



PROSENSE TOD Tank Level Gauge Installation and User Manual

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WARNING!

This manual must be carefully read by all persons who have or will have the responsibility for installing, using or servicing this product.

Like any equipment, this product will perform as designed only if installed, used and serviced in accordance with the manufacturer's instructions. Otherwise, it could fail to perform as designed and persons who rely on this product for their safety could suffer severe personal injury or death.

The warranties made by Prosense with respect to this product are voided if the product is not installed, used and serviced in accordance with the instructions in this user guide. Please protect yourself and other by following them.



**DO NOT REMOVE COVER WHEN ENERGISED!
ELECTROSTATIC HAZARD - CLEAN ONLY WITH A DAMP CLOTH!**

Introduction

PROSENSE TOD is a Tank Level Mesasuring Detector that can work in explosive atmospheres. It has a sensor on the front, the tank level information is instantly taken from the float and transferred to the microprocessor. The microprocessor processes the analog measurement data and converts into a digital format to display on screen as a numerical value. TOD has 0-5V Analog voltage signal output to connect control panels and PLCs for remote monitoring.

TOD should only be used/installed by qualified personnel and companies, taking into account the legal obligations, required standards and the points in the user manual.

Technical Characteristics

Prosense TOD body is produced as aluminum casting. The sight glass in the product is produced as acrylic, and the sight glass nut is produced as brass. The PCB is designed to be intrinsically safe, and the current values drawn and the total power consumed are limited. Prosense TOD, can be used in Zone-1 or Zone-2 classified areas. The system parameters are given in table:

Manufacturer	Prosense
Model	TOD
Ex protection	Ex ib II C T6
ATEX Marking	Ex II 2 G D
Operating temperature	-20 - +60C
Ingress Protection	IP65
Cable connections	3 x 0,75 mm ² (minimum diameter)
Vn	5 VDC
In	12 mA
Pn	60 mW
V max	5 VDC
I max	18,6 mA
Ci	2 nF
Pmax	< 93mW

Connections

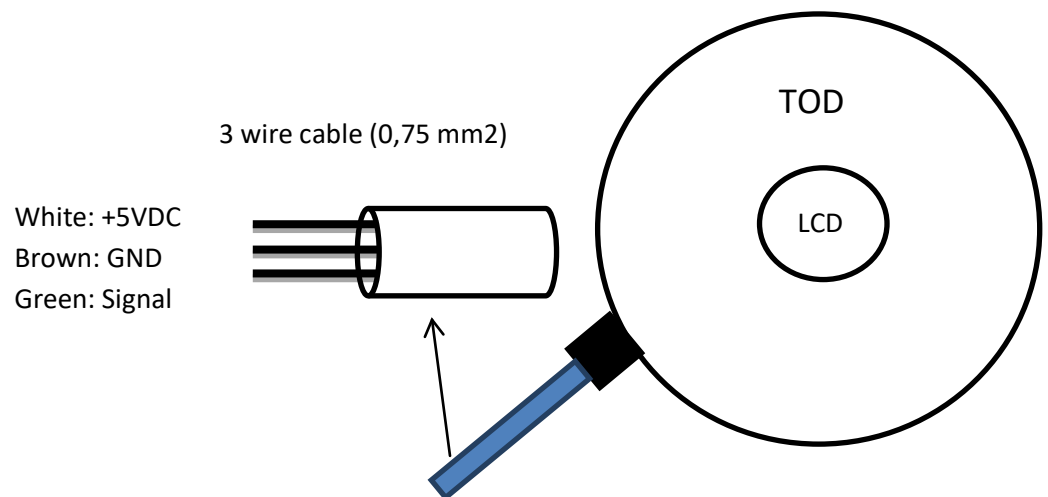
It is strictly prohibited and dangerous to open any device in a potentially explosive atmosphere. If you need to open the device, make sure that the energy source is closed and out of potentially explosive environment.

It is absolutely dangerous and prohibited to open or perform live maintenance on the device while the power supply is continuing. The opening process should be done 10 minutes after the device is de-energized.

If the device is to be used in Ex environment, it must be fed with an intrinsically safe power supply or connected using an intrinsically safe Zener Barrier!

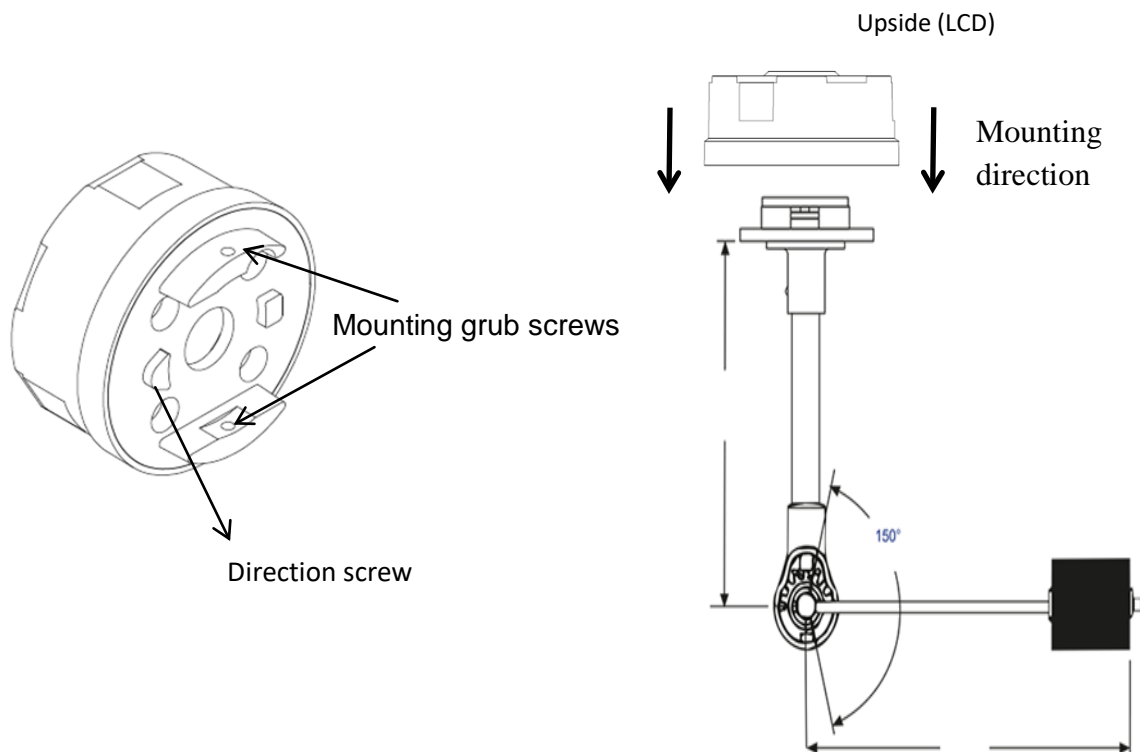
Electrical connections

TOD has 3 cables to provide power to device and get the measurement signal. Their colors are designed to recognize their function as shown on graphic.



Mounting

TOD must be mounted on top of mechanical measurement device such as Rochester etc. The LCD must be located up side to see the actual measurement level. AT the bottom of device there is two special shaped screws to guide you to located device correctly to tthe mechanical measuring equipment. Once locatad well fiw the mountign grub screws.



Operation

TOD works with 3-wire connection which are V +, V- and S ports. V + and V- used to provide power to device . The power must be supplied at the specified voltage level. The measurement level performed by the TOD is given as a voltage signal from S output in 0-5V range depending of the measurement level. 0-5 VDC Signal output provides linear output in the range of 0-100% in the percentile that is directly proportional to the voltage.

TOD also has 7-segments LCD on the device to provide visual output user as a 3 digit measurement value in 0-100 range corresponds to the percentage occupancy rate of the tank.

The correct measurement reading of the tank level as a percentage of the device is directly proportional to the assembly. So the assembly must be checked that the TOD is correctly seated in its housing. TOD does not have any electrical connection with the surface or mechanical measurement devices since TOD gets measurement readings via magnetic field effect.

Warranty Statement

All products are designed and manufactured to the latest internationally recognized standards by Prosense Technology under a Quality Management system that is certified to ISO 9001. As such Prosense Technology warrants its products against defective parts and workmanship and will repair or (at its option) replace any instruments which are or may become defective under proper use within 12 months from date of commissioning by an approved Prosense Technology representative or 18 months from date of shipment from Prosense Technology, whichever is the sooner. This warranty does not cover disposable batteries or damage caused by accident, abuse, abnormal operating conditions or poisoning of sensor.

Defective goods must be returned to Prosense Technology premises accompanied by a detailed description of any issue. Where return of goods is not practicable Prosense Technology reserves the right to charge for any site attendance where any fault is not found with the equipment. Prosense Technology shall not be liable for any loss or damage whatsoever or howsoever occasioned which may be a direct or indirect result of the use or operation of the Contract Goods by the Buyer or any Party.

This warranty covers instrument and parts sold to the Buyer only by authorized distributors, dealers and representatives as appointed by Prosense Technology. The warranties set out in this clause are not pro rata, i.e. the initial warranty period is not extended by virtue of any works carried out there under.

In no event will Prosense Technology be liable for any incidental damages, consequential damages, special damages, punitive damages, statutory damages, indirect damages, loss of profits, loss of revenues, or loss of use, even if informed of the possibility of such damages. Prosense Technology's liability for any claims arising out of or related to this product will in no case exceed the order value. To the extent permitted by applicable law, these limitations and exclusions will apply regardless of whether liability arises from breach of contract, warranty, tort (including but not limited to negligence), by operation of law, or otherwise.