Technical Specification HS1

Specification Matrix

General	
Model	HS1
Dimensions	130mm x 68mm x 44mm
Weight	186g
Mode Of Communication	WiFi 2.4Ghz
Mode Of Operation	Electronic
ICASA Approval	TA-2018/2266
Quality Standard	ISO 9001-2015
Country Of Origin	South Africa
PQS Category	E006/DL01.2
Legal Manufacturer	My Fridge Online
M2M Physical Specifications	
M2M 5V 1A Barrel Jack	Yes
M2M Data Logger USB-C Port	Yes
Enviromental Specifications	
Operating Temperature	-10°C to 60°C
Storage Temperature	-30°C to +70°C
IP Rating	IP45 with conformal coating to pcb components.

	M2M connectors covered with grommets while not in use.
Contains Ozone-Depleting Chemicals	No
Corrosion Resistance	Yes
Restriced Material Usage (E006/DL01.2 4.3.5)	No
Electrical Specifications	
Power Supply	12V - 24V via LIN port
Battery Life	100 Hours based on fully charged, new battery
Battery Storage Lifetime	5 years or 500 cycles
Battery Type	Rechargeable Li-ion 4.2v
Battery Replaceable	Yes
M2M Power Output	5V 1A Barrel Jack
RTC Battery Life	10 years
RTC Battery Storage Lifetime	10 years
Communication	
Bandwidth Standard	802.11 b/g/n
Range	50m to 100m line-of-sight (Environment Dependant)
USB Access	Yes
USB Mass Storage Device Format	FAT32
USB Mass Storage Structure Standard	E006/DL01 (M2M)
USB M2M Support	Yes
USB Access Timeout	180 seconds
USB Compatibility	Windows,Linux,IOS, M2M Compliant EMD/E-EMD
Logging	
Logging Interval	15 Minutes
Aggregate Readings	Polled every 10 seconds
Door sensor Interval	1 second,
Door Open Count Recording (DRCV)	Yes
RTC Accuracy	Approximately 1 minute of drift a year
Memory Capability	1 year of logs, stored to internal SD-Card

Memory Type	Non-Volatile Flash
User Interface	
View And Programming	AP-Mode Webpage
Status Indicator	RGB LED
Supported Inputs	
Door Sensor	1
SDD LIN	Yes
SDD Voltage Monitoring	Yes
SDD Current Monitoring	Yes
SDD Fan Speed	Yes
SDD Compressor Speed	Yes
Wired Amb. T/H Sensor Type	SHTC3
Wired Amb. T/H Temperature Range	-40°C to +125°C
Wired Amb. T/H Temperature Accuracy	±0.2°C
Wired Amb. T/H Temperature Resolution	0.01°C
Wired Amb. T/H Humidity Range	0% to 100% 1
Wired Amb. T/H Humidity Accuracy	±1
Wired Amb. T/H Humidity Resolution	0.01%
Wired Temperature Sensor Type	DS18B20
Wired Temperature Range	-55°C to +125°C
Wired Temperature Accuracy	±0.5°C
Wired Temperature Resolution	0.01°C

Markings

All inputs/outputs are clearly labelled according to WHO EMS standards, they are as follows:

- LIN: Communication and power port for SDD LIN
- 5V Monitoring Power: 5V 1A Barrel jack output, to be used to power and E-EMD
- Door: A digital input
- Modem: Port reserved for future use
- Logger Data Access: WHO EMS M2M compliant data access port
- Status LED: Indicates the current status of the unit, see manual for further information
- Button: Used to interact with the unit

Traceability

Each unit is provided with a serial number and an IMEI number that uniquely identifies the unit and can be used to trace back to manufacture date.

Manufacturer-Specific Data Objects

Code	Description	Type	Example
zlbp	Logger battery percentage	number	55.5
zlt1	Logger temperature probe 1	number	8.1

M2M Connectors

5V Barrel Jack

The female 5V Barrel jack only provides 5V 1A when the unit is powered via the LIN connector.

- Type: Barrel
- Sleeve diameter: 5.5 mm
- Sleeve length: 9.5 mm
- Pin diameter: 2.1 mm
- Polarity: pin positive, sleeve negative
- Cable type: captive to appliance
- Cable length: 1m

M2M Logger Data Port

The M2M Logger Data Port can be used to power and access the logger even when the unit's batteries are completely depleted. Do note that the device will not charge or provide power from the 5V Barrel Jack when powered solely by the Logger USB-C port.

- Type: USB-C
- Voltage: 5V
- Current: 1A

Energy Storage Lifetimes

Replaceable Li-ion Battery

The replaceable Li-ion battery within the unit has a lifetime of up to 5 years or 500 cycles whichever comes first.

- Safety Datasheet
- Specification

CR2032 Coin Cell Battery

The replaceable CR2032 within the unit which powers the RTC has a lifetime of up to 10 years.

- Specification

Ingress Protection Requirements for installation

The HS1 is designed to be installed in an IP65 or higher-rated compartment by an authorized installer to ensure protection against dust and water ingress.