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GSM Transformer Alarm System & GSM House Alarm System &  
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***An Economical and Practical Solution For Temperature Measurement  
Logging by GPRS In The Worldwide!***



## **GPRS Temperature Logger**

**S26x**

### **User Manual**

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This handbook has been designed as a guide to the installation and operation of S26X GPRS Temperature Data Loggers. Statements contained in the handbook are general guidelines only and in no way are designed to supersede the instructions contained with other products.

We recommend that the advice of a registered electrician be sought before any Installation work commences.

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## Model List Table

Model No.	Description	Temperature Sensor	Communication Protocol
S260	Suitable for general applications.	Semiconductor Temp. Sensor X1	GPRS
S261	Suitable for industrial applications.	Semiconductor Temp. Sensor X2	GPRS
S262	Suitable for industrial applications.	Semiconductor Temp. Sensor X2	Modbus TCP
S263	Suitable for industrial applications.	PT100 Temp. Sensor X2	GPRS
S264	Suitable for industrial applications.	PT100 Temp. Sensor X2	Modbus TCP

- The S260, S261, S263 data transmission based on our private GPRS Protocol to Web Based Monitoring Center;
- The S262, S264 supports standard Modbus TCP protocol, and we also can supply the OPC Server to use SCADA.



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## **1. Brief introduction**

The GPRS Temperature Logger S26X is an economical and practical solution for multipoint temperature measurement logging to Web Based Monitoring Center by GPRS in the worldwide!

The GPRS Temperature Logger S26X is special for real time remotely measuring temperature to the monitoring center by wireless GPRS Network. It will automatically upload the temperature to the Web Based monitoring center by GPRS.

Moreover, the user can inquiry the current temperature and historical record from website at anywhere and anytime.

The GPRS Temperature Logger S26X is easily to setup by simple SMS Commands.

### **\*\*\*Where Does the GPRS Temperature Logger S26X Suitable for?\*\*\***

Because of the GPRS Temperature Loggers S26X no distance limited, they can working in the worldwide to the monitoring center, they are very suitable for:

Heating Room;

Cooling Room; Refrigerator Car;

Food Storehouses;

Weather Station;

Energy saving control of heating enterprises;

Agriculture and Greenhouse;

Meteorology;

Residential areas(e.g.: North Europe winter, Russia winter and Canada winter residential areas monitoring.)

and other places or applications relevant to temperature measurement monitoring needs;

Heating companies;

Refrigerator Car Transportation companies;

And so on.

### **\*\*\*How Does the GPRS Temperature Logger S26X works?\*\*\***

The GPRS Temperature Logger S26X equipped one reliable GPRS Module inside, and plus one sensitive temperature sensor, the sensor has a predictable resistance that is affected by temperature change, so as the temperature increases or decreases the electrical current changes, or the resistance increases and



decreases. Then transmits the electrical signal to MCU, and the MCU will process the signal and then transmits to Monitoring Center Domain or Sever by GPRS.

Once the Monitoring Center Received the data, will identify the data and distinguish where is from, then store it and display them as line chart as well as show the place by map for user review. More about the Web Based monitoring center please see GPRS Temperature Logger Web Based Monitoring Center Datasheet.

## **2. Safety Directions**



### **Safe Startup**

Do not use GPRS Temperature Logger when using GSM equipment is prohibited or might bring disturbance or danger.



### **Interference**

All wireless equipment might interfere network signals of GPRS Temperature Logger and influence its performance.



### **Avoid Use at Gas Station**

Do not use GPRS Temperature Logger at a gas station. Power off GPRS Temperature Logger when it near fuels or chemicals.



### **Power it off near Blasting Places**

Please follow relevant restrictive regulations. Avoid using the device in blasting places.



### **Reasonable Use**

Please install the product at suitable places as described in the product documentation. Avoid signal shielded by covering the mainframe.



### **Use Qualified Maintenance Service**

Maintenance can be carried out only by qualified maintainer.

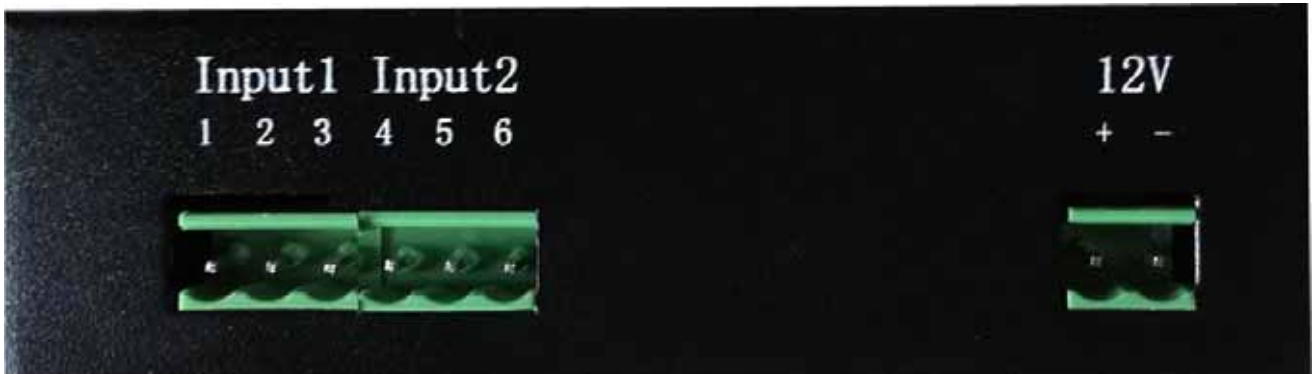
## **3. Standard Packing List**

Control Unit X1, GSM ANT X1, User Manual X1(CD), AC/DC Adaptor X1, Temperature sensor X1.

## **4. Physical Layout**



#### 4.1 Control Unit physical layout



### Interface Instruction

Input 1	1	GND
	2	Signal
	3	DC power for temperature sensors.
Input 2	4	GND
	5	Signal
	6	DC power for temperature sensors.
12VDC	The external power input. Recommend 12VDC, 1A, 7.5 ~ 24V, 1A.	

## 5. Features

1. GPRS Data Transmission, no distance limited;
2. Transmission span time is programmable by user from 1~255minutes;
3. Simply installation and easy to use;
4. Programmable by SMS Commands;
5. Measurement Temperature range -50 ~ 120 (18B20 Temperature Sensor,S260,S261,S262), -50~300 (PT100 Temperature Sensor,S263,S264).

## 6. Settings

### Notice:

1. The default Password is **1234**.
2. All the settings are through SMS commands, please edit the below SMS commands in your cell phone, then send to the S26X Unit.
3. You can program the GPRS Temperature Logger with SMS commands using your phone. It is



safe to do so because in addition to the fact that other people may not know the number of the SIM inserted in it, we also use a Password that makes it impossible for anybody, who doesn't know it, to access the system by chance.

4. Remember that commands must be **CAPITAL LETTERS**. It is PWD not pwd, CAP not Cap etc. Don't add spaces or any other character.
5. The **pwd** in the commands is means the password, when you use it, please in stand of it by the digital number; the capital letters **PWD** is the command letter, use PWD directly.
6. After setup the parameters, power on the unit, wait 10minutes, the temperature will upload to the Web Based Monitoring Center.
7. In some GSM operators they use different SMS parameter; the units can't return the SMS confirmation is normally. It is not product problem. Also, you can try to add the country code before the number, see the below settings:

**For example:**

In China, the country code is **0086**, or **+86**.

The user cell phone number is **13570810254** and has been assigned as a SMS Alert number, the simcard number in the panel is **13512345678**.

Problem 1: Alarm but the user hasn't received the SMS Alert.

Solution: Please plus the country code while you setup the 13570810254 as SMS Alert number, means setup **008613570810254** to instead of the **13570810254**.

Problem 2: The user number can receive the SMS Alert message from alarm panel, but the alarm panel can not receive the commands from the user number.

Solution: Please add country code to the simcard number in the alarm panel. Means send sms commands to **008613512345678** to instead of **13512345678**.

Solution 3: When you use cell phone dial another one, what number it will be displayed then you can set the displayed number as dial numbers; when you use cell phone send SMS to another cell phone, what number it will be displayed then you can set the displayed number as SMS Alert number, just use the 00 to replace the "+", also, you can try the "+".

8. The SMS Commands are different for GPRS Protocol and Modbus TCP Protocol models, please see the following chapters.

## 6.1 SMS Commands for GPRS Protocol models(S260,S261, S263)

### 1. Inquiry Current Temperature by SMS:

**\*pwd\*B#**

if successful, the unit will return: **IDXXXXXX:Temp:B+025.5;Time:03/01/01 00:00.**

IDXXXXXX: the XXXXXXXX stands for the last 7 digital of the GSM Module IMEI Code.(in below mentioned IDXXXXXX is the same means.)

B+025.5 stands for the current temperature value, unit is centidegree.



Time:03/01/01 00:00 stands for date and time.

**2. Setup the interval time to upload data to monitoring center:**

**\*pwd\*D,,TTT#**

if successful, the unit will return: **IDXXXXXXXX:D SET OK.** The time starts from the GPRS Logger connecting to monitoring center.

*D,, is the command, please note two dots, not one.*

*TTT: Stands for time, unit is minutes, from 000~255minutes, when TTT=000 stands for not upload data to monitoring center.*

E.g.: if you want to setup the interval time as 30minutes, and the password is 1234, then you can send **\*1234\*D,,030#**

**3. Setup the monitoring center parameters:**

**\*pwd\*Ixxx.xxx.xxx.xxx\*PPPPP\*U(T)\*D(I)#**

if successful, the unit will return: **IDXXXXXXXX:I SET OK.**

*Ixxx.xxx.xxx.xxx the I is the command, xxx.xxx.xxx.xxx stand for the DNS or IP address.*

*PPPPP stands for the port that the GPRS Logger used to connect the monitoring center, the port must be one of the 9010,9011,9012.*

*U(T) stands for GPRS Transmission protocol, U means UDP, T stands for TCP. Only accept one of them. We recommend using TCP.*

*D(I) stands for monitoring center domain use DNS or Static IP Address, D stands for DNS, I stands for static IP Address. Only accept one of them. We recommend using DNS.*

E.g.: if you want to setup the monitoring center as [www.gprstemplogger.com](http://www.gprstemplogger.com), and using ADSL to connection, the mapped port is 9011, using TCP protocol, and the password is 1234, then you can send **\*1234\*Iwww.gprstemplogger.com\*9011\*T\*D#**. if successful, the unit will return: **IDXXXXXXXX:I SET OK.**

if you want to setup the monitoring center as static IP Address 192.168.1.25, and using ADSL to connection, the mapped port is 9011, using UDP protocol, and the password is 1234, then you can send **\*1234\*I192.168.1.25\*9011\*U\*I#**. if successful, the unit will return: **IDXXXXXXXX:I SET OK.**

**4. Setup the APN(Access Point Name) :**

*Some GSM Operator need setup the APN, others no need. If need to setup the APN, please see below:*

**\*pwd\*Paaa;nnn;ppp#**

if successful, the unit will return: **IDXXXXXXXX:P SET OK.**

*P is the command.*

*aaa stands for APN, max. 32 characters;*

*nnn stands for username, max. 32 characters;*

*ppp stands for GPRS Password.*

*Between APN, USERNAME,PASSWORD must use symbol ; not other symbols.*



All of the abovementioned APN, USERNAME, PASSWORD can be get from your GSM Operators.

E.g.: if the APN is UKNET, and no Username, GPRS password is 1111, and the password is 1234, then you can send `*1234*PUKNET;;1111#`. if successful, the unit will return: `IDXXXXXXXX:P SET OK.`

## 6.2 SMS Commands for Modbus TCP models(S262,S264)

### 1. Setup the monitoring center parameters:

```
*pwd*lxxx.xxx.xxx.xxx*PPPP* T*D(I)#
```

if successful, the unit will return: `IDXXXXXXXX:I SET OK.`

*lxxx.xxx.xxx.xxx the l is the command, xxx.xxx.xxx.xxx stand for the DNS or IP address.*

*PPPP stands for the port that the server used to connect the GPRS Logger, if use ADSL, please map the port for the this connection.*

*T stands for GPRS Transmission protocol, T stands for TCP. Only accept TCP protocol for Modbus TCP.*

*D(I) stands for monitoring center domain use DNS or Static IP Address, D stands for DNS, I stands for static IP Address. Only accept one of them. We recommend using DNS.*

E.g.: if you want to setup the monitoring center as [www.gprstemplogger.com](http://www.gprstemplogger.com), and using ADSL to connection, the mapped port is 9011, using TCP protocol, and the password is 1234, then you can send `*1234*lwww.gprstemplogger.com*9011*T*D#`. if successful, the unit will return: `IDXXXXXXXX:I SET OK.`

if you want to setup the monitoring center as static IP Address 192.168.1.25, and using ADSL to connection, the mapped port is 9011, using TCP protocol, and the password is 1234, then you can send `*1234*l192.168.1.25*9011*T*I#`. if successful, the unit will return: `IDXXXXXXXX:I SET OK.`

### 2. Setup the APN(Access Point Name) :

*Some GSM Operator need setup the APN, others no need. If need to setup the APN, please see below:*

```
*pwd*Paaa;nnn;ppp#
```

if successful, the unit will return: `IDXXXXXXXX:P SET OK.`

*P is the command.*

*aaa stands for APN, max. 32 characters;*

*nnn stands for username, max. 32 characters;*

*ppp stands for GPRS Password.*

*Between APN, USERNAME, PASSWORD must use symbol ; not other symbols.*

*All of the abovementioned APN, USERNAME, PASSWORD can be get from your GSM Operators.*

E.g.: if the APN is UKNET, and no Username, GPRS password is 1111, and the password is 1234,





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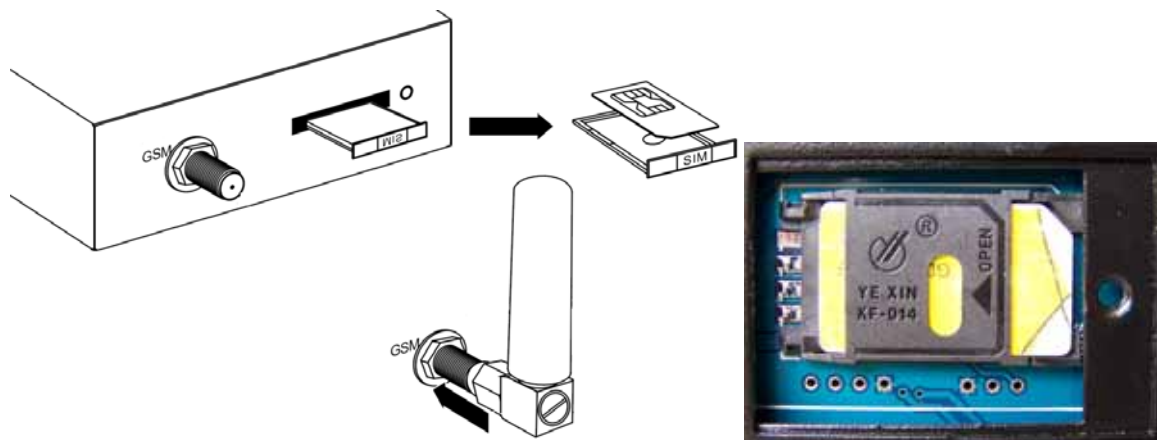
then you can send `*1234*PUKNET;;1111#`. if successful, the unit will return: `IDXXXXXX:P SET`  
`OK.`

## 7. Installation

*Before installing the control unit and sensors, please help to test the system firstly, including sensor, power supply, gsm signal, etc.*

### 7.1 Insert SIMcard into Control Unit

In the backside of the control unit, please install the GSM SIM card.



### 7.2 Connecting the Temperature Sensors

Please fixed the related temperature sensors, the sensors connect to the related input.

### 7.3 Install the Mainframe

The mainframe should be installed in the position that person can not get it, and there're with a power source as well as enough GSM signal coverage.

## 8. Technical specifications

Rated Voltage: 7.5 ~ 24VDC 1A

Standby current: 1.1mA

Working temperature: -35 ~ +80

Storage temperature: -35 ~ +80

Measurement Range: -50 ~ 120 (18B20 Temperature Sensor,S260,S261,S262), -50~300 (PT100 Temperature Sensor,S263,S264).

Temperature Sensor input: 2(S260 is only 1)

Relative humidity: 10-90%, No condensation

GSM Band: 850/900/1800/1900Mhz



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GSM Emission Power: GSM850/EGSM900 Class4(2W)  
DCS1800/PCS1900 Class1(1W)

GPRS Protocol: GSM/GPRS Phase2/2+

GPRS Data: GPRS CLASS12  
CS 1,CS 2,CS 3,CS 4  
PBCCH  
TCP/IP ACK

Size: 80mmX76mmX25mm (LXWXH)

Net Weight: 0.60Kg

## **9. Important information**

- 1) Please read the User Manual carefully before you install the Control Unit and set the Control Unit.
- 2) Install the system in a hidden place.
- 3) Avoid getting water into the Control Unit.
- 4) Have a secure connection to the main power supply.

## **10. Maintenance**

- 1) In case of failure, please contact the distributor or manufacturer.
- 2) If the remote control works, but the Control Unit fails to send SMS texts, switch the power of Control Unit off and switch it on after one minute. Test this system after another minute, or check the settings are correct and the GSM Signals are strong enough.
- 3) If the Control Unit can run and sensors work, but cannot send SMS texts, please change SIM Card to check it.
- 4) If the problem cannot be solved, please contact the distributor or manufacturer.

## **11. Instruction for Demo Testing**

The demo only suitable for S260,S261,S263. We installed one Server in our company, the users who ordered the sample can use our server to test directly to know more about the whole solution and easily.

Please do as below step by step to finish the setup.

1. Insert SIMCARD, the SIMCard must support GPRS transmission.
2. Connect the temperature detectors according to the user manual, then switch on it.
3. Send SMS: `*1234*lgprstemplogger.oicp.net*9010*T*D#` to the unit. if successful, the unit will return: `IDXXXXXXXX:I SET OK.`
4. Setup the interval upload time as 30seconds, send SMS: `*1234*D,,030#` to the unit.
5. Setup the APN, Some GSM Operator need setup the APN, others no need. If need to setup the APN, please see below:  
`*pwd*Paaa;nnn;ppp#`



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if successful, the unit will return: `IDXXXXXXXX:P SET OK.`

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*All of the abovementioned APN, USERNAME, PASSWORD can be get from your GSM Operators.*

E.g.: if the APN is UKNET, and no Username, GPRS password is 1111, and the password is 1234, then you can send `*1234*PUKNET;;1111#`. if successful, the unit will return: `IDXXXXXXXX:P SET OK.`

6. After you do that, then please login our demo to add your unit. Please read the CMS-02 user manual or provide your unit IMEI Code so that our engineer can help you to do that. The IMEI Code is when you got Return SMS, the digitals after ID, like `IDXXXXXXXX:P SET OK.`, the XXXXXXXX is the IMEI code. Strongly recommend you setup the details in the CMS-02 side by yourself according to the CMS-02 Instruction, Our Server details please see below:

<http://www.gsmalarmsystem.com/Enshownews.asp?id=143>

## 12. Warranty

- 1) This system is warranted to be free of defects in material and workmanship for one year from the date of purchase.
- 2) This warranty does not extend to any defect, malfunction or failure caused by abuse or misuse by the Operating Instructions. In no event shall the manufacturer be liable for any alarm system altered by purchasers.

The End!

Any questions please help to contact us feel free.

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