

The ShipsLog™

Cryo-transit datalogger for vapor shippers



The **ShipsLog™** is a new, onboard monitoring system of temperature history for samples in liquid Nitrogen Vapor Shippers. It provides **traceability for the temperature** of the samples and can give alarms at setpoints during the transit period.

The ShipsLog™ monitor is fitted in the top of the dry shipper's cover. The temperature probe (PT100) extrudes through the 'cork', monitoring the temperature at the warmest part of the vapor shipper. The temperature sensor is fitted to a plate which prevents physical damage to the sensor and also ensures that the temperature recorded is higher than the temperature in the vicinity of the sample.

The ShipsLog™ can also be supplied with a flying lead should it be required to record the temperature within the sample area - this unit is not fitted with, or supplied with a cork and cover. Samples may be transported in the knowledge that on arrival at destination the recipient can quickly check via the LED display whether the **temperature range has deviated from the pre set profile**. The full temperature history can be downloaded if desired to confirm the exact temperature pattern throughout the journey.

The logger is user programmable via PC software. The logging process can be started either via the PC software or via a magnetic swipe key - which can be shipped separately from the vapor shipper. Analysis of the data can be made by the sender, the receiver or both.

The Planer ShipsLog™ is a new datalogger for vapor shippers which will keep an accurate and downloadable temperature history of samples over the duration of the transit.

- ◆ **Record of sample temperature**
- ◆ **Soft or hard copy**
- ◆ **Alarms trip points can be set**
- ◆ **Visual LED warning**
- ◆ **User programmable**

Temperature Check

- Log intervals can be set for each shipment
- Temperature Alarms settable by user
- Logging intervals can be set from 30 seconds to 99 minutes
- Store up to 8,192 entry logs

Alarms

- High and low temperature alarms
- Alarm delays programmable
- Temporary removal of cork and cover need not initiate alarm status

Software

- User programmable
- Archiving facility for logged data
- Hard disk or external drive
- Print in graphical or tabular form
- Specific segments can be printed

Precision Accuracy

- Probe accuracy of +/- 1.3° at -200°C
- Battery life of approximately 3 years
- View current temperature via software
- Software settings password protected.



Measurement

Range	-200°C to 0°C
PC Program	Display units user selectable -°C, °F or K
Probe Type	Platinum Resistance, Pt 100, Class B
Resolution	Approximately 1.0°C over whole operating range
Accuracy	+/-1.5°C at 0°C, rising to +/-2.5°C at -200°C, including uncertainty due to measurement resolution and probe errors
Calibration	Traceable to NAMAS standards; semi-automatic user calibration possible using optional PC calibration pack; calibration certificate printed automatically

Data Logging

Number of Points	8,192
Logging Interval	30 seconds to 99 minutes in 30 second intervals
Logging Resolution	0.1°C
Max Number of Logs	Unlimited, up to total log capacity
Alarm Generation:	
High Alarm Level	-200°C to 0°C in 1.0°C steps
Low Alarm Level	-200°C to 0°C in 1.0°C steps
Alarm Delay Period	0 to 120 logging intervals

Control & Indication

Manual Control	Magnetic Non Contact Start / Stop Switch using supplied fob
Communication	RS232 Serial communications to proprietary PC program
Programming	Using proprietary PC program
Indicators	Three x LED Indicators: Yellow=Normal, Orange=Warning, Red=Alarm

Battery

Type	Lithium Thionyl Chloride, internally fitted factory replaceable only
Life	Approximately 3 years in normal operation; battery life remaining is indicated via PC program
PC Software Requirements	PC to be Windows '95, '98 or NT

