

# RESOL STA-W

**Mounting**

**Connection**

**Function**



48004660

Thank you for buying this RESOL product.  
Please read this manual carefully to get the best performance from this unit.  
Please keep this manual carefully.

# STA-W



**Manual**

[www.resol.com](http://www.resol.com)

**Safety advice**

Please pay attention to the following safety advice in order to avoid danger and damage to people and property.

**Instructions**

Attention must be paid to the valid local standards, regulations and directives!

These instructions are exclusively addressed to authorised skilled personnel.

- Only qualified electricians should carry out electrical works.
- Initial installation must be effected by qualified personnel named by the manufacturer

This manual contains important information about safe and proper usage of this product. Please keep this manual for future reference.

**Description of symbols**



**WARNING!**  
Warnings are indicated with a warning triangle!

Signal words describe the danger that may occur, when it is not avoided.

**Attention** means that damage to the appliance can occur.



**Note**  
Notes are indicated with an information symbol.

→ Arrows indicate instruction steps that should be carried out.

**Disposal**

- Dispose of the packaging in an environmentally sound manner.
- Dispose of old appliances in an environmentally sound manner. Upon request we will take back your old appliances bought from us and guarantee an environmentally sound disposal of the devices.

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Subject to technical change. Errors excepted.

**Information about the product**

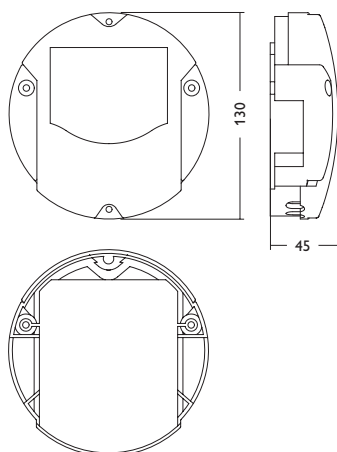
**Proper usage**

The STA-W may only be used as an interface between RESOL controllers and devices with VBus® output and external appliances in compliance with the technical data specified in this manual.

Improper use excludes all liability claims.

**CE-Declaration of conformity**

The product complies with the relevant directives and is therefore labelled with the CE mark. The Declaration of Conformity is available upon request, please contact RESOL.



**Technical data**

- Housing:** plastic, PC-ABS
- Protection type:** IP 20, with insulation IP 22 (DIN 40050)
- Ambient temperature:** 0 ... 40 °C
- Dimensions:** Ø 130 mm, depth 45 mm
- Mounting:** wall mounting
- Display:** 1 LED
- Supply:** via RESOL VBus®
- Interface:** RESOL VBus®
- Output:** 1 potential-free relay (max. 24 V DC, 1 A, 15 W)
- Max. frequency:** 5 Hz

**Included**

- 1 × STA-W
- 1 × accessory bag
- 2 × screw
- 2 × wall plug
- 1 × terminal block

**Overview**



**STA-W**

The STA-W is an interface that transmits heat quantity measurement values between RESOL devices and external appliances. It is to be connected to a RESOL controller or calorimeter via the RESOL VBus®. The STA-W receives and processes the VBus® data packets of the device connected and calculates the difference in heat quantity measurement values.

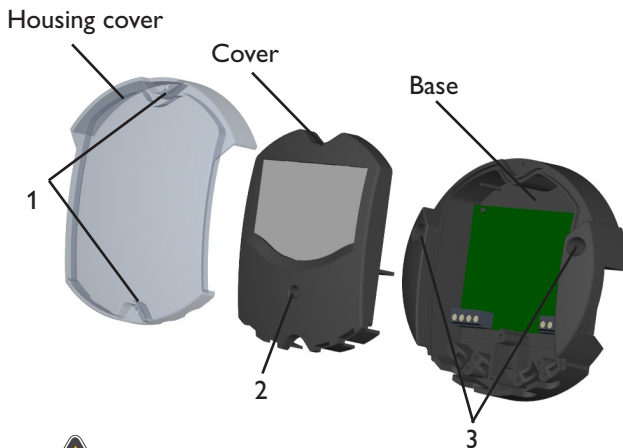
Whenever the new kWh value exceeds the previous by 1 kWh, the STA-W operates a potential-free contact which can e.g. be connected to a building management system (BMS). For example: if the new value exceeds the previous by 5 kWh, the STA-W will operate the contact five times. The number of accumulated contacts can thus be visualised as a heat quantity in the BMS software.

The RESOL STA-W is designed for connection to the DeltaSol® BS, BS Plus, DB, E, ES, M, Minipool, Plus and Pool controllers as well as the SOLEX heat exchange module, the WMZ calorimeter and the FlowCon D pump station.

The STA-W recognises the VBus®-protocols of the following devices:

- DeltaSol® BS1-4
  - DeltaSol® BS Plus
  - DeltaSol® DB
  - DeltaSol® ES
  - DeltaSol® E
  - DeltaSol® M
  - DeltaSol® Pool
  - DeltaSol® Minipool
  - DeltaSol® Plus
  - SOLEX
  - WMZ
  - FlowCon D
- current as of 02/2009

**1. Mounting**



**ATTENTION:**  
Electrostatic discharge can cause damage of electronic components.

The unit must only be located in dry interior locations. It is not suitable for installation in hazardous locations and should not be placed close to any electromagnetic fields.

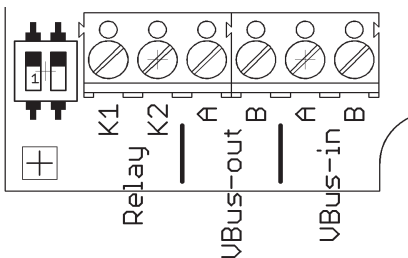
- ➔ Choose a location, drill two holes (Ø6 mm) parallel next to each other (112 mm distance) and fasten the enclosed wall plugs.
- ➔ Attach the adapter to the wall with the enclosed screws through the mounting holes (3).

Opening the housing is not necessary for mounting, connection and operation of the STA-W. The cables necessary for the normal operation of the STA-W are pre-connected.

Should the access to the terminals become necessary, the housing can be opened as follows:

- ➔ Unscrew the cross-head screws on the housing cover (1) and remove them along with the housing cover.
- ➔ Unscrew the cross-head screw on the cover (2) and remove it along with the cover.

**2. Connection**



Terminals of the STA-W



**Note**  
For mounting, connection or normal operation of the STA-W, neither opening the housing nor accessing the terminals is necessary.

The STA-W is designed for simple connection to RESOL controllers or calorimeters via the RESOL VBus®. A mains connection is not necessary.

The STA-W comes with two pre-connected cables, the VBus®-cable (labelled "VBus®") and the cable for the connection to the building management system (labelled "relay").

The cable carries low voltage and must not run together in a cable conduit with cables carrying a higher voltage than 50V (please pay attention to the valid local regulations!). The bus cable can be extended with a two-wire cable (bell wire). The cross section of the cable must be at least 0,5 mm² and the cable can be extended up to 50 m in the case of a single connection.

### 3. VBus®-LED

The following status are signalled via the VBus® -LED

- off: no VBus®-connection
- red flashing: error:  
STA-W does not recognise the device connected or the heat quantity measurement option of the controller has not been activated.
- red/green flashing: initialisation phase:  
the device connected has been recognised and the VBus® data packets are processable. The potential-free contact has not yet been operated.
- green: normal operation:  
VBus® data packets are processable, the potential-free contact is being operated.

### 4. Function

The STA-W is an interface that transmits heat quantity measurement values between RESOL devices and external appliances. It is to be connected to a RESOL controller or calorimeter via the RESOL VBus®. The STA-W receives and processes the VBus® data packets of the device connected and calculates the difference in heat quantity measurement values.

Whenever the new kWh value exceeds the previous by 1 kWh, the STA-W operates a potential-free contact which can e.g. be connected to a building management system (BMS). For example: if the new value exceeds the previous by 5 kWh, the STA-W will operate the contact five times. The number of accumulated contacts can thus be visualised as a heat quantity value in the BMS software.

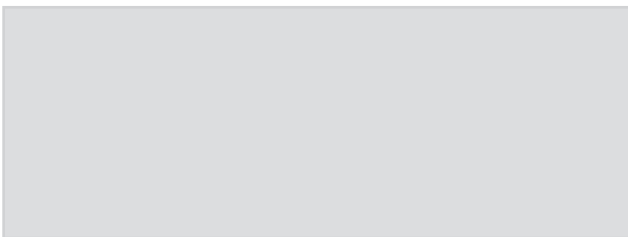
A maximum of five contacts per second is possible.

If the STA-W does not receive a processable VBus® data packet for a period of one minute, the next incoming heat quantity measurement value will be set as a base value for the next difference calculation. The potential-free contact will be operated as soon as the new base value is exceeded by at least 1 kWh in a following data packet.

The increase in heat quantity during the malfunction will not be recorded and must, if necessary, be manually corrected in the BMS.

An increase of more than 50 kWh between two VBus® data packets cannot be processed. In such a case, the STA-W will set the new heat quantity measurement value as a base value for the next difference calculation, but will not operate the potential-free contact.

### Distributed by:



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#### Important notice:

We took a lot of care with the texts and drawings of this manual and to the best of our knowledge and consent. As faults can never be excluded, please note: Your own calculations and plans, under consideration of the current standards and national regulations should only be basis for your projects. We do not offer a guarantee for the completeness of the drawings and texts of this manual - they only represent some examples. They can only be used at your own risk. No liability is assumed for incorrect, incomplete or false information and / or the resulting damages.

#### Please note:

The design and the specifications may be changed without notice. The illustrations may differ from the original product.

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