Elko
Temperature Controller
Type SHEKxTEMDIS



- **Smart-house temperature controller with display**
- **Developed to fit into wall socket from Elko**
- **Shows current room temperature, floor temperature, shows outdoor temperature**
- **Turns on/off heating and cooling**
- **Set wanted room/floor temperature**
- **Energy Save through 3 heating setpoints and 3 cooling setpoints**
- **Blue LEDs: programmable function status**
- **Available in 3 colours: white, gray and anthracite gray**

Product Description

SHEKxTEMDIS is a temperature display with 4 buttons and 4 LEDs. It is developed to be mounted into a 55x55 wall socket from Elko. The TEMDIS display can manage 6 automatic setpoints (3 for heting and 3 for coding) and one manual setpoint to let the user manage in the most confortable way the temperature in his home. The TEMDIS is part of the smart-house concept for building automation applications.

Ordering Key

SH EK X TEMDIS

Smart-house
Elko mounting
Colour
Temperature display

Type Selection

Housing	Colour	LEDs	Bus supplied
55 x 55 mm	White	4 blue	**SHEKWTEMDIS**
55 x 55 mm	Gray	4 blue	**SHEKGTEMDIS**
55 x 55 mm	Anthracite gray	4 blue	**SHEKATEMDIS**

Input Specifications

Sensor	1 integrated temperature sensor
Range	-10 - +50°C (32 - 122°F)
Precision	± 1°C
Floor sensor (not included)	
Temperature range	-10 - +50°C (32 - 122°F)
Cable length	4 m
Cable consists of 4 wires:	
Brown	Connect to “+” on Temperature controller
White	Connect to “c” on Temperature controller
Yellow	Connect to “d” on Temperature controller
Green	Connect to “T” on Temperature controller

See wiring diagram

The floor sensor is an active 4-wire sensor and must be ordered separately: the part number is BSO-TEMDIG.

Output Specifications

LEDs	4 blue

Dupline® Specifications

Voltage	8.2 V
Maximum Dupline® voltage	10 V
Minimum Dupline® voltage	5.5 V
Maximum Dupline® current	2 mA

Supply Specifications

Power supply	Supplied by Dupline® bus

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General Specifications

Channel coding	The address assignement is automatic: the controller recognises the module through the SIN (Specific Identification Number) that has to be fitted in the configuration tool.
Environment	
Degree of protection	IP 20
Pollution degree	3 (IEC 60664)
Operating temperature	-10° to +50°C (14° to 122°F)
Storage temperature	-20° to +70°C (-4° to 158°F)
Humidity (non-condensing)	20 to 80% RH
Connection	
Screwless detachable	0.2 to 1.5 mm^2
D+	Signal
D-	GND
Dimensions	86 x 86 x 24 mm
Weight	50 g

CE Marking	Yes
EMC	
Immunity	EN 61000-6-2
- Electrostatic discharge	EN 61000-4-2
- Radiated radiofrequency	EN 61000-4-3
- Burst immunity	EN 61000-4-4
- Surge	EN 61000-4-5
- Conducted radio frequency	EN 61000-4-6
- Power frequency magnetic fields	EN 61000-4-8
- Voltage dips, variations, interruptions	EN 61000-4-11
Emission	EN 61000-6-3
- Conducted and radiated emissions	CISPR 22 (EN55022), cl. B
- Conducted emissions	CISPR 16-2-1 (EN55016-2-1)
- Radiated emissions	CISPR 16-2-3 (EN55016-2-3)

Mode of Operation

Symbol description:
On the display the following five symbols are used:
Temperature symbol 1, indicates that the regulating temperature is currently shown on the display.
Temperature symbol 2: steady indicates that the second probe is shown (floor if the TEMDIS is regulating according to room temperature, or room probe if TEMDIS is regulating according to floor temperature). Flashing indicates the external probe if configured.
Heat symbol, indicating that a heat application is currently selected. When the symbol is blinking, the unit is heating. When the symbol is steady, Heat mode is selected.
Frost symbol, indicating that a cooling application is currently selected. When the symbol is blinking, the unit is cooling. When the symbol is steady, Cooling mode is selected.
T1 symbol, indicating that the current application is regulated according to setpoint1.
T2 symbol, indicating that the current application is regulated according to setpoint2.
T3 symbol, indicating that the current application is regulated according to setpoint3.

Manual symbol, indicating that the current application is regulated according to a manual setpoint
°C The temperature is shown in degrees Celsius.
°F The temperature is shown in degrees Fahrenheit.

Starting Up
When the temperature controller is connected to the smart-house bus, the display digits will start flashing. The display will continue to flash until a complete status has been received from the smart-house controller. This will take approximately 1 min. When the temperature controller has received a complete status, the display will stop flashing and show the current application status and room or floor temperature.

Function Description
After the start-up has finished, normal operation will commence. The user has the following options.

Temperature option
When the Sel ( ) button is pressed briefly, the current floor temperature is shown (or room temperature if the system is regulated according to the floor temperature) for 5 seconds and the symbol (not flashing) will be seen. If Sel is pressed again within the 5 seconds, it displays the external temperature (symbol flashing). If it is pressed again within the 5 seconds it returns to the probe control. If the floor probe or the external probe are not connected, the display will show ---.

Button	Name	Description
	Sel	Shows the different probes and enters manual mode
	Enter	Shows clock and enters setpoint modification status
	-	Enters adjust cooling temperature setpoint
	+	Enters adjust heating temperature setpoint



Heating setpoint visualization
By pressing the + ( ) button briefly, the current heating setpoint is shown. If pressed again within the 5 seconds the other heating setpoints (T1, T2, T3, OFF) are displayed with the relevant symbols , , . If no keys are pressed, after 5 seconds the display will again show the current probe value.

Selecting a different heating setpoint
Once the required setpoint is selected using the + button, press Enter ( ) to confirm it: the relevant temperature symbol (, ,) will flash indicating that a temporary setting has been chosen. This setpoint remains active until the expiry time at midnight (if set by means of the SH Tool) or until successive modification.

Specifications are subject to change without notice (14.03.2013)

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Mode of Operation

Cooling setpoint visualization
By pressing the - ( ) button briefly, the current cooling setpoint is shown. If pressed again within the 5 seconds the other cooling setpoints (T1, T2, T3, OFF) are displayed with the relevant symbols t_I, t_{II}, t_{III}. If no keys are pressed, after 5 seconds the display will again show the current probe value.

Selecting a different cooling setpoint
Once the required setpoint is selected using the - button, press Enter ( ) to confirm it: the relevant temperature symbol (t_I, t_{II}, t_{III}) will flash indicating that a temporary setting has been chosen. This setpoint remains active until the expiry time at midnight (if set by means of the SH Tool) or until successive modification.

Entering manual mode
When the Sel button ( ) is kept pressed for 3 seconds, you enter manual mode and a manual setpoint can be chosen: the manual symbol ( ) will be shown. To exit from manual mode, keep the Sel button pressed for 3 seconds. In manual mode, if '+' or '-' are pressed, only the manual set is displayed and you do not access the three automatic sets.

Changing the value of a setpoint
From the setpoint visualization, whether manually or automatically, if the Enter button is kept pressed for 3 seconds, the setpoint value will start flashing: with the keys '+' and '-' it is possible to modify the setpoint in steps of 0.5°C. By keeping pressed '+' and '-' pressed you have double speed. To confirm press Enter: the setpoint value will be modified.

Time clock visualization
If the Enter key is pressed briefly in home status (when the value of the current probe is shown), the clock is displayed. You should return to the display of the probe for timeout (5 seconds) or after having pressed 'enter' briefly. The 'Enter' key pressed briefly in any other status functions only confirms and does not display the hour.

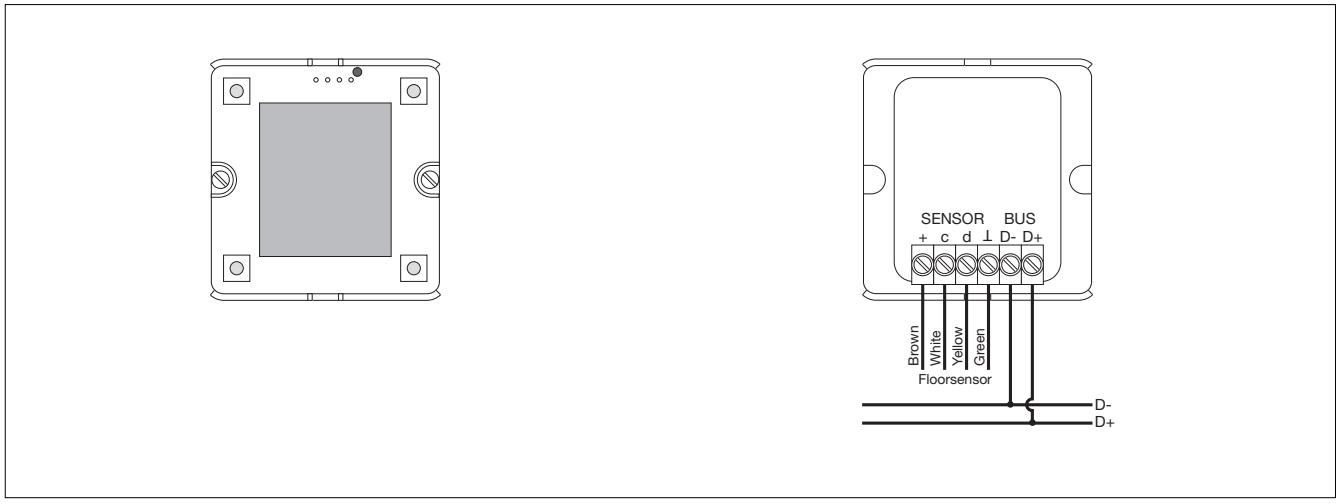
Time clock settings
If you are in clock display, by keeping the 'Enter' key pressed for 3 seconds you enter into the setting status: the number flashes for the minutes and with '+' and '-' it is possible to modify it (by keeping '+' and '-' pressed you have double speed). To confirm the minutes press 'Enter' briefly and go to the number of the hour. To confirm the number of the hour and exit from the setting, press 'Enter' briefly. After 5 seconds you will exit due to timeout without saving anything.

With the SH tool it is possible to de-activate:
a) The change of the timeband
b) Manual input
c) The change of the setpoint
d) Configuration of the hour
e) Automatic exit of the temporary mode at midnight.
a) Change of timeband de-activated: by pressing the keys '+' and '-' only the current setting is displayed but you cannot change the timeband.
b) Manual mode de-activated: by keeping the 'Sel' key pressed nothing happens.
c) Change of setpoint de-activated: by keeping the 'Enter' key pressed during the display of the set, you do not enter into modification status.
d) Time setting de-activated: by keeping the 'Enter' key pressed during the display of the hour, you do not enter into modification status.

Coding/Addressing
If the light switch module is connected to the SH-WEB controller, no addressing is needed since the module is provided with a specific identification number (SIN): the user has only to insert the SIN number in the SH tool when creating the system configuration.

LED programming
The LEDs are also configurable via the SH Tool:
• Blue LEDs: The 4 blue LEDs will be ON when the relevant push-button is pressed.

Wiring diagram



Dimensions

