



SCIENTIFIC INSTRUMENTS

SI -7000

The New SI-7000 Tank Gauge System
The Leader in Rollover Prevention in LNG Storage Tanks



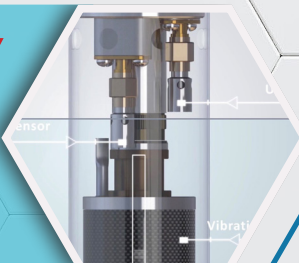
The latest generation SI Gauge model SI-7000 is the industry's leading solution for level, temperature, and density profiling in LNG & LPG storage tanks.

The third generation LTD from Scientific Instruments is designed to detect stratification and to provide the DCS and other host the data necessary for rollover prediction and prevention, as well as for fiscal calculations.

The LTD provides realtime and averaged measurement data that is used to monitor conditions inside the tank. This data also provides early warnings to plant operators, thus empowering them to make smart decisions and to take control of situations before becoming dangerous emergencies

PROVEN TECHNOLOGY

Accuracy & Reliability
Dedicated Sensors for Level, Temperature and Density embedded into a single housing / Probe



INNOVATION

Smart Electronics
Single Control Module, easily accessible for service & maintenance



RELIABILITY

Reliable Mechanical Drive
Robust 316 SS Vertical-Gear-Drive mechanism (VGD) & 304 SS Chain



CONNECTIVITY

Flexible Connectivity
Standard Serial MODBUS,
4 -20mA HART and Ethernet



About us

Scientific Instruments was founded in 1967 by Aeronautical Engineer Jack Hoey and Physicist Gib Halverson. Their core competence focussed on precision cryogenic thermometry. Their accomplishments include creating the first Germanium Resistance Thermometer (GRT) used by NASA for Apollo missions.

In 1975 they also invented / patented the first LTD system. An intelligent system comprising of multi-sensors embedded into a single probe capable of measuring Level, Temperature and Density inside LNG Storage Tanks. Current CEO Leigh Ann Hoey has been successfully leading & transforming the company while proceeding her Father's legacy

Why Choose us

- Original inventor of the first LTD in 1975, globally recognized as the "SI Gauge"
- Market Leader, with more than 500 units installed in LNG Storage Tanks around the world.
- Market focus, providing LNG and Cryogenic Measurement solutions since 1967.
- Global sales and technical support. Providing Turn-Key Tank Gauge Solutions



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SI-7000 Specifications

Level

- Range: 56 m
- Resolution: < 1 mm
- Accuracy: < ± 2 mm
- Top and Bottom reference

Protection Class

- Designed to meet IP65

Mounting Flange

- Standard 6" ANSI 150#RF
(more available upon request)

Temperature

- Sensor Range: -200°C to $+50^{\circ}\text{C}$
- Resolution: 0.01°C
- Accuracy: $\pm 0.1^{\circ}\text{C}$

Sensor Drive

- Stainless Steel Chain

Density

- Oscillating Spool
- Range: 400 to 1000 kg/m³
- Resolution: 0.01 kg/m³
- Accuracy: ± 0.5 kg/m³

Housing Material

- 316 Stainless Steel

Safety Certification

- IECEx / ATEX , cml Ex , PESO.
CSA (Pending)

Electrical

- Power Supply
- 85-264 VAC, 47-63 Hz, 150 W

Seismic Rating

- Designed to meet 3.0G (testing required)

Communications

- (2) Standard RS-485 MODBUS
- Optional; 4-20mA, HART & Ethernet

Stilling Well

- With or Without (Consult Factory)

Sensor Isolation

- Intrinsically Safe

Isolation Valves

- External Pinch Valve (Recommended)

Physical

Maximum Operating Pressure

- 400 mbarg (for higher, consult factory)

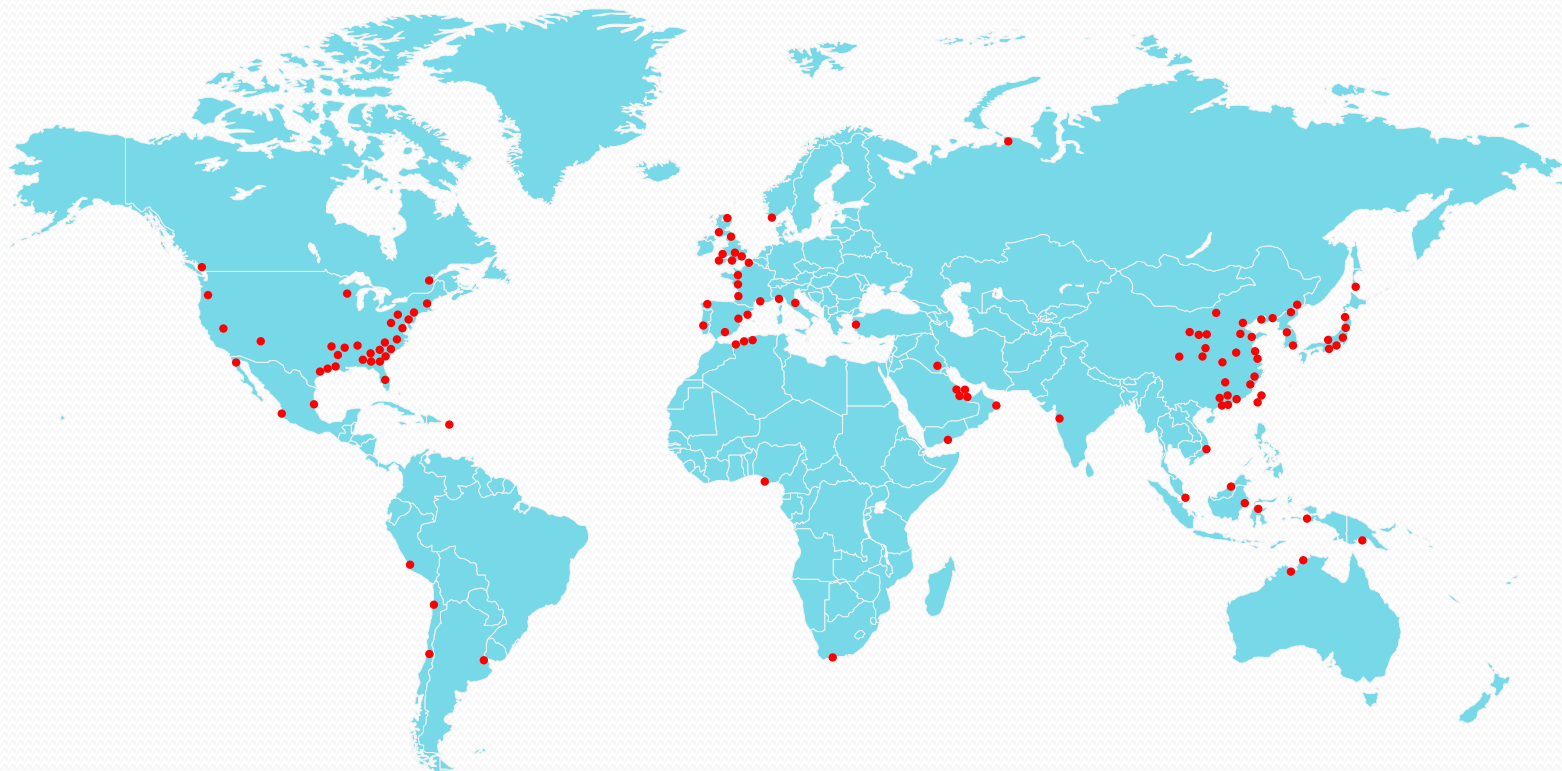
Ambient Temperature

- -40°C to $+60^{\circ}\text{C}$

Dimensions

- 125 (50) \times 76 (30) \times 37 (15) cm (in.)
- Weight: 180 (396.8) kg(lbs.)

OUR GLOBAL INSTALLED BASE SINCE 1976 **



**Includes new and previous LTD versions
Quantities vary



SCIENTIFIC INSTRUMENTS

Cryogenic Temperature Sensors and Instruments • Aircraft Temperature Probes • LNG Tank Gauging
Engineering Design Services, Integrated Solutions and Technical Services

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