

DATASHEET

Level

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



Description

Magnetostrictive Liquid Level Meter (Tank gauging system) for gas stations consists of Magnetostrictive Probe + PTCM-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°C				
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 lev	vel 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°C	
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



Tank Parameter Setup





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

NO.	Start Time		End Time				
	Height	Volume	Height	Volume	Leakage rate	Un	
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Printing Reports

Tank :1# Product: DIESEL Product: Volume: 3719.6 Gal Water Height: 86.0 mm Water Volume: 77.8 Gal Product: remperature: 30.3 cc Ullage: 2541 Gal Product: REGULAR Product Volume: 2989.3 Gal Water Height: 93.3 mm Water Volume: 77.3 Gal Product I emperature: 30.6 °C Ullage: 1891 Gal Product PREMIUM Product Premerature: 30.6 °C Ullage: 1891 Gal Product Volume: 2947.4 Gal Water Height: 1798.7 mm Product Volume: 8947.4 Gal Water Volume: 132.8 Gal Product Temperature: 30.6 °C Ullage: 5001 Gal ************************************	2017-08-08 09:39:03 ******Delivery Report************************************



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





**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.