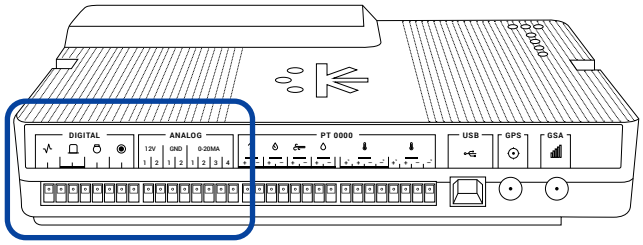
DC 365

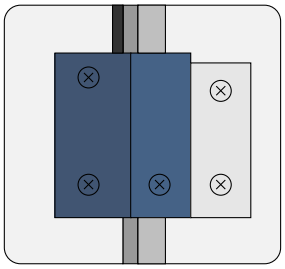
TECHNICAL SPECIFICATION & HARDWARE

PHARMATECH SYSTEMS

The DC 365 monitoring system has been designed for multiple applications to predetermine asset performance, acting as a single point of failure. The systems come complete with sensors and door contacts for access control with easy install and commissioning guides, available through our QR code provided with each device. The complete monitoring systems has been designed and tested throughout healthcare applications, suitable for many types of fridges and freezers. By ensuring asset performance against normal operational criteria and in-line with specific regulatory guidelines for the storage of temperature sensitive products. The system provides valuable tools to ensure 21 CFR part 11 compliance for data integrity. The cloud platform is a read only cloud-based SAAS solution that is GAMP validated for storing data associated with asset health & failure probability.



Digital and Analog inputs



Door contacts

Digital inputs

Multiple digital inputs are available for monitoring specific alarm criteria. Alarm thresholds can be defined based on the product stability budget.

Analog inputs

Various sensor inputs are available for monitoring temperature, humidity, pressure & environmental conditions. Additional 0-20 mA inputs are available for environmental monitoring & energy metering.

Door contacts

Actively monitor door contacts for access control. Monitoring door opening and closing can significantly reduce energy usage and provide additional product security.

Installation & commissioning

Scan QR code to access a step-by-step installation & commissioning guide. Each data point will be checked & data recorded in our cloud platform to ensure installation is correct & stored for traceability.

Technical specification DC 365

Internal Battery Storage	Approximately 1 Week	10 MB internal storage
USB Connections	USB-B	
Sensors & Inputs	4 x Temperature sensors (Install monitoring)	2 Wire 0.5˚C
	2 x Temperature sensors (Ambient)	4 Wire 0.1˚C
	4 x Analog inputs (Universal)	0-20 mA
	4 x Digital inputs	Door contacts & KWh meter 400V (Reversable)
	1 x Energy meter	230V-1F-16A
Visual	LED indicator	Includes data connection & signal strength indicator
Connectivity	GSM/Wi-Fi (Stand-alone) GPS	Includes data connection in more than 100 countries (2G, 3G, 4G) Connected by LTE M for optional indoor range GPS localisation satellites
Positioning	Satellite	Galileo & BeiDou, uBlox EVA-M8M GPS chip
Temperature range	Operation/ Range	-150˚C/ +200˚C
Operating power	Lithium-Ion batteries (Rechargeable) mains power	Capacity: 3.7 V/7.8Ah/28.9 Wh
Housing	Dimensions Weight Mounting IP rating	180 x 100 x 34mm 160g 1 screw hole on each side. IP 32 rated

Description

Single point of failure

Each fridge or freezer will have its own addressable device to ensure continuity across multiple applications, focused on increasing system uptime.

GSM Connectivity

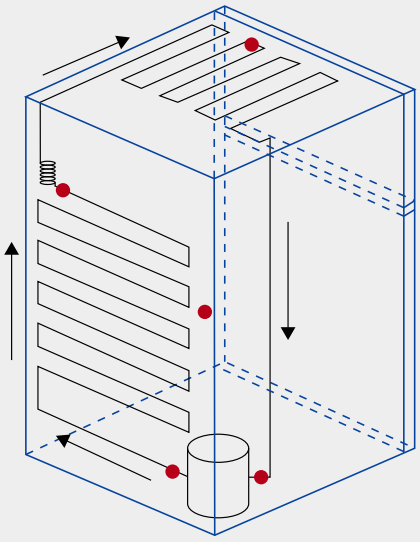
Stand-alone connectivity allows seamless data transmission to the cloud-based monitoring platform. Avoids the need for complex integration with IT networks.

Preventive Maintenance

The systems is designed to reduce & prevent maintenance costs. Our solutions reduce the man-hours required to respond to work orders by predicting anomalies associated with asset performance. Alarms can be defined and sent by email or txt message to your chosen maintenance provider or third-party FM (Facilities Maintenance) software.

Predictive analytics

Customised algorithms can be designed in-line with SOPs (Standard Operating Procedures) to determine asset failure probability.



Wireless Mesh

Wireless mesh networks can be provided where the GSM signal could be limited.

Asset health

By utilising specific sensors across important points on fridges and freezers we can determine asset health. Leak detection, pressure changes, CO^2 & temperature excursions. Environmental conditions can also be incorporated to predetermine failure probability.