

## 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:

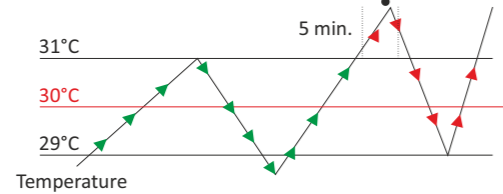
SMS

**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:

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

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

- If a request to change languages includes an invalid number

- The temperature exceeds the limit set by the user

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

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

- 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 Inofrm
- 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.

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Cod.:7955 INGV0 ENE19

# TELKAN 4 GSM 3G

Telephonic Control Via GSM Code:19.095



## 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)

**4 Relays (2x5A + 2x12A):** You can activate/deactivate manually or by SMS, activate /deactivate timed and query the status of the relay.

**3 Inputs for T Probes:** 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 Input for 4a20mA:** Has the same procedure that input for probes.

**1 Alarms 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: 7.118)

## 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.

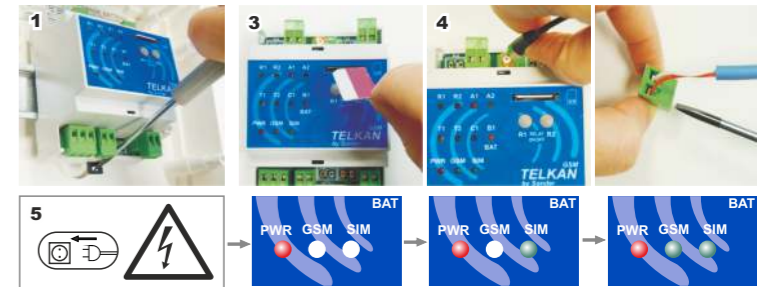
2 - Check with a mobile phone the SIM (which has no access PIN code, the credit, sending and receiving SMS).

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 mm<sup>2</sup> Power supply → 1 mm<sup>2</sup>

- Measures: Rail-DIN box 6 modules (90x105x58 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

## DESCRIPTION

### Input for external battery

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

### LED's

● **r1, r2, r3, r4** (Relays) on → relay connected  
off → relay disconnected

● **a1, a2, a3** (Alarms) on → in alarm  
off → Without alarm

● **t1, t2, t3** (Probes) on → in temperature alarm  
off → without temperature alarm  
blinking → Connection error

● **c1** (Input 4a20mA) on → in value alarm  
off → without value 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 → with 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)

### Application (relays r1, r2)

12A 250V~ SPDT. Relays with free voltage-contact (operation as a switch)

### 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 Mini-SIM that is operational and any company. Does not work with Mini-SIM card or the phone number doubled. **Do not insert or remove the SIM card with the Sondertel powered.**

### Buttons ON / OFF

Connect /disconnect the relays manually without sending message.

### Input for temperature probes

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 No function has been activated. (F. MEET, can activate the desired relay).

### Input for transducer 4a20mA

Has the same procedure that input for probes.

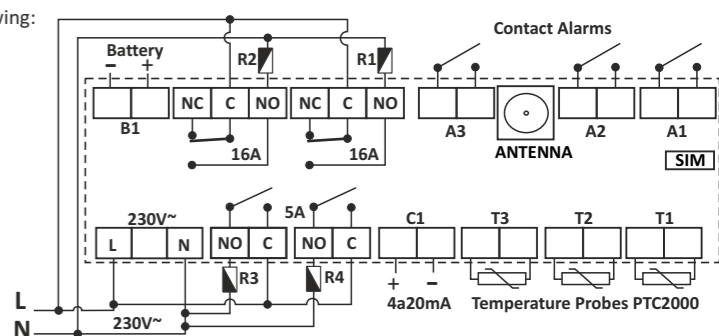
### Application (relays r2, r3)

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

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

### Electrical drawing:

IP20



## 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 estructure

acces code = **0000** (from factory, change by personal code)      \_ = 1 space      Relays: **r1, r2, r3, r4**      Temperature probes: **t1, t2, t3**      Input 4a20mA: **c1**  
 Contact Alarms: **a1, a2, a3**      Battery: **b1**

### Change of acces code *Exemple of SMS*

|                          |                       |   |
|--------------------------|-----------------------|---|
| acces code_pass_new code | <b>0000 pass 1234</b> | 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  | <b>0000 alive 1</b>  | 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* | <b>0000 alive 1*</b> | <i>Example of order without return SMS of confirmation (adding * at the end of the SMS order)</i><br>Programm the sending of test message without SMS of confirmation   |
| acces code_alive          | <b>0000 alive</b>    | Sends a SMS with the time remaining for the next send of sms alive  |

### To turns relay ON (\*)

|                         |                   |   |
|-------------------------|-------------------|---|
| acces code_rNo relay_on | <b>0000 r1 on</b> | Turns the relay on and returns a status message to the sender |
|-------------------------|-------------------|---|

### Timed relay activation (\*)

|                                    |                      |   |
|------------------------------------|----------------------|---|
| acces code_rNo relay_on_No minutes | <b>0000 r2 on 15</b> | 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 | <b>0000 r1 off</b> | 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 | <b>0000 r2 off 15</b> | 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 (sensors, transducers, contact closure alarms, battery)

|                               |                         |  |
|-------------------------------|-------------------------|--|
| acces code_meet               | <b>0000 meet</b>        | 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  | <b>0000 meet r1 a1</b>  | When it detects an contacts alarm relay activates permanently until there is a forced manual or by SMS.  |
| acces code_meet_rNo relay_b1  | <b>0000 meet r2 b1</b>  | 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_c1  | <b>0000 meet r1 c1</b>  | When appears a reading alarm (rising or falling setpoint) the relay permanently activated until occurs a manual forced or SMS.                         |
| acces code_meet_rNo relay_t1  | <b>0000 meet r1 t1</b>  | 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 | <b>0000 meet r1 off</b> | The relay operation is independent. The relay is activated by SMS or manually pressing the front button <b>TELKAN</b>                                  |

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

|                      |                       |   |
|----------------------|-----------------------|---|
| acces code_inform_on | <b>0000 inform on</b> | 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 | <b>0000 inform off</b> | 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 | <b>0000 inform reset</b> | Deletes ALL the phone numbers stored in memory for alarm notification via SMS. |
|-------------------------|--------------------------|--|

### List of number of phones that receive SMS

|                   |                    |  |
|-------------------|--------------------|--|
| acces code_inform | <b>0000 inform</b> | 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                  | <b>0000 alarm a1 on</b>  | 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                  | <b>0000 alarm b1 on</b>  | 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      | <b>0000 alarm t1 45</b>  | 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> |
| acces code_alarm_c1_value for the scale | <b>0000 alarm c1 100</b> | Activates the alarm function and defines the threshold within the configured scale value 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 | <b>0000 alarm a1 off</b> | Deactivates the alarm function and returns an SMS to confirm the new status.                             |
| acces code_alarm_b1_off | <b>0000 alarm b1 off</b> | Deactivates the alarm function for failure of power supply and returns an SMS to confirm the new status. |
| acces code_alarm_t1_off | <b>0000 alarm t1 off</b> | Deactivates the alarm function for temperature and returns an SMS to confirm the new status.             |
| acces code_alarm_c1_off | <b>0000 alarm c1 off</b> | Deactivates the alarm function for c1 analog input and returns an SMS to confirm the new status.         |

### Alarm activation/deactivation delay (\*)

|   |                          |   |
|---|--------------------------|---|
| acces code_delay  | <b>0000 delay</b>        | 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><br>acces code_delay_a1_minutes_minutes                 | <b>0000 delay a1 2 5</b> | 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><br>acces code_delay_b1_minutes_minutes | <b>0000 delay b1 2 5</b> | Delays on / off failure of power supply alarm (default 0, disabled = reported immediately). The same operation as the previous order.   |
| <i>Alarm temperature</i><br>acces code_delay_t1_minutes_minutes             | <b>0000 delay t1 2 5</b> | Delays on / off temperature alarm (default 0, disabled = reported immediately). The same operation as the previous order.   |
| <i>Alarm reading</i><br>acces code_delay_c1_minutes_minutes                 | <b>0000 delay c1 2 5</b> | Delays on / off reading alarm (default 0, disabled = reported immediately). The same operation as the previous order.   |

### Checking recent temperatures & readings

|                   |                    |  |
|-------------------|--------------------|--|
| acces code_avg_t1 | <b>0000 avg t1</b> | 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. If you have already sent a valid command from the same number, you can obtain the status by phone. The <b>TELKAN</b> hangs up and sends an SMS with the above temperature data. |
| acces code_avg_c1 | <b>0000 avg c1</b> | Returns an SMS with the readings of: current, for the past 1 min, 4 mins, 15 mins, 1 hr and 4 hrs  |

### Define a scale of values for c1 (\*)

|   |                               |   |
|---|-------------------------------|---|
| acces code_scale_c1_initial value_final value                     | <b>0000 scale c1 0 1500</b>   | Sets the values for the minimum and maximum of the scale for the analog input C1  |
| acces code_scale_c1_initial value_final value_No decimals to show | <b>0000 scale c1 0 1500 2</b> | Sending this message sets the beginning and end of the scale and also set two decimal. In the example would scale of 0-1500 and shows readings in 0.00 format |

### Units of measure for the scale of c1 (\*)

|                            |                          |  |
|----------------------------|--------------------------|--|
| acces code_units_magnitude | <b>0000 units liters</b> | With this SMS you can define what is being measured with the input c1 of 4a20mA. For example: liters, kg, humidity ... |
|----------------------------|--------------------------|--|

### To change SMS language

|                                 |                    |  |
|---------------------------------|--------------------|--|
| acces code_lang_No new language | <b>0000 lang 0</b> | Changes the language setting (default Spanish) to the selected language No: 0=Spanish, 1=English |
|---------------------------------|--------------------|--|

### Alarm Settings Query

|                  |                   |  |
|------------------|-------------------|--|
| acces code_alarm | <b>0000 alarm</b> | 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 Commercial (\*)** from factory setting in on

|                      |                       |  |
|----------------------|-----------------------|--|
| acces code_promo_off | <b>0000 promo off</b> | Sets the control to delete all commercials messages received   |
| acces code_promo_on  | <b>0000 promo on</b>  | The control sends at the telephone number registered in function inform, all received messages that start with text. |

### Version

|                    |                     |   |
|--------------------|---------------------|---|
| acces code_version | <b>0000 version</b> | Send an SMS to the sender informing the program version, modem signal, voltage for the power supply (these values depending of battery charge & 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 | <b>0000 test</b> | Send an SMS to the sender reporting the status of the relay, the time it is connected (if programmed), status of the GSM signal <b>TELKAN</b> and current temperature. |
|-----------------|------------------|--|