HEAT-LINK A22+4

Technical data

Data:

item number	7900
phone type	GSM 900/1800
SIM card	Standard
Driving voltage	220 VAC till 12 VDC
Current consumption	<20 mA in average
Thermostat	Built-in with frost guard
Number of wireless outputs	8 st. channels with wireless remote switches
Number of inputs	1st free & 1 st. for outside temp. giver
Number of wireless inputs	6 st. for detectors / sensors
LED indication	1 st. GSM Active
	1 st. Heat Active
	ON/AUTO/OFF close
Battery 760mA	> 24 hour reserve operation
Dimensions: excl. antenna	170 x 70 x 20 (wxhxd)

GSM Alarm Transmitter

Adapted for remote control of heating / frost guard

Controls 8 channels with wireless remote switches

Temperature control in 4 zones with frost guard

Wireless burglar alarm

All settings via SMS or Internet

HEAT-LINK A22+4

Thank you for giving us the confidence to deliver this product to you. Please read the instructions carefully before using the HEAT-LINK A22 + 4.

HEAT-LINK A22 + 4 is developed for monitoring and control of objects that normally do not have a fixed telephone connection but where mains voltage is available.
This can be cottages, boats, caravans, work sheds etc.

Generally

HEAT-LINK can act as a frost guard and activate the heating element or heating loop in pipes when the temperature drops to the freezing point to avoid costly damage. HEAT_LINK automatically controls the heat to an economically advantageous level with maintenance heating but also gives you the opportunity to get to an already heated summer cottage or caravan when you need it through a simple SMS that start heating to comfort temperature.

HEAT_LINK can also be used as a combined burglar alarm with the possibility of remote alarms for smoke alarms / leakage alarms.

HEAT-LINK A22 + 4 package.

A standard package includes:

HEAT-LINK A22+4 centralenhet
Power adapter for 230 VAC
Wireless remote switch 3500W (for use in wall sockets)
Included accessories: GSM antenna (SMA connector), built-in backup battery
Mounting screws

HEAT-LINK has a built-in rechargeable battery for approx. 24 hours of reserve operation at full charge. It sends alarms in the event of a power failure longer than 30 minutes.

The package can be supplemented with more remote switches, IR detectors, magnetic contacts, smoke alarms, remote controls etc.

Generally function

The remote switch is placed between the wall socket and the heat source.
The included remote switch can be charged with a maximum of 3500W. The remote power switch is of the self-learning type (NEXA compliant) and should be learned on channel 1 for basic function.

The control panel measures the indoor temperature with the built-in temperature sensor and is set to control remote switches connected to channel 1, so that the temperature does not fall below + 10ºC. The heat is switched off automatically at + 12ºC. These limit values can be changed, see the section temperature settings.

The user can manually override the function by pressing the button on the front of the unit or sending the SMS command "HEATON" to the unit, which activates comfort heating with pre-programmed limit values 20-22ºC.

To return to maintenance heating, press the button on the unit again or send the SMS command "HEATOFF", and the automatic frost-free basic heating is activated again.

If it gets so cold that the connected heat source with its own settings can not keep frost-free temperature above + 3ºC, HEAT-LINK A22 + 4 will send a warning for low temperature to the user who can then e.g. either activate an additional heat source on one of the other channels, or manually change the setting on the heat source.

Control of channel 2-4 is done by sending the SMS command "ON * 2 *" or "OFF * 2 *" which then activates or de-activates the selected channel.

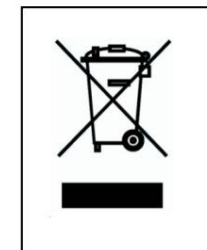The user can at any time ask about the current indoor temperature by sending the command "TEMP?".

Internal Battery

HEAT-LINK A22 + 4 has a built-in Lithium-Jon battery for backup operation and will be in operation even during power outages.
You will receive an SMS message automatically about this if the power outage is longer than 30 minutes.

The time for reserve operation is 12-24 hours. The battery is monitored and a low battery warning is sent.

The theoretical life of the internal battery is about 3 up to 5 years. It depends on external circumstances such as heat, cold etc.

The battery in this product does NOT contain the toxic heavy metals mercury, lead or cadmium but other metals that can be recycled. The EU has decided that collection and recycling should apply to all batteries in order to reduce the burden on the environment.
The battery is marked with a crossed-out wheeled bin to remind you as the end turner to leave the battery for recycling. This can be left at your local collection point or at a retailer of the product

Remote control

Remote control troll:	Serial Number	Comment:
01		
02		
03		
04		
05		

Planning the installation

HEAT-LINK normally requires a power supply (230VAC). We recommend placing the central unit in the room that is most exposed when it gets cold.

Place the central unit 1 to 1.5 m above the floor. It is not tight and can not be placed in a space where it can get wet. Placement on or near large metal objects such as refrigerators or the like can greatly reduce reception and transmission, checking clay carefully before final placement.

Most electrical elements have a grounded plug and a built-in thermostat. Usually there is one element in each room. Some rooms are more sensitive than others, in bathrooms and kitchens there are water pipes that should be kept frost-free, and possibly also water in the toilet seat. To protect water installations, elements can be supplemented with a heating loop mounted in the pipe.

If the home has an open floor plan or you leave the doors open, you can manage with a smaller number of elements, but one is recommended per room.

HEAT-LINK has a built-in temperature measurement located in the central unit. If the unit can not be placed so that it is in the coldest part of the property, this can be supplemented with one or more external sensors.

HEAT-LINK has an antenna placed on the top. It may be necessary to replace it with an external antenna in case of poor GSM coverage or difficult reception conditions.

If your neighbors have identical or similar equipment, it may be necessary to use a different house code than the pre-programmed one, see the section Changing houses code.

The control panel must have a standard GSM SIM card. Prepaid cards can be used, but keep in mind that it must be charged to work.

Assembly instructions

First charge the built-in battery in HEAT-LINK for 1-2 hours!
Low battery voltage when making settings in the unit and the unit restarts several times can give unpredictable results.

Mount the central unit in a suitable place, and mount the antenna.

Insert the SIM card on the side of the HEAT-LINK, the contact field towards you and the bevel on the top left. The card stays inside the holder only if it is mounted correctly.

Remember to deactivate the PIN code if it is not 0000 from delivery!
If necessary, check the SIM card in a phone to make sure it works.

Insert the power supply unit, the top LED starts flashing red.
When HEAT-LINK is ready for use, the top LED flashes green at a steady pace.

Send the following SMS from your mobile phone to HEAT-LINK, "A22 !! 01"
The command "A22 !! 02" provides English text for pre-programmed messages.

After a few minutes you get an answer back, **"Heatlink initialization ok".**
You have now programmed your telephone number in place 1 in the alarm list.

NOTE !!! This command deletes ALL settings in the device, and should not be used as a troubleshooter! NOTE !!!

Send new message to HEAT-LINK: **"STATUS?"**

Response from the device:

Heatlink status:

Power ok	Mains voltage 230 V is available and is ok
Internbatteri ok	The internal battery is ok
Temp: inne +019 C	Temperature in zone 3 is +19 degrees (sensor in HEAT-LINK)
HeatOn	Comfort heating mode is active
Alarm off	The alarm is off
Gsm Signal 4	GSM signal strength is 4 on a scale of 1-5 where 5 is best
Channel on = none	No remote switch is active

Min installation

Make a note of your future troubleshooting settings.

Zone/channel:	Type detector:	Detector S.nr:	Comment:	
01	Wireless temperature sensor	1		
02	Wireless temperature sensor	2		
03	Wireless temperature sensor	3		
04	Wireless temperature sensor	4		
11				
12				
13				
14				
15				
16				

Send:	Meaning	Response	Comment
TEMP?	Ask for temperature. Temp indoor +024 Outdoor +006		
ON*2* also channel 3, 4,5,6,7 & 8	Turn on channel 2.	Out*1,1*2,1*3,0*4,0*5,0*6, 0*7,0*8,0*9,0*A,1*B,0*	Channels 1 and 2 are for
OFF*2* also channel 3, 4,5,6,7 & 8	Off channel 2. Out * 1.1 * 2.0 * 3.0 * 4.0 * 5.0 * 6, 0*7,0*8,0*9,0*A,1*B,0*		Channel 1 on and channel 2 are off
TELE! * 2, (no) Programming of additional emergency numbers.		TELE nr1,0702123456 Nr 2,0702456789 No. 3, No. 4, No. 5, Nr 6, Nr7, Nr 8,	Overview of programmed mobile numbers.
A LOT??	Ask which alarms number as are programmed.	TELE Nr1,0702123456 Nr 2,0702456789 No. 3, No. 4, No. 5, Nr 6, Nr7, Nr 8,	Overview of programmed mobile numbers.
HOUSE! * E * Add House code channel E.		HOUSE**E*	A to F are allowed na.

Indications

The two-tone red / green indication at the top means:

Flashing red:	Start-up
Flashing green:	Normal operation
Solid green:	GSM is active (receiver / transmitter)
3 Short greens:	Battery operation (No power supply)
Shifts green / red:	The alarm went off
2 Short greens: 2	Out of function / SIM card missing or wrong, or no coverage
red and one green:	Home safe mode is on
Yellow LED is solid:	"ON" Comfort heating is active
Yellow LED flashes:	"AUTO" Maintenance heating is active
Yellow LED off:	"OFF" Frost warning is active

Local control of the heat

With the ON / AUTO / OFF button on the HEAT-LINK front, you can control the thermostat locally:

One print: Solid yellow light, Comfort warmth (factory setting 20-22ºC).

Two presses: Short yellow flash, Maintenance heat is active and the heat is off
Long yellow flash, Maintenance heat is active and the heat is on (10-12ºC)

Three presses: Frost warning is activated, you will receive an SMS warning when the temperature faller under +05ºC.

After three presses of the button, the unit restarts from the beginning.

When activating comfort heating via the button, the system will switch on the remote power switch regardless of the room temperature in order to be able to verify that they are correctly connected. If the temperature is higher than the comfort value, the heat is switched on for a maximum of one minute and then switched off.

When controlling via SMS, the heat is not switched on if the room temperature is higher than the comfort value.

NOTE! You control all four channels when you press the front button. They are set to the same position regardless of the previous setting.

Change of house code

If your neighbors have similar equipment, it may be necessary to use a different house code than the pre-programmed one (A). Permitted house codes are A to P.

To change the house code to D, the SMS command **HOUSE! * D *** is sent to HEAT-LINK
The unit answers: **HOUSE ** D ***
You have now changed the house code for the device. Note: all channels change.

NOTE !!! After changing the house code, all remote switches must be reset and reloaded.

Add emergency number

HEAT-LINK can have up to 8 telephone numbers entered in the alarm list. To add additional phone numbers to the alarm list, do the following.

To store numbers in place two, send: **Tele! * 2, +
4670123456** The unit answers with a list of the
phone numbers that are stored.

NOTE !!! The phone number MUST be written in the format + 46xxx for the device to handle it correctly.

You do the same if a telephone number is to be replaced, which overwrites the old number.

To ask which telephone numbers are on the list, send: **Tele ??**
In response, you will receive a list of all programmed telephone numbers.

Delete phone number 2, send: **Tele! * 2,** Phone
number 2 is deleted when no new number is available.

Dictionary for SMS commands

Send:	Meaning	Response	Comment
A22 !! 01 (Swedish) (A22!!02 (english))	Activating HEAT-LINK with factory settings.	HEAT-LINK initialization ok	Only during installation **NOTE Resets the system.**
STATUS?	Status request.	Charging current / battery / temp / mode / Alarm switch / GSM status / Active channel	Overview information
HEATON	Comfort heating (20-22ºC)	Status message with HeatOn	Also activates frost guard.
HEATOFF	Maintenance heat (10-12ºC)	Status message with TermOn	Also activates frost guard.
TERMOFF	Frost guard only (colder than +5 degrees)	Status message with FreezeOn	
FREEZEOFF	All heat and frost guard off	Status message with FreezeOff	

Preset values temperature zones

The table shows the pre-programmed limit values present in the unit after initialization, all alarms have a delay to avoid unnecessary alarms during sharp or rapid temperature fluctuations.

	Command	Temp. Limit "TEMPT??"	Delay "TEMPD??"	Comment
Sun 1	Heaton1 Heatoff1 Termoff1	+20 grader +10 grader +05 grader	2 hours 2 hours 1/2 hour	Program unique code in Sensor! * 01, xxx
Sun 2	Heaton2 Heatoff2 Termoff2	+20 grader +10 grader +05 grader	2 hours 2 hours 1/2 hour	Program unique code in Sensor! * 02, xxx
Sun 3	Heaton3 Heatoff3 Termoff3	+20 grader +10 grader +05 grader	2 hours 2 hours 1/2 hour	Program unique code in Sensor! * 03, xxx If not programmed, an internal sensor is used
Sun 4	Heaton4 Heatoff4 Termoff4	+20 grader +10 grader +05 grader	2 hours 2 hours 1/2 hour	Program unique code in Sensor! * 04, xxx
Termostat status	HEAT?			Shows the temperature of all 4 zones and the battery level of each detector.

Password

The system can be protected against unauthorized use with a four-digit PIN code.
NOTE !!! The PIN code must then precede all commands sent to the system!

If the PIN code is forgotten, this must be renewed at the factory, and cannot be reset locally

Pin code:	PSW*1234:
Set PSW to 1234:	PSW*/1234:
Delete PSW 1234:	PSW*1234/:
Change PSW from 1234 to 2580:	PSW*1234/2580:

Example:

If you want to know the status, send now:
PSW*1234:STATUS?

Learning Remote switch

To enable learning of wireless remote switches (NEXA compliant), the LEARN * x * command is sent for each channel, 1-4.

Example: **LEARN * 2 *** activates channel 2 learning.

The upper LED flashes at a slow pace two flashes for channel two for about 60 seconds. During this time, the remote switch is set to learning mode (see separate manual), and when the code is confirmed, the HEAT-LINK sends a signal that turns on the remote switch (indicator LED lights up or relay clicks audibly). If the remote switch is not turned on, learning has not been completed and should be repeated.

NOTE !!! When changing the House Code, learning must be done for each unit again.

Setting Temperature limits

In HEAT-LINK you can set 3 different temperature limits for different purposes.
1. Comfort heating for controlling the temperature when you are in the room 2.
Maintenance heating that provides lower energy consumption when you are not in the
room 3. Frost warning for protection of your property against frost damage to pipes or other sheets
events that affect the temperature.

To see set temperature values, send the SMS command: **TEMPT ??** (note last "T" must
be included)

In response, you will receive:

TEMPT01,+20,+10,+05*02,+20,+10,+05*03,+20,+10,+05*04,+20,+10,+05***

01 to 04 is the number of the thermostat / duct **+20**
is the set value for comfort temperature **+10** is the
maintenance **temperature +05** is the limit for when
HeatLink alarms for low temperature (frost warning)

Comfort heating: when sending the **HEATON** command , the +20 value is the reference and
the system switches on the remote switch if the temperature drops below + 20ºC, and switches
off when the temperature exceeds + 22ºC.

The **HEATOFF** command switches off the comfort heating. Then activated during holding heat
automatically.

Maintenance heat: Sets the value +10 as a reference and the system regulates during the
maintenance heat between +10 and + 12ºC. The maintenance heater is activated automatically
at the **HEATOFF** command

If you want to change the maintenance heat from the factory-set value +10 to +7 degrees,
send the command:

**TEMPT! * 01, + 20, + 10, + 05 * 02, + 20, + 10, + 05 * 03, + 20, + 07, + 05 * 04, + 20, + 10,
+ 05 *** Note that must be ! * after TEMPT when you want to change values for temperature
settings.

NOTE: The frost guard warns at colder than + 05ºC. It is always active until you send **FREEZEOFF.**
It is then activated automatically when you send one of the commands donate **HEATON,**
HEATOFF, TERMON, TERMOFF or **FREEZEON.**

Thermostat settings

With HEAT-LINK you can regulate the temperature in 4 different zones.
Wireless temperature sensors make it possible to measure the temperature in 4 different places
and regulate according to it.

The internal temperature sensor is connected to channel / zone 3 and is canceled when you
program a wireless temperature sensor in the sensor! * 03, the new value is automatically
displayed on status instead when you adjust temperature or status.

HEATON, HEATOFF and TERMOFF as well as the front button have exactly the same function
as before when replacing the internal temperature sensor with a wireless one.
These commands control all four channels / zones together.

To control zones 1 to 4 separately, add the channel number at the end of the comma dot. Ex:
HEATON4

NOTE: HEATON without a number at the end, converts all zones (1 to 4) to HEATON.
The same rule applies to HEATOFF, TERMOFF, FREEZEOFF and the front button.

Zone 3 is ready for use, and only requires that you program the detector or use the internal sensor,
the alarm text is pre-programmed.

We recommend replacing the battery on wireless temperature sensors every year, or if it shows
a value below 2.7 volts (displayed in response to **"TEMP?").**