Solar Remote Display

Installation, Commissioning & User Instructions

Lochinvar®
HIGH EFFICIENCY BOILERS & WATER HEATERS

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1 Lay-out

1.1 Introduction

The Remote Display is designed for a simple connection to the controller of the solar system with VBus. It is used for visualizing data issued by the controller of the solar system: collector temperature, store temperature and energy yield of the solar thermal system.

The use of bright blue display with with graphics, gives a high optical brilliance and good readability. Additional power supply, for the Remote Display, is not required.

1.2 Lay-out

The Remote Display consists out of:
- a display;
- a HOME-button;
- a UP-button;
- a DOWN-button.

Home-button
This button is can directly open the main menu, from each screen.

UP-button
This button is for scrolling up through the menus.

DOWN-button
This button is for scrolling down through the menus.

2 Installing & Connecting

2.1 Introduction

This chapter describes:

- the installation of the remote display;
- the selection of the communication cable;
- the connections that should be made on the remote display.

2.2 Installing

Warning
The installation should be carried out by a competent person, in compliance with general and locally applicable regulations.

1. Select a two-wire cable, for the communication between the solar control and the Remote Display.

   The cable diameter is free to choose. The maximum length of the cable depends on the cable diameter, see the table.

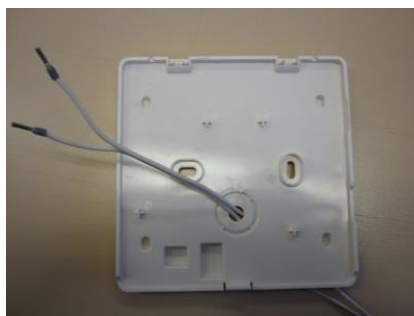| Cable diameter [mm^2]	Max. cable length [m]
0,25	100
0,5	200
0,75	300
1	400
1,5	600

Attention:
This (communication)cable is **not** supplied with the remote display.

2. Remove the rear side of the Remote Display.
3. Drill two holes in the wall for mounting the rear side of the Remote Display onto the wall.

4. Before fastening, lead the communication cable through the hole on the rear side

2.3   Connecting

Warning
The installation should be carried out by a competent person, in compliance with general and locally applicable regulations.

1.   Mount the two cables in the connector onto the print of the Remote Display. Mount the other ends in the blue connector on the rights side above the print of the solar control.

2.   Mount the other ends, of the communication cable, in the blue connector on the rights side above the print of the solar control.
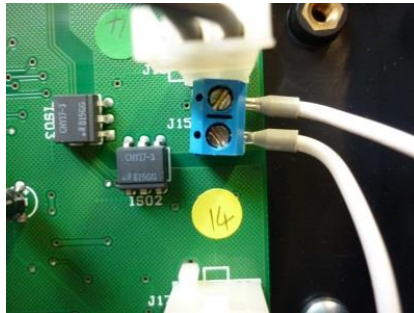
3.   Fasten the front side of the Remote Display onto the rear side.

3 Control

3.1 Introduction

The Remote Display, consists out of one menu and three different status screens, such as:
- the main menu;
- the temperature screen;
- the pump screen;
- the contribution screen;.
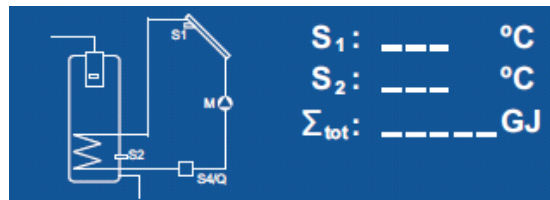
3.2 Main menu

When the EcoCharger Hybrid water heater is switched on, the Remote Display will automatically be activated. The Remote Display automatically detects to which water heater (HWHC or HWH) it has been connected to.

After the System Check, the Remote Display goes to the main menu.
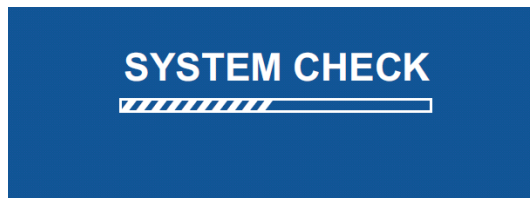
This main menu displays the installation and shows three kinds of data. First, the temperature in the collector is shown, to be followed by the temperature in the tank and the total contribution of the solar system.
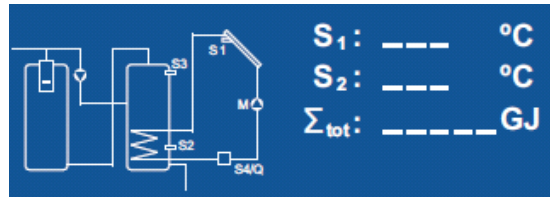
HWHC

HWH

S_1 = Collector temperature(ºC)
S_2 = Tank temperature(ºC)
Σ_{tot} = Total contribution (GJ)

You can use the DOWN-button and UP-button to scroll through 3 status screens from the main menu. Besides the main menu, the following screens are available:
1. Temperature screen
2. Pump screen
3. Contribution screen
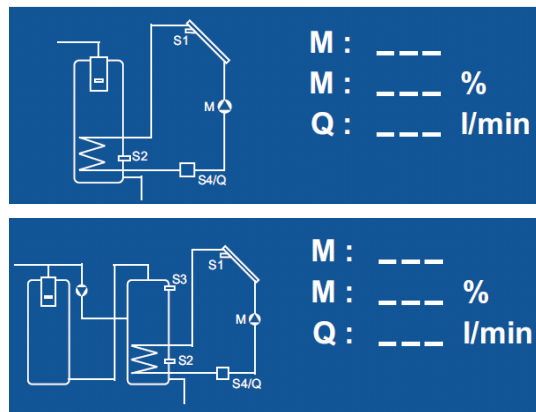
3.3 Temperature screen

This screen displays all temperatures measured in the solar system.

S_1 : ___ ºC
S_2 : ___ ºC
S_4 : ___ ºC

S_1 : ___ ºC
S_2 : ___ ºC
S_3 : ___ ºC
S_4 : ___ ºC
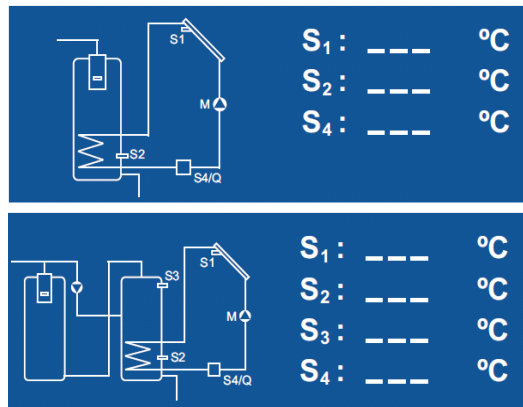
S_1 = Collector temperature (ºC)
S_2 = Tank temperature (ºC)
S_3 = Top Tank temperature (ºC)
    (only HWH)
S_4 = Temperature Q/T-sensor (ºC)

3.4 Pump screen

This screen displays the pump data.

M : ___
M : ___ %
Q : ___ l/min

M : ___
M : ___ %
Q : ___ l/min

M = Status pump (ON/OFF)
M = Pump speed (%)
Q = Flow Q/T-sensor (l/min)

3.5 Contribution screen

This screen displays the contribution of the solar system.

Actual : _____ W
Σ_{24h} : _____ MJ
Σ_{tot} : _____ GJ

Actual : _____ W
Σ_{24h} : _____ MJ
Σ_{tot} : _____ GJ
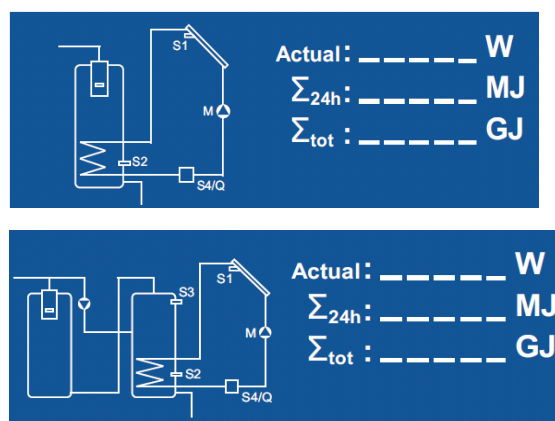
Actual = Current contribution of the
         system (W)
Σ_{24h} = Contribution in the last 24 hr (MJ)
Σ_{tot} = Total contribution (GJ)

4 Errors

The Remote Display only has two failures,
1. No current supply to the Remote Display
    When the Remote Display does not receive any current, the display will remain dark and no text will appear on the screen. Check the following possible causes of the failure:
    -   wiring between the Remote Display and the solar system control
    -   connection of the wiring in the Remote Display.
    -   power supply to the solar system control
    -   power supply to the installation
2. No Remote Display communication
    When the Remote Display does not detect any communication, the message given below will appear on the display. Check the following possible causes of the failure:
    -   wiring between the Remote Display and the solar system control
    -   connection of the wiring in the Remote Display.

**SYSTEM NOT O.K.
NO COMMUNICATION
CHECK WIRING**

0311 404 R0.0   EN

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ACS REGISTRARS Quality Assurance **ISO 9001** UKAS

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