

# KARI



**ATEX approved**

## SILO SWITCHES MS1 and MS2

The Silo switch is designed for the surface level control of loose storage items (high level detection).

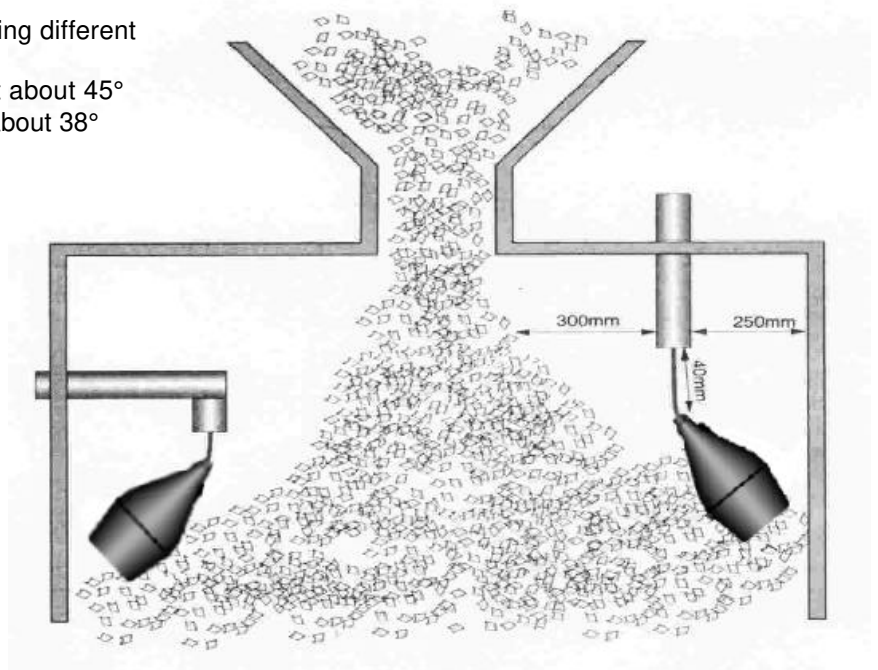
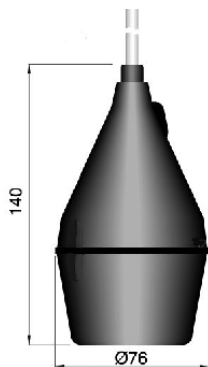


### Operation and Installation

At the end of a cable hangs a cone containing a micro switch which operates when the cone is tilted some 25° in any direction from its normal vertical position. The unit must be installed a minimum of 250 mm from the silo wall and a minimum of 300 mm from the centre opening. 40 mm of cable is required from the end of the protective conduit to the cone. The same requirements hold true for the side mounted switch. When the silo is filled to the predetermined capacity the switch is activated by the rising level of the item being stored.

Examples of Density differences causing different degrees of tilt in different items:

- gravel about 55°
- wheat about 45°
- barley about 40°
- oats about 38°
- grain about 40°



#### Technical Information:

Voltage	250 VAC
Current	1A AC1
Weight	130 g
Operating temperature	0°C - +50 °C
Cable dimensions	2x1 mm <sup>2</sup> , 2 m
Cone material	PP
Cable Insulation	rubber
Protection class	IP 66/67

Type MS1 Free floating	- switch open
Type MS1 Tilted	- switch closed
Type MS2 Free floating	- switch closed
Type MS2 Tilted	- switch open

- switch open
- switch closed
- switch closed
- switch open



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No 3389



## EC-DECLARATION OF CONFORMITY

Name of manufacturer: Kari-Finn Oy

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Product: Silo switch types MS-1, MS2 and MS-3 II 1 D Ex tD A20  
IP66/67 T 60 °C

We affirm that this product fulfils the requirements of ATEX-directive 94/9/EC. The construction of the product is in accordance with the following harmonised standards: EN 61241-0 (2006) and EN 61241-1 (2004). The conformity to mentioned standards of each manufactured unit is ensured according our quality control instructions. The product is CE-marked 2005.

### EC-TYPE EXAMINATION

CERTIFICATE NO: VTT 09 ATEX 019X.

### PRODUCTION QUALITY

ASSURANCE NOTIFICATION NO: VTT 05 ATEX Q 002

Notified body: 0537  
VTT Industrial Systems  
Electrical Ex-apparatus  
Otakaari 7B, Espoo  
FIN-02044 VTT

Lahti 17.6.2009

Matti Kari  
Managing director