

### Ullage Space Pressure Monitor

Comply with New SOLAS Regulation  
Alarm Monitor to watch excessively high and/or  
too low pressure in tank

### Ullage Space **Pressure Monitor**



#### ■ OUTLINE

This is the pressure measuring system having the element constituted the provision for the prevention of the emission of volatile organic compounds being prescribed in the regulation 15 of MARPOL (International Convention for the Prevention of Pollution from Ship), Annex VI .

This is the ullage space pressure monitor corresponded to the requirement of SOLAS Regulation.

This system can continuously monitor an excessively high and/or too low pressure arising in the cargo tank during loading, unloading, oil transfer between tanks and/or due to a waving of temperature during navigation, and output a high and low pressure alarm at abnormal conditions.

The monitor is also available to use as a pressure sensor for vapor return gas corresponding to the requirement of USCG, VCS.

#### ■ STANDARD SPECIFICATION

- Construction;  
Intrinsically Safe Explosion Proof: Ex ia II CT6
- Material exposed with gas;  
Main Body : SUS316L  
Diaphragm : Ceramic
- Measuring Range;  
Ullage Space and Gas Return line Sensor:  
800 to 2000 hPa (abs)  
Atmospheric Sensor: 900 to 1100 hPa (abs)
- Accuracy;  $\pm 1\%$  F.S

#### ■ FEATURES

- High Everlasting;
- Easy for Calibration and Maintenance
- It is available to use as a sensor to detect inert gas pressure in tank vessel.

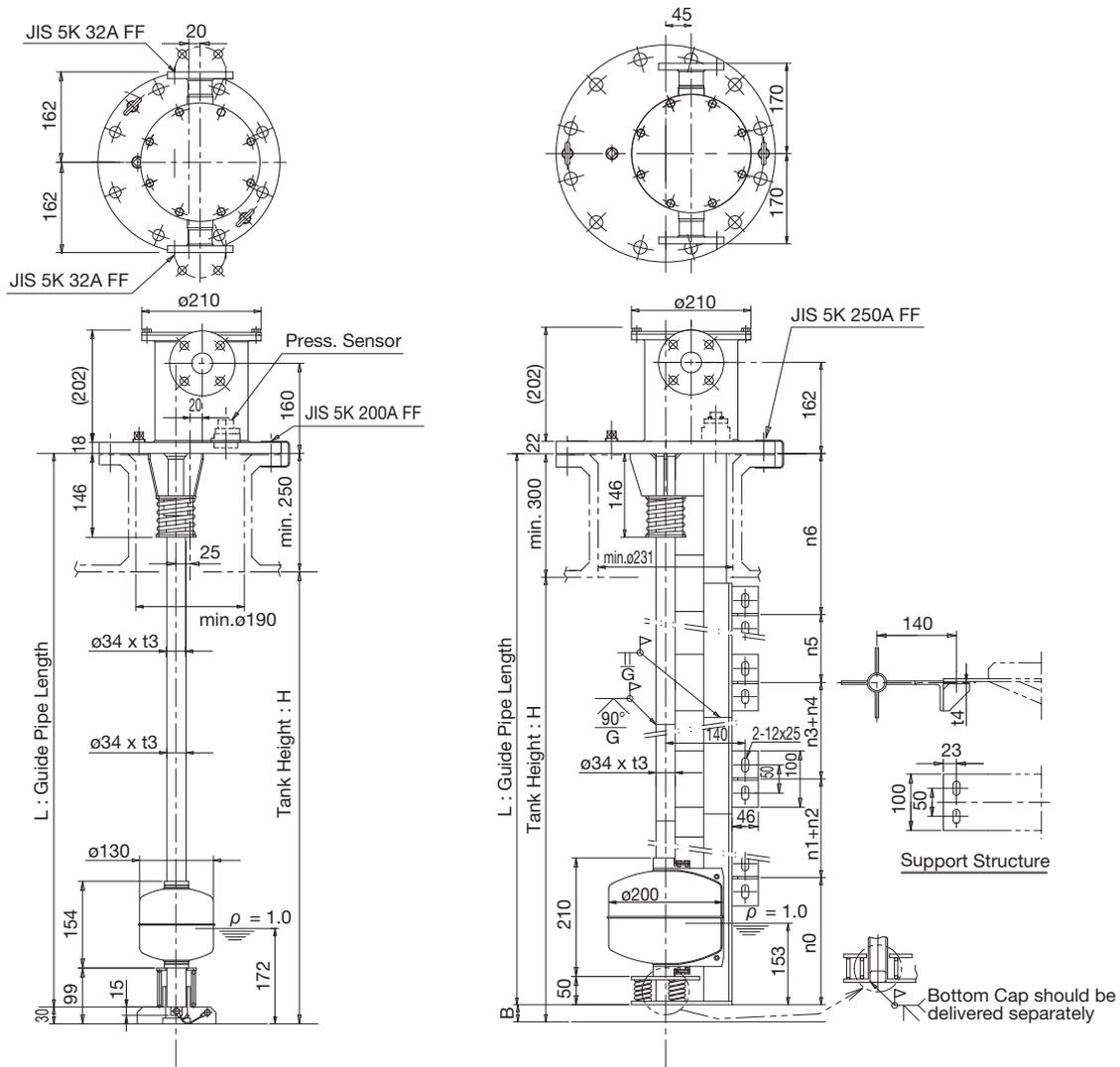
■ COMBINATION TYPE WITH LEVEL GAUGE

SP(T)-3500 Series

SPT-3500		—		Content
Construction (IP65)	W			Non-Explosion Proof Type
	S			Intrinsically Safe (IS) Type: Ex ia II CT6
Fitting Number of Temperature Senso		1R		1 Point (1 Sensor)
		2R		2 Points (2 Sensors)
		3R		3 Points (3 Sensors)
Fitting of Pressure Sensor (T901-P01A)			P	800 – 2000 hPa (Absolute: abs)

Note: 1. Safety Barrier, TZB-101 shall be used for S Type.  
 2. It shows that SP-3500 is without temperature sensor and SPT-3500 with temperature sensor (s).

■ STANDARD CONSTRUCTION



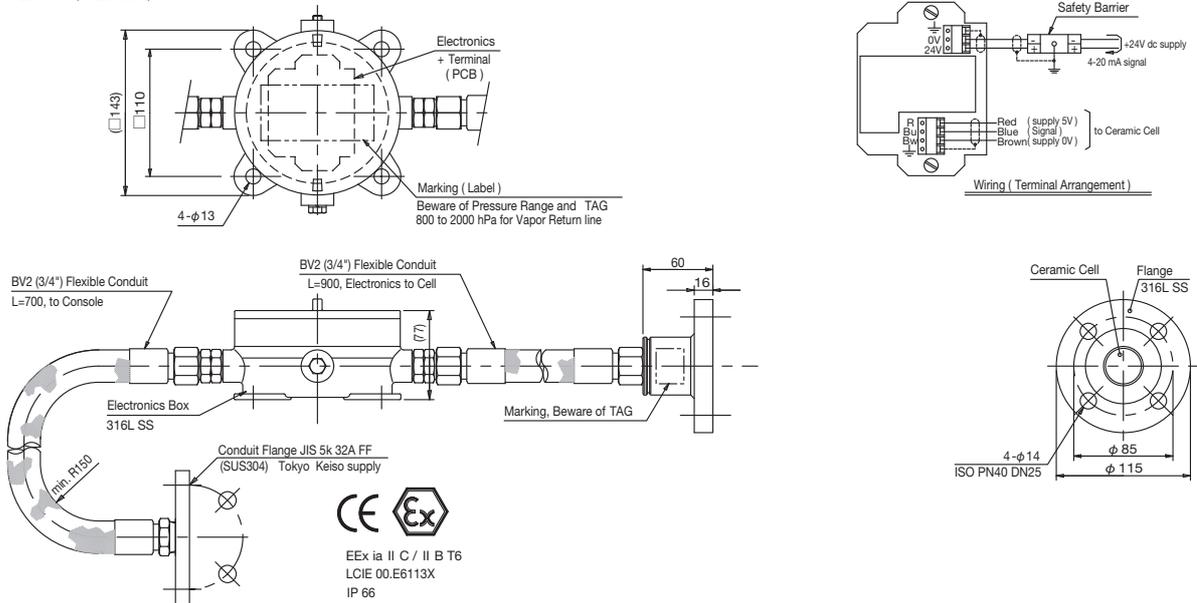
■ INDEPENDENT TYPE

PL3700 / PL3700ATM Pressure Transmitter

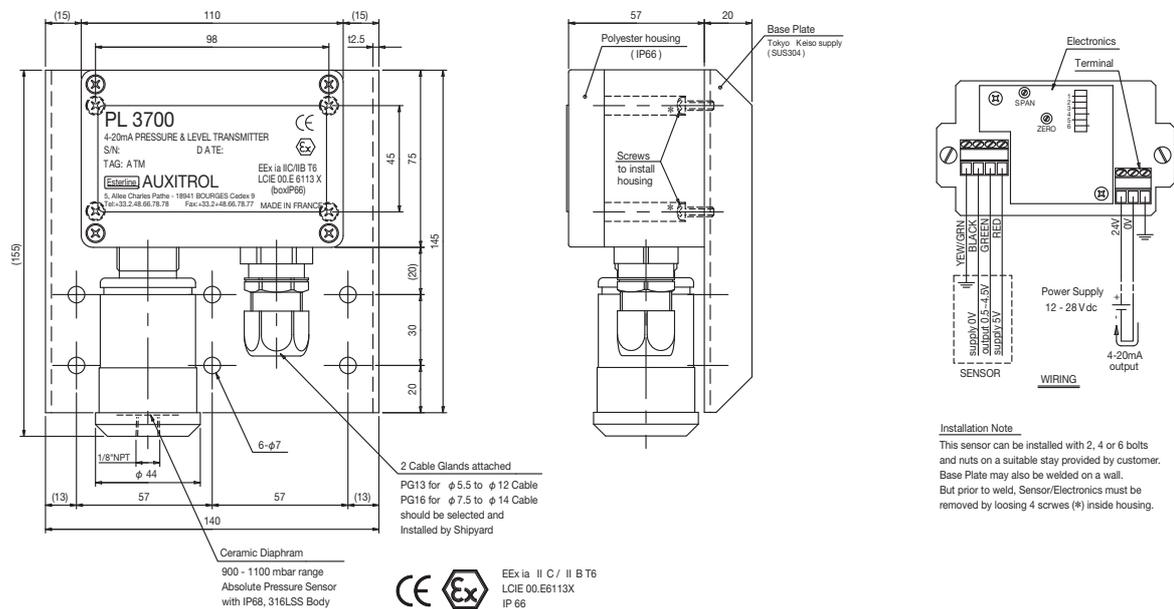
Specifications		PL3700	PL3700ATM
Material of diaphragm		Ceramics	
Measuring method		Absolute pressure	
Measuring range		800 to 2000 hPa	900 to 1100 hPa
Flange on sensor side (Standard)		PN25 and DN25 (Welding type)	—
Material of terminal box		316L SS	<ul style="list-style-type: none"> <li>• Polyester</li> <li>• Base plate: SUS304</li> </ul>
Operating temperature range		- 25 to 70°C	
Structure	Sensor assembly	IP68	
	Box	IP66	

■ CONSTRUCTION

Ullage Space Pressure Sensor / Vapor Gas Pressure Sensor  
PL3700 (4-20mA)

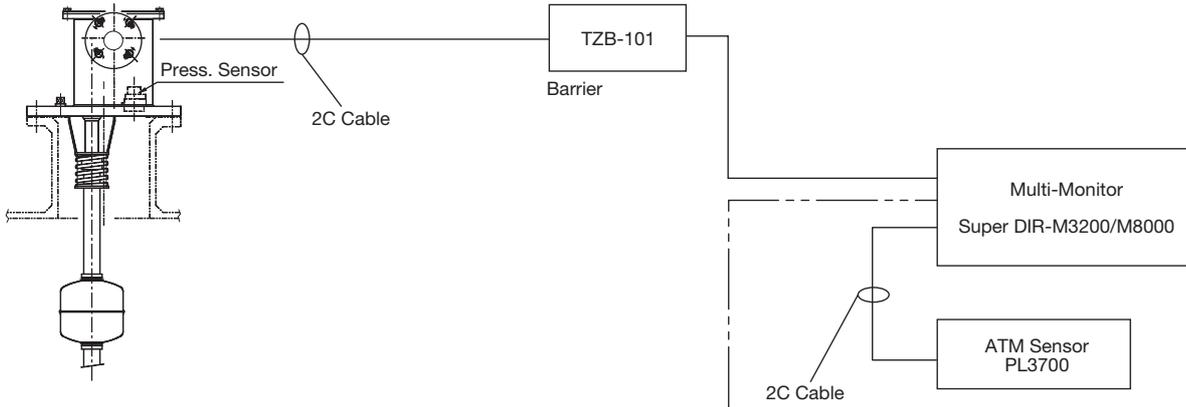


Atmospheric Pressure Sensor  
PL3700ATM

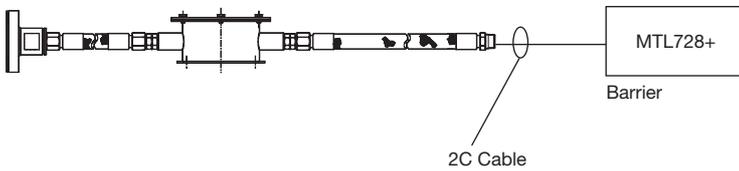


SYSTEM

SP-3500 Series



PL3700 Series



OTHER INSTRUMENTS FOR MARINE APPLICATION

Besides SPT-3500, the following level gauges and relevant instruments for marine applications are available from Tokyo Keiso.

- SP-1200: Flow Magnet Type Level Gauge
- SP-7200: Magnet Float Type Level Gauge with using Contact less Hall IC
- PL3700: Pressure Sensor using for Ullage Space in Tank and/or Gas Return Line
- MIA-LIDEC: Acoustic Type High level, Overfill Alarm and/or Dryness Sensor
- FP-7091S-T: Float Type High and Overfill Alarm
- FB-5000, FB-7000: Float Type Bilge Level Alarm

\* Specification is subject to change without notice.

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