Sparr Electronics Limited

User Manual

SMS Alerter 8

CONTENTS

PACKAGE CONTAINS

SL NO	ITEM	QUANTITY
1	SMS ALERTER 8 UNIT	1
2	12 V POWER ADAPTER	1
3	GSM ANTENNA	1

Manual Revision	Revision Date	List of Updates
00	23/09/2016	
01	14/08/2017	1. Contact Information

1. Introduction

- SMS Alerter – 8 can be used for sending critical alerts to 5 mobile numbers stored in its memory, thereby concerned person can take immediate informed remedial actions to prevent any major untoward incidents and increase productivity.
- There is flexibility to the user that the 8 Inputs or Outputs are factory configurable.
- The unit is housed in IP65 plastic enclosure to withstand demanding environmental requirements.

2. Technical Specifications

Number of Ports supported	8 [Mix of Digital inputs/Analog inputs/ Relay outputs can be optional]
Isolated Digital Input Voltage	12 V DC
Analog Voltages	0-12V DC, 4-20 mA
Relay Outputs	Common and Normally Open
GSM Antenna	External
Power supply	12V DC adaptor supplied with the unit
Enclosure	IP65 box
Terminals	Screw type provided inside the box
SIM Holder	Tray type inside the box
Master Number	One, Configurable
SMS Recipient Number	Up to 5, Configurable
Configuration	SMS command based from Master number only

3. Applications

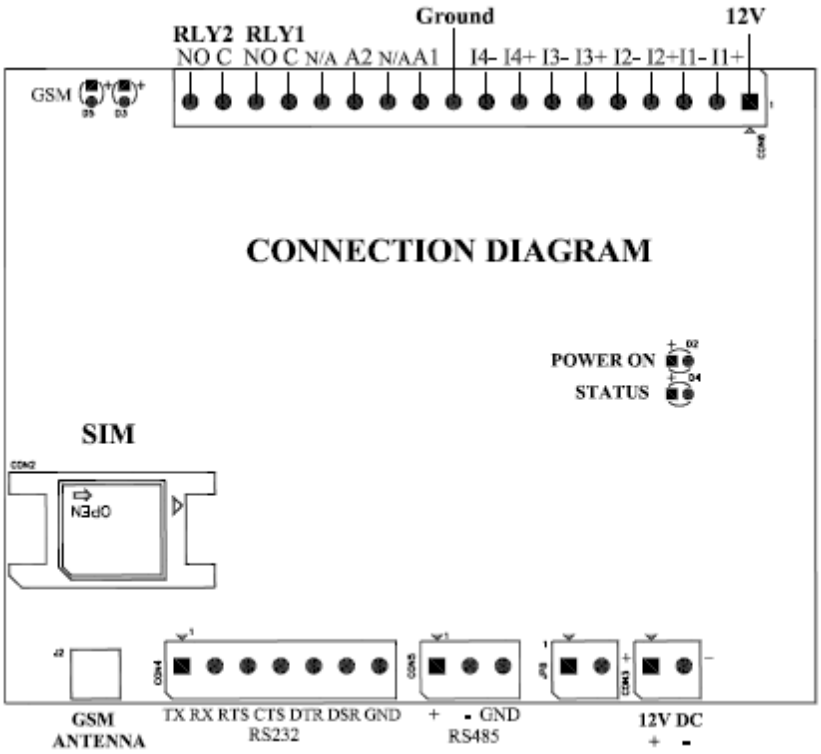
- Data Centre Monitoring
- Process Control industries
- Pharmaceutical Industries
- Perishable goods storage
- Manufacturing industries
- Chemical Industries
- Air-conditioning & Refrigeration industry
- Security Monitoring
- Solar Power generations
- Remote Monitoring of locations / Services.

4. Getting Started

1. Unscrew the top cover open the Box. Refer the connector diagram for connecting the power, inputs, outputs and SIM. Insert the SIM card into the SIM holder.
2. Take 12V DC power supply wire through wire gland and connect to CON3, Red wire to + Pin and White to the – pin of the connector.
3. Connect required inputs and outputs to CON6, refer connector diagram. Once the preliminary check is completed, power ON the Unit. Check Power ON LED is glowing.
4. Power OFF the unit place the top cover and fix the screws.
5. power ON the unit, now the Unit is ready to test.

Note:

- Firmware updates will require GPRS functionality. It is preferable that GPRS is there and also pretested by using it in a phone.
- The SIM card has to be a pretested and unlocked SIM.
- It is preferable that the SIM card to be tested for its ability to send and receive SMS by using in a Phone.



Connector diagram

5. Configuring the Unit through SMS Commands

The unit can be configured through SMS commands from a master number. The commandsare described below.

“All the commands are case sensitive”
“Mobile Number should always be starts with +91”

1. Set Master Number.

In order to configure the unit initially master number has to be set; the unit will only receive SMS commands and respond to the master number.

Format	**Set**<space>**M1**<space>**number**
Example	**Set M1 +911234567890**
Response	**Date,Time Set M1+911234567890 OK**

2. Set M1.

Change the master configuration number to its default value, which is NULL.

Format	**Set**<space>**M1.**
Example	**Set M1.**
Response	**Date,Time Set M1 Clear OK**

3. Set Recipients Numbers:

Up to 5 numbers can be set, to which the SMS Alerter unit will send preprogrammed SMS messages when it detects changes in the input.

Format	**Set**<space>**N1**<space>**number** **Set**<space>**N2**<space>**number** **Set**<space>**N3**<space>**number** **Set**<space>**N4**<space>**number** **Set**<space>**N5**<space>**number**
Example	**Set N1 +911233456789**
Response	**Date, Time Set N1 +911233456789OK**

4. Set N1.

Change to default which is NULL. Similarly, for N2, N3, N4, N5

Format	**Set**<space>**N1.**
Example	**Set N1.**
Response	**Date, Time Set N1 Clear OK**

5. Set APN <APN>

To configure APN, maximum of 20 characters are allowed. **Default is airtelgprs.com**

Format	**Set**<space>**APN**<space>**access point name**
Example	**Set APN airtelgprs.com**
Response	**Date, Time Set APNairtelgprs.com OK**

6. APN.

This command clears the configured APN.

Format	**Set**<space>**APN.**
Example	**SetAPN.**
Response	**Date, Time Set APN Clear OK**

7. Set I1LOWHIGH<message>

To Configure the Input 1 Low to High Message. The configured message will be sent in the SMS alert and HTTP post, whenever a change (LOW to HIGH) is detected. **Default is I1_LOWHIGH**.

Format	**Set**<space>**I1LOWHIGH**<space>**text message**
Example	**Set I1LOWHIGH open**
Response	**Date, Time Set I1LOWHIGHopen OK**

Similarly, I2 for second input.

8. Set I1LOWHIGH.

Change to Default, **default is I1_LOWHIGH**.

Format	**Set**<space>**I1LOWHIGH.**
Example	**Set I1LOWHIGH.**
Response	**Date, Time Set I1LOWHIGH Clear OK**

9. Set I1HIGHLOW<message>

To Configure the Input 1 High to Low Message. The configured message will be sent in the SMS alert and HTTP post, whenever a change (HIGH to LOW) is detected. **Default is I1_HIGHLOW**.

Format	**Set**<space>**I1HIGHLOW**<space>**message**
Example	**Set I1HIGHLOW close**
Response	**Date,Time Set I1HIGHLOW close OK**

Similarly, I2 for second input.

10. Set I1HIGHLOW.

Change to Default**, default is I1_HIGHLOW**.

Format	**Set**<space>**I1HIGHLOW.**
Example	**SetI1HIGHLOW.**
Response	**Date,Time Set I1HIGHLOW Clear OK**

11. Set A5LOWMSG<message>

The configured message will be sent in the SMS alert; whenever analog value goes below the lower threshold. **Default is A5Lowerlimit**.

Format	**Set**<space>**A5LOWMSG**<space>**<message>**
Example	**Set A5LOWMSG lower limit**
Response	**Date,Time Set A5LOWMSG lower limit OK**

12. Set A5LOWMSG.

Change to default.

Format	**Set**<space>**A5LOWMSG.**
Example	**Set A5LOWMSG.**
Response	**Date,Time Set A5LOWMSG Clear OK**

13. Set A5HIGHMSG<message>

The configured message will be sent from SMS alerter whenever analog value goes above the upper threshold. **Default is A5Upperlimit**.

Format	**Set**<space>**A5LOWMSG**<space>**<message>**
Example	**SetA5HIGHMSG upper limit**
Response	**Date,Time Set A5HIGHMSG upper limit OK**

14. Set A5HIGHMSG.

Change to default.

Format	**Set**<space>**A5LOWMSG.**
Example	**SetA5HIGHMSG.**
Response	**Date,Time Set A5HIGHMSG Clear OK**

15. Set A5MIN <xxxx>

The configured number is the value below which if the analog value goes, alert is generated. Any number between 1 and 65000 can be configured.**Default is 0**.

Format	**Set**<space>**A5MIN**<space>**xxxx**
Example	**Set A5MIN 20**
Response	**Date,Time Set A5MIN 20OK**

Where xxxx is 1 to 65000

16. Set A5MAX <xxxx>

The configured number is the value above which if the analog value goes, alert is generated.

Any number between 1 and 65000 can be configured.**Default is 50**

Format	**Set**<space>**A5MAX**<space>**xxxx**
Example	**Set A5MAX 60**
Response	**Date,Time Set A5MAX 60OK**

Where xxxx is 1 to 65000

17. Set DEFAULT 7727735328766427

If the master number has been forgotten or lost, this command allows to reset the master number and to load the default values.

Format	**Set**<space>**DEFAULT**<space>**7727735328766427**
Example	**Set DEFAULT 7727735328766427**
Response	**Date, Time Set DEFAULT OK**

18. Set DEFAULT

This will load factory default values in to theAlerter and also allows a new master number to be set.

Format	**Set**<space> **DEFAULT**
Example	**Set DEFAULT**
Response	**Date, Time Set DEFAULT OK**

19. Set Time Stamp ON

To enable time stamping on SMS and HTTP Post. **Default is enabled.**

Format	**Set**<space>**Time**<space>**Stamp**<space>**ON**
Example	**Set Time Stamp ON**
Response	**Date, Time Set Time Stamp ON OK**

20. Set Time Stamp OFF

To disable time stamping on SMS and HTTP Post.

Format	**Set**<space>**Time**<space>**Stamp**<space>**OFF**
Example	**Set Time Stamp OFF**
Response	**Set Time Stamp OFF OK**

21. STATUS

This command gives the current status of all the inputs.

Format	**Set**<space>**STATUS**
Example	**Set STATUS**
Response	**Date, Time STATUS I1-close I2-I2_HIGHLOW I3-I3_HIGHLOW I4-I4_HIGHLOW A5-lower limit A6-A6Lowerlimit 07-OFF 08-OFF v2.3 OK**

22. TABLE Ax,n,X1-Y1,X2-Y2,…Xn-Yn

where Ax is the analog input, either A5 or A6. n is the number of entries (minimum 2 and max10), X1 is the voltage(in Volt) *1000 and Y1 is the corresponding sensor value.
Eg:Table A5,2,1100-10,1600-60

Format	**Set**<space>**Table**<space>**Ax,n,X1-Y1,X2-Y2,..Xn-Yn**
Example	**SetTable A5,2,1100-10,1600-60**
Response	**Date,Time Set Table A5,2,1100-10,1600-60 OK**

23. Check Internet

This command allows totest the Unit's ability to connect to the Internet.

Format	**Check**<space>**Internet**
Example	**Check Internet**
Response	**Date, Time Check Internet OK/Check Internet Error**

24. Smsduration1 <xx>

For a duration of the configured minutes, SMS alerts will be sent. **Default is 0**.

Format	**Set**<space>**Smsduration1**<space>**xx**
Example	**Set Smsduration1 10**
Response	**Date, Time Set Smsduration1 10 OK**

25. Smsfrequency1 <xx>

Upon every configured interval (i.e. the frequency in minutes) SMS will be sent. **Default is 0**.

Format	**Set**<space>**Smsfrequency1**<space>**xx**
Example	**Set Smsfrequency1 2**
Response	**Date, Time Set Smsfrequency1 2 OK**

26. Smson open1

SMS alerts are sent only when the digital input is open.

Format	**Set**<space>**Smson**<space>**open1**
Example	**Set Smson open1**
Response	**Date, Time Set Smson open1 OK**

27. Smson close1

SMS alerts are sent only when the digital input is closed.

Format	**Set**<space>**Smson**<space>**close1**
Example	**Set Smson close1**
Response	**Date, Time Set Smson close1 OK**

28. Smson change1

SMS alerts are sent only any change in the digital input. This is the default state.

Format	**Set**<space>**Smson**<space>**change1**
Example	**Set Smson change1**
Response	**Date, Time Set Smson change1 OK**

29. Smson count1 <xxxx>

SMS alerts are sent when the total number of changes in the digital input reaches the configured count value. Default is 0. Any number between 1 and 65000 can be configured

Format	**Set**<space>**Smson**<space>**count1**<space>**xxxx**
Example	**Set Smson count1 10**
Response	**Date, Time Set Smson count1 10 OK**

30. Set O7 ON

Set the digital output O7 to ON state. Similarly, for output O8.

Format	**Set**<space>**O7**<space>**ON**
Example	**Set O7 ON**
Response	**Date, Time Set O7 ON OK**

31. Set O7 OFF

Set the digital output O7 to OFF state.Similarly, for output O8.

Format	**Set**<space>**O7**<space>**OFF**
Example	**Set O7 OFF**
Response	**Date, Time Set O7 OFF OK**

32. Set O7 ON-5-OFF

This command sets the digital output to ON state for 5 seconds, followed by OFF state. A delay between 1 to 99 seconds can be thus set.Similarly, for output O8.

Format	**Set**<space>**O7**<space>**ON-5-OFF**
Example	**Set O7 ON-5-OFF**
Response	**Date, Time Set O7 ON-5-OFF OK**

33. Set O7 OFF-10-ON

This command sets the digital output to OFF state for 10 seconds, followed by ON state. A delay between 1 to 99 seconds can be thus set. Similarly, for output O8.

Format	**Set**<space>**O7**<space>**OFF-10-ON**
Example	**Set O7 OFF-10-ON**
Response	**Date, Time Set O7 OFF-10-ON OK**

Note: The status of the digital output will be retained over power-cycles.

34. Set Mode SMS

Only SMS alerts are sent.

Format	**Set**<space>**Mode**<space>**SMS**
Example	**Set Mode SMS**
Response	**Date, Time Set Mode SMS OK**

35. Set Mode Server

Only HTTP Post is sent.

Format	**Set**<space>**Mode**<space>**Server**
Example	**Set Mode Server**
Response	**Date, Time Set Mode Server OK**

36. Set Mode SMS & Server

Both SMS alerts and HTTP Post is sent. This is the default state.

Format	**Set**<space>**Mode**<space>**SMS**<space>**&**<space>**Server**
Example	**Set Mode SMS & Server**
Response	**Date, Time Set Mode SMS & Server OK**

37. Set File Path <xxxxxxxxxx>

The file path for the HTTP Post can be configured. A maximum of 300 characters is allowed.

Default is *EightPortServer/sparrServlet?IN1=R1&IN2=R2&IN3=R3&IN4=R4&IN5=R5&IN6=R6&IN7=R7&IN8=R8*

Format	**Set**<space>**File**<space>**Path**<space>**/EightPortServer/sparrServlet?IN1=R1&IN2=R2&IN3=R3&IN4=R4&IN5=R5&IN6=R6&IN7=R7&IN8=R8**
Example	**Set File Path /EightPortServer/sparrServlet?IN1=R1&IN2=R2&IN3=R3&IN4=R4&IN5=R5&IN6=R6&IN7=R7&IN8=R8**
Respons	**Date, Time Set File Path /EightPortServer/sparrServlet?IN1=R1&IN2=R2&IN3=R3&IN4=R4&IN5=R5&IN6=R6&IN7=R7&IN8=R8 OK**

38. Set Remote IP <xxx.xxx.xxx.xxx>

Set the remote IP to which the HTTP Post is to be sent. **Default is 192.64.85.132**

Format	**Set**<space>**Remote**<space>**IP**<space>**xxx.xxx.xxx.xxx**
Example	**Set Remote IP 192.64.85.132**
Response	**Date, Time Set Remote IP 192.64.85.132 OK**

39. Set Remote Port <xxxxx>

Set the remote port. **Default is 8080**.

Format	**Set**<space>**Remote**<space>**Port**<space>**xxxx**
Example	**Set Remote Port 8080**
Response	**Date, Time Set Remote Port 8080 OK**

40. Set Time Mode GSM

Time is updated locally from the cell provider. This is the default state.

Format	**Set**<space>**Time**<space>**Mode**<space>**GSM**
Example	**Set Time Mode GSM**
Response	**Date, Time Set Time Mode GSM OK**

41. Set Time Mode NTP

Time is updated from an NTP Server.

Format	**Set**<space>**Time**<space>**Mode**<space>**NTP**
Example	**Set Time Mode NTP**
Response	**Date, Time Set Time Mode NTP OK**

42. Set Time Update Interval <xxxx>

Time is updated after every configured interval. Default is 60 mins. Any number between 1 and 65000 can be configured.

Format	**Set**<space>**Time**<space>**Update**<space>**Interval**<space>**xxxx**
Example	**Set Time Update Interval 60**
Response	**Date, TimeSet Time Update Interval 60 OK**

43. Set Time Server IP1

Configure the NTP server through which the time is obtained. Up to 3 such servers can be configured.
Default is Time Server IP1: 193.079.237.014, Time Server IP2: 64.90.182.55,
Time Server IP3:216.171.112.36

Format	**Set**<space>**Time**<space>**Server**<space>**IP1**<space>**xxx.xxx.xxx.xxx**
Example	**Set Time Server IP1 193.079.237.014**
Response	**Date, Time Set Time Server IP1 193.079.237.014 OK**

44. Set Time Server Port

Configure the time server port. **Default is 123**.

Format	**Set**<space>**Time**<space>**Server**<space>**Port**<space>**xxx**
Example	**Set Time Server Port 123**
Response	**Date, Time Set Time Server Port 123 OK**

45. Set Time Zone <xxxxx>

Helps to set the different time zones.

Format	**Set**<space>**Time**<space>**Zone**<space>**xxxx**
Example	**Set Time Zone +5:30**
Response	**Date, TimeSet Time Zone +5:30 OK**

46. Set Post Interval <xxxx>

Set an interval after which HTTP Post is made. Default is 15 mins. Any number between 1 and 254 can be configured.

Format	**Set**<space>**Post**<space>**Interval**<space>**xxxx**
Example	**Set Post Interval 15**
Response	**Date, Time Set Post Interval 15 OK**

47. Set Unit ID

Default is NULL. IF no Unit ID is configured, IMEI number of the GSM module is sent.

Format	**Set**<space>**Unit**<space>**ID**<space>**unit id**
Example	**Set Unit ID ABC**
Response	**Date, Time Set Unit ID ABC OK**

48. Post Analog Count

In the HTTP Post, count value of the analog inputs are sent. This is the default state.

Format	**Set**<space>**Post**<space>**Analog**<space>**Count**
Example	**Set Post Analog Count**
Response	**Date, Time Set Post Analog Count OK**

49. Post Analog Voltage

In the HTTP Post, voltage value of the analog inputs are send.

Format	**Set**<space>**Post**<space>**Analog**<space>**Voltage**
Example	**Set Post Analog Voltage**
Response	**Date, Time Set Post Analog Voltage OK**

50. Set Secondary IP <xxx.xxx.xxx.xxx>

Set the secondary IP from which the packet containing the command to change the digital output state is received. Default is 192.64.85.132.

Format	**Set**<space>**Secondary**<space>**IP**<space>**xxx.xxx.xxx.xxx**
Example	**Set Secondary IP 192.64.85.132**
Response	**Date, Time Set Secondary IP 192.64.85.132 OK**

51. Set Secondary Port <xxxxx>

Set the secondary port. Default is 8080.

Format	**Set**<space>**Secondary**<space>**Port**<space>**xxxx**
Example	**Set Secondary Port 8080**
Response	**Date, Time Set Secondary Port 8080 OK**

52. Set Server Response Interval <xxxx>

The unit waits for this amount of time (in seconds) for the packet from the secondary IP, after which it'll return to its functionalities. Default is 60 seconds

Format	**Set**<space>**Server**<space>**Response**<space>**Interval**<space>**xxx**
Example	**Set Server Response Interval 60**
Response	**Date, Time Set Server Response Interval 60 OK**

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9. Troubleshooting

Problems	Solutions
1) If the device is not able to send the SMS Alert	Check GSM antenna connected properly Check SIM Card inserted properly Make Sure enough currency is available to send SMS Check GSM LED is ON for 64msec and OFF for 3 sec
2) If the device is not detecting the input	Check the digital inputs are connected properly
3) If the device is unable to Configure	Ensure Master number is configured correctly and verify SMS commands are being sent from the master mobile

10. Frequently Asked Questions

Questions	Answers
1) How to SET MASTER NUMBER?	**Set**< space >**M1**<space>**Number**
2) How to RESET MASTER NUMBER?	**Set**<space>**DEFAULT 7727735328766427** If Master number is forget or lost, by sending this command master number can be deleted from any mobile hand set.
3) How to SET DEFAULT values?	**Set**<space>**DEFAULT** All parameter values are loaded into default values.
4) How to send a message along with Date and Time?	**Set**<space>**Time**<space>**Stamp**<space>**ON** [Default: enable] date & Time will be sent in SMS along with the message
5) How to DELETE a number?	**Set**<space>**M1** It makes master number into null.
6) How to SET RECIPIENT NUMBER?	**Set N1 number** **Set**< space >**N1**<space>**Number**

12. Contact and Support

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