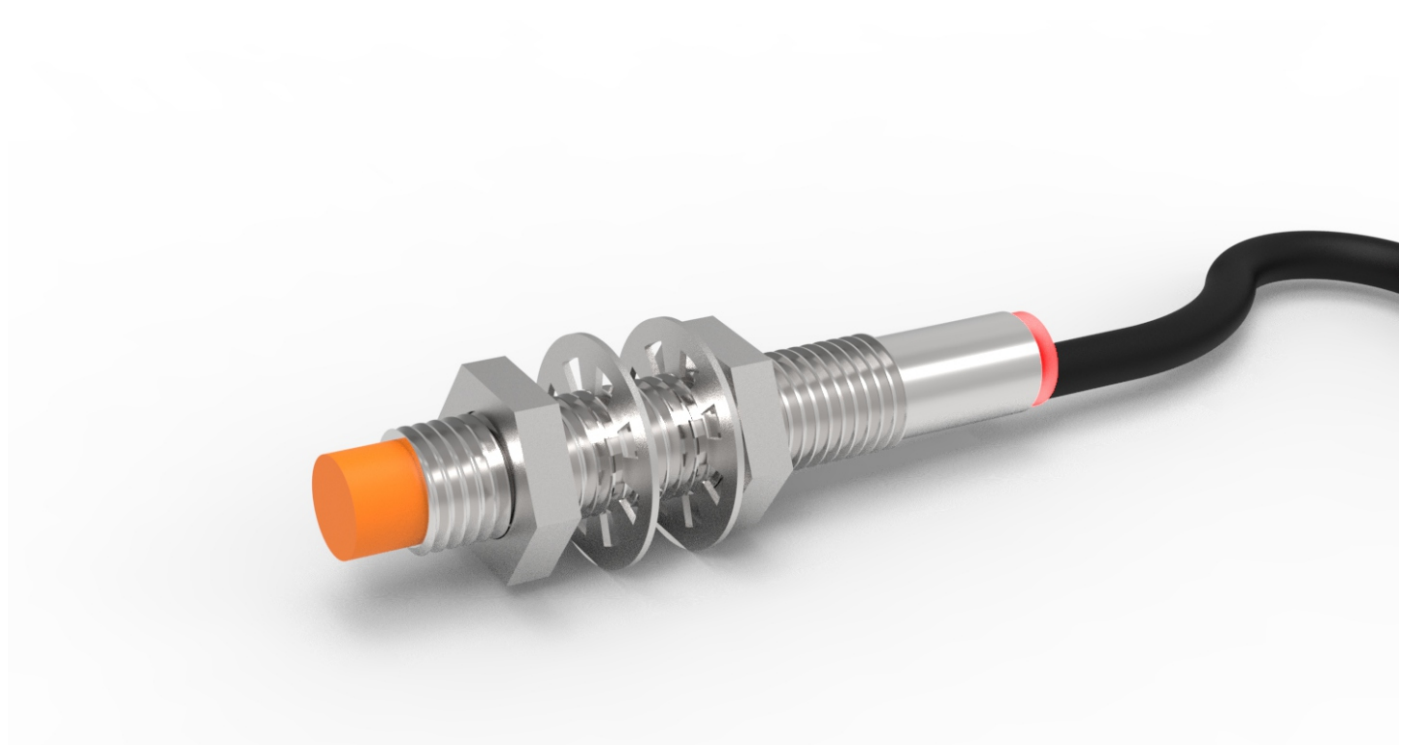


Inductive M8 Sensor

Position / Frequency / Speed Sensor

SIM8

Version 1.0



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Introduction.

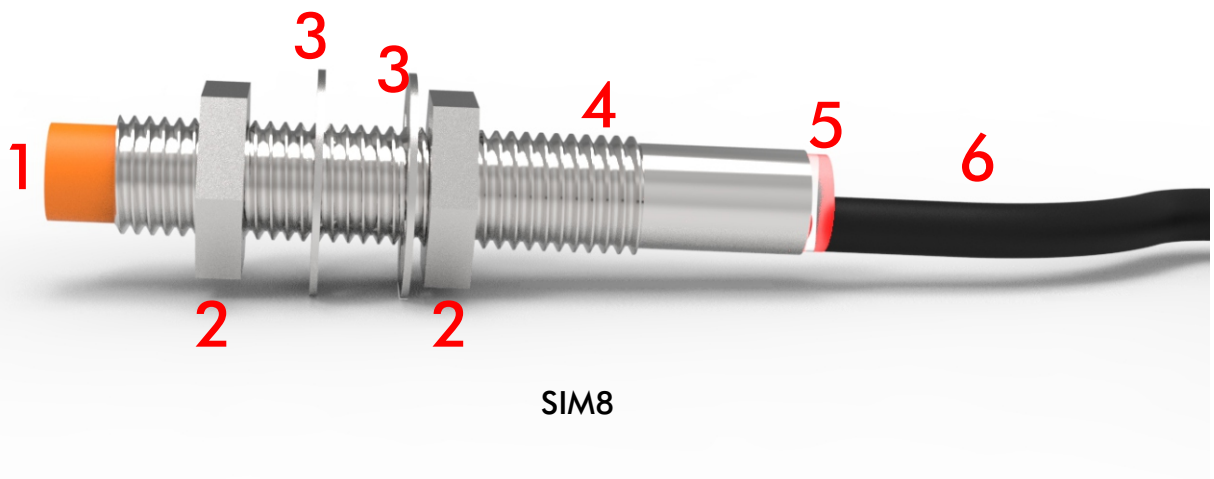
This universal sensor is developed to easily measure metal objects. The sensor is a digital on/off switch type. It can measure the position of objects, movement frequency and speed. It is a normal open sensor and switches to ground. When Normal is open, it returns a signal that is equal to vdd.

How does this sensor benefit me?

This sensor is used to measure the position of metal elements, to know the frequency of movement of engine chassis parts or movements of pedals or mechanisms. It is also used to know the rotation speed of axles, wheels, etc. It is only necessary to have metal parts or metal jumps in which proximity can be read inductively.

Description of Parts.

The sensor is simple. It is composed of an orange medication front. Installed inside a brass nickel plated body with M8x1 thread. On the back it has a light indicator where you can verify the switching of the sensor when it is installed, by bringing it closer or further away from the metal piece to be measured. The kit is delivered with 2 installation bolts and two anti-twist locking washers.



SIM8: Inductive M8 Sensor.

- 1- Front face where the measurement is made.
- 2- 12 mm nuts for sensor installation.
- 3- Locking washers for secure installation..
- 4- Brass nickel plated body with M8x1 thread.
- 5- Rear LED for installation check.
- 6- Sensor output cable.



Electrical characteristics.

ABSOLUTE MAXIMUM RATINGS. (Note 1)

Parameter	Symbol	Value	Unit
Supply voltage	Vcc	From 5 to 32	VDC
Output current	Io	150	mA
Operating temperature	Ta	-25 to 80	°C
Storage temperature range	Tstg	-10 to 50	°C
ESD on connector pins (Human body model)		3000	V

Note 1: Stresses greater than those listed under "Absolute Maximum Ratings" may cause permanent damage to the device. These are stress ratings only, and functional operation of the device at these or any other conditions beyond those indicated under "Recommended Operating Conditions" is not implied. Exposure to "Absolute Maximum Ratings" for extended periods may affect device reliability.

RECOMMENDED OPERATING CONDITIONS.

Parameter	Symbol	Min	Max	Unit
Supply voltage	Vcc	5.0	12.5	VDC
Operating temperature	Top	-20	70	°C

ELECTRICAL FEATURES.

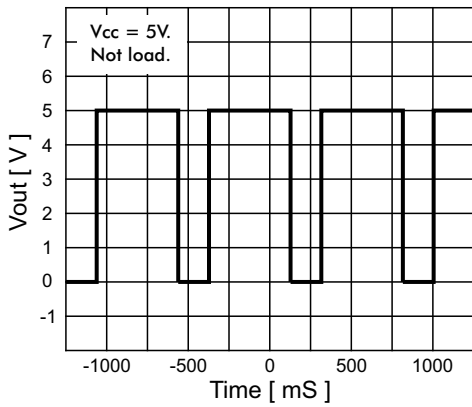
(TA=25°C, unless otherwise specified.)

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Supply current, normal open	Icc	5VDC		0.3		mA
Supply current, normal open	Icc	12VDC		0.8		mA
Supply current, normal closed	Icc	5VDC		1.2		mA
Supply current, normal closed	Icc	12VDC		4.8		mA
Supply current, normal closed	Icc	12VDC		4.8		mA
Voltage output, normal open	Vout	5VDC		VDC		VDC
Voltage output, normal open	Vout	12VDC		VDC		VDC
Voltage output, normal closed	Vout	12VDC		0VDC		VDC
Frequency measure	Fmax	all VDC range			3000	Hz
Distance measure	Dmax	all VDC range			1.6	mm

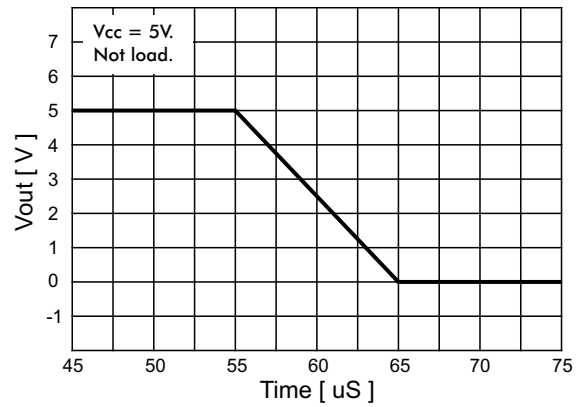


Performance characteristics.

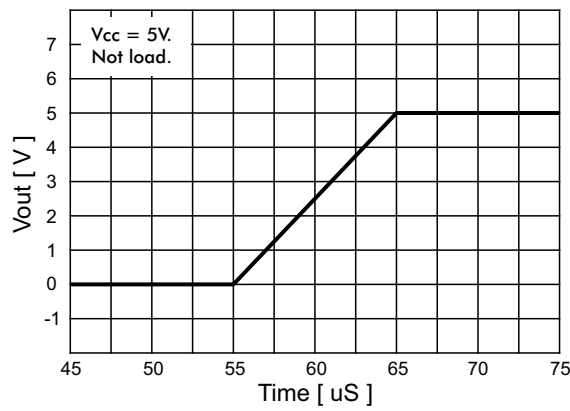
Signal pattern



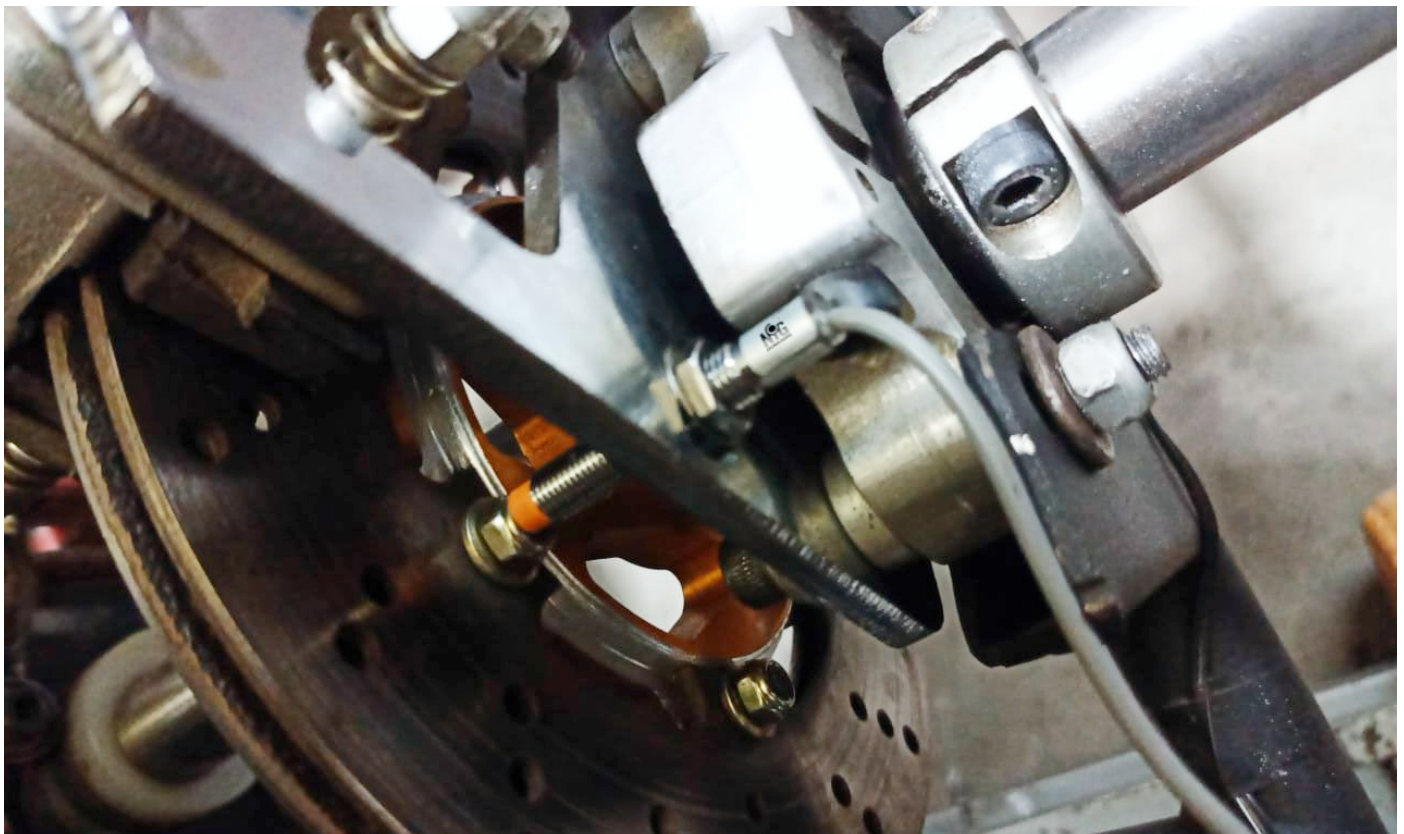
Rise time



Fall time



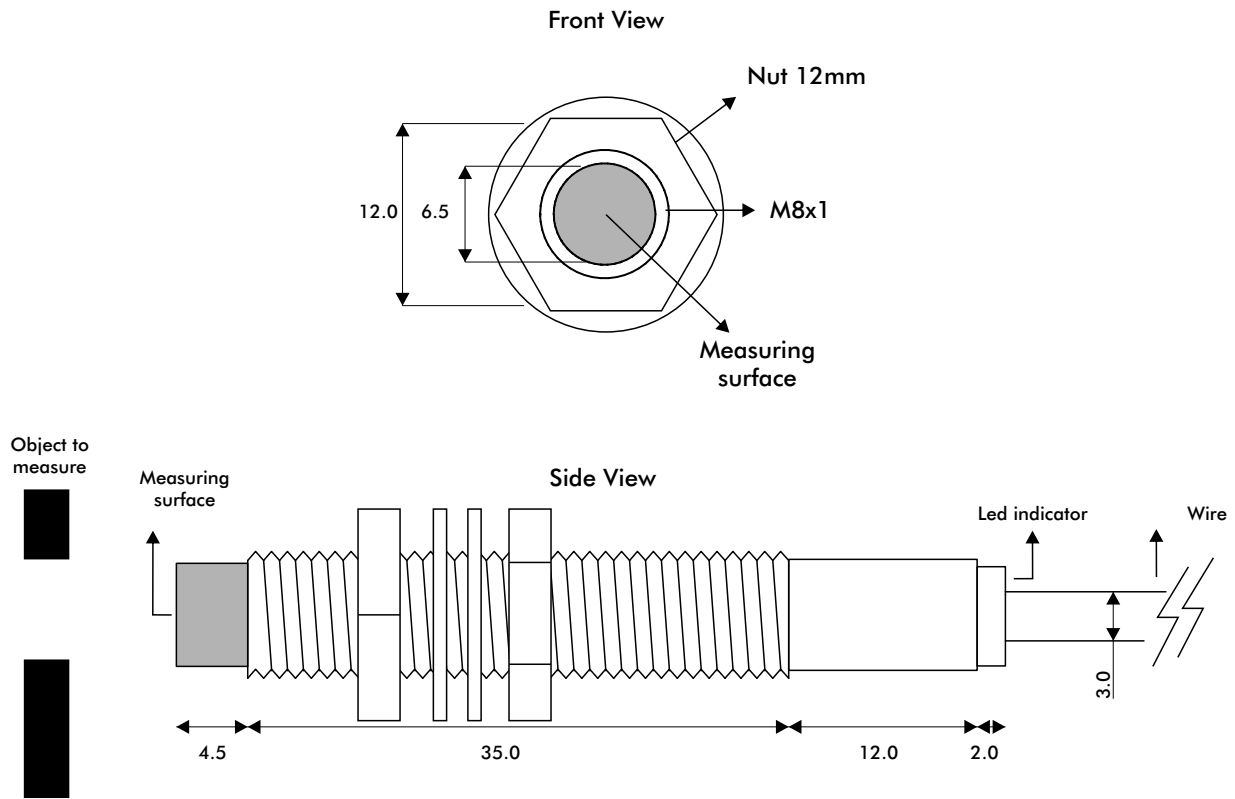
Kit Installation.





Dimensions.

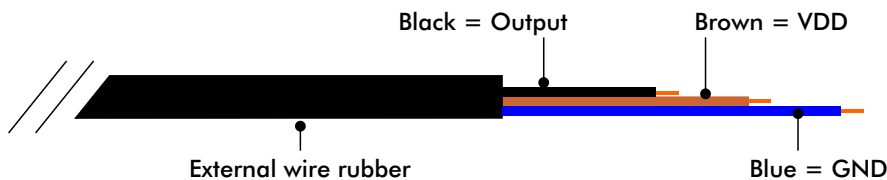
SIM8. (Dimensions in mm).



Pinout.

Below is the pinout of the sensor SIM8 with the colors of the cable that is provided. The pinout of the connector will depend on the connector with which you want to assemble the sensor.

Pinout from wires colours.



Customization options

The sensor customization options are:

- Type of connector.
- Type of cable
- Type of plastic casings
- Type of emitting magnet
- Internal magnetic sensor chip for another with other electrical characteristics.