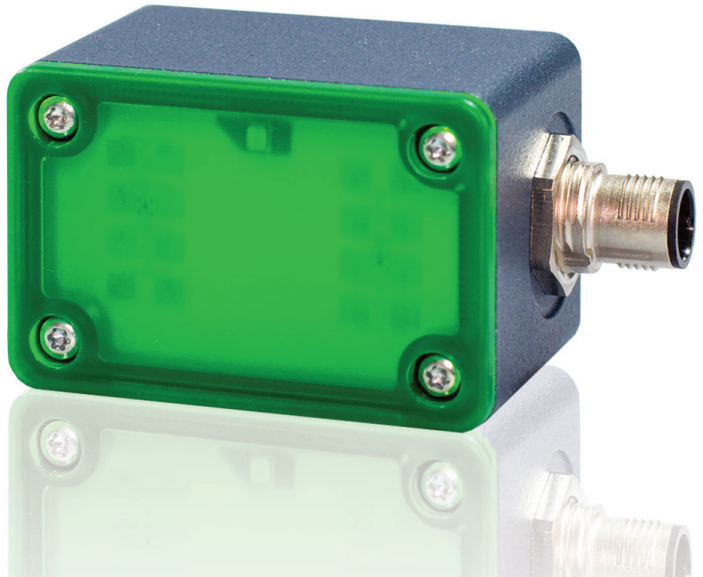
iSYS
www.InnoSenT.de

iSYS-4001
iSYS-4002

speed- and distance detector

product brochure - V1.2



typical applications

The iSYS-4001 can be used in applications where movement, speed or distance measurement is of interest.



- door applications
- industrial door openers
- energy saving
- lighting applications
- flow measurement
- level measurement

iSYS-4001/4002

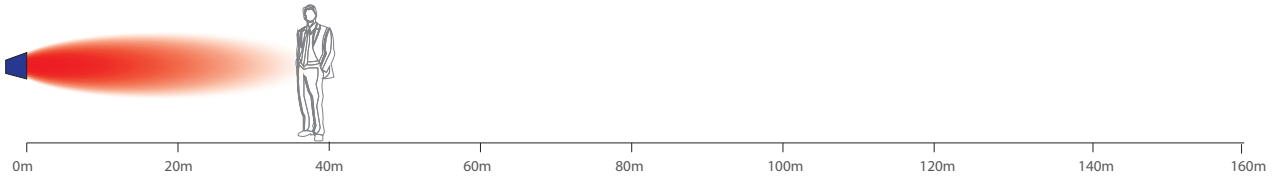
motion detector

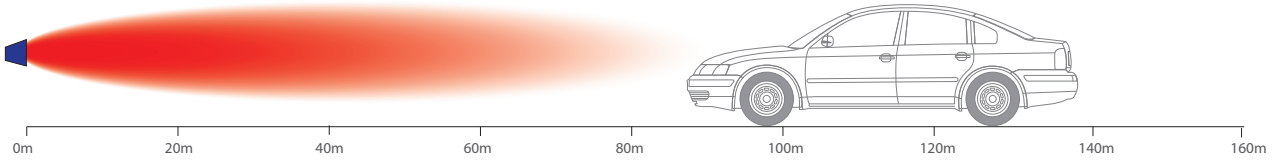
» radar-based motion detector
» operating in the 24GHz - ISM - Band, therefore ready for worldwide use
» detection of moving objects in a range from 0.3 to 150m (depending on RCS of detected object)
» detectable speed: ±0.8km/h up to ±250 km/h
» detection and velocity range configurable via GUI (graphical user interface)
» direction of motion discrimination
» iSYS-4001 with RS232 interface and iSYS-4002 with RS485 interface
» protection class IP67 for outdoor use
» CE - certified

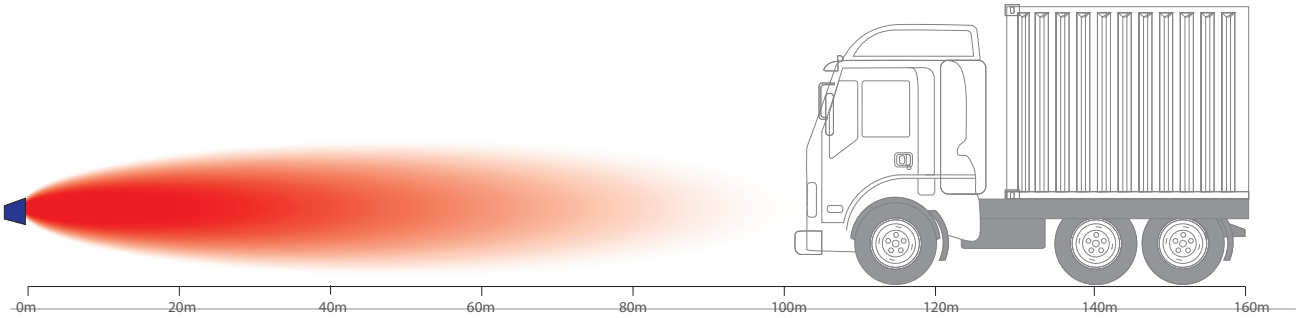
- traffic light management
- people detection
- industrial applications
- collision avoidance systems
- traffic monitoring

detection range

The detection range of the iSYS-4001 is depending on the RCS (radar cross section) of the monitored object. Typical detection ranges are shown below. Depending on the installation the ranges can vary.
The detection range can be configured with the GUI. That means a minimum and/or maximum range can be set depending on the application.







K-band movement detection system

K-Band based motion detector with integrated µC decision unit. It can detect moving objects in a speed range of 0.8 km/h (0.5 mph) up to 250 km/h (155.3 mph). Detection range from 0.3m (1ft) up to 150m (491,25ft) (depending on RCS of moving object). The sensor povides 3 programmable output pins (open drain) to offer a wide area of individual configurations. The programming can be easily done by a GUI, that is available on www.innosent.de.

specifications

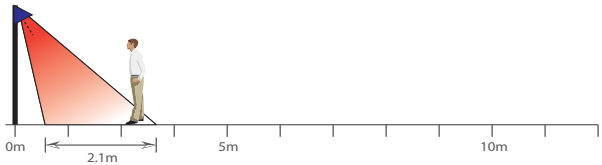
speed range:	0.8...250km/h
distance range:	0.3...150m
signal level:	0...250dB
supply voltage:	10...30V
supply current:	typ. 76mA@24V
operating temperature:	-25 ...+60°C

antenna pattern (examples)

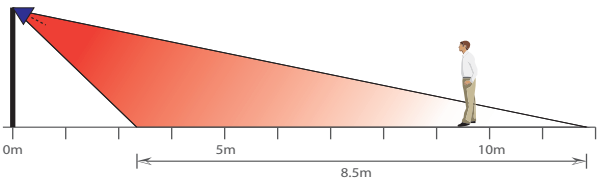
The coverage area of the iSYS-4001 is depending on the distance to the object as well as to the mounting situation.

example: Height: 2,5m
3dB-Beamwidth: 34° x 49°

Mounting angle ∂: **30°**
Detection field: 2,10m x 2,63m

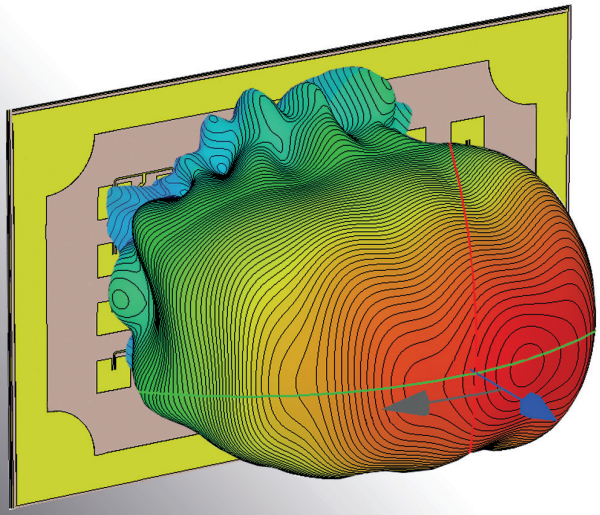


Mounting angle ∂: **60°**
Detection field: 8,50m x 4,56m



detection fields

Providing the width of the antenna in degrees just says, that the transmitted or received energy has dropped at this point by 50 percent of the maximum value (3dB-beamwidth). It does definitely not mean that beyond that point no transmission or reception is possible. An object for instance with huge radar cross section (truck, metallic door) might very well compensate the loss of the antenna pattern and provide a significant radar signal. Due to this fact the detection range of the sensor can vary depending on the RCS (radar cross section) of the detected object.



antenna specifications

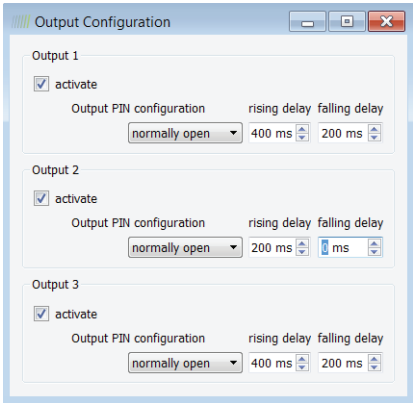
detection field (3dB):	
horizontal	typ. 49°
vertical	typ. 34°
side lobe suppression:	
horizontal	typ. 30dB
vertical	typ. 20dB
antenna gain:	12.6dBi

interface

The iSYS-4001 offers 3 output signals that can be activated and configured indepentendly of each other. The output can be configured as PWM or digital channel. (open drain)

In case of „PWM“ a pulse width modulated signal will be fed to the output PINs corresponding to the speed or distance of the object.

In case of „Digital Output“ a digital signal is set if the configured speed and distance settings apply. Each output can be configured individually.



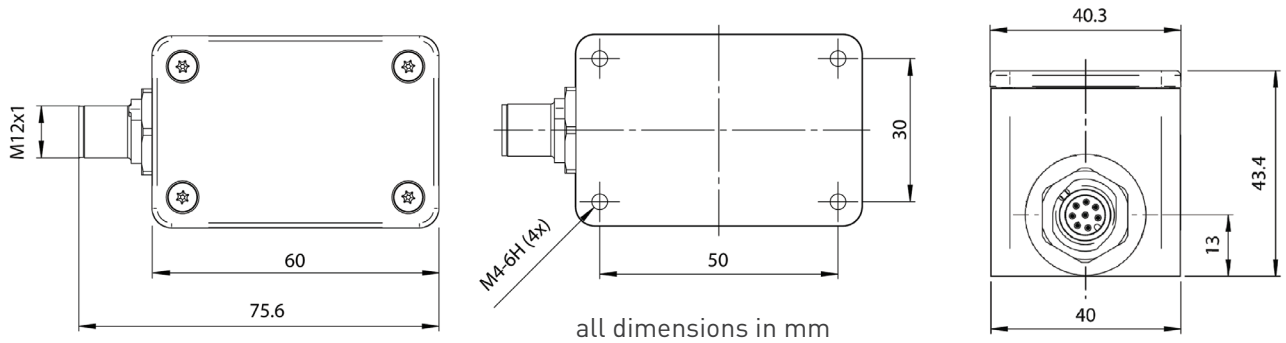
GUI - graphical user interface

For configuration of the most important parameters InnoSenT offers a dedicated environment. The GUI can be used to evaluate the measurement data as well as to program the iSYS-4001 sensor. Therefore a smart and easy possibilty to use the sensor is given.

The programming can be easily done by a GUI, that is available on www.innosent.de.

mechanical outlines

The sensor provides an M12x8 Conec type SAL - 12 - FSH8 - P5,5 - 9 (PN: 43-01071) with SAL - 12 - FKH8 - P5,5 - 9 PLUG (PN: 43-01063).



all dimensions in mm

contact information

If you have any questions please contact us!

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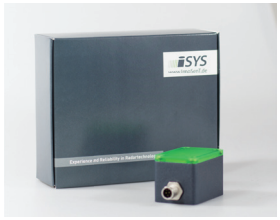
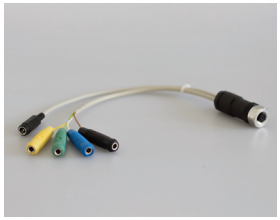
part numbers



P/N: iSYS-4001

P/N: iSYS-prog_adap



P/N: iSYS-pow_adap

P/N: iSYS-pow_sup

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