

GENERAL

The **SPT3500N series** is the successor to the popular SPT-3500 series with high reliability, durability, and a solid track record. The field indicator comes with a two-line large display with backlight, which improves the efficiency of work at night.

As in the previous model, the **SPT3500N** uses Hall IC, which is reliable for level measurement. The **SPT3500N** is the latest magnet float level gauge that can measure liquid level, temperature, and pressure of ullage space.

The **SPT3500N** is ideal for measuring and managing liquid cargoes of various vessels such as large crude oil tankers, small coastal tankers, chemical tankers, LPG tankers, and product carriers.

FEATURES

- ❑ **COMPACT AND COST SAVING DESIGN**
- ❑ **SEPARABLE LCD FIELD INDICATOR**

Visibility is improved with a two-line large display (for level and temperature) with backlight.

Separable indicators can be gathered at a place convenient for valve operation.

(Note that pressure is not displayed on the LCD indicator.)
- ❑ **TEMPERATURE AND PRESSURE MEASUREMENT**

In addition to standard liquid level measurement, ullage space pressure and maximum 3 points temperature are possible.
- ❑ **2 CORE CABLE DATA TRANSMISSION**

Liquid level and maximum 3 points temperature and pressure data are sent to CCR monitoring by serial BCD signal through 2 core cable only including power supply to the deck. This achieves easy wiring.
- ❑ **16 bit CPU DATA PROCESSING**

Intelligent signal processing unit with 16 bit micro processor achieves high reliability and high function such as self diagnosis and setting of measuring liquid density.
- ❑ **FULL LINE UP OF REMOTE INDICATION SYSTEM**

Full line up from individual gauge to computer based system is ready to meet the requirements.



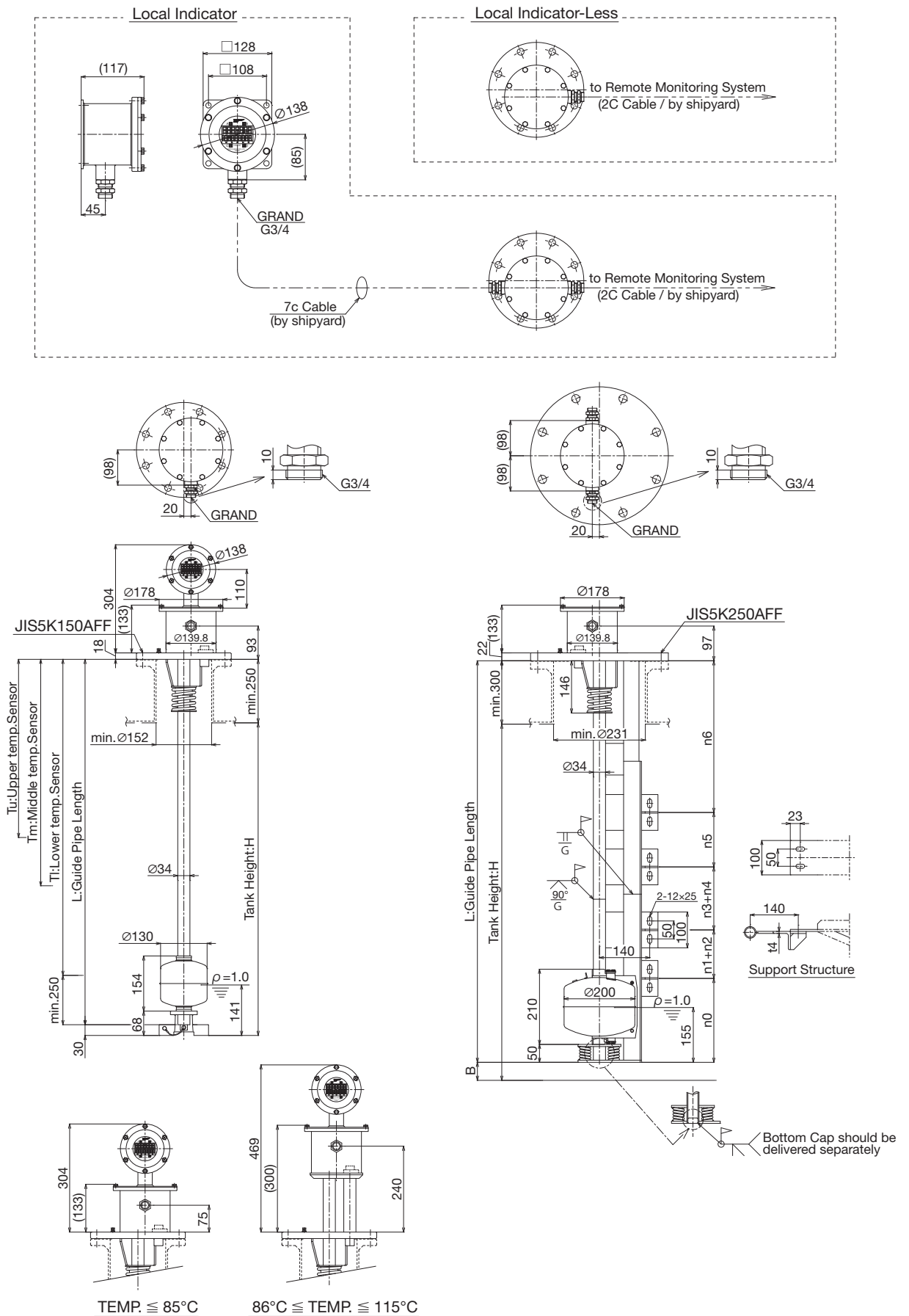
MODEL CODE

SP		35								Specifications	
Faction of temperature measurement										Not provided temperature measurement	
	T									Provided temperature measurement	
Level sensor implementation, resolution and accuracy		1								10mm pitch sensor	
		2								20mm pitch sensor	
LOG3500 Local indicator		0								Not provided local indicator	
		1								Provided local indicator on the terminal box	
		2									Provided local indicator for separate
Intrinsically Safe Type Ex ia IIC T4, T5 and/or T6		NS								Intrinsically Safe Type with use safety barrier (TZB-101)	
		NW									Non Intrinsically Safe Type
Quantity of temperature sensor										Not provided temperature sensor	
		-1R								1 point provided temperature sensor	
		-2R									2 points provided temperature sensor
		-3R									3 points provided temperature sensor
Ullage space pressure sensor (Not available for LPG tanker)										Not provided pressure sensor	
		P									Provided pressure sensor
Temperature of Cargo liquid										Standard specification (Max. 85°C)	
		H									High temperature specification (Max. 115°C)

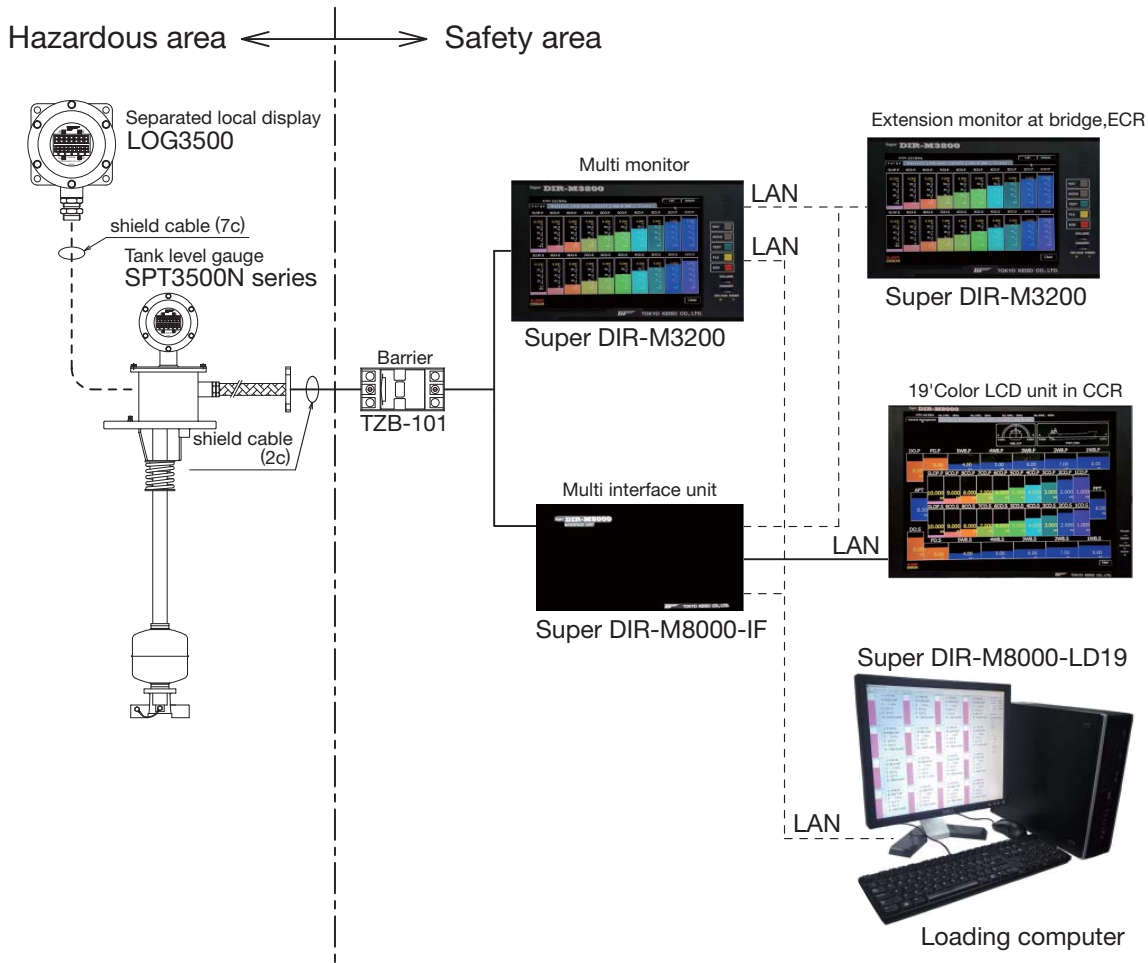
SPECIFICATIONS

- Measurement object: Level and temperature of liquid cargo
 - : Standard density range: 0.60 to 1.9 g/cm³
 - : Density range for LPG : 0.43 to 1.0 g/cm³
- Measuring method:
 - : Level: Hall IC sensor with magnet float
 - : Temperature: Pt 1000 RTD
 - : Pressure: Absolute type ceramic membrane sensor
- Temperature range: (selectable)
 - : Ambient : -20 to +70°C
 - : Cargo liquid : -25 to +85°C (Standard)
-25 to +115°C (High temp. spec.)
- Measuring range:
 - : Level : -1.000 to 35.000 m (Max. 35 m)
 - : Temperature : -25 to +115°C
 - : Pressure : 80.0 to 200.0 kPa
- Measuring accuracy:
 - : Level : ±20 mm (Standard) / ±10 mm (Option)
 - : Temperature : ±1.5°C
 - : Pressure : ±0.5% F.S. (Output signal)
- Local indicator
 - : 2 paragraphs LCD display for level and temp. data
 - : Provided lamp
 - : Magnet pin externally for operation and setting
- Material
 - : Float : SUS316L (Standard) , TP340 (for LPG)
 - : Terminal box : SUS304 (Standard)
 - : Flange : SUS304, SUS316, SUS316L
 - : Guide pipe : SUS304, SUS316, SUS316L
- Protection grade: IP66 / IP67
- Explosion proof grade: Ex ia IIC T6, T5 and/or T4
- Maximum temperature of cargo liquid for explosion proof
 - : Ex ia IIC T6 : Max. 70°C
 - : Ex ia IIC T5 : Max. 85°C
 - : Ex ia IIC T4 : Max. 115°C

EXTERNAL DIMENSION



SYSTEM CONFIGURATION



SYSTEM CONFIGURATION

Besides SPT3500N, the following level gauges and relevant instruments for marine applications are available from Tokyo Keiso ;

- SP-1200 : Mechanical magnet float type level gauge
- SPT-7200 : Magnet float type level gauge
- MIA-LIDEC : Acoustic wave type High level/Overfill alarm sensor
- FP-7091 : Magnet float type level switch for High level, Overfill, Bilge alarm etc.
- FB-5000 : Float type level switch

* Specification is subject to change without notice.

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