MMS-TL Series Materials Management System – Tank Level

More than just another level measurement company ....
PRODUCT INTRODUCTION
The MMS-TL Series is a materials management software system designed to provide an efficient and high value method to manage bulk solid or liquid material inventories in tanks, silos and many different types of containment storage vessels. The MMS-TL series software system can replace your labor-intensive manual measurement and data collection process. A choice of Aplus Finetek Sensor’s level measurement and inventory monitoring sensors can be integrated into the MMS-TL software. This will also make the process of measuring your material levels safer by eliminating personnel from climbing the tanks and silos to measure the material level. The MMS-TL series software system will provide more effective materials management, reducing operating costs, improving personnel safety and improving profitability.

FEATURES
1. Graphic user interface with easy setup of system and vessels including Group ID, Com Port, Baud Rate, Connected Device Range, Tank/Silo Name, Tank/Silo Number, Sensor Type, MODBUS Sensor ID, Choice of Tank/Silo Type and Dimension Parameters, High/Low Level Alarms, Alarm Notification Setup and more.
2. Items displayed include Sensor Type, Tank/Silo Name, %-Full, High Level, Low Level, Material Level, Volume, Weight and Status Alerts, etc.
3. Sensor diagnostic and material level alarms that are detected will be displayed and alarm alert notifications can be setup to be sent by email.
4. Historical data can be viewed and exported in text or spreadsheet formats.
5. Account setup can distinguish between Admin and Operator access rights.

MINIMUM SYSTEM REQUIREMENTS
- CPU – 1Ghz Pentium 4
- Internal Memory – 512MB RAM
- Operating System – Windows 2000 or Above
- PC machine type – 32 or 64bit
- Hard Drive Storage Space – 1GB storage for database
- Connection to PC – Via RS485*

* Use RS485-to-RS232 convertor to connect to MODBUS RS485 sensors
* Use RS485-to-USB convertor to connect to MODBUS RS485 sensors
SYSTEM DESCRIPTION
The MMS-TL materials management system utilizes level measurement instruments to measure and continuously monitor the level of liquid or bulk solids in a storage vessel, tank or silo. Most sensor technologies will measure empty space distance and report the measured distance to the material surface, as well as reporting the material level, to the MMS-TL software via the RS485 MODBUS sensor network. Consult with Aplus Finetek Sensor, Inc. for available sensor technologies for your specific applications.

The MMS-TL software can provide information to the user in graphical and discrete formats, including sensor type, silo name, %-full, high or low level alarms, distance, material level, volume and weight. An alarm alert notification system is also included. Users can view and access measurement data locally or remotely (via TCP/IP Internet connection access) using a standard web browser.
**Home Page**

From the Home Page the operator can view the graphic depiction of up to four (4) tank/silo information including: Silo Number, Sensor Type, Silo Name, Silo High Level, Silo Low Level, Material Level, % Full or Material Remaining, Material Volume, Material Weight, Status Alert and more. If there are more than four (4) sensors connected, multiple Home Pages will be created to contain all the silos that exist within the system.

**Serial Port Setup**

Setting up your serial port is simple. You will need a convertor to connect the RS485 MODBUS sensor network wires (two + / -) to your PC. Aplus Finetek Sensor, Inc. offers an RS485-to-USB convertor, part number YTXUSB485-T, that has been fully tested with the MMS-TL software and PC's meeting software system requirements. Information required for setup of your serial port is as shown in the serial port setup page and include: Connected Group ID, Com Port, Baud Rate, Polling Time, Connection Timeout and Connected Device Limit, etc.

**Silo Parameter Setup**

A total of thirty-two sensors can be connected to the MMS-TL software using a single RS485 network connected to one PC com port. Up to nine (9) sensor networks can be connected (requires nine com ports in the PC). This means the MMS-TL can be setup to provide access to and information on a maximum of 288 sensors via RS485 MODBUS communications networks. Whatever the number of silos you will have in the MMS-TL materials management system the setup of each silo is the same. Silo parameter setup includes setting of the following parameters for each silo: Silo Name, Silo Number, Sensor Type, MODBUS sensor ID, Connected Group ID, Choice of Silo Type and its associated dimension parameters, High Level / Low Level alarm information, Timeout Check Interval, Logging Interval, etc.
History Query

Historical measurement information can be viewed, exported and printed for further review and analysis. The History Table/Graph can be established by entering the period of time for the historical query and the Silo number.

Alarm Setup

Sensor and material level alarms can be set for each silo or tank. The setup of each alarm for each silo allows setting for visual and remote alarm notifications. The remote alarm notifications can be sent by email. Setup includes setting email SMTP server, response time interval, etc.

Account Setup

Multiple users can be allowed to access the MMS-TL software database locally or remotely. Account Setup allows you to control the type of account each user has, which then sets the permissions for each user. Users can be setup to be either an Administrator or Operator. Administrators have full access and setup permissions while the Operator accounts are limited in what they can do, primarily limited to viewing information and exporting historical data.