# Product

# **Nautical Instrument**

We keep taking advantage of boundless uses of sensor. We developed all kinds of sensors including thermometer, anemometer, smell sensor and environmental purity sensor for our daily life use.



# Ultrasonic Type Wind Sensor

The ultrasonic Type Anemometer is a compact, self-contained, automatic station with no moving parts. The weather sensors and data acquisition computer are all contained in a single unit that is easy to install. Anemometer is ideal for severe and harsh environments aboard marine vessels. Anemometer offers the convenience of requiring no calibration or periodic maintenance.



Propeller Type Wind Sensor

Propeller Type Anemometer measures wind velocity and direction in real-time by rotation of transmitter. We can supply two kinds indicator-separated type or combined type.



# **3-Cup Type Wind Sensor** & Indicator

The 3-Cup Type Wind Tracker, wind speed and wind direction indicator offers big performance in a compact display. Wind speed is displayed in your choice of units: KNOTS, M/S. Maximum wind speed is saved on the display until reset by the operator. Wind direction information is clearly displayed on a circular compass pattern of LEDs. Multicolored segments give a quick visual indication of current direction and direction variability. Front panel brightness control allows adjustment for best viewing in any light.



### **Pressure Transmitter**

MCP-1 series Pressure Transmitter is designed to operate in hostile environments and yet give the outstanding sensitivity, linearity, and hysteresis of a silicon. Applications are process control system and biomedical instruments as well as ship.



### **Temperature Sensor**

The temperature resistance characteristic of platinum wire is internationally utilized for measuring temperatures in the range of -200°C to 600°C. Platinum thermal resistance bulbs are known to be most suitable when used as temperature sensors which require extreme accuracy and stability.



### Whistle

### Air Horn

The air horn is a diaphragm sound transmitter operating on compressed air. The signal is released by an electromagnet or manually using a hand pull-rope.

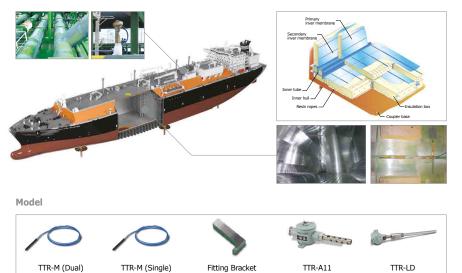
### Electric Horn

The electric horn is driven by an AC 3phase motor. An essential component is the piston inside the cylinder driven by an AC3phase motor via connecting rod, crankshaft and gearwheels.

### **Temperature Sensor for LNGC**

### **Temperature Sensor for GTT NO 96**

NO 96 Membrane System is a cryogenic liner directly supported by the ship's inner hull. This liner includes two identical metallic membranes and two independent insulation layers.



### Application

- 1) IS/IBS/Liquid Dome Temperature
- 2) BHD/Trunk/Sec. Space Temperature
- 3) LNG Liquid Temperature
- 4) LNG Vapor Temperature
- 5) Glycol Water Temperature
- 6) Spray Inlet Temperature
- 7) Atmospheric Temperature

#### Specification

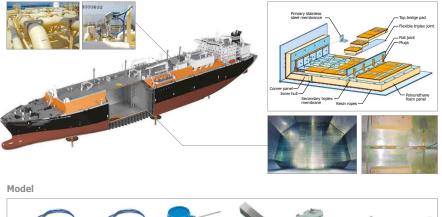
- Sensor type :  $RTD(Pt100\Omega)$
- According to IEC 60751
- R100/R0 = 1.3851
- R0 : Resistance value at 0  $^{\rm o}{\rm C}$
- R100 : Resistance value at 100 °C
- t : Measuring temperature

Operating Temperature	Class	Tolerance(°C)
-200 ~ 100°C	А	$\pm$ ( 0.15 + 0.002   t   )

#### **Temperature Sensor for GTT Mark III**

TTR-M (Dual)

MARK III Membrane System is a cryogenic liner directly supported by the ship's inner hull. This liner is composed of a primary metallic membrane positioned on top of a prefabricated insulation panel including a complete secondary membrane.



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TTR-M (Single)	TTR-M	Fitting Bracket	TTR-A11	TTR-LD	

#### Application

- 1) IS/IBS/Liquid Dome Temperature
- 2) BHD/Trunk Temperature
- 3) LNG Liquid Temperature
- 4) LNG Vapor Temperature
- 5) Glycol Water Temperature
- 6) Spray Inlet Temperature
- 7) Atmospheric Temperature

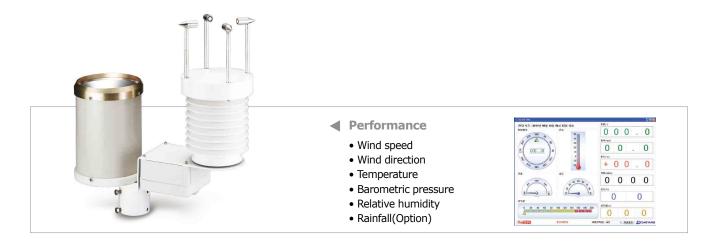
#### Specification

- Sensor type : RTD(Pt100Ω)
- According to IEC 60751
- R100/R0 = 1.3851
- R0 : Resistance value at 0 °C
- R100 : Resistance value at 100 °C
- t : Measuring temperature

Temperature	Class	Tolerance(°C)
-200 ~ 100°C	А	±( 0.15 + 0.002   t   )

# **WIS-200** Weather Information System

Weather Information System measures Wind speed and direction, Air temperature, and Barometric pressure, Humidity, Rainfall(Option).



Outputs RS422/RS232

Rainfall accuracy

Output rate	1sec
Units	m/s
Serial output format	Daeyang protocol
Serial output baud rate	2400,4800,9600,19200 or 38400 (Default : 9600)
Power	· · · ·
Power requirements	24Vdc (±20%) 4A
Environmental	
Operating temperature range	-40 ~ 70°C
Storage temperature range	-50 ~ 80°C
Specification	
Wind speed range	0 ~ 75m/s
Wind speed accuracy	±3%
Wind direction range	0 ~ 360°
Wind direction accuracy	±3°
Temperature range	-40 ~ 60°C
Temperature accuracy	0.3°C
Barometric pressure range	600 ~ 1100hP
Barometric pressure accuracy	±0.5hP
Relative humidity range	0 ~ 100%RH
Relative humidity accuracy	±3%RH
Rainfall range (Option)	0 ~ 250mm/h

±5%

- \* Weather Information System Protocol \$DEWMS,xxx.xx,R,xx.xx,M,A,H,xxx.x,T, sxxx.x,B,xxxx.x\*[CS] <CR><LF>
- \* Rainfall Protocol \$RAINxxx.xMM\*[CS]<CR><LF>