

INSTALLATION INSTRUCTIONS

WI-FI CONTROL UNIT FOR EBERSPÄECHER PARKING HEATERS



**CONTROL KIT — WI-FI REMOTE FOR
EBERSPÄECHER PARKING HEATERS 20 2800 70 23 00**

Chapter	Chapter title	Page	Chapter contents
1	Introduction		
			Please read first 3
			Safety instructions 3
			General information 3
		Concept of this manual 3	
2	Product Information		
			Wi-Fi Control Unit Features 4
		Technical Specifications 4	
3	Scope of delivery and Installation		
			Scope of Delivery 5
			Mounting Location & Installation 5
		Wiring 6	
4	Operation		
			Operation 7
			Schedule 7
		Fault Codes 7	

1 Introduction


PLEASE READ FIRST


Before you start to install the Wi-Fi Control Unit, always read through these installation instructions carefully.


These installation instructions contain important information, which you need to install Wi-Fi Control Unit.


SAFETY INSTRUCTIONS

PICTURE SYMBOLS AND TEXT STRUCTURES

 **DANGER!** Indicates that serious or fatal injury may result if specific guidelines are not followed. Always note and follow all information and notes, especially the safety instructions in this document and in the heater's technical description!

 **CAUTION:** Indicates that personal injury or damage to equipment may occur unless specific guidelines are followed.

 **WARNING:** Indicates very important heater information that may cause personal injury, heater failures and maintenance costs.

 **PLEASE NOTE:** Indicates general heater related notes, clarifications and recommendations, which can be very useful for technician, installer, or owner; and should not be disregarded. Improper use and use outside the specified purpose cancels all liability and warranty.

- (•) A dot indicates a list, which is started with heading;
- (-) If indented dash follows a "dot", this list is a sub section of the black dot;
- (*) An asterisk symbol describes a further note on it's associated title, statement or data.

GENERAL INFORMATION

INTENDED USE

The Wi-Fi Control Unit is used to select the operating mode, to set the operating time, to preselect the switching on time and to switch On / Off the heater and / or add-on unit installed in the vehicle.

The controller is supposed to be used with Eberspächer heaters for heating purposes in cold seasons.

INSTALLATION INSTRUCTIONS FOR SPECIAL FUNCTIONS

These installation instructions describe the standard configuration. For enhanced configuration of the Wi-Fi Control Unit and for special functions, e.g. combinations with different control units, installation in ADR vehicles, etc. contact tech support line.

FOREWORD

- This document is applicable to the controllers listed on the title page, to the exclusion of all liability claims, and aims to support registered dealers, service technicians and end users in North America. This does not replace documentation produced by J. Eberspächer.

- The installation instructions and standards described in this document are NOT APPLICABLE TO MARINE INSTALLATIONS. Please consult a certified Eberspächer North America Marine dealer for marine installation.
- This publication was correct at the time of going to print. However, Eberspächer Inc. has a policy of continuous improvement and reserves the right to amend any specifications without prior notice.
- Eberspächer Climate Control Systems takes regular steps to ensure that any content, illustrations and technical data in its manuals are correct; however errors do occur, and Eberspächer Climate Control Systems reserves right to correct any such errors, and disclaims liability resulting therefrom.
- Eberspächer Climate Control Systems is not liable for any negligence and incompetence from dealers, installers and owners thereby causing heater or any related system failures to nullify the warranty under such conditions.
- Any parametric information related to the heating system (like technical data, illustration, table, calculation, graph) in this manual is available to provide a supplementary technical guidance for installers and dealers. It does not, however, replace or supersede any application specific rules and regulations for heating and ventilation system in automobiles.

CONCEPT OF THIS MANUAL

This manual aims to support the service company installing the Wi-Fi control unit and to provide the user with all important information about the controller.

The manual has been divided into 4 chapters to make it easier to find the corresponding information quickly.

1 Introduction

Here you will find important introductory information about installation of the Wi-Fi control unit and about the structure of the manual.

2 Product Information

Here you will find information about the scope of supply, the technical data and the dimensions of the controller.

3 Installation

Here you will find important information and instructions referring to installation of the Wi-Fi control unit.

4 Operation and Function

Here you will find information about the operation and function.

2 Product Information



WIRELESS HEATER CONTROL

- Simple To Use
- Full Diagnostics
- 7 Day Programmability
- No Monthly Fee
- No Internet Connection Required (Direct Wi-Fi connection between controller and cellphone)

WIRELESS CONTROL USING 802.11XX WI-FI STANDARD

- No app needed, uses the WEB browser available on Wi-Fi device.
- Works On All Wi-Fi Devices:
IOS, Android, Blackberry Windows, Mac...

FAULT CODE AND TEXT DESCRIPTION DIAGNOSTICS

- Displays fault code and description.
- Active fault as well as past five faults same as Eberspaecher diagnostics.
- Reset Fault codes with one click, and unlock the ECU.

7 DAY PROGRAMMABILITY

- Fifteen minute to twelve hour scheduled run times.
- Full seven day schedule at a glance
- Easy to use, similar to setting an Alarm on a smart phone.
- Schedule automatically repeats. No more resetting each week.

TECHNICAL SPECIFICATIONS

Operating Voltage Range	9 - 24V
Dimensions	2.3" x 2.9" x 0.4" (excl wire leads)
WiFi Frequencies	2.4 GHz
Installation location	Vehicle Interior
Antenna	External 2m Antenna (incl)
Temperature	-40 C to +85C
Current consumption	50mA @12V (Typical)
Contains FCC ID: 07P-362	Contains IC: 10147A-362

List of compatible heaters are:

Hydronic-I heaters produced after 2008:

mod: 25.2219 05; 25.2509 05; 25.2325 05; 25.2217 05; 20.1820 05;
20.1819 05; 25.2147 05*; 25.2218 05*;

Hydronic-II: mod. 20.1904 05; 25.2526 05;

HS3CS* and HS3CL – all models;

Hydronic M-II – all models;

Hydronic L-II* – all models (no diagnostic functionality);

Airtronic and D8LC* (requires resistor or rheostat for temperature control).

The controller also can be used for older heaters without diagnostic functionality.

* Remote diagnostic functionality is not available.

For more information on this product and other products to help you connect, as well as pricing and stocking dealers, please connect with us:

Eberspaecher Climate Control Systems

(800) 387-4800

(905) 670-0960

(905) 670-0728 Fax

info@eberspaecher-na.com

www.eberspaecher-na.com

The controller works independently from any cellular or satellite signal by creating its own Wi-Fi hotspot which then communicates directly with a smart phone/laptop/tablet etc. The device offers a range of 10-30 meters, depending on obstructions. Once programming is in place, the controller will operate the heater independently from the phone/tablet/laptop etc. The Wi-Fi unit can now control both the coolant heater and the bunk heater if required.

The Wi-Fi controller provides a 7-day schedule with multiple times per day, full diagnostics (complete with description of fault), and a reset function for clearing codes and unlocking heaters. Finally, there are no monthly cellular connectivity fees as it operates on its own network.

EVENT TIMER 7-day timer with up to 4 events per day: Single event, or repeat each week.

DIAGNOSTICS Fault code display, description and event clearing.

NO APPS Connects to any Wi-Fi enabled phone, tablet or laptop without installing apps or special software.

Connects to Wi-Fi networks for custom fleet applications providing local or remote web heater control.

ACCESSORIES Includes LED manual switch and external antenna with 2m lead.

The controller does not include temperature sensor so temperature reading is performed at the heater or external sensor.

3 Scope of delivery and Installation

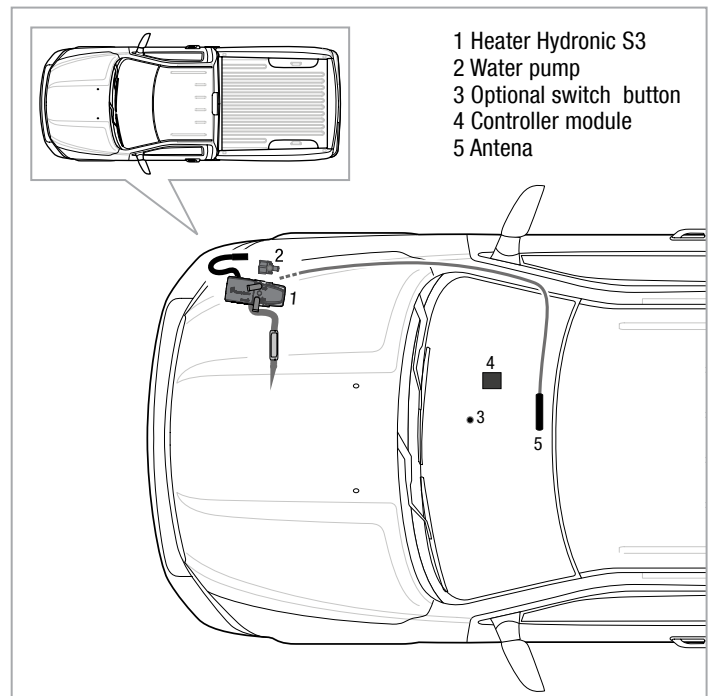


CONTROL KIT - WI-FI REMOTE 20 2800 70 23 00

CABLE	FUNCTION
White	Switch
Black	Ground
Green	LED (Heater on)
Orange	Heater 2 Control
Purple	Heater 2 Data
Yellow	Heater 1 Control
Blue	Heater 1 Data
Red	Power
Black	Ground

MOUNTING LOCATION & INSTALLATION:

With the External Antenna, it is recommended to mount both the controller and the antenna inside the cab of your equipment, though both are weather resistant for external installations where needed. The controller can be mounted inside the dash. Affix the antenna to a suitable surface where the range can be optimized, metal drastically attenuates the signal.



WIRING

Please ensure the main fuse for the heater is removed prior to installation of the WI-FI CONTROL UNIT.

If this is a retrofit and you already have a switch or a timer, their diagnostic lines may no longer be used. Please disconnect the blue/white wire from existing controller.

COOLANT HEATER

SIGNAL	CONTROLLER	EBERSPAECHER CONTROLLER HARNESS
Ground	Black (Ground)	Brown
Power	Red (Power)	Red
Diagnosis	Blue or Purple (Data)	Blue/White (Color may be blue/white or yellow for heater 20 1952 05 and 25 2652 05), refer to heater manual.
S+	Yellow* or Orange (Control)	Yellow*

* Only use this wire if there is a yellow wire on the Eberspaecher Harness. If not, simply seal it off to prevent potential shorting issues. Do not connect to yellow wire if installed with heaters model: 20 1952 05 or 25 2652 05.

COOLANT HEATER MANUAL SWITCH (OPTIONAL)

CONTROLLER	MOMENTARY SWITCH
White (Switch)	Normally Open (White) **
Black (Ground)	Common (Blue)
Black (Ground)	Ground (Black)
Green (LED)	Power (Red)*

* Follow polarity on the switch button: "+" must match red wire.

** These colors are on the switch harness we supply. Instead of optional switch, a custom momentary ON button can be used between white and black wires.

*** If wire colors do not match the table above, see enclosed leaflet.

AIR HEATER WITH DIGI MAX D-1000

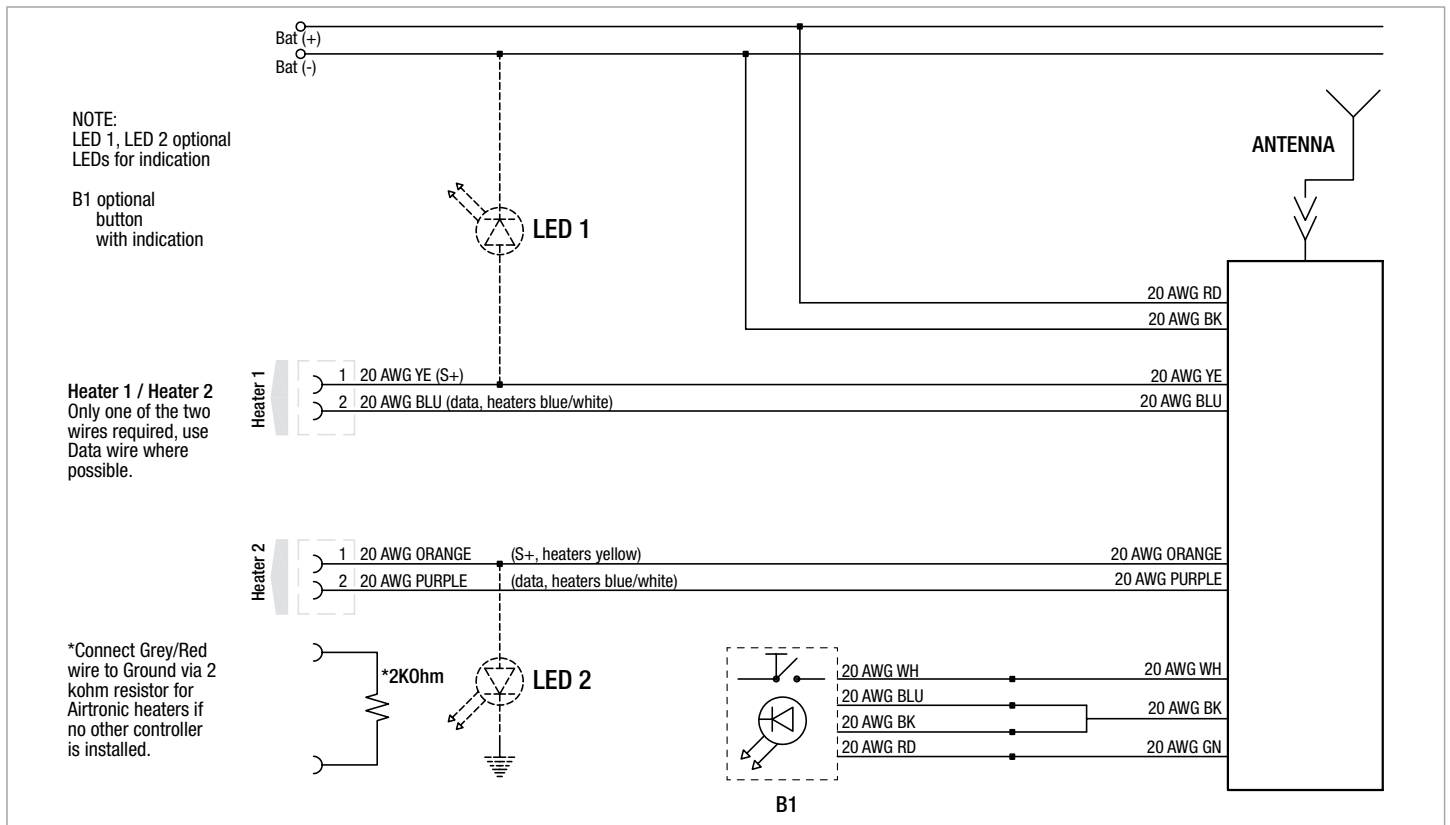
CONTROLLER	EBERSPAECHER CONTROLLER HARNESS
Orange or Yellow (Control)	Yellow
Purple or Blue (Data)	Blue/White Disconnect Blue/White wire from Digi-Max

AIR HEATER WITHOUT DIGI MAX D-1000*

CONTROLLER	EBERSPAECHER HARNESS
Orange (Control)	Yellow
Purple (Data)	Blue
2000 ohm resistor	Brown with White stripe & Red with Gray stripe

* The 2000 Ohm resistor is necessary if you are not using an Eberspaecher Digi Max D-1000. Please install the resistor across the wires as indicated above.

WI-FI WIRING SCHEMATIC



4 Operation

Start-up Please ensure you are within range of the controller's Wi-Fi network. On your smartphone please ensure your Wi-Fi is turned ON and connect to the network called HEATXXXXX. Please refer to the instructions for your specific device on how to connect to the network.

Now go to the internet address bar (NOT THE SEARCH BAR) and type in <http://10.10.10.10>

Eberspächer Heater Controls will come up.

Save this site to "favorites" OR HOME PAGE so it will always appear on your phone.

Manual ON/OFF The first screen is simply for manually turning ON/OFF the heater. Upon the heater being turned on, the Heater Status will switch from off to on and light up.

Diagnostics Press the menu option (black box with the 3 lines) to access diagnostics. Press "Diagnostics" to view fault history. In the event of a fault, repair as necessary. If it is a lock-out fault, you can "Reset Fault Codes" at the bottom of the screen.

Schedule After returning to the menu, press "Schedule" to program the heater to come on. For each day of the week, you can program the start time and the heat time. If "Disabled" is chosen, the heater will not come on that day. For most applications a 2 hour "heat time" is sufficient. In this case, you would want to set your timer for 2 hours before you plan on starting your equipment. You can set up to 4 times per day with heater 1, heater 2, or both heaters. You can have the event happen just once or repeat.

Temperature Adjust This adjustment allows to set your cabin temperature if you have a bunk heater installed.

Settings Under "Settings" there are four options plus a window showing Device Information.

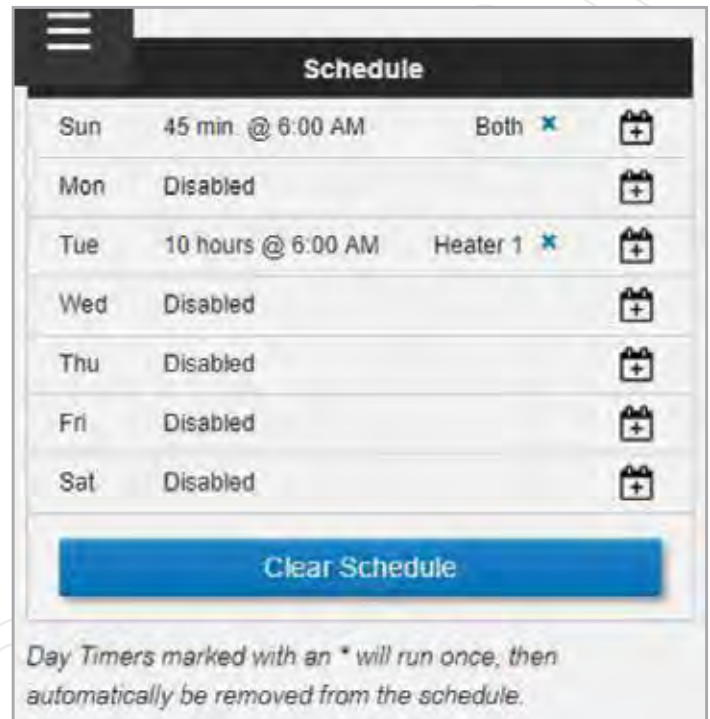
Clock Set Clock to ensure time is correct-needs to be done on initial set-up.

SSID The original SSID of HEATXXXXX needs to be changed. We recommend company name followed by unit number. Ex. ABC1234. This way if you have multiple units you can easily determine unit you are addressing.

Set Heater Run Time This allows you to set how long you want the heater to run when you manually turn it ON. Please note it is possible to set "No Limit" which means the heater will continue to run until it is shut off manually.

WI-FI You are able to set up a security password for the device. If doing so, document this under notes in your phone so it is not forgotten. In the event, if it is forgotten you will need to either press the switch 8 times (1 sec on – 1 sec off) then hold switch in 10 seconds. If you have no switch you will need to cycle the white and black wires directly off the controller.

SCHEDULE

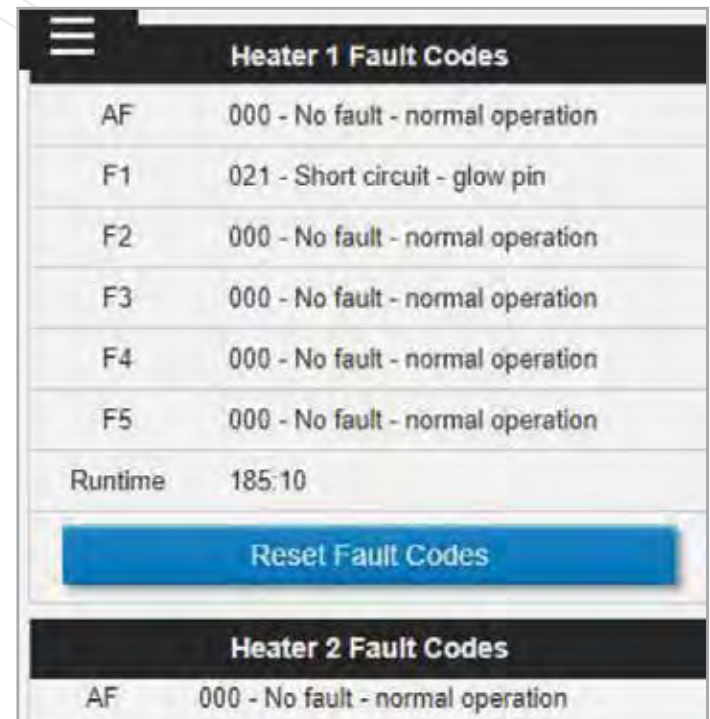


Day	Time	Heater	Action
Sun	45 min @ 8:00 AM	Both *	+
Mon	Disabled		+
Tue	10 hours @ 6:00 AM	Heater 1 *	+
Wed	Disabled		+
Thu	Disabled		+
Fri	Disabled		+
Sat	Disabled		+

Clear Schedule

Day Timers marked with an * will run once, then automatically be removed from the schedule.

FAULT CODES

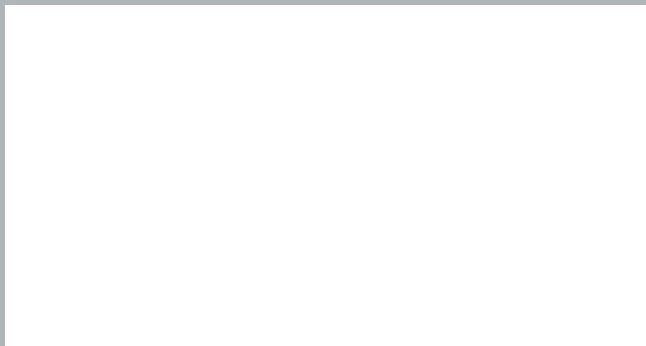


Code	Description
AF	000 - No fault - normal operation
F1	021 - Short circuit - glow pin
F2	000 - No fault - normal operation
F3	000 - No fault - normal operation
F4	000 - No fault - normal operation
F5	000 - No fault - normal operation
Runtime	185:10

Reset Fault Codes

Code	Description
AF	000 - No fault - normal operation

PLEASE NOTE: Switching the heater ON and OFF using optional button: Use long press (5 seconds) the button to change heater state. Power reset on the controller will cause clock/calendar reset and disabling the schedules.



Eberspaecher Climate Control Systems

(800) 387-4800

(905) 670-0960

(905) 670-0728 Fax

info@eberspaecher-na.com

www.eberspaecher-na.com

