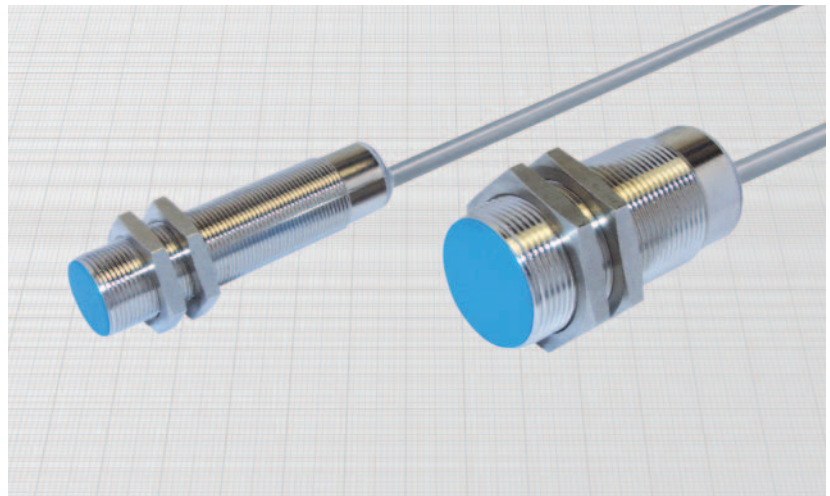
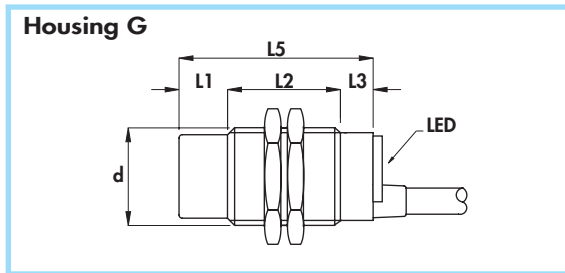
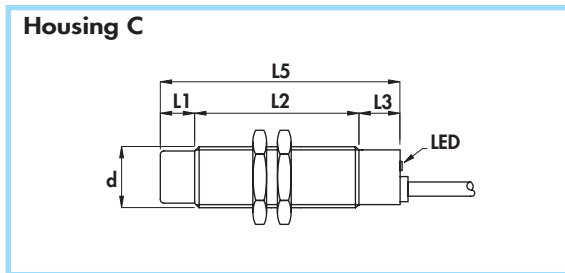


## SPEED SENSORS

- Speed sensors with integrated control
- 2 wires - a.c.
- Cable output



Diameter		M18 x 1	M30 x 1,5
Nut	Size	SW24	SW36
	Thickness mm	4	5
Max tightening torque Nm		35	80

### Materials:

- Cable: 2m PVC - CEI 2022 II- 90°C 300V-O.R.
- Housing: nickel plated brass
- Sensing face: plastic

### General Features:

These sensors allow to control with extremely high precision the rotation of a toothed wheel or reference marks, switching off the load in case of the speed goes down the minimum threshold. Thanks to the extremely wide measuring range they can be even used to control repetitive operations, signalling in case of unavoids stops. They are able to drive directly a.c. relays from 90 to 240 Vac with no need of external power supply or amplifiers.

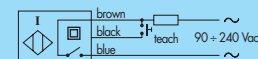
Further delays or other special functions are implementable upon specific request.

The output is protected against connection mistakes, overvoltages on lines, and short circuit of the load.

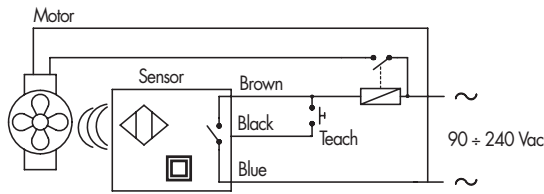
### Technical data:

- Working voltage: 90 ÷ 240 Vac
- Electrical system frequency: 40 ÷ 60 Hz
- Off-state current at 220 V: <2,2 mA
- Minimum operational current: 8 mA
- Voltage drop: <8V
- Switching hysteresis (H): < 10% S<sub>n</sub>
- Repeat accuracy (R): < 2% S<sub>n</sub>
- Maximum detectable interval (between two pulses): 2 min
- Detectable start-up time (T1): 0 ÷ 1 min (default 2 sec.)
- Temperature range: -20 ÷ +70°C
- Max thermal drift of sensing distance S<sub>n</sub>: ±10%
- Degree of protection: IP67
- Cable conductor cross section: 0,50mm<sup>2</sup>
- Status indicator: yellow LED = out ON; frequency over the threshold  
red LED = out OFF; frequency under the threshold  
blinking red LED = out OFF; short circuit on the output
- Protected against short-circuit and overload
- Class 2 equipment according to IEC 536
- Shock and vibration according to EN60068-2-27 EN60068-2-6
- Electromagnetic compatibility (EMC) according to EN60947-5-2

Housing	Flush mounting Non flush mounting	L1	L2	L3	L4	L5	Cable diameter	Body diameter (d)	Max detectable frequency	Rated operational current (I <sub>e</sub> )	Nominal sensing distance (S <sub>n</sub> ) ± 10%	ORDERING REFERENCES
		mm	mm	mm	mm	mm						
C	•	-	58	12	-	70	5	M18 x 1	800	200	5	<b>ASD18/4609KS</b> <b>ASD18/5609KS</b>
C	•	10	48	12	-	70	5	M18 x 1	400	200	8	
G	•	-	50	10	-	60	6	M30 x 1,5	400	200	10	<b>ASD30/4609KS</b> <b>ASD30/5609KS</b>
G	•	15	35	10	-	60	6	M30 x 1,5	200	200	15	



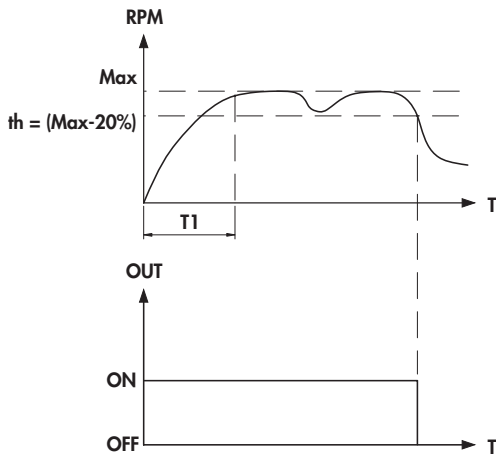
**Example of application**



**Use of the sensor:**

On power on, the yellow LED goes on and the output switches in ON state, driving the relay, which will drive the motor. After a start up delay time (T1) the sensor measures the speed of the motor and compares it to the threshold value. If the speed is under the threshold value, the output goes OFF, giving an alarm indication with the red LED. The minimum threshold can be either factory presetted or can be acquired from the sensor directly on the application with no need to perform any measurement.

**Procedure 1**



**Threshold self-teaching procedure:**

There are two different ways to perform the self-teaching of the threshold:

**1 - Acquisition of start up time and calculation of the threshold from the maximum speed:**

- a) connect the Teach input (black) to the brown before to turn on the power
- b) Turn on the power supply to the machine and to the sensor and wait the speed gets the nominal value
- c) Turn off the power supply
- d) At this stage the sensor acquired the start up time (T1) and calculated the threshold as the maximum value of the speed reduced of -20%
- e) Disconnect the Teach in from the brown wire before to run the machine again.

**2 - Acquisition of a known threshold (start up time is not modified):**

- a) Turn the power supply on to the machine and sensor and go to the speed you want to get as threshold (th).
- b) Connect temporarily the Teach input (black) to the brown wire. This operation can be easily done with a push-button on the operator panel of the machine.
- c) At this stage the current speed becomes the minimum threshold (th), under of which the sensor goes in OFF state.

Both of the procedures can be repeated unlimited times.

**Procedure 2**

