

# Techtrol Tank Content Gauging System (Marine) : TCGS



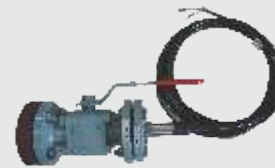
The system is specially designed for monitoring liquid level, volume and weight in multiple tanks on barges, ferries and offshore industries for services like fuel, AVCAT, LSHSD, lube oil, water tanks, bilge holding tanks and any other non-corrosive mediums.

## Salient Features :

- Animated Tank Level with Alphanumerical Display
- High/Low Alarms
- User Friendly Touch Screen Operations
- Brightness Adjustment for Display
- IP68 Transmitters to suit Marine Environment
- IRS Class Certified Gauging System
- Intrinsically Safe Transmitters for Hazardous Areas (Isolated Barriers)
- Remote Tank Levels in WP or Ex-P Panels.
- Customized Tank Gauging Solutions



HMI Display



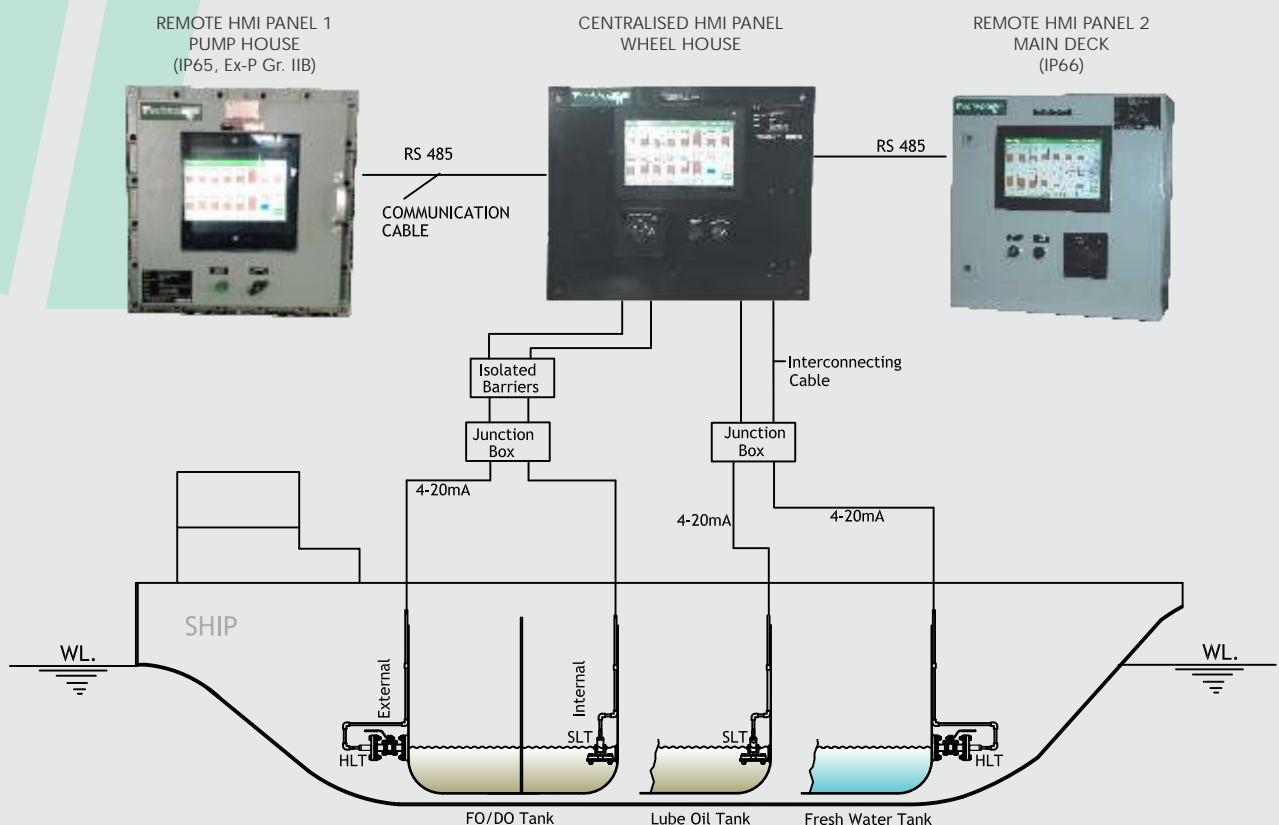
HLT (Side Mtd)



SLT (Top Mtd)

## System Overview :

Hydrostatic pressure transmitters (SLT/HLT) are installed on tanks. Analog input signals received from transmitters are processed through microprocessor based electronics and displayed on centralized HMI as level, volume & weight of liquid in animated format including high /low level alarms. In addition to centralized HMI, it is provided with two remote HMI's configured through RS485 for pump house and main deck respectively. For hazardous areas, transmitters are provided with isolated zener barriers. The system is available in three configurations depending on number of tanks.



Typical System Configuration with Centralized HMI and Remote HMI 's

## System Specifications :

### Configuration:

- TCGS 8 : 1 to 8 tanks with centralized and remote HMI's
- TCGS 16 : 1 to 16 tanks with centralized and remote HMI's
- TCGS 24 : 1 to 24 tanks with centralized and remote HMI's

### Touch Screen Display Panel

Panel	: WP IP66 or Ex-proof
Panel Size	: TCGS 8 - 400Hx300Wx150D, : TCGS 16- 400Hx500Wx150D, : TCGS 24 - 500Hx600Wx150D
Display Type	: Human Machine Interface (HMI)
HMI Size	: 4" (TCGS 8) or 10" (TCGS 16) or 12"(TCGS 24)

Indications : Level, Volume & Weight alongwith High / Low Alarms

Audio Alarm : Hooter with Reset Switch

Supply : 110VAC or 230VAC or 24VDC

Amb. Temp. : 0 to 50°C

### Hydrostatic Pressure Transmitters

Type : SLT (Submerged & Top Mounted) or HLT (Side Mounted)

Ranges : upto 10 mtrs depending on tank sizes

Supply : 24VDC

Output : 4-20mA DC

Cable MOC : Polyurethane

Probe MOC : SS316

Protection : IP68 (SLT), IP65(HLT)

Diaphragm MOC : SS316L

Max. Temperature : 80°C

Max. Pressure : Atm

Process Conn. : 1.5"NB ANSI 150# Flange (HLT)  
1.5"NB ANSI 150# Flange + Socket (SLT)

### Isolated Zener Barrier for Hazardous Area

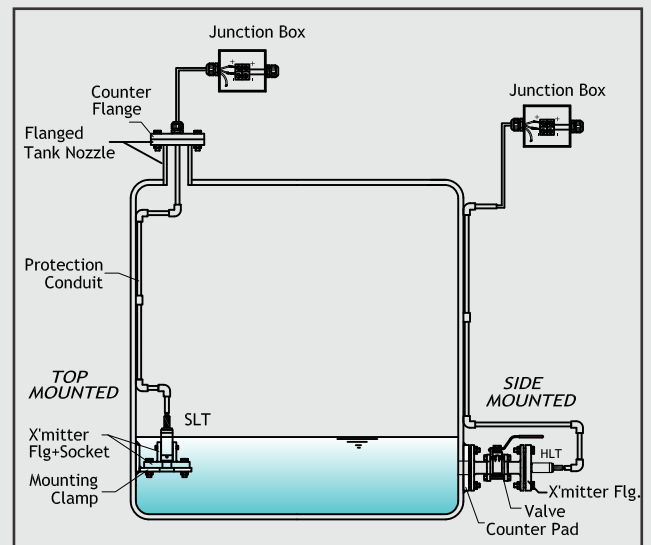
Supply : 24VDC, Input: 4 - 20mADC, Output: 4 - 20mADC

### Installation Accessories :

- 1) Isolation valves for side mtd. x'mitter (one each)  
1.5"NB flanged ball valve (ANSI 150#) x CSA105 MOC
- 2) Weldable mtg. clamp for top mtd. x'mitter (one each)  
Sheet plate, 155 x 140 mm
- 3) Weldable counter pad for side mtd. x'mitter (one each)  
Sheet steel x 1.5"NB ANSI 150#
- 4) Flanged tank nozzle for top mtd. x'mitter (one each)  
1.5" NB Sch 10 nozzle + 1.5"NB ANSI 150# x CSA105 MOC

- 5) Tank counter flange with cable gland for top mtd. x'mitter (one each)  
1.5"NB ANSI 150# x CS A -105 MOC, PG11 cable gland x brass MOC
- 6) Conduit pipe with elbows & clamps : GI, 1"NB 6)
- 7) Transmitter junction boxes (one for each x'mitter)  
ABS, WP IP65, (Size 80x85x55mm)
- 8) Intermediate junction boxes: Cast Al. WP IP 65
- 9) Interconnecting cable: 2 core 1.5mm<sup>2</sup>PVC cable, LFH type to suit marine class
- 10) Communication cable: 2 core shielded PVC cable.

## Installation :



## Applications :

Ferries, Barges, Offshore Platforms and Retrofit Projects.

## Ordering Information :

1. System configuration + no. of tanks.
2. Tank details with mounting position (top or side)
3. No. of remote displays and junction boxes required.
5. Length of interconnecting cable (tank to display panel)
6. Length of communication cable (centralized to remote display panel)
7. Strapping table for volumetric indication.

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