

OPERATING TEMPERATURE ALARM

First off set the temperature for alarm for example 30°C ± 1°C (differential of activation) may also indicate the time that has to remain above or below to consider that is in alarm. You can define two different values or the same for the delay time (Delay). Factory goes to 0 and alerts at the same time the temperature goes from temp alarm ± 1°C.

Delays are very useful to discriminate when a temperature alarm of a product load in cold rooms where there are short peaks and temperature are controlled.

Example:

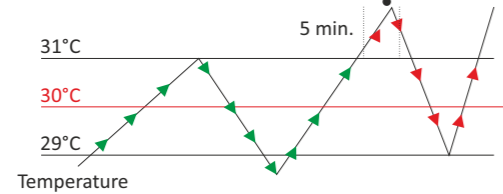
SMS

0000 alarm t1 30 Temperature for alarm: 30°C + fixed Dif.: ± 1°C

0000 delay t1 5 delays 5 minutes for activation and deactivation

0000 delay t1 5 10 delay for activation 5 and 10 minutes for deactivation

Must comply with 2 factors: Temperature + Time Set



Activates the alarm in case of being more than 5 minutes (time delay) above 31°C (temperature alarm + differential) and does not disable the alarm until it is below of 29°C over 5 minutes (temperature alarm - differential)

IN CASE OF: SMS received

- Make a call to **TELKAN** from a phone that had previously made valid orders.

R1: on
T1: 26.8C
A1: off
B1: BATT (11.799V)

SMS Status query:
State relays
Current temperature read by probes
Alarm status
battery connected (value of charge)

- Send an wrong SMS to the **TELKAN** from a phone that had previously made valid orders.

pwd +
on - relay on
off - relay off
inform on - receive alarm
test - status
pass xxxx - change password

Password (set from factory to 0000) + followed by the command: order - (meaning that order)

- If a request to change languages includes an invalid number

ERROR: invalid language. 0-Castellano, 1-English.

- The temperature exceeds the limit set by the user

Alarm: T1
T1: 33.5C
A1: off
B1: MAIN

Probe set for alarm
Reading probe alarm
Disconnected alarm contact
Main power supply

- Message received periodically according to set time with the function **Alive** activated

T1: 26.8C
A1: off
B1: MAIN

Temperature read by probe T1
Alarm 1 off
Main power supply

- Message received when the control detects that the battery power is low.

Warning! The volatge of the battery is very low.
BATT (9.112V)

Warning low battery with charge value

- If the SMS received by the **TELKAN** not start with numeric digits and comes from an unknown telephone is interpreted as a message from the phone company:

- If the control is configured with the function **PROMO** in on, the SMS is forwarding to all phones set in Function Inform
- If the control is configured with the function **PROMO** in off, is deleted.

- The **TELKAN** saves the last 5 phone numbers that have given a correct order and if they make a lost call, the **TELKAN** sends an SMS of state, but the SMS that an alarm has occurred only is sent to the numbers set in **INFORM** function.

CONDITIONS OF GUARANTEE

This device has 3 year warranty according to the date of manufacture, it is limited to replacement of faulty part. Transport not included.

We decline any responsibility for damaged equipment result of poor handling. Not included in the warranty:

- Equipment whose serial number has been damaged, deleted or modified.
- Devices whose connection or use has not been executed according to the instructions accompanying the appliance.
- Apparatus modified without the consent of the manufacturer.
- Devices whose deterioration is the result of impact or liquid or gaseous emanations.

Reserved the right to change without prior notice. For the rest of general conditions visit our web.

Very important:

Device designed for a situation of pollution clean.

This control is not a safety device, and can not be used as such, it is the installer responsibility incorporate adequate protection to every type of installation (**HOMOLOGATED**)

Control device for DIN rail mounting and connection via fixed pipeline.

When installing control ensure you have good coverage away from contactors and other signals that may interfere.

Sonder Regulación, S.A.

Avda. La Llana, 93

08191 RUBÍ

(Barcelona) Spain

www.sonder.es

Cod.:7883 INGV1 ENE19

TELKAN 1 GSM 3G

Telephonic Control Via GSM Code:19.091



Manual of installation and use

Remote control via GSM that works by sending and receiving SMS (configurable in 2 languages, Spanish / English). Ability to operate powered 12V ideal photovoltaic installations.

SIM: Works with prepaid card or contract of any company, it is recommended the prepaid for save money. Before purchasing the SIM, verify what company has the better coverage in the area. (SIM not included)

1 Relay 5A: You can activate/deactivate manually or by SMS, activate /deactivate timed and query the status of the relay.

1 Input for T Probe: allows receive warnings of a temperature alarm, the relay can be linked to temperature alarm and view the history of temperatures for the last 4 hours via SMS. (Probes not supplied, code: 4.343)

1 Alarm contact: When open / close contact for more than 5 seconds will generate an alarm.

1 Input for external battery: When detecting a change of power (battery passes network or vice versa) sends SMS warning of network failure and SMS of service restoration. (Battery not supplied, code: 7.190)

IP65 Box: Box for surface mounting. (Box not supplied, code: 4.914)

START UP

1 - Install the control away from contactors, motors ... etc. **It may be the case with some contactor with strong electromagnetic peaks need to install a relay between the output of TELKAN and the contactor coil.**

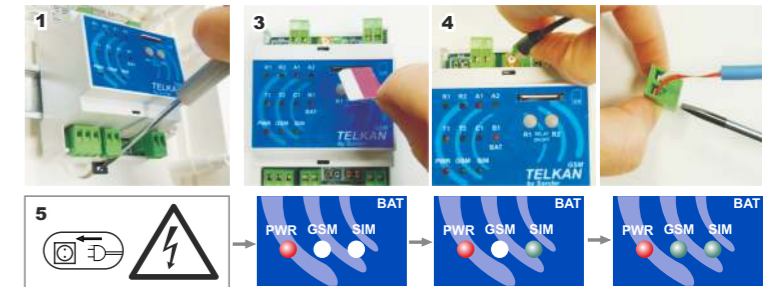
2 - Check with a mobile phone the SIM (which has no access PIN code, the credit, sending and receiving SMS).

3 - Insert SIM in **TELKAN**.

4 - make the rest of connections.

5 - Connect the control to the power supply 230V~

If the installation was successful should light the LEDs: **PWR, SIM and GSM**



TECHNICAL SPECIFICATIONS

- Power supply: 230V~ +10% -15% 50/60Hz max. 2VA

- Free-voltage contact relay

- Wiring type: H05VV-F or H05RR-F

- Minimum section for cable of: Relay → 2,5 mm² Power supply → 1 mm²

- Measures: Rail-DIN box 4 modules (90x70x58 mm)

- Software classe A - Action type 1.B

- Independent dispositive

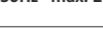
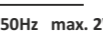
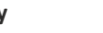
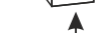
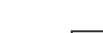
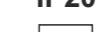
- Environment: Temperature → 0°C to 45°C / Humidity → 20% to 85%

- Contamination degree: clean environment

- According normative: **EN 60730 / EN 301511 / EN 301489-1 / EN 301489-7**

Electrical drawing:

IP20



DESCRIPTION

Application (relay)

5A 250V~ SPST. Relay with free voltage-contact (operation as a switch)

LED's

- **r1** (Relay) on → relay connected
off → relay disconnected
- **a1** (Alarm) on → in alarm
off → Without alarm
- **t1** (Probe) on → in temperature alarm
off → without temperature alarm
blinking → Connection error
- **b1** (Battery) on → power supply by battery
off → power supply by 230V~
- **PWR** (Power supply) on → powered supply
off → without power supply
- **GSM** (Signal) on → wiht signal GSM
off → without signal GSM
blinking → sending dates or SMS received
- **SIM** (Card) on → inserted and operational
off → without card SIM
blinking → the card has PIN (take out of TELKAN & disabled the PIN)

External antenna connector

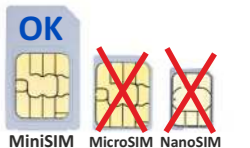
Connection for external antenna with magnetic base

Contact closure alarms

When open / close contact for more than 5 seconds generates an alarm

SIM card

Cardholder to insert a MiniSIM that is operational and any company. Does not work with MiniSIM card or the phone number doubled. **Do not insert or remove the SIM card with the Sondertel powered.**



Button ON / OFF

Connect / disconnect the relays manually without sending message.

Input for temperature probe

Connection for temperature probe PTC2000 (-40°C ... + 140°C). When the probe detects that the temperature has crossed the threshold defined by the user, the controller sends an SMS alarm only to phone number that has been activate INFO function. (F. MEET, can activate the desired relay).

Input for external battery

External input for a sealed lead battery of 12V and a capacity of 1.2 to 20Ah.



Before giving the power to the control, remove the SIM card PIN and insert it into the TELKAN

USE SMS MESSAGES TO CHANGES SETTINGS

The programming is done via SMS messages through a mobile phone. It is imperative to introduce exactly the same characters as they are written in the description. Phones with call in hidden number identification can only send orders and can not receive confirmation messages.

When **TELKAN** receives the order, it returns an SMS to the sender with confirmation of the new configuration, if you want to override this SMS (saving money card that manages the **TELKAN**) must only add an asterisk (*) at the end of each order (not for relay status query and History temperatures).

IMPORTANT: to receive SMS alarm, alive and other than shipping immediately has to register the phone number on control with the function inform.
(*) It means that this order has the option to override the confirmation message by adding an asterisk at the end of the message

SMS esturcture

acces code = **0000** (from factory, change by personal code) ∪ = 1 space Relay: **r1** Temperature probe: **t1**
 Contact Alarm: **a1** Battery: **b1**

Change of acces code	Exemple of SMS	
acces code ∪ pass ∪ new code	0000 pass 1234	Changes the access code (from the factory default of 0000) and returns a confirmation message to the sender

Operative status (*)

acces code ∪ alive ∪ No days	0000 alive 1	Sends a test message every number of hours configurated to communicate that status of device is operative (SIM has money and works correctly). If programmed to 0, the function is off. Range: 0 (off) ... 45 days.
acces code ∪ alive ∪ No days*	0000 alive 1*	<i>Example of order without return SMS of confirmation (adding * at the end of the SMS order)</i> Programm the sending of test message without SMS of confirmation
acces code ∪ alive	0000 alive	Sends a SMS with the time remaining for the next send of sms alive

To turns relay ON (*)

acces code ∪ rNo relay ∪ on	0000 on	Turns the relay on and returns a status message to the sender
-----------------------------	----------------	---

Timed relay activation (*)

acces code ∪ rNo relay ∪ on ∪ No minutes	0000 on 15	Turns the relay on for the number of minutes specified in the message and then switches it OFF. (Adjustable: 1 ...64 800 minutes.) This command returns two status messages to the sender: the first to confirming receipt of the command, and a second message when the relay status changes to OFF.
--	-------------------	---

To turns relay OFF (*)

acces code ∪ rNo relé ∪ off	0000 off	Turns the relay off and returns a message to the sender indicating the new status.
-----------------------------	-----------------	--

Timed relay deactivation (*)

acces code ∪ rNo relay ∪ off ∪ No minutes	0000 off 15	Turns the relay OFF for the number of minutes specified in the message and then switches it ON. (Adjustable: 1 ...64800 minutes.) This command returns two status messages to the sender: the first to confirming receipt of the command, and a second message when the relay status changes to ON.
---	--------------------	---

Relays behaviors, MEET (*) You can link any of the relays to any of the inputs (temperature sensor, contact closure alarm, battery)

acces code ∪ meet	0000 meet	It returns a message with the status of the function on/off and device is connected as the operation of the relay
acces code ∪ meet ∪ rNo relay ∪ a1	0000 meet r1 a1	When it detects an contacts alarm relay activates permanently until there is a forced manual or by SMS.
acces code ∪ meet ∪ rNo relay ∪ b1	0000 meet r1 b1	When it detects a change in power supply (battery to grid / network battery) activates the relay permanently until there is a forced manual or by SMS.
acces code ∪ meet ∪ rNo relay ∪ t1	0000 meet r1 t1	When it detects an temperature alarm (rising or falling humidity) activates the relay permanently until there is a forced manual or by SMS.
acces code ∪ meet ∪ rNo relay ∪ off	0000 meet r1 off	The relay operation is independent. The relay is activated by SMS or manually pressing the front button TELKAN

Log telephone number for receiving SMS (*) To receive SMS alarm must register the phone number with the function inform on

acces code ∪ inform ∪ on	0000 inform on	Save the phone number that sent this order to send SMS alarm to occur. Save up to 4 phone numbers, then you have to clear before sending a new one.
--------------------------	-----------------------	---

Remove phone numbers for receiving SMS (*)

acces code ∪ inform ∪ off	0000 inform off	Delete the phone number you sent the order for receiving sms alarm.
---------------------------	------------------------	---

Reset all phone numbers in memory for receiving SMS (*)

acces code ∪ inform ∪ reset	0000 inform reset	Deletes ALL the phone numbers stored in memory for alarm notification via SMS.
-----------------------------	--------------------------	--

List of number of phones that receive SMS

acces code ∪ inform	0000 inform	Returns an SMS to the sender reporting phone numbers that will send the SMS at alarm temperature, contacts, failure of power supply in net
---------------------	--------------------	--

Alarm activation (*)

	Exemple of SMS	
acces code ∪ alarm ∪ a1 ∪ on	0000 alarm a1 on	Activates the contact alarm function and returns an SMS to confirm the new status. <i>If you also want to alert you when the alarm occurs it is necessary to send the order to inform on.</i>
acces code ∪ alarm ∪ b1 ∪ on	0000 alarm b1 on	Activates the alarm function for failure of power supply and returns an SMS to confirm the new status. <i>If you also want to alert you when the alarm occurs it is necessary to send the order to inform on.</i>
acces code ∪ alarm ∪ t1 ∪ temperaturE °C	0000 alarm t1 45	Activates the Temperature alarm function, sets the temperature limit to that sent by the user and returns an SMS to confirm the new status. <i>If you also want to alert you when the alarm occurs it is necessary to send the order to inform on.</i>

Alarm deactivation (*)

acces code ∪ alarm ∪ a1 ∪ off	0000 alarm a1 off	Deactivates the alarm function and returns an SMS to confirm the new status.
acces code ∪ alarm ∪ b1 ∪ off	0000 alarm b1 off	Deactivates the alarm function for failure of power supply and returns an SMS to confirm the new status.
acces code ∪ alarm ∪ t1 ∪ off	0000 alarm t1 off	Deactivates the alarm function for temperature and returns an SMS to confirm the new status.

Alarm activation/deactivation delay (*)

acces code ∪ delay	0000 delay	Returns an SMS to the sender informing of delays programmed to alarm temperature. for each of type alarm, temperature, contacts, failure of power supply...
<i>Alarm contact</i> acces code ∪ delay ∪ a1 ∪ minutes ∪ minutes	0000 delay a1 2 5	Delays on / off contacts alarm (default 0, disabled = reported immediately). You can set a common value for activation and deactivation (0000 delay 5) or different in each case, two values of minutes: 0000 delay 5 10). Range (0... 240 minutes).
<i>Alarm failure of power supply</i> acces code ∪ delay ∪ b1 ∪ minutes ∪ minutes	0000 delay b1 2 5	Delays on / off failure of power supply alarm (default 0, disabled = reported immediately). The same operation as the previous order.
<i>Alarm temperature</i> acces code ∪ delay ∪ t1 ∪ minutes ∪ minutes	0000 delay t1 2 5	Delays on / off temperature alarm (default 0, disabled = reported immediately). The same operation as the previous order.

Checking recent temperatures & readings

acces code ∪ avg ∪ t1	0000 avg t1	Returns an SMS with the current temperature and the average temperature for the past 1 min, 4 mins, 15 mins, 1 hr and 4 hrs.
-----------------------	--------------------	--

Calibration temperature probe t1

acces code ∪ cal ∪ t1 ∪ value to subtract or add	0000 cal t1 -0.3	Allows you to adjust the probe reading. Using a precision pattern thermometer, look at the current temperature reading and then adjust the probe reading to the reading of the standard thermometer. Scale: -10.0 to 10.0, factory set to 0.0.
--	-------------------------	--

To change SMS language

acces code ∪ lang ∪ No new language	0000 lang 0	Changes the language setting (default Spanish) to the selected language No: 0=Spanish, 1=English
-------------------------------------	--------------------	--

Alarm Settings Query

acces code ∪ alarm	0000 alarm	Returns a text message informing the sender of the setting, on / off and values of the alarms for temperature, contacts failure of power supply in net..
--------------------	-------------------	--

Receiving messages Commercials (*) from factory setting in off

acces code ∪ promo ∪ off	0000 promo off	Sets the control to delete all commercials messages received
acces code ∪ promo ∪ on	0000 promo on	The control sends at the telephone number registered in function inform, all received messages that start with text.

Version

acces code ∪ version	0000 version	Send an SMS to the sender informing the program version, modem type, modem signal, voltage for the power supply (values of battery charge or electric network) & status of PROMO function.
----------------------	---------------------	--

Status Query If you missed a call the number on the SIM, SMS returns a test

acces code ∪ test	0000 test	Send an SMS to the sender reporting the status of the relay, the time it is connected (if programmed), status of the GSM signal TELKAN and current temperature.
-------------------	------------------	--