Saga Cryogenic

General overview

Product name	Saga
Model Name	Saga-P
Model Type	Cryogenic
Dimensions	25mm × 61mm × 98mm 0.98in × 2.40in × 3.86in
Weight	194g 6.84oz
Housing	ABS plastic enclosure
Available information	Temperature, geographical location, battery status, light events
Ingression protection rating	IP54
Flight detection	Yes
Display	Yes, E Ink

Calibration

Calibration points	See probe datasheet, page 3
Calibration accuracy	See probe datasheet, page 3
Calibration certificate	Available upon request

Technical data

Battery type	Rechargeable NiMH battery, 2500 mAh
Nominal energy	9 Wh
Battery life	Device transmits data for 20–110 days on a single charge, depending on cloud reporting interval, as detailed on page 2.
Internal memory	Storage capacity of 150 days of temperature measurements (when recorded at 10-minute intervals).
Charging	Via attached USB-A cable
Backup data download	Via attached USB-A cable
Cellular network type	2G, 3G and 4G (LTE)
Cellular coverage	Global
Location positioning	Cellular Wi-Fi 2.4Ghz WPS (Receive only)

Measurement data

Measurement interval Sampling rate	10 minutes
Data reporting	Device needs to wake up and establish a connection to upload measurement data to the Controlant cloud.
Wake-up schedule	Adjustable from 1h to 24h frequency. Device wakes up when excursion triggers alarm, regardless of schedule.
Standard operating temperature range Logs temperature: Yes Cloud connection: Can be established Battery life: Normal Display: Fully functional (above 0°C)	-20°C to +50°C
Limited operating temperature ranges Logs temperature: Yes Cloud connection: Disabled below -20°C Battery life: Reduced Display: Not functional	-30°C to -20°C +50°C to +70°C
Resolution	0.1°C
Long-term drift Estimate at mid-range temperature	<0.1°C / year

Certifications and approvals

Approvals	CE, FCC, IC, NOM, KC
Aviation compliance	IATA, FAA and EASA

Manufacturer

Name	Controlant hf.
Address	Smáratorg 3, 201 Kópavogur, Iceland

Doc ID 963211958-174918 | Version 1 | Last updated 10 December 2025.

Saga Cryogenic

Built for the most extreme cold chain demands, this cryogenic probe device operates down to -200°C in liquid nitrogen. It provides real-time temperature and location monitoring for ultra-sensitive products like cell and gene therapies, ensuring full traceability, regulatory compliance, and product safety throughout cryogenic transport and storage.

Battery type

The device is powered by a rechargeable NiMH battery, 2500 mAh. NiMH batteries are not considered dangerous goods. The battery life cycle is at least 70 charge cycles.

Battery life

A fully charged device on a 12-hour wake-up interval can be expected to upload data and report alarms for at least 110 days while monitoring an active shipment within the operating temperature range.

The device enters Hibernation Mode when the battery level reaches 5% or less, at which stage it stops attempting to connect to the Controlant cloud. In Hibernation Mode, it still records data and stores it in internal memory until the battery is depleted or the device is recharged.

The battery life depends on the set wake-up interval, as shown in the table below.

Wake-up interval	Battery life
1 hour	20 days
2 hours	35 days
3 hours	45 days
6 hours	75 days
12 hours	110 days
24 hours	>110 days

Doc ID 963211958-174918 | Version 1 | Last updated 10 December 2025.

Saga Cryogenic probe

PR-T80
The PR-T80 digital dry ice temperature probe is designed for the Controlant Saga-P real-time temperature monitoring data devices.

Features and benefits

- Validated and compliant for the life sciences supply chain
- Accurate digital temperature sensor for dry ice temperature measurements
- IP65/67
- Designed for dry ice applications (-200°C | -328°F)

General overview

Product name and type	PR-T80 digital temperature probe
Probe length overall (LOA)	1370.8mm ±30mm 54in ±1.22in

Connector section Ⓐ

Operating temperature	-40°C to +50°C -40°F to +122°F
Cable diameter	4.6mm 0.18in
Cable section material	TPU, black
Connector body	TPU
Connector standard	IEC 61076-2-104
Connector contacts	Brass with gold plate
Connector locking system	Screw locking
Connector water-proof rating	IP67
Cable color	Black

Probe section and cable Ⓑ

Operating temperature	-200°C to +50°C -328°F to +122°F
Length (probe + cable)	1198mm ±20mm 47.2in ± 0.8in
Probe section diameter	4.0mm 0.16in
Cable diameter	2.5mm 0.09in

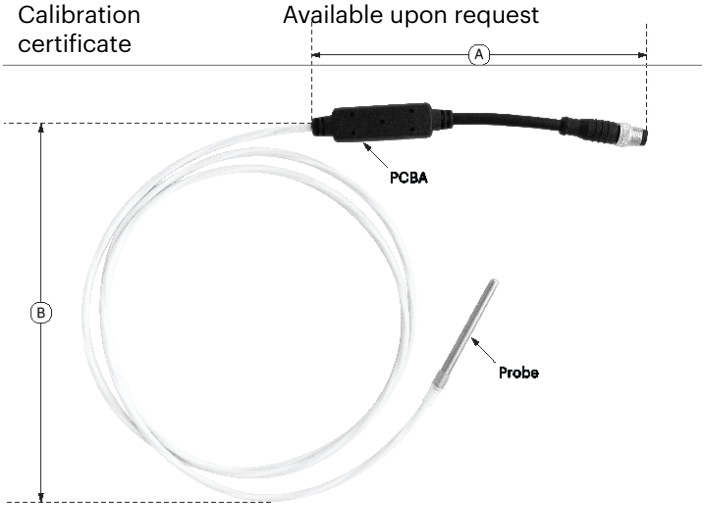
Temperature sensors

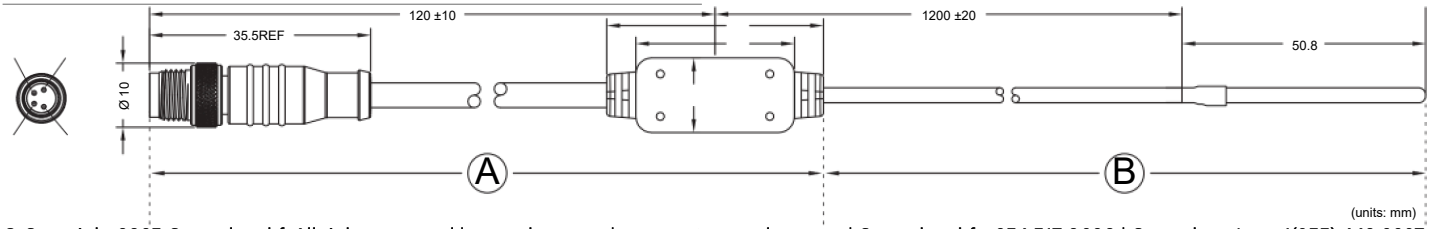
Measurements

Number of sensors	One sensor — cryogenic temperatures
Temperature	-200°C to +50°C -328°F to +122°F
Resolution	0.1°C 0.18°F
Long-term drift	<0.1°C / year <0.18°F / year

Calibration

Standard calibration points	-195.7°C | -80°C | -40°C | 0°C -320.3°F | -112°F | -40°F | 32°F
Calibration accuracy	**±1.0°C** at -90°C to 0°C **±1.4°C** at -200°C to -90°C
Calibration certificate	Available upon request





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