General Description

OIS32 is an optical level sensor with digital output. Thanks to the optical configurations, the sensor is able to detect different typologies of substances, solid and liquid ones. In order to achieve better performances it is suggested to use a reflective target in front of the sensor, if you work with translucid media (e.g. oils).

The sensor is provided with a robust brass body that protects it from accidental shocks. The measure is performed through a plastic optical window, that isolates the electronic from external substances. The optical windows has a slightly rounded surface that permits an easy maintenance and cleaning of the device.

The digital output can drive up to 700mA loads and it's designed to be directly connected to lamps or small sirens.

Applications

Flour level

Turbid/opaque liquid level

Translucid liquids level (with reflective target)

Features

- ■ **Robust design**
- ■ **High current drive**
- ■ **Easy maintenance**
- ■ **Works with different substances**

Vcc

GND

Out

Pin Functions

OIS32

Cable color	Name	Function
Brown	V_{CC}	Power Supply
Black	GND	Ground
Grey	OUT	Output (PNP)

Ordering Information

OIS32-OL   Open lead version

ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Min	Max	Unit
T_S	Storage Temperature	0	85	°C
T_A	Operating Temperature Range	0	85	°C
V_{CC}	Supply Voltage Range	7	15	V
Io	Max output current (depending on ambient temperature)	-	700	mA

Stresses beyond those listed under "Absolute Maximum Ratings" may cause permanent damage to the device.

Exposure to absolute maximum rated conditions for extended periods may affect device reliability.

ELECTRICAL CHARACTERISTICS

T_A = 25°C, unless otherwise noted.

Symbol	Parameter	Conditions	Min	Typ	Max	Unit
V_{CC}	Supply Voltage Range OIS29-12AT	Battery	0	12	15	V
Icc	Device current consumption	No load, Vcc=12V	-	15	20	mA
V_{OH}	Output voltage high	7V< Vcc <15V, no load	Vcc-0.7	-	-	V
V_{OL}	Output voltage low	Vcc = 12V R_L<10kΩ	0	10	50	mV

MECHANICAL CHARACTERISTICS

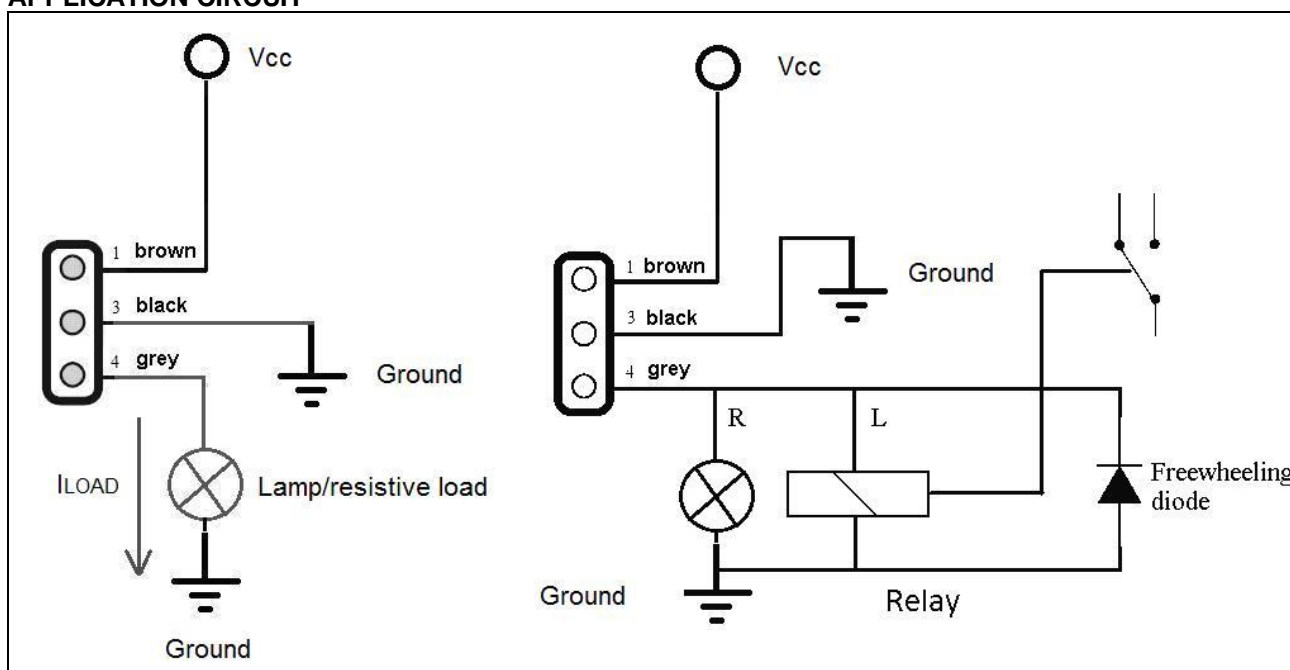| Symbol	Parameter	Conditions	Min	Typ	Max	Unit
TH	Thread	-	-	G3/4	-	"
Out	Output configuration	-	-	PNP	-	
L_C	Cable length	-	-	0.5	-	m
L_T	Length tolerance (cable 3x0.5mm^2)	-	-	± 20	-	mm
D	Working distance in reflection mode	With reflector, see Fig. 2		10		mm

APPLICATION CIRCUIT
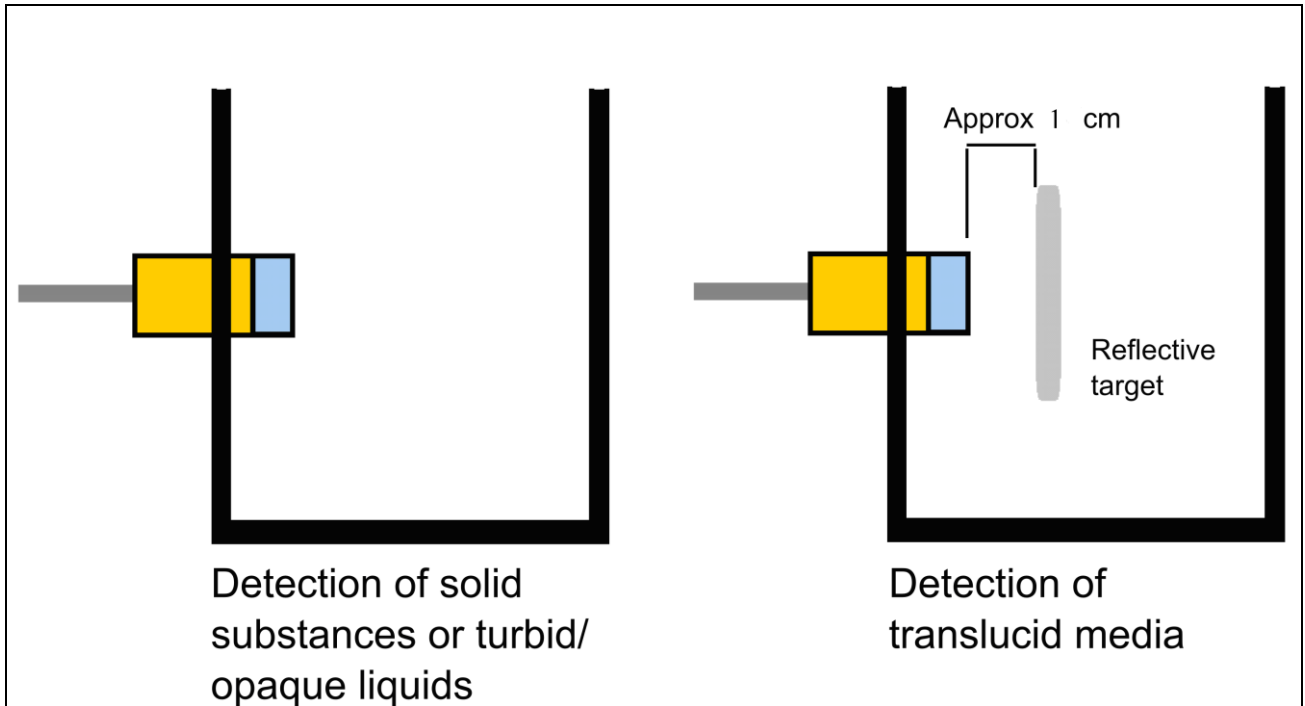

Figure 1 – Resistive and inductive load connections

INSTALLATION

Figure 2 – Installation guidelines