

DTGS Integrated Marine Tank Gauging System

A purpose designed modular, expandable, and simple to install solution

T: +44 (0)1444 410040 E: sales@psmmarine.com
www.psmmarine.com



Key features

- Complete Tank & Draught monitoring package with centralised processing & display and output to other systems
- Screen layout is defined for each application for maximum clarity with specific arrangements for tank level and Draught
- Multiple repeater display options
- Low cost of installation
- Multi-drop interconnection means simple cabling
- Real-time display with option for data logging
- Small space efficient design for both panel and wall mounting
- All system elements designed to work together:
 - VPM 4300 display panel
 - RFM connection modules
 - APT1000 level transmitters

Part of the **TankWatch** product group

PSM Instrumentation Ltd, Unit 3 Burrell Road, Haywards Heath, West Sussex, RH16 1TW. UK

DAT 19H Oct 2020



KEY FEATURES

- Centralised display of all onboard tank contents.
- Tank level transmitters in a choice of corrosion-proof materials for ballast and oils.
- Simple installation with multiple mounting options and single cable networked interconnection.
- Supplied pre-configured for the specific application.
- Onscreen alarm warnings with outputs for remote audible / visual alarms.
- Serial communication of all data to other systems.
- Option for repeater displays and can be Intrinsically Safe Certified.

BENEFITS

- Low installed cost with minimal cabling.
- Fast plug and play commissioning.
- Simple touchscreen operation.
- Clear and comprehensive display of real-time status.
- Accurate monitoring of all onboard fluids.
- Equipment is Marine Type Approved.

The DTGS is the perfect solution for tank level measurement for tugs. For more information or to download a datasheet please visit www.scanjetpsm.com or email sales@psmmarine.com



PSM Instrumentation – Specialists in Marine Control Instrumentation and Marine Protection Systems

Established for 40 years, PSM Instrumentation, based in the UK, is a specialist in the design, manufacture and supply of marine instrumentation for vessels of all types. PSM is part of the Scanjet Group, a leading global supplier of intelligent tank management (ITAMA), providing a single source total package for the marine market.

VPM 4300 Data Acquisition, Processing, and Display Module.



Key features

- Acquisition, processing, display, and control module providing a full tank gauging solution
- 7" VGA high visibility touchscreen
- Powerful ARM A9 Quad core processor running Linux O.S. 1 GB DDR RAM and solid state memory with 100% Back-up
- Dual Independent RS485 I/O ports supporting Modbus RTU. Ethernet Port for interconnection of multiple display units
- Panel or wall mount installation
- Versatile HMI that is used by PSM as a tank gauging solution but is equally well suited to development for other acquisition and display applications

Name	Content	SG	Volume	UOM	%	Level	UOM	Alarm
FRESH WATER N1 9H03	Fresh Water	1	751	Litres	3	107	mm	LOW
FRESH WATER N2 9H04	Fresh Water	1	743	Litres	3	103	mm	LOW
GREY WATER N1 9H01	Grey Water	1	197	Litres	2	98	mm	LOW
GREY WATER N2 9H01	Grey Water	1	196	Litres	3	122	mm	LOW
OILFREE WW N1 9H01	Waste Water	1	131	Litres	9	215	mm	LOW
OILFREE WW N2 9H02	Waste Water	1	0	Litres	0	118	mm	LOW
WATER MIST 9H03	Water	1	0	Litres	0			
OW COLLECTING 9H03	Oil Water	1	681	Litres	14			

Alarm Acknowledgement

Name	Alarm	
DFM N1 9101	LOW	Acknowledge
DFM DS N2 9G05	LOW	Acknowledge
DFM N4 9G01	LOW	Acknowledge
		Acknowledge ALL
		Alarm History

Fwd	2549mm	Trim	479mm
Aft	3028mm		
Port	827mm	Heel	0°
Stbd	827mm		

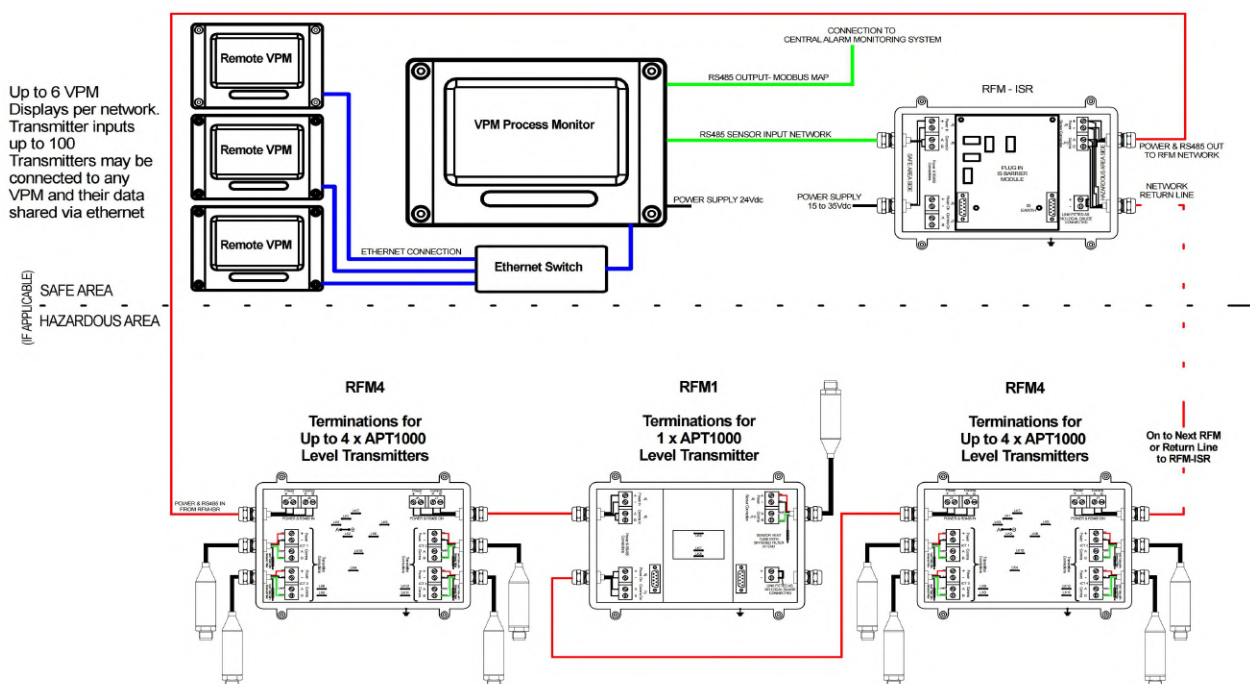
Draught Corrections

Main SC Edit Alarms Draught Ballast DFM

DTGS A Flexible and Scalable Solution for Shipboard Tank Gauging

The VPM Display is at the heart of the PSM flexible monitoring solution. It combines all functions of data acquisition, data processing, local display, and remote reporting. Input data is collected from PSM APT1000 level transmitters via an RS485 multi-drop connection, using industry standard Modbus protocol. This RS485 network is built up using PSM's RFM termination modules to realise a system with minimal cabling. Just one 4 core cable carries both power and communication signals across the entire network. For Intrinsically Safe installations purpose designed Safety Barriers from PSM allow the entire network and all transmitters to be protected with just one Barrier component. Where the input is of a conventional signal type, e.g. 4-20mA for tank level or pressure, PT100 for temperature, or volt-free contacts for status or alarm conditions, these are connected via distributed acquisition modules that may also be connected to the VPM via the RS485 port.

Example system architecture



Presentation is designed for clarity of information and is tailored for each installation with specific input / tank names, units of measure, status etc. Data is arranged in "groups" immediately accessible via dedicated on-screen buttons. Vessel draught, trim, & heel have a dedicated display layout

The system may be supplied fully configured with all data loaded for its intended application, however, all configuration is user editable via the touchscreen. Password protection with multiple access levels ensures that only authorised personnel can make changes. The complete system configuration can also be uploaded via temporarily connected USB memory device, and full support tools are provided for generating the configuration file on a PC before uploading.

Up to 6 VPM's may be interconnected via a dedicated Ethernet connection. Each can share information so that data collected by one VPM is available for display by the others.

For local alarm annunciation VPM features four configurable relay outputs to connect to external visual and audible devices.

The VPM can also output a complete Modbus Map of all parameters which is available for other monitoring systems to read.