

DATASHEET

Level

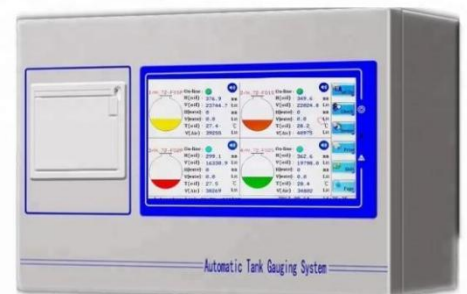
Magnetostrictive Liquid Level Meter For Oil Depot and Automatic Tank Gauging System Model **PWL-M200/PWL-M300**



PWL-M200
Rigid Probe



PWL-M300
Flexible Hose Probe



PWD-CM1
Smart Console

Description

Magnetostrictive Liquid Level Meter (Tank gauging system) for gas stations consists of Magnetostrictive Probe + CM-1 Smart Console. It is an electronic device, the basic function is to monitor the fuel level in the tank. After those years' development, it integrates several parameters for the convenience of fuel management of gas station/oil depot, with just one probe it can output: fuel level, fuel volume, fuel temperature, water level and water volume, high&low fuel level warning in one tank. So to provide reliable and convenience data for tank gauging system. There are different solutions to meet different demands.

Solutions

1. PWL-M200/M300 Probe(RS485 Modbus Protocol) + Other brand controller
2. PWL-M200/M300 Probe + PWD-CM1 Console
3. PWL-M200/M300 Probe + PWD-CM1 Console + PC software
4. PWL-M200/M300 Probe + PWD-CM1 Console + Internet Remote Query(like Mobile APP)
5. PWL-M200/M300 Probe + PWD-CM1 Console + Center Control Software System(other brand)

Features

- Industrial design, long service life, fast in running
- Information is stored in memory for future inquiry
- With an embedded printer(optional) it can print inventory reports, delivery reports, leak reports and shift reports
- Can monitor up to max 12 tanks and display dynamically the fuel level and water level with colored graphics in proportion
- After connected with Central Control System through internet, it can provide information for manager to manage the inventory, delivery and the sale of the fuel.



Probe Structure

The probe consist of:

- Fully enclosed magnetostrictive probe.
- Electronic Pod using for data measuring and transforming.
- Floater made according to the medium.

Introduction of Touch Console

- It can monitor up to 1-12 tanks and monitor the delivery conditions, it also enjoys a static leak test function
- It can display fuel level, water level, temperature, volume, ullage
- It enjoys a tank tilt compensation function
- It can display dynamically the change of fuel level and water level with graphics in proportion, it features a 7 inch colored touch-screen console panel, and each interface displays 4 graphics
- It features an audible and visual alarm function with front panel
- It comes with one RS-232 serial interface communication ports to connect with different brand Center Console or connect to PC software, one RJ45 port for remote monitor
- It enjoys a record function, all information are stored in memory for future queries
- There is an embedded printer in it to print inventory reports, delivery reports, leak reports and shift reports
- It can calculate volume of fuel by multipoint, which can fully ensure the accuracy of volume of the fuel
- After connected with Center Console through internet, it can provide information in long-distance for manager to arrange the inventory
- It can monitor the oil pump according to the fuel level, which can avoid the fuel spilled and pump down
- It can connect with flow-meter to display delivery information constantly

Specifications

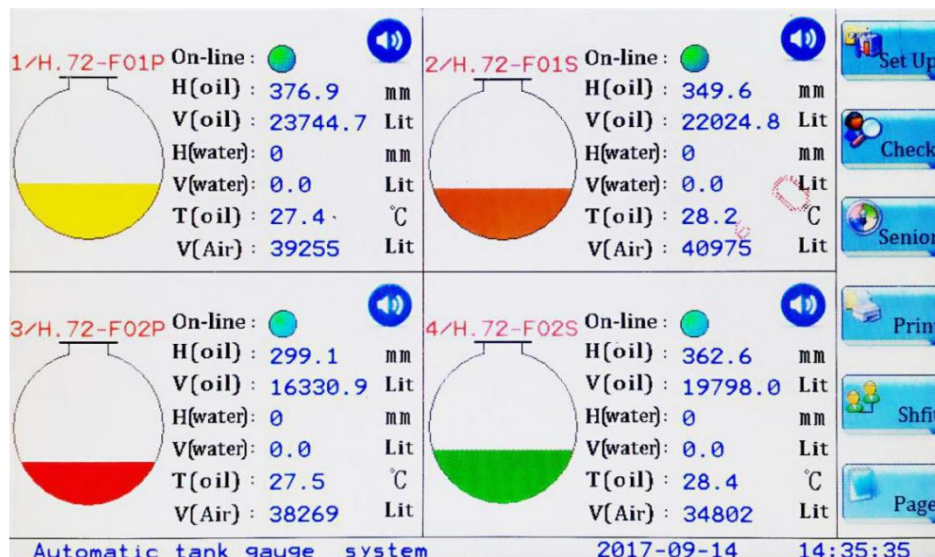
Model	PWL-M200 (Rigid Probe)	PWL-M300 (Flexible Hose Probe)
Purpose	To measure fuel level, water level, volume and temperature in fuel tanks	
Mediums	Gasoline, diesel, kerosene, ethanol, water	
Measuring Principle	Magnetostrictive measuring technology	
Temperature Sensing Method	Digital temperature acquisition and transmission	
Probe Length	600~3500mm	600~15000mm
Level Accuracy	±0.3mm	±1.0mm
Temperature Accuracy	±0.2℃	±0.2℃
Repeatability Accuracy	±0.1mm	
Level Resolution	0.023mm	
Working Temperature Range	-40~70℃	
Working Pressure Range	-0.02MPa~0.6MPa	
Installation Method	ID 3" or 4" riser pipe installation	3" or 4" flange installation
Communication	RS485 Modbus RTU	
Power Supply	24~26VDC	
Max Communication Distance	1200m	
Probe Material	1Cr18Ni9Ti SMLS stainless steel	316L corrugated pipe
Floater Material	2.5" stainless steel floater or φ63mm plastic floater	
IP Rating	IP67	
Blind Area	200mm fuel, 25mm water (2.5" floater)	
Inspection Time	1s	
Hardware Parameter Settings	Compensation and setting for fuel level and water level	
Explosion-proof	Exia II BT4 Ga	Exia II AT4

Model	PWD-CM1 Smart Touch Console
Purpose	To display, alarm and store the data from probe
Power Supply	AC220V±10%/50Hz
Working Temperature	-40~70℃
Working Humidity	0-90%
Screen	7Inch Real-color touch-screen
Display Mode	English, graphic, LCD
Connected Tanks	1~12 tanks
Sound and Light Alarm	Available
High/low Fuel Level Alarm	Available
High Water Level Alarm	Available
High/low Fuel Temp. Alarm	Available
Record Storage	1 year
Transmission Mode with Magnetostrictive Probe	RS485 Modbus RTU(within 1200m)

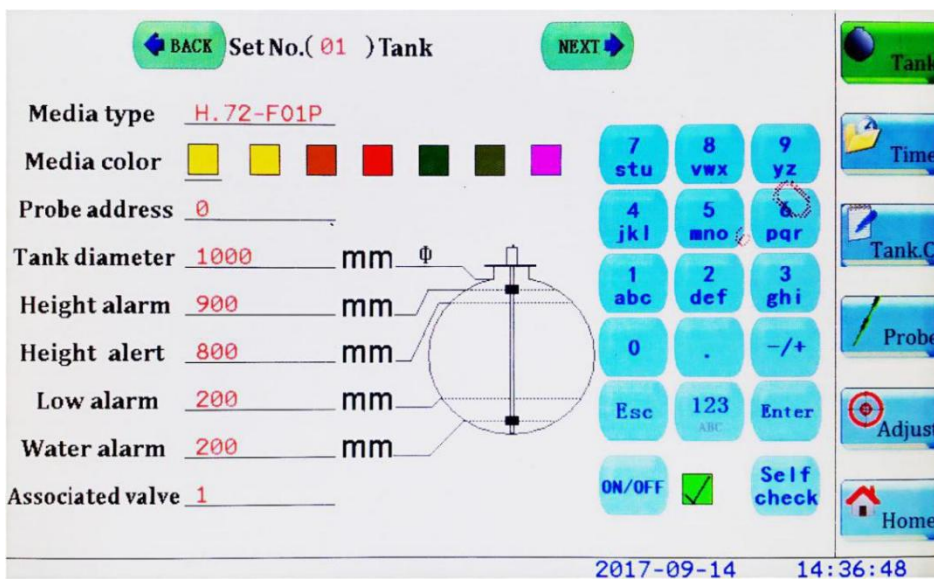
Transmission Mode with Central Control System	1 interface of RS232 Interface (within 15m)
Analog Output	Optional for 4-20mA, 0-5V or 0.5-4.5V output
Ethernet Port	1 port
SD Card	Optional
Leakage Detection	Optional
Printer Function	Optional
Data Uploading	Optional
Language	English/Chinese
Dimensions	400mm x 300mm x 200mm

Photos Reference

Main Interface of Console



Tank Parameter Setup



The setup screen for Set No. (01) Tank includes the following parameters and a numeric keypad:

- Media type:** H.72-F01P
- Media color:** Yellow (selected)
- Probe address:** 0
- Tank diameter:** 1000 mm
- Height alarm:** 900 mm
- Height alert:** 800 mm
- Low alarm:** 200 mm
- Water alarm:** 200 mm
- Associated valve:** 1

Navigation buttons: BACK, NEXT, Tank, Time, Tank.C, Probe, Adjust, Home. The status bar at the bottom shows "2017-09-14" and "14:36:48".

Leakage Records(there also shift, unloading, alarm records)

Last month
(09) Leakage records
Next month

Shift
Unload
Leakage
Alarm
Tank.C
Home

NO.	Start Time		End Time		Leakage rate
	Height	Volume	Height	Volume	

2017-09-14
14:40:05

Printing Reports

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*****Inventory Report*****
Tank :1#
Product: DIESEL
Product Height: 1324.1 mm
Product Volume: 3719.6 Ga1
Water Height: 86.0 mm
Water Volume: 77.8 Ga1
Product Temperature: 30.3℃
Ullage: 2541 Ga1

Tank :2#
Product: REGULAR
Product Height: 1252.6 mm
Product Volume: 2989.3 Ga1
Water Height: 93.3 mm
Water Volume: 77.3 Ga1
Product Temperature: 30.6℃
Ullage: 1891 Ga1

Tank :3#
Product: PREMIUM
Product Height: 1798.7 mm
Product Volume: 8947.4 Ga1
Water Height: 93.4 mm
Water Volume: 132.8 Ga1
Product Temperature: 30.6℃
Ullage: 5601 Ga1
*****END*****

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2017-08-08 09:39:03

*****Delivery Report*****

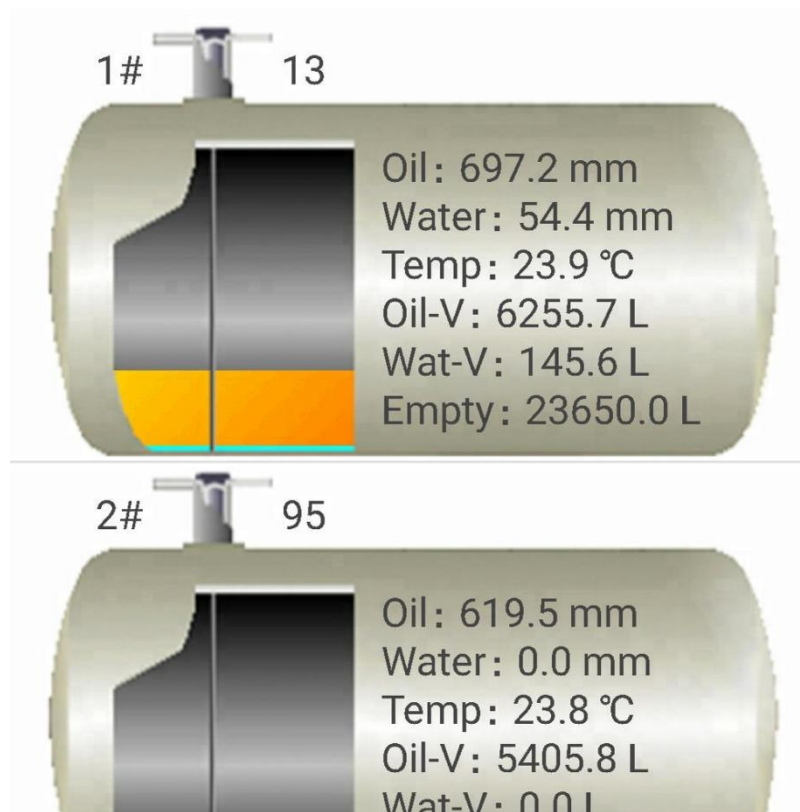
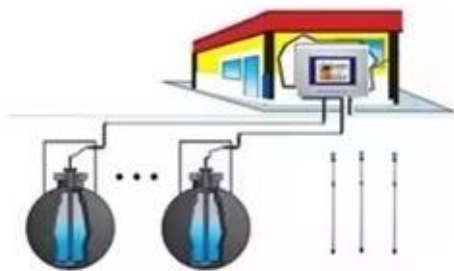
Tank: 1 #
Product: Diesel
Start Height: 10152.8 mm
Start Volume: 10152.8 L
End Height: 10152.8 mm
End Volume: 10152.8 L
Total Deliver Volume: 1781.1 L

*****END*****

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Internet Function

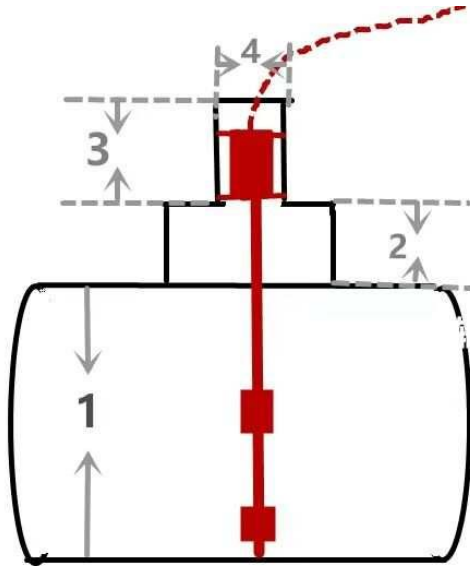
With APP or Web to login, to realize remote monitoring for petrol station tank gauging system.



How to Order

Should to provide those information to us for evaluation of probe dimensions:

- #1: Tank diameter= _____ cm
 #2: Tank neck height= _____ cm
 #3: Riser pipe height= _____ cm
 #4: Riser pipe inner diameter= _____ cm



1. Tank diameter= _____ mm

2. Tank Neck = _____ mm

3. Riser pipe = _____ mm

4. Riser pipe inner diameter= _____ mm

***Tell us medium / which application / measuring range / working temperature / signal output / what you wanna to realize, our sales engineer will recommend suitable model for you.*