

MARRAD™

A NEW GENERATION IN CARGO TANK GAUGING

MarRAD™ is a cargo tank radar level gauging system highly accurate measurement of cargo tanks on all types of tankers where such a degree of accuracy is paramount.

The system comprises of stainless steel radar heads installed on deck and a central processing, display and control system usually located in the cargo control room (CCR). This control technology can be in the form of a marine industrial PC of a touch screen facility, both of which provide all cargo data in both graphical and tabular formats.

- ④ DUAL DISPLAY AVAILABLE
- ④ SIMPLE GRAPHICAL SCREEN DISPLAYS SHOWING ALL TANK ACTIVITY
- ④ INTEGRATES – LEVEL, TEMPERATURE & PRESSURE
- ④ LATEST RADAR LEVEL GAUGING HEADS
- ④ SINGLE CABLE COMMUNICATIONS NETWORK



SPECIFICATIONS

CONTROL DISPLAY OPTIONS

- Panel mounted IPC – Touch screen
- Remote PC with desktop/bezel mounted screen

MarRAD™ SOFTWARE FEATURES

- Independent screens for cargo monitoring and ballast monitoring
- Fully programmable with vessels ullage tables
- Alarm history and data-logging facility
- Communications output to approved loading computer

MM7000™ RADAR HEAD

Measuring Range	up to 35m
Output	4-20mA, 2 wire system
Measuring Accuracy	3mm
Measuring Cycle	1 second
Certification	ATEX II 1/2 G EEx ia IIC T6
Product Temperature	Max 150°C
Process Connection	1 1/2" BSP Thread.

MM200™ PRESSURE SENSOR

Pressure Range	-1000 to +3000 mmWg
Material	Stainless Steel
Process Connection	1/2" BSP Thread
Signal Output	4-20mA, 2 wire system
Response Rate	≤ 1ms (10 ... 90%)
Accuracy	≤ 0.5 % of Span
Operating Temperature	-30 to +105°C
Ex-Protection	ATEX categories M1, M2, 1G, 1D 1/2G, 1/2 D, 2G, 2D

MM800™ MULTIPOINT TANK TEMPERATURE SENSORS

Output	4-20mA, 2 wire system (via transmitter)
Element	PT100 3 Wire Class A (FLEX TYPE)
Temperature Range	0-100°C
No of Elements	Up to 3 measuring points
Outer Sheath	3/4" Stainless Steel convoluted sheath with over braid
I/Conn	1/2" BSP thread
Process Conn	Eyebolt
Termination	1000mm PVC Lead
Probe Length	Up to 20m

MM500™ HIGH LEVEL / OVERFILL ALARMS

Temperature Range	-40 to +150°C
Product Density	>0.5g/cm ³
Power Supply	24Vdc
Sensor Material	316 St/St (optional hastelloy)
Process Connection	G 3/4"
Ingress Protection	IP66/67
Test Facility	In-situ magnetic test point

SMART BARRIERS

Inputs	2 wire 4-20mA from radar, temperature and pressure. Digital inputs from high level overfill alarms.
Safety Barriers	Integral with analogue and digital modules
Communications	MODBUS RS485 & Ethernet

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