reporter®

A1400 – GSM Temperature Detector

USER'S GUIDE

A1400-REV1.2-1305

ERBAŞ TEKNOLOJİ
Innovative Solutions

www.erbasteknoloji.com

1. DESCRIPTION

A1400 is a simple & easy to use GSM Temperature Detector which sends SMS and calls you in case of alarm events. Alarm event occurs in case of Low or High Temperature threshold values are exceeded and restored. Also occurs with the Cable Fault. Up to 3 users can be registered.

Item has one piece of Digital Temperature Probe which enables you to monitor temperature overflow 24 hours.

Only a local GSM SIM card is required to operate the device.

A1400 might operate with both batteries and power adaptor. In case of battery only use; lifetime is more than 1 year (calculated with 1 SMS per day).

A1400 also operates as Power Failure Detector. Sends you POWER FAIL message in case of power adaptor fails and sends you POWER OK message in case of power restored.

Once battery is low, device sends you LOW BATTERY message and sends you weekly KEEP ALIVE messages.

Device also sends you "GSM Signal Strength Level" while making configuration.

2. GETTING STARTED

2.1. Insert SIM Card

A local SIM card is required to operate the system. Before inserting the SIM card, try it with a mobile phone and:

- o Disable PIN code protection
- o Send an SMS to a mobile number for testing

After above steps; please open the screws on the back of the item and please insert SIM card into your device.

2.2. Connect Digital Temperature Probe

Connect RED wire of temperature probe to the terminal block 3.

Connect WHITE wire of temperature probe to the terminal block 4.

Please pay attention to the wires connection to avoid device damages.

2.3. Connect Power

Connect 12V DC power adaptor into terminal block numbers 1 and 2. Number 1 is positive voltage and 2 negative (GND).

Please note power adaptor current should be at least 1500 mA.

Then insert two pieces of CR123A batteries included in the package. (If power adaptor is not used, insert batteries only).

2.4. Register Admin Number

Admin number is authorized to make configurations, change & delete settings of the device. And also will receive all alerts with SMS and/or phone calls. Other users will only receive alerts and will not be able to make configurations.

The LED will blink a few times until it is connected to an available network. Please wait for LED becomes solid ON. Once LED is ON; that means device is connected to a GSM network and ready to work.

Now please call the device's number with your phone. Once you hear the ringing volume, your number is registered to devices memory as ADMIN NUMBER.

Then the LED will blink and device will send you an SMS including "ADMIN OK" message. After you receive this message; please wait for LED becomes solid ON again. If done; you ready for next step.

2.5. Send Configuration Commands

Now your device is waiting for a configuration SMS from you (note that timeout is 2 minutes).

Please note all commands should start with an admin password (except RESET command). Default password is "1111". Also, it is possible to send one or several commands in one SMS.

Commands should be written in big letters (correct one: 1111 NEWP:3333, wrong one is: 1111 newp:3333).

There should be a <u>space character</u> between independent commands e.g.: 1111<space>NEWP:1234<space>DEL1<space>DISABLE

Device is case sensitive;, please pay attention to write temp sign with "+" or "-" and temp value by 2 digits (e.g.: 1111 TEMPH:+10 TEMPL:-07)

Attention: If you write the password wrong you will receive an SMS including "WRONG PSWR" text. In that case device will keep in configuration mode. Please wait until LED becomes solid again and send a configuration SMS with correct password. Otherwise device will keep the same settings and continue operation after 2 minutes timeout and LED will become OFF.

Below is the list of commands:

DESCRIPTION	COMMAND	DEFAULT
Change Password	NEWP:XXXX	1111
Add / Change User1	TEL1:+XXXXXXXXXX	
Add / Change User2	TEL2:+XXXXXXXXXX	
Delete User1	DEL1	
Delete User2	DEL2	
High Temp. Value (^{0}C)	TEMPH:+XX or TEMPH:-XX (2 DIGITS)	+30
Low Temp. Value (^{0}C)	TEMPL:+XX or TEMPL:-XX (2 DIGITS)	+00
Enable Keep Alive	ENABLE	Enabled (Weekly)
Disable Keep Alive	DISABLE	Enabled (Weekly)
Reset Device	RESET	

Table – 1 "Commands List"

1) Quick Configuration:

   1111

   Above example means you didn't change any configuration but you know the password. Once you sent this SMS to the device; it will reply you with an SMS including "CONFIG OK <XX>" text (where XX is GSM signal strength, see "Table-2" for further details). Now LED will turn off and your device is ready to operate.

2) Extended Configuration:

   1111 NEWP:5555 TEL1:+906661234567 TEL2:+907771234567 TEMPH:+60

   Above example means:

   o New admin password is now "5555" and you have to use this new password to make new configurations in the future. Please note it carefully.
   o You added a new user1 number +906661234567.
   o You added a new user2 number +907771234567.
   o High temperature is changed to +60 ^{0}C.
   o Low temperature value is factory default: +00 ^{0}C.

   Once you sent this SMS to your device, it will reply you with an SMS including "CONFIG OK <XX>" text (where XX is GSM signal strength, see "Table-2" for further details). Now LED will turn off and your device is ready to operate.

   Finally close the cover and insert screws on the back.

<XX>	MEANING	ADVICE
Between 19~31	Excellent Signal	
Between 14~18	Good Signal	
Between 9~13	Workable Signal	Try changing location
Between 1~8	Weak Signal	Check antenna / change device location

Table – 2 "GSM Signal Strength Levels"

3. NORMAL OPERATION & ALARMS

Now your device will continuously check for:

   o Low or High Temperature threshold overflows
   o Temperature Restorations
   o Temperature Probe Cable Fault
   o Power failure and restorations
   o Low battery
   o And keep alive message periods

In case of any temperature alarms you and other users (if registered) will receive SMS including "TEMP=XXX C" or "TEMP=XXX C" texts. And also will receive Calls from your device.

Once cable connection is lost / broken, you and others users will receive SMS including "CABLE FAULT!" text and will receive Calls.

In case of power failure, power restoration, keep alive period exceeds and low battery case; you and other users will only receive SMS including "POWER FAIL", "POWER OK", "STILL ALIVE" and "LOW BATTERY" texts. There won't be any call with these cases.

3.1.   Re-configure Your Device

Press at least 1 second to the Configuration Button on your device anytime. LED will blink a few times and please keep waiting for LED becomes solid ON. Then you might send a new configuration SMS to device with using your latest password. The procedure of sending configuration SMS is same with article "2.5. Send Configuration Commands".

3.2.   Check GSM Signal Strength

Please follow article 3.1 and then only send your last password with SMS. You will receive "CONFIG OK <XX>" text message where <XX> indicates GSM Signal Strength. For further description please see "Table-2".

3.3.   Reset Your Device

Press Configuration button at least 1 second. LED will blink a few times and please keep waiting for LED becomes solid ON. Then send an SMS to the device including "RESET" command. LED will blink a few times and become solid ON. Now your device has been reset, it is ready to start. Please follow instructions starting from "2.4. Register Admin Number".

4. TECHNICAL SPECIFICATIONS

A1400 – Technical Specifications	
Power Supply	• 2 x CR123A Lithium batteries (included) • 12V 1500mA DC Adaptor (optional)
Battery Life	• More than 1 year under normal usage
Inputs	• Digital temperature sensor input • Power adaptor input
Outputs	• Not available
GSM Module	• GSM 900/1800 MHz Dual Band
Event Alerts	• SMS / Call in case of Low or High Temperature • SMS / Call in case of Temperature Restorations • SMS / Call in case of Cable Fault • SMS for Power Failure • SMS for Power Restored • SMS for Low Battery • SMS for Keep Alive Messages • SMS for GSM Signal Strength (while configuration)
Configurations via SMS	• Change security password • Register & delete user phone numbers (up to 2) • Set low and high temperature threshold values (between -55 ^{0}C to +99 ^{0}C) • Enable & disable weekly keep alive messages • Reset device
Operating Temperature	• -10 ^{0}C ~ + 50 ^{0}C (Main Device) • -55^{0}C ~ + 100 ^{0}C (Temperature Probe)
Dimensions	• 109 x 58 x 31 mm
Package Content	• 1 x A1400 GSM Temperature Detector • 2 x CR123A Lithium Batteries • 1 x Digital Temperature Sensor • 1 x User Manual • 4 x Fixing Screws & Fixing Plugs