

# AS300SA STAND ALONE ALARM & MONITORING SYSTEM

## Monitor and Protect

### Irreplaceable Samples / Valuable Assets



#### SIMPLE INSTALLATION

It's easy to install the AS300SA stand alone system. Fit the probes into the equipment and plug them into the probe sockets of the unit. No phone line or line rental is required as the system uses a mobile network of your choice. Then program the settings into the AS300SA from a mobile phone.

#### MULTIPLE SITES

Multiple linked sites can be alarmed and monitored across the country as the system uses a GSM network. There's no limit to distance or location.

#### QUERY UNIT FROM A MOBILE PHONE

- Including
  - ◆ Alarm Status.
  - ◆ Real Time Values of Input 1, 2 & 3 and Power.
  - ◆ Contact Telephone Numbers and Alarm Log.
  - ◆ Network Signal Strength.



#### SETUP AND CHANGE ALL SETTINGS FROM A MOBILE PHONE ALL PASSWORD PROTECTED.

- Including
  - ◆ Contact Telephone Numbers, Two Telephone numbers.
  - ◆ Outgoing Message.
  - ◆ Input Settings

#### ACKNOWLEDGE ALARM FROM A MOBILE PHONE

- Including
  - ◆ Alarm text must be acknowledged from mobile phone, if no acknowledgement is received the AS300SA will repeatedly call contact telephone numbers until acknowledged.
  - ◆ Once acknowledged, recipient's who have received an alarm text will be sent a message giving telephone details of the acknowledger.

#### INPUT DATA & ALARM LOG SENT TO WEB SERVER

- Including
  - ◆ Data logged from the AS200SA unit can be sent to the web.
  - ◆ Alarm log of input alarms and telephone calls made in the event of an alarm. (Note this feature is an option)

Make an informed decision on what action to take based on instant readings from the equipment monitored. This can be sent at any time to your mobile telephone. This is particularly useful if an alarm occurs when the person is on call or out of the workplace. With no need for a dedicated telephone line or line rental the AS300SA is exceptionally easy to install.



Web Data Analysis  
& Alarm Log



Mobile  
Phone



AS300SA





## Features

The AS300SA stand alone system is a new generation of monitoring and alarm systems using the Global System for Mobile Communications (GSM) and wireless technology. The monitoring and data logging system allows laboratory and hospital equipment to be protected. The system ensures the safety and continued effectiveness of medicine produce, blood products and samples at specific refrigeration and freezer temperatures. Due to the high value of many of these goods, Quality Assurance programs increasingly require that storage temperatures are to be verified several times per day and that records be maintained. The AS300SA unit will meet the alarm, monitoring and logging requirements.

Make an informed decision on what action to take based on instant readings from the equipment monitored. This can be sent at any time to your mobile telephone. This is particularly useful if an alarm occurs when the person is on call or out of the workplace. With no need for a dedicated telephone line or line rental the AS300SA is exceptionally easy to install.

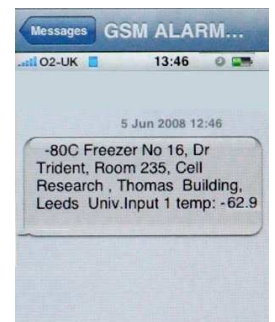
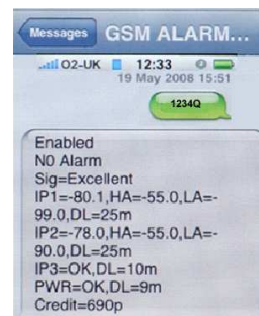
The programming of telephone numbers and input settings can be done from any location by a mobile phone with the relevant password.

Multiple units at different sites can be connected anywhere in the country or countries as the system uses a GSM network of your choice.

The use of the GSM network for communications allows the AS300SA units to be located anywhere a network signal is present. This is particularly useful if customers equipment is distributed on several sites or different parts of the country

The AS300SA has many special features like the Defrost Function which allows an input to have the alarms disabled. The disabled period can be set from 0 to 90 hours from the users mobile phone. Once the disabled period has elapsed the alarms will become active automatically.

- **Compact size. 170H x 85W x 35W (mm).**
- **Two Temperature Inputs.**
- **One Volt Free Input.**
- **Simple to use.**
- **Two menus available giving information on the system.**
- **Last 10 alarms stored.**
- **All alarms are time and date stamped.**
- **Acknowledged by mobile phone.**
- **Up to five contact telephone numbers.**
- **Audible alarm.**
- **Power failure alarm.**
- **Rechargeable battery backup.**
- **Built in communications to mobiles, land lines and web.**
- **Internet access to logged alarm information. (Option)**
- **CO2 & Temperature Probe Unit.**





## Data Logging & Alarm Log for the AS300SA Unit

The AS300SA can log data which can be sent to a server, this data can be downloaded to a computer and stored. The data collected can be analysed using our data analysis software. The data interval stored can be selected between 1 minute to 60 minutes, this interval will be dependant on the type of equipment being monitored. The alarm log gives details of all alarms, listing alarm input, time, date, call direction, telephone number, acknowledgers number and whether the call was successful or failed.

### Data Dump

Data from the AS300SA will be sent to the server once every 24 hours. The data can also be sent on demand by the user. To access the data a username and password is required. The data is organised into zip files and can be downloaded to the customers computer.

**Datadump**  
Managing your remote data

ASPER SYSTEMS

Login

Username:

Password:

Login

Timestamp	Device ID	Alarm Title No.	Serial	Alarm Message	Firmware
2010-10-30 13:35:24	357800022514434	SM 0784 2016257	1009	Gas Square ULT	2863L1Y1014
2010-10-12 15:40:51	357800022514434	SM 0784 2016257	1009	CSM Alarm and Monitoring System	2863L1Y1014
2010-10-11 15:40:59	357800022514434	SM 0784 2016257	1009	CSM Alarm and Monitoring System	2863L1Y1014
2010-10-10 12:40:38	357800022514434	SM 0784 2016257	1009	CSM Alarm and Monitoring System	2863L1Y1014
2010-10-09 12:52:55	357800022514434	SM 0784 2016257	1009	CSM Alarm and Monitoring System	2863L1Y1014
2010-10-08 12:45:54	357800022514434	SM 0784 2016257	1009	CSM Alarm and Monitoring System	2863L1Y1014
2010-10-07 16:40:51	357800022514434	SM 0784 2016257	1009	CSM Alarm and Monitoring System	2863L1Y1014
2010-10-06 16:42:30	357800022514434	SM 0784 2016257	1009	CSM Alarm and Monitoring System	2863L1Y1014
2010-10-04 16:42:30	357800022514434	SM 0784 2016257	1009	CSM Alarm and Monitoring System	2863L1Y1014
2010-10-04 16:42:30	357800022514434	SM 0784 2016257	1009	CSM Alarm and Monitoring System	2863L1Y1014

AS300 Alarm and Monitoring Data Analysis - [10/11/2010 to 16/11/2010]

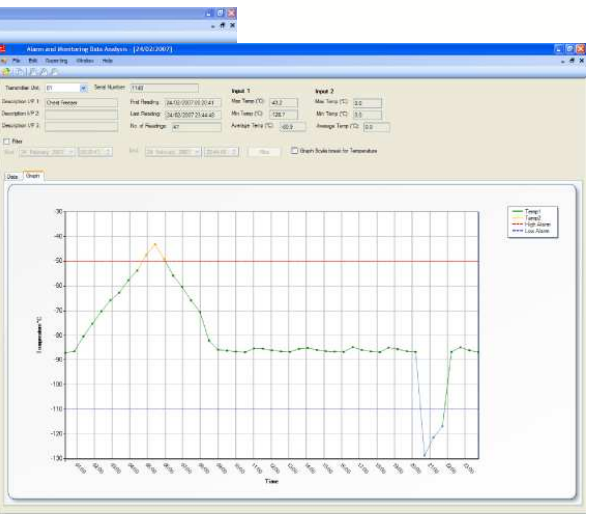
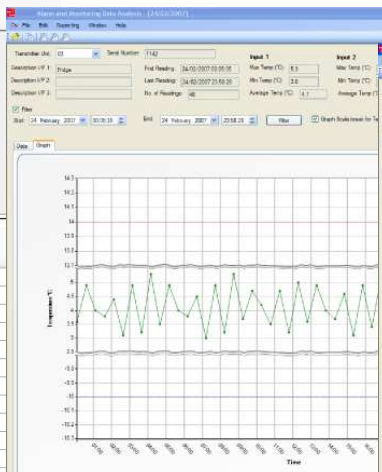
Serial Number: 0

First Reading: 10/11/2010 13:46:42

Last Reading: 16/11/2010 15:29:43

No. of Readings: 167

Time	Probe 1 Actual Temp (°C)	Probe 1 Upper Limit (°C)	Probe 1 Lower Limit (°C)	Probe 1 Time Delay	Probe 2 Actual Temp (°C)	Probe 2 Upper Limit (°C)	Probe 2 Lower Limit (°C)
10/11/2010 13:46:42	15.2	28.0	-199.0	1	14.9	99.0	-199.0
10/11/2010 14:47:05	15.9	28.0	-199.0	1	15.7	99.0	-199.0
10/11/2010 15:47:28	15.3	28.0	-199.0	1	15.0	99.0	-199.0
10/11/2010 16:47:52	14.8	28.0	-199.0	1	14.6	99.0	-199.0
10/11/2010 17:48:15	14.4	28.0	-199.0	1	14.4	99.0	-199.0
10/11/2010 18:48:39	13.8	28.0	-199.0	1	13.9	99.0	-199.0
10/11/2010 19:49:02	13.3	28.0	-199.0	1	13.4	99.0	-199.0
10/11/2010 20:49:26	12.7	28.0	-199.0	1	12.7	99.0	-199.0
10/11/2010 21:49:49	12.5	28.0	-199.0	1	12.4	99.0	-199.0
10/11/2010 22:50:13	12.2	28.0	-199.0	1	12.2	99.0	-199.0
10/11/2010 23:50:36	12.1	28.0	-199.0	1	12.0	99.0	-199.0
11/11/2010 00:50:59	11.9	28.0	-199.0	1	11.9	99.0	-199.0
11/11/2010 01:51:23	11.9	28.0	-199.0	1	11.8	99.0	-199.0
11/11/2010 02:51:46	11.8	28.0	-199.0	1	11.8	99.0	-199.0
11/11/2010 03:52:16	11.6	28.0	-199.0	1	11.6	99.0	-199.0
11/11/2010 04:52:33	11.3	28.0	-199.0	1	11.3	99.0	-199.0
11/11/2010 05:52:57	11.1	28.0	-199.0	1	11.1	99.0	-199.0
11/11/2010 06:53:20	11.4	28.0	-199.0	1	11.4	99.0	-199.0
11/11/2010 07:53:44	11.7	28.0	-199.0	1	11.5	99.0	-199.0
11/11/2010 08:54:09	12.3	28.0	-199.0	1	12.2	99.0	-199.0
11/11/2010 09:54:31	12.5	28.0	-199.0	1	12.3	99.0	-199.0
11/11/2010 10:54:54	12.7	28.0	-199.0	1	12.6	99.0	-199.0
11/11/2010 11:55:17	13.0	28.0	-199.0	1	12.9	99.0	-199.0



### Data Analysis

Data analysis software allows the user to look at the data in numerical and graphical forms. Information at the top of the screen is displayed for the selected unit. Information includes, Serial Number, First Reading, Last Reading, Number of Readings, Max Temp, Min Temp and Average Temp for I/P1 and I/P2.

The data in the columns displays information on Date, Time, Temperature Input 1, Temperature Input 2, High Alarm Set-point, Low Alarm Set-point and Delay Time. Graphs with scale breaks can be displayed by simply clicking on the graph tab.

The alarm log gives historical information of time, date, call direction, telephone numbers, alarm input and whether the call was successful or failed.

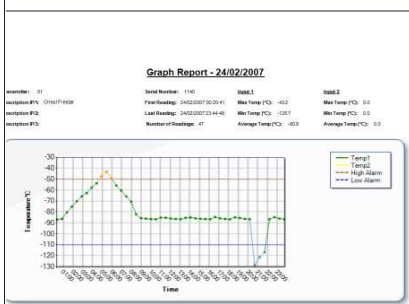
### Reporting

Print out of the data can be done in three ways.

- ◆ **Transmitter Report** prints the data column view.
- ◆ **Graph Report** prints the graph view.
- ◆ **Summary Report** prints the "header" information for each transmitter and alarm log.

Transmitter Report - 2402/2007

Time	Temp	High Alarm	Low Alarm
10/11/2010 13:46:42	15.2	0	0
10/11/2010 14:47:05	15.9	0	0
10/11/2010 15:47:28	15.3	0	0
10/11/2010 16:47:52	14.8	0	0
10/11/2010 17:48:15	14.4	0	0
10/11/2010 18:48:39	13.8	0	0
10/11/2010 19:49:02	13.3	0	0
10/11/2010 20:49:26	12.7	0	0
10/11/2010 21:49:49	12.5	0	0
10/11/2010 22:50:13	12.2	0	0
10/11/2010 23:50:36	12.1	0	0
11/11/2010 00:50:59	11.9	0	0
11/11/2010 01:51:23	11.9	0	0
11/11/2010 02:51:46	11.8	0	0
11/11/2010 03:52:16	11.6	0	0
11/11/2010 04:52:33	11.3	0	0
11/11/2010 05:52:57	11.1	0	0
11/11/2010 06:53:20	11.4	0	0
11/11/2010 07:53:44	11.7	0	0
11/11/2010 08:54:09	12.3	0	0
11/11/2010 09:54:31	12.5	0	0
11/11/2010 10:54:54	12.7	0	0
11/11/2010 11:55:17	13.0	0	0



Summary Report - 2402/2007

Parameter	Value
Serial Number	1100
First Reading	10/11/2010 13:46:42
Last Reading	16/11/2010 15:29:43
No. of Readings	167
Max Temp (°C)	15.9
Min Temp (°C)	11.1
Average Temp (°C)	16.1



### TEST ALARM FUNCTION

This allows the user to send a test message to the AS300SA unit to simulate a full test of an alarm on an input. This generates your chosen phone call and acknowledger sequence.

### DISABLE / DEFROST FUNCTION

This allows the user to send a text message to the AS300SA unit to disable either I/P1 or I/P2 for the desired time, up to 90 hours. Once this time has elapsed the input will be automatically be reactivated to accept alarms.

### CALIBRATION FUNCTION

This allows the user to calibrate input 1 or input 2 for temperature. This is done by disconnecting the probe from the relevant input and connecting the calibration key-fob to the input. A text message is sent to the AS300SA for the relevant input. The unit now carries out a calibrating procedure which takes approximately 2 minutes. During calibration the relevant stages are indicated on the display.

### SERVICE AND SUPPORT

We service and repair all of the electronic products we manufacture. All our goods carry a 1 year return to base warranty. If one of our products needs repair while under warranty, we will repair or replace it

### ALARM & MONITORING APPLICATIONS

- ◆ ULT FREEZERS
- ◆ LN2 STORAGE
- ◆ INCUBATORS
- ◆ ISOLATORS
- ◆ CLEAN ROOMS
- ◆ FREEZERS
- ◆ FRIDGES
- ◆ COLD ROOMS
- ◆ CULTURE ROOMS
- ◆ CLIMATE MONITORING
- ◆ CRYOGENICS
- ◆ COMPOST
- ◆ TEMPERATURE, -200°C to +100°C
- ◆ HUMIDITY, 0 to 100%RH
- ◆ CO2, 0 to 20 %
- ◆ OTHER APPLICATIONS AND RANGES AVAILABLE

# System Specification and Functions

## AS300SA STAND ALONE UNIT

### INPUTS THAT ARE CONFIGURABLE

- ◆ I/P1 Precision Temperature +/-0.1°C. (-200°C to +100°C) other sensor can be configured e.g. CO2, Humidity etc.
- ◆ I/P2 Precision Temperature +/-0.1°C. (-200°C to +100°C) other sensor can be configured e.g. CO2, Humidity etc.
- ◆ I/P3 Volt Free.

### OUTPUTS

- ◆ Relay.

### CONFIGURABLE ALARMS

- ◆ I/P1, I/P2, I/P3, I/P RS232, Power Fail.

### MEMORY

- ◆ Over 4000 readings.

### TELEPHONE NUMBERS

- ◆ 5 Telephone Numbers.

### PASSWORDS

- ◆ . Master and Acknowledger 4 digit password.
- ◆ Lock switch on receiver, disabling change of settings by mobile phone.

### Display

- ◆ Scrolling display of Sim Number, Sim Credit, Signal Strength. (Sim Credit only available on O2 and Vodaphone)
- ◆ Two Menu's :-, System & Alarm Log.

### GSM SIGNAL

- ◆ Visual indication of signal strength. Audible and visual indication if network strength is lost or low.

### SIM CARD

- ◆ Low Credit Warning text message and visual, audible warning on GSM Unit.

### BATTERY BACK UP

- ◆ Rechargeable Batteries.

### EXTERNAL DIMENSIONS

- ◆ 160H x 90L x 50D mm.

### BUILT IN COMMUNICATIONS

- ◆ 5 Telephone numbers allocated per AS300SA.
- ◆ Web access for data and alarm history. (Option)

### TELEPHONE ALARM MESSAGES

- ◆ Up to five telephone numbers can be programmed into the AS300SA a text message will be sent to a mobile and a voice message sent to a land line. The outgoing message can be up to 90 characters long and the value and input alarming is tagged on to the end of the OGM.

## FUNCTIONS INITIATED FROM MOBILE PHONE

- ◆ Enable or Disable GSM unit.
- ◆ Setup Alarm Parameters e.g. High Alarm, Low Alarm and Delay time for each input. (Delay time 0 to 90 minutes)
- ◆ Setup Telephone Numbers, mobiles and land lines.
- ◆ Enquire Details Including Alarm Status, Signal Strength, Setup Values, Amount of Credit in Sim Card and Input Readings.
- ◆ Acknowledge Alarms.
- ◆ Test Alarm Function.
- ◆ Disable / Defrost Alarm Facility For I/P1 and I/P2 to accept alarms. (0 to 90 hours)
- ◆ Calibration Function.
- ◆ Output Function. This allows the customer to turn the relay output on or off. (Option)



CO2 & Temperature Probe

