

Thank you for purchasing our product which adopts excellent workmanship and exceptional reliability. We suggest that you take a few minutes to read through this instruction manual to familiarize yourself with all the features of the product before you proceed to install the system.

Intended Users

This manual needs to be made available to all persons who are required to install or configure equipment described herein, or any other associated operation.

The information provided is intended to highlight operational and safety issues and to enable the user to obtain maximum benefit from the equipment.

Training

My Fridge Online provides remote training sessions, detailing setup, maintenance and usage of the HS1. If you are interested, feel free to contact our support team to arrange a schedule.

Email: support@myfridgeonline.com

Equipment Inspection

- Check for signs of transit damage
- Check that the product code on the rating conforms to your requirement

If the unit is not being installed immediately, store the unit in a well-ventilated place away from high temperature, humidity, dust, or metal particles.

Foreword

- This manual contains text and explanations which will guide the reader with the correct installation and operation of the Health Sentinel (HS1). It should be read and understood before attempting to install or use the unit.
- If in doubt about the operation of the device, please consult **My Fridge Online**.
- This manual is subject to change without notice.

Contents

Intended Users.....	1
Training.....	1
Equipment Inspection.....	1
Foreword.....	1
SDD Setup.....	3
Button.....	3
LED.....	3
Features.....	3
Spare Parts List.....	3
M2M Interface.....	4
Logger Data Access.....	4
60 Day Performance Report.....	5
5 V Monitoring Power.....	6
AP Mode User Manual.....	6
M2M.....	7
Calibration.....	8
Firmware.....	9
TVC Override.....	10
Troubleshooting.....	11
Product Care.....	11
Installation/Maintenance.....	11
Installation.....	11
Probe Replacement.....	12
Disposal.....	12

SDD Setup

SDD needs to be configured with the following settings, otherwise it will not be detected:

- Baud: 19200
- Parity: Even
- Stopbit: 1
- Mode: RTU
- Address 1

SDD to LIN is 1 to 1

Button

Startup

Pressing the button once will start AP-mode

LED

- Flashing RED: Unit is in AP-mode
- Flashing RED/ORANGE: The unit does not detect the SD-Card
- Solid Red: Unit is unable to communicate with SDD
- Solid Green: Unit is fully operational

Features

- 1 year of log storage
- 100+ hours of battery life
- 24v DC
- External temperature and humidity sensor support
- External digital temperature sensor support
- Digital input support

- 15-minute logging
- WHO M2M interface support

Spare Parts List

- HS1-PROBE: Wired Probe
- HS1-SD: SD-Card replacement
- HS1-LION: LIOB Battery replacement
- HS1-COIN: RTC CoinCell Battery replacement
- HS1-TH: External Temperature/Humidity probe replacement

M2M Interface

Logger Data Access

Connect a USB-C cable to the port marked M2M, The HS1 should be detected on the connection within 1 minute. Once mounted you can explore the HS1 Directory for up to 180 seconds. Editing of files is protected.

**It can take up to 1 minute for the HS1 to become available on a pc/emd when connected via USB*

Root Directory

DATA_HISTORY	1980/01/02 00:45	File folder	
8CBFEA78E670_60DTR_SUMMARY_P369DT20H53M32S.pdf	1980/01/05 20:53	Microsoft Edge PD...	227 KB
8CBFEA78E670_CURRENT_DATA_P369DT20H51M51S.json	1980/01/05 20:51	JSON Source File	676 KB
8CBFEA78E670_SYNC_P369DT20H53M44S.json	1980/01/05 20:53	JSON Source File	1 KB

The root directory of the HS1 holds the following:

- DATA_HISTORY: Archive of the last years logs
- CURRENT_DATA: The active log record for the current 60 day period
- SYNC: File with instant measurements generated during usb mount
- 60DTR_SUMMARY: A report with summaries of the last 60 days

Record Overview

Logs are stored using the M2M Data format. Further information can be found on the WHO website.

USER GUIDE: HEALTH SENTINEL (HS1)

```

"AMFR": "CoolFinity",
"AMOD": "IceVolt300P",
"ASER": "12345678",
"ADOP": "2024-11-18",
"APQS": "E003/122",
"ACAT": "",
"LMFR": "MyFridgeonline",
"LMOD": "HS1",
"LSER": "8CBFEA78E670",
"LID": "",
"LDOP": "1970-1-1",
"LSV": "v1.0",
"LPQS": "E006/XXX",
"CNAM": "SECOP",
"CSER": "SDD",
"CSOF": "v1.2",
"CDAT": "2024-11-18",
"CNAM2": "",
"CSER2": "",
"CSOF2": "",
"CDAT2": "",
"records": [
  {
    "REL": "P369DT20H53M44S",
    "RTCM": "P369DT20H36M50S",
    "IDRV": 111,
    "IDRF": 111
  }
]

```

Error Codes

The HS1 generates the custom error codes during operation:

- TH: Failure to read external temperature/humidity sensor
- FUEL: Failure to communicate with battery fuel gauge
- LIN: Failure to communicate with SDD
- PROBE: Failure to read digital temperature probe
- RTC: Failure to read Real Time Clock

60 Day Performance Report



60 DAY PERFORMANCE REPORT

Appliance PQS Code: E003/122
 Appliance Serial Number: 12345678
 Report Creation Time: P369DT17H6M1S
 Upper Alarm Limit: Above +8.0°C for 10h
 Lower Alarm Limit: Above -0.5°C for 1h

Day	Avg Storage Temp (°C)	Status	Minimum Temp (°C)	Time < -0.5°C (h:mm)	Low Alarm Time (h:mm)	Maximum Temp (°C)	Time > +8.0°C (h:mm)	High Alarm Time (h:mm)	Door Openings	Door Open Time (h:mm)	AC Power Avail (h:mm)	Comp Runtime (h:mm)	Average Amb	Faults
1	21.9	ALARM	20.9	00:00	00:00	24.9	16:58	07:01	75	00:51	00:48	00:48	22.4	LIN
2	23.7	ALARM	20.9	00:00	00:00	29.2	23:43	16:32	109	17:17	03:22	03:22	29.2	LOW PROBE LIN
3	21.3	OK	0.0	00:00	00:00	85.0	11:06	00:00	476	12:40	00:00	00:00	31.7	PROBE LIN
4	20.0	ALARM	21.2	00:00	00:00	30.6	23:00	13:12	680	10:08	00:00	00:00	28.3	LIN JMB
5														NO DATA
6														NO DATA
7														NO DATA
8														NO DATA
9														NO DATA
10														NO DATA
11	1.1	ALARM	-0.0	10:20	10:50	58.1	10:45	00:00	0	12:00	12:42	00:11	3.6	LOW PROBE LIN
12	3.8	OK	-0.3	11:15	00:00	59.9	12:30	00:00	0	12:37	11:20	00:11	-0.3	LOW PROBE LIN
13	3.0	OK	-0.6	10:45	00:00	58.9	11:45	00:00	0	10:33	12:15	00:10	1.1	LOW PROBE LIN
14	2.5	ALARM	-0.8	12:00	00:15	58.4	11:00	00:00	0	11:03	13:20	00:12	6.5	LOW PROBE LIN
15	4.1	ALARM	-0.7	14:00	00:00	58.7	09:30	00:00	0	12:12	14:04	00:11	1.2	LOW PROBE LIN
16	-1.4	ALARM	-0.8	12:30	00:45	58.9	09:30	00:00	0	12:22	11:32	00:11	-2.8	LOW PROBE LIN
17	2.8	ALARM	-0.7	11:00	00:45	60.0	12:00	00:00	0	12:19	12:37	00:12	-1.2	LOW PROBE LIN
18	3.1	ALARM	-0.0	11:45	00:30	58.6	11:15	00:00	0	13:24	12:10	00:11	3.4	LOW PROBE LIN
19	5.0	ALARM	-0.2	12:15	00:30	58.4	10:30	00:00	0	12:48	12:02	00:11	9.1	LOW PROBE LIN
20	0.9	ALARM	-0.0	12:00	00:15	59.3	10:45	00:00	0	13:08	13:37	00:11	-1.7	LOW PROBE LIN
21	3.5	OK	-0.0	11:45	00:00	59.3	11:15	00:00	0	11:03	11:03	00:12	-0.3	LOW PROBE LIN
22	0.6	ALARM	-0.3	09:45	00:30	58.7	12:15	00:00	0	12:00	11:43	00:12	2.8	LOW PROBE LIN
23	0.4	OK	-0.5	09:00	00:00	58.6	11:30	00:00	0	11:55	10:59	00:11	6.4	LOW PROBE LIN
24	-1.7	ALARM	-0.7	13:15	02:45	58.0	09:15	00:00	0	12:40	12:28	00:11	3.6	LOW PROBE LIN
25	1.7	ALARM	-0.7	11:30	00:15	58.1	10:30	00:00	0	12:05	12:58	00:12	2.5	LOW PROBE LIN
26	8.1	OK	-0.2	09:30	00:00	59.8	13:15	00:00	0	11:41	11:44	00:11	8.8	LOW PROBE LIN
27	6.4	ALARM	-0.6	10:30	00:30	59.8	11:30	00:00	0	11:15	12:17	00:12	0.2	LOW PROBE LIN
28	0.2	ALARM	-0.7	11:45	01:00	59.5	09:45	00:00	0	11:38	12:52	00:11	4.0	LOW PROBE LIN
29	0.2	ALARM	-0.6	12:30	01:00	59.0	09:15	00:00	0	10:30	12:45	00:12	5.6	LOW PROBE LIN
30	0.8	ALARM	-0.6	12:30	01:00	59.2	09:45	00:00	0	13:41	11:58	00:12	-2.2	LOW PROBE LIN

*Blank rows in the table above indicate that no data was available for those entries.

Contact: support@myfridgeonline.com | Website: www.mfol.co.za

The 60 Day Performance Report provides users with an easy-to-understand overview of the last 60 days of operation. Where day 1 is the current day and day 2 is the previous.

Days with no logs are left blank with a fault code of “No Data”.

Headings

- Day: The day the log was recorded
- Avg. Storage Temp (°C): The average temperature of the vaccine compartment
- Status: The state of the day, “OK” if no alarms were active, “ALARM” if any alarms were active
- Minimum Temp (°C): The minimum temperature of the vaccine compartment
- Time < -0.5°C (hh:mm): The duration the vaccine compartment was below -0.5°C
- Low Alarm Time (hh:mm): The duration the vaccine compartment was in LOW alarm
- Maximum Temp (°C): The maximum temperature of the vaccine compartment
- Time > +8.0°C (hh:mm): The duration the vaccine compartment was above +8.0°C
- High Alarm Time (hh:mm): The duration the vaccine compartment was in HIGH alarm
- Door Openings: Number of door openings
- Door Open Time (hh:mm): The total duration the door was open
- AC Power Available (hh:mm): The total duration that AC power was available
- Comp. Runtime (hh:mm): The total duration the compressor was on
- Average Amb: The average ambient temperature
- Faults: Error codes generated

5 V Monitoring Power

A 5V M2M power output is available to power external LEVEL 2/3 devices. It should be noted that this port only supplies power when the HS1 is powered via the LIN interface.

AP Mode User Manual

Accessing AP-Mode

1. Connect to Access Point
 - a. Power On the unit (Power-cycle the unit if it is already on)
 - a. When the led is RED press the button once
 - a. The led will start flashing RED
 - a. A Wi-Fi access point should be visible `HS1_xxxxxxx`
 - If possible disconnect from your current network and connect to the above
 - a. Connect to the access point with your mobile or pc
 - a. Navigate to `192.168.4.1` in your browser
 - a. The unit will stay in `AP` mode for up to `30 minutes`, where after it will restart
2. Fill in the relevant fields

M2M

On the M2M page you can save important information about your fridge. Simply edit your information and click save.

The screenshot shows a mobile application interface with a blue header bar containing a home icon, a question mark, and a menu icon. Below the header is a white card titled "M2M Information". The card contains a table with two columns: "Name" and "Reading". The table has seven rows of data. At the bottom left of the card is a blue "Save" button. Below the card is a dark grey footer with copyright information.

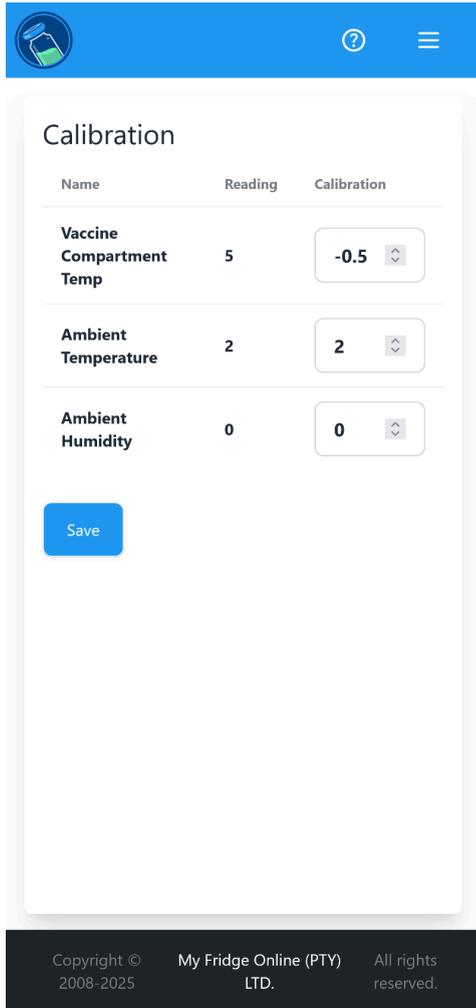
Name	Reading
Appliance manufacturer	AMFR
Appliance model	AMOD
Appliance manufacturer serial number	ASER
Appliance PQS code	APQS
Appliance PQS device type	APQS
Appliance date of production	03/02/2025
Compressor Electronic Unit Manufacturer	CNAM

Save

Copyright © 2008-2025 My Fridge Online (PTY) LTD. All rights reserved.

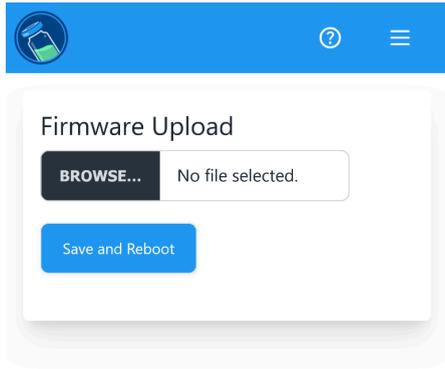
Calibration

On the Calibration page you apply calibration offsets to your recorded readings. Simply edit the applied value and click save.



Firmware

On the Firmware page, you can upload device firmware to apply a firmware update. Simply upload the file and click save and reboot.



TVC Override

The TVC(Temperature of the Vaccine Compartment) source is primarily the SDD, if the SDD is unavailable the zlt1 (external digital temperature probe) is used.

Troubleshooting

- The HS1's LED is solid RED
 - Check the LIN connection with the SDD
- The HS1 no longer keeps time when the primary li-on battery is full depleted
 - Replace the RTC Coin cell backup
- The HS1'S LED is flashing RED/ORANGE
 - Ensure the SD card is correctly seated in its slot
 - Power off the HS1, remove the SD-Card and place it into a pc. Ensure that you can access the files.
 - If the files are visible re-install the SD-Card in the HS1 and power on the unit
 - If the files are not visible, reformat the SD-Card as FAT32, re-install the SD-Card in the HS1 and power on the unit
 - Replace the SD-Card with a replacement
- I have connected to the AP but `192.168.4.1` is not loading
 - Confirm that your device (mobile/laptop) is still connected to the SMRT Cold
 - Disconnect and reconnect to the Access point
 - Power cycle the unit, put the unit back into ap mode and reconnect
 - If the issue persists, reset the device's DNS settings to their defaults. (Default Primary DNS Server IP - 8.8.8.8 Default Secondary DNS Server IP - 8.8.4.4)
- Request timeouts while in AP Mode
 - Disconnect and Reconnect to the AP
 - Refresh the Page

Product Care

Environmental Monitoring

Verify that the surrounding temperature and humidity are within safe limits.

Cable Management

Organize and secure any cables to prevent wear and accidental disconnection.

Port Inspection

Check charging and other ports for dust and damage.

Power Supply Check

Ensure power cable (HS-PJ) and USB connection (HS-CTC) are secure and undamaged. Please ensure the cables are not placed under strain to avoid unintentional damage.

Installation/Maintenance

Installation

Unpack And Inspect

Unpack the HS1 from its packaging and inspect it for any damage

Position The Unit

Install the HS1 within a cool, dry compartment inside the fridge casing

Make Connections

1. Connect the LIN connector to the compressors LIN port
2. Connect the captive barrel jack to the port labelled 5V Monitoring Power
3. Connect the USB-C extension to the port labelled Logger Data Access
4. Connect the Ambient T/H sensor and wire it so that it is in the open air
5. Connect the Wired Temperature probe and place the probe inside the fridge
6. Connect the Door sensor and affix it to the fridge door

Commissioning The HS1

Commissioning your device involves configuring its settings via the AP-Mode M2M page. This process requires filling in the following fields:

7. Appliance Identifier: Identifier for asset tracking
8. Logger Identifier: Identifier for asset tracking
9. Region Name: Name of the region where the device is installed
10. District Name: Name of the district where device is installed
11. Facility Name: Name of facility where the device is installed
12. Country ID: Country where device is installed
13. Facility Id: Facility ID where the device is installed

Close And Verify

Confirm that the HS1 is functioning correctly by connecting your laptop or PC to the M2M port. You should see the M2M directory

Probe Replacement

Replacement of probes does not require any special procedure. Simply replace the faulty probe with a replacement.

- Power off the unit
- Disconnect the faulty probe
- Connect the probe and follow placement as described in the installation section
- Power on the unit

TF Card Replacement

- Power down the unit
- Disconnect the HS1 from power
- Remove the Coincell
- Place the new TF-Card into you pc via an adapter
- Format the TF-Card as Fat32
- Eject the TF-Card

- Replace the TF-Card in the HS1
- Replace the CoinCell
- Connect cables to HS1
- Power on the unit
- Connect to the unit via “Logger Data Access”
- Ensure files are generated

Disposal

1. **Turn Off:** Ensure the device is off.
2. **Do Not Disassemble:** Avoid removing the battery yourself.
3. **Recycle Properly:**
 - Use e-waste recycling programs.
 - Contact local waste management facilities.
4. **Handle Carefully:** Avoid damaging the battery.
5. **Store Safely:** Keep in a cool, dry place until disposal.
6. **Follow Local Rules:** Adhere to local e-waste disposal regulations.

Note: Improper disposal can be hazardous. Always use authorized recycling methods.

For more details, visit www.mfol.co.za .

CONTACT INFORMATION

For More Information and Pricing Options Contact:

My Fridge Online

TEL: 082 940 3058 | 0861 111 105

E-mail: support@myfridgeonline.com praba@myfridgelonline.com

www.mfol.co.za

