Fuel Cap Sensor (AR0224)

Product Overview

Cellocator Division
Pointer Telocation Ltd.

Proprietary and Confidential

Version 1.4

Revised and Updated: April 11, 2011

POINTER

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Table of Contents

1 Introduction

1.1 Overview

The Fuel Cap Sensor reduces the possibility of fuel theft by reporting on fuel cap openings. The Sensor, which is connected to one of the Cellocator unit digital inputs, detects fuel cap access and sends a signal to the Cellocator unit digital input. The Cellocator unit reports to the Control Center by sending an appropriate event.

The Fuel Cap Sensor is designed to be mounted on the tank lid neck, preventing access to the fuel cap when closed and allowing free access to the fuel cap when open.

The Cellocator AR0224 Fuel Cap Sensor replaces the Cellocator AR0192 Fuel Cap Sensor.

1.2 Highlights

- Informs on any access to the fuel cap
- Supports all fuel lead sizes (and not only 10.5 cm diameter ones)
- Has a rugged and professional design
- Disables access to fuel cap when cover is closed
- Allows free access to fuel cap when cover is opened
- Prevents access to the reed relay and magnet
- Supports easy installation as no calibration is needed
- Supports automatic opening due to built-in spring

1.3 Compatibility

All Cellocator units utilizing digital inputs support the Fuel Cap Sensor.

1.4 Abbreviations

Abbreviation	Description

1.5 References

All the reference documents listed in the following table can be downloaded from the support section of the Pointer website (www.pointer.com).

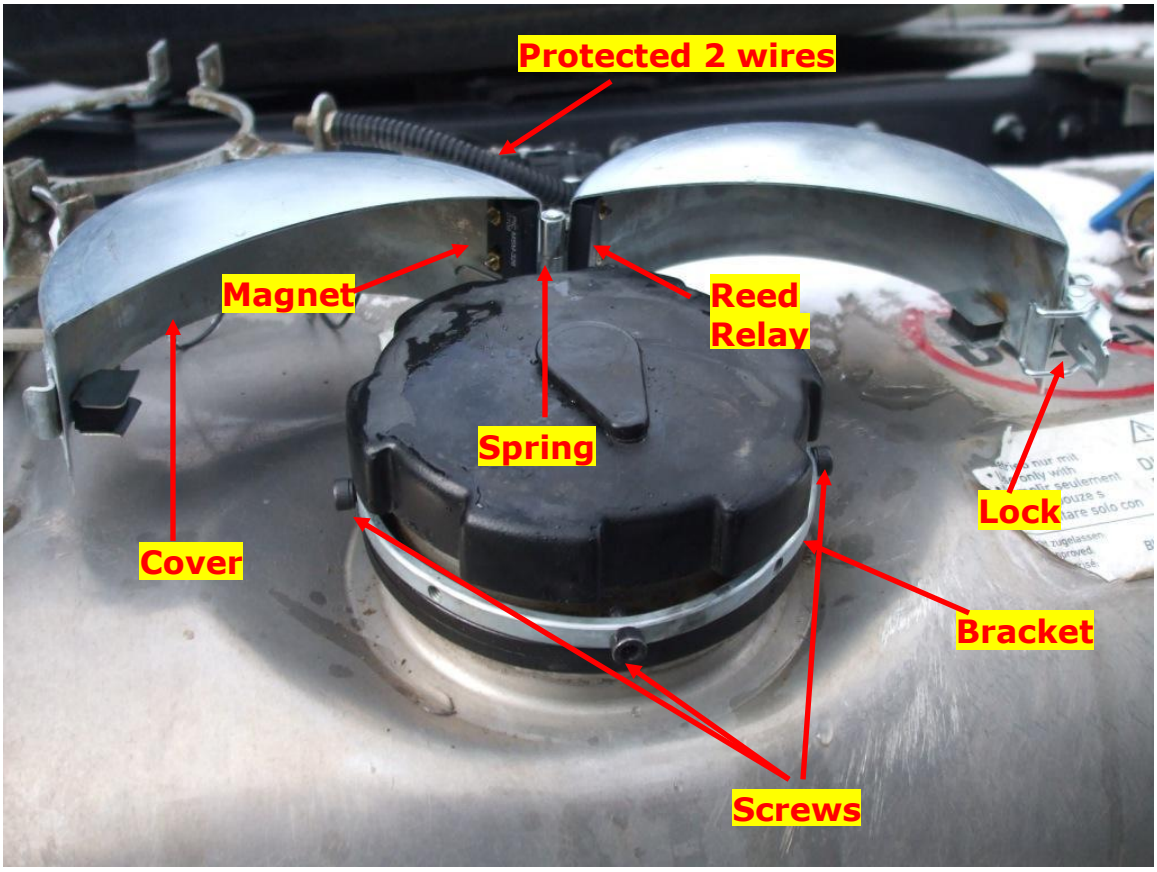
#	Reference	Description
1.		
2.		

1.6 Revision History

Version	Date	Description
1.0	March 01, 2011	Initial preliminary version
1.1	March 09, 2011	Technical Writer edit
1.2	March 23, 2011	Updating technical specifications
1.3	March 30, 2011	Add all screws types to the package
1.4	April 10, 2011	Change section 1.1 and 3(2)

2 Fuel Cap Sensor Description

The product includes the Fuel Cap Sensor itself and a bag of 12 screws.



The stainless steel Fuel Cap Sensor is mounted on the fuel lid using the bracket and three Allen screws. A lock is used to close the two parts of the cover. The spring enables automatic opening of the cover when the lock is opened. When the cover is closed, the reed relay is adjacent to the magnet and the two wires are connected to each other. When the cover is opened the reed relay opens the circuit and disconnects the two wires.

The Fuel Cap Sensor is mounted on the fuel lead using three screws. Three types of screws are available for supporting different sizes of fuel leads:

- Short screws: the short screws dimensions are 5 * 14.25 mm and support fuel leads of 102-110 mm.
- Medium screws: the medium screws dimensions are 5 * 20.75 mm and support fuel leads of 89.9 -102.1 mm.
- Long screws: the long screws dimensions are 5 * 20.75 mm and support fuel leads of 73.2 - 90 mm.

All screws are Allen type screws with a sharpened end. The different types of screws are shown in the pictures below.

The Fuel Cap Sensor is provided with four screws of each type.

3 Installation Instructions

WARNING: Installation of the mounting bracket of the fuel tank lid sensor must be done in accordance with the installation instructions.

In addition, to avoid possible bodily injury, or damage to the vehicle, the installer must be a certified technician who has been qualified to install the system.

➢ **To install the Fuel Cap Sensor:**

1. Mount the bracket on the fuel tank lead using the appropriate three screws. Make sure that the cover can be opened and the fuel cap can be removed and closed again.

2. Apply several drops of a medium strength threadlocker (adhesive) (such as HENKEL-Loctite 270 screw stabilizer) onto the bolt at the nut engagement, preventing the bracket from coming loose.

3. Verify that when the bracket is closed the wires are shortened, and when the bracket is opened the reed relay is opened.
4. Connect one wire to the vehicle ground and the other to one of the Cellocator unit inputs.
5. Program the relevant input to the non-inverted state.

6. Open and close the bracket and validate that the Control Center application is notified of the change.

Some installation examples are shown below.

4 Technical Specifications

Parameter	Description
Contact Type	Normally open
Contact rating max.	10 VA / W
Switching Voltage max.	200 VDC / 140 VAC
Switching Current max.	1 A
Switching Distance	40 ≥ x ≥20 mm
Cable Type	gray PVC covered 2 x 0,25mm^2 copper LIY(st) CY
Cable Length	0.5 meter
Operating Temperature	-20°C to +85°C
Dimensions	17.5 X 14.5 X 7 cm
Weight	0.66 Kg