



## Switchable socket adaptor



The SPP22 is a socket adaptor for switching and measuring the consumer. The device must be connected to a controller via CORA wireless. This allows switching of the power supply to the connected consumer as well as measurement of its power and voltage.

Wired connection via CORA-DL/DL bus is not possible.

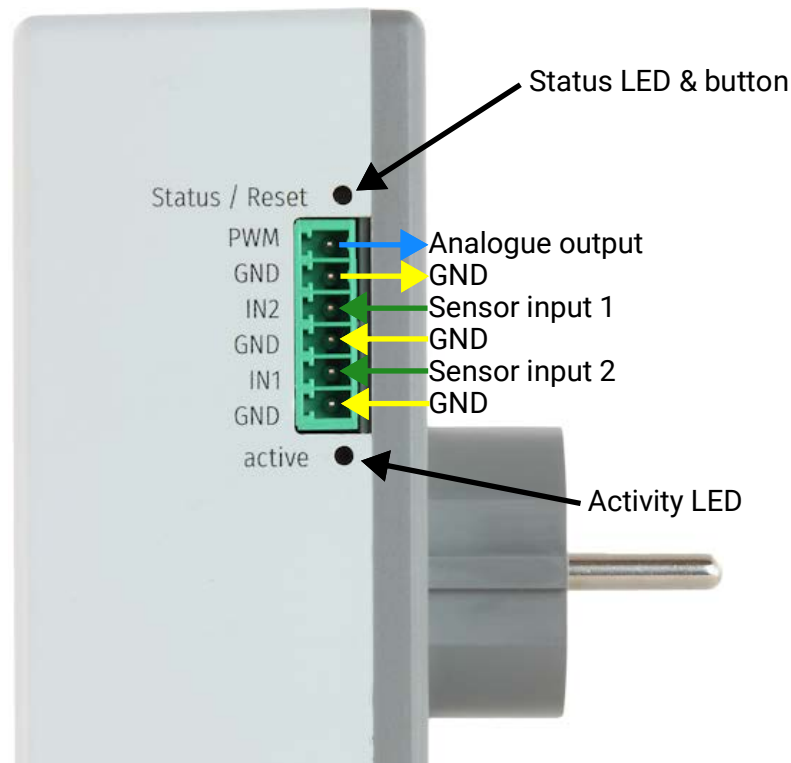
The SPP22 also has an analogue output (0-10 V/PWM) and two inputs for various measuring tasks.

### Table of contents

Installation & connection .....	2
LEDs .....	2
Button .....	2
CORA devices (wireless system) .....	3
Principles .....	3
Pairing CORA devices .....	3
Relaying wireless signals .....	4
Deleting a pairing .....	4
Wireless transmission interval .....	4
Programming .....	5
Input variables .....	5
Parameters .....	6
Output variables .....	6
Dimensions in mm .....	7
Technical data .....	7

# Installation & connection

The SPP22 is plugged into an earthed socket outlet and the consumer's mains cable is plugged into the SPP22.



## LEDs

The "active" LED lights up when the consumer is active.

### Status LED:

Control indicator	Explanation
Green, steady light	The device is connected and ready for operation
Green, quick flashing	If the LED flashes rapidly for only 3 seconds, pairing has been permitted via the pushbutton.
Orange, steady light	No wireless signal has been received for at least 2 minutes.
Red, steady light	Internal fault
Red, slow flashing	Wireless chip error
Red, quick flashing	EEPROM error

## Button

Double click (two clicks within 2 seconds)	Allow pairing for 5 minutes (see chapter "Wireless system") The status LED flashes green rapidly for 3 seconds to confirm.
10-second click	Total reset (hold until the status LED shows a green light for 1 second). After a total reset, pairing is allowed until the first successful pairing attempt, with no time limit.
Click once	Reset (software restart)

# CORA devices (wireless system)

## Principles

The CORA wireless system comprises multiple CORA devices, which communicate with one another, exchange data or transfer firmware. This functionality cannot fully replace the CAN bus.

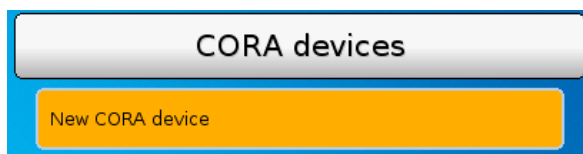
The wireless range is around 1000 m outdoors, and typically 30 m in buildings (through approx. 2 walls/ceilings, depending on thickness and material). Up to 3 additional wireless devices can be used as a bridge to enable data to be exchanged under differing conditions.

A higher ranking controller can be paired with maximum **12** CORA devices.

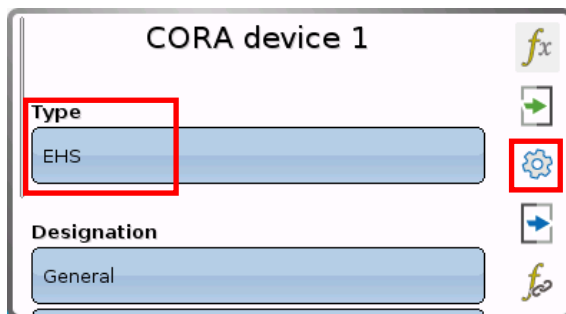
RCV-DL, GBS-F and RAS-F devices **cannot** be used.

All wireless system settings can be found in the main menu item **CORA devices**.

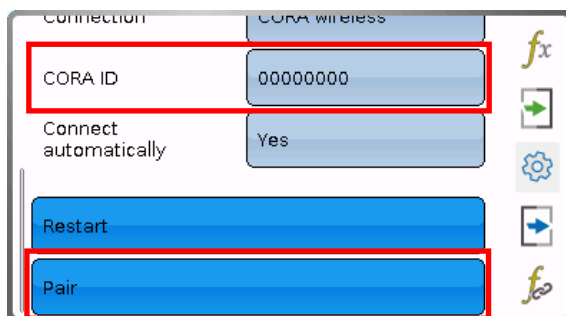
## Pairing CORA devices



In the main menu, under "**CORA devices**", a **New CORA device** is selected. Once the device type has been selected, additional setting options appear.



Select device type, then switch to parameters



Specify CORA ID from target device...

...and select **Pair**

The target device must have **Allow pairing** enabled. Information about this can be found in the operating instructions for the relevant device.

To pair an additional device, navigate back to the **CORA devices** menu and create another **New CORA device**.

If **Connect automatically** is set to **Yes**, when the wireless signal is lost, the system automatically attempts to restore the connection.

## Relaying wireless signals

CORA devices can relay signals from other devices. All required settings for this are carried out at the device that transmits the signal to be relayed. Pairing with devices that simply relay signals is not required.

When programming the CORA device, simply enter the CORA ID of the relaying devices under the items **HOP1-3** (depending on how many relays need to occur).

RCV-DL, GBS-F and RAS-F devices **cannot** be used.

**Example:** The **controller** should control the **CORA 2** device wirelessly but cannot reach it due to the local conditions. However, the **controller** can reach **CORA 1**, and **CORA 1** can reach **CORA 2**.



CORA ID  
00000003

When programming the **controller** (= pairing with **CORA 2**), the CORA ID of **CORA 2** is entered under **CORA ID**, and the CORA ID of **CORA 1** is entered under **HOP1**.

HOP1 ID  
00000002

No settings are required on **CORA 1**. This device relays the signals independently.

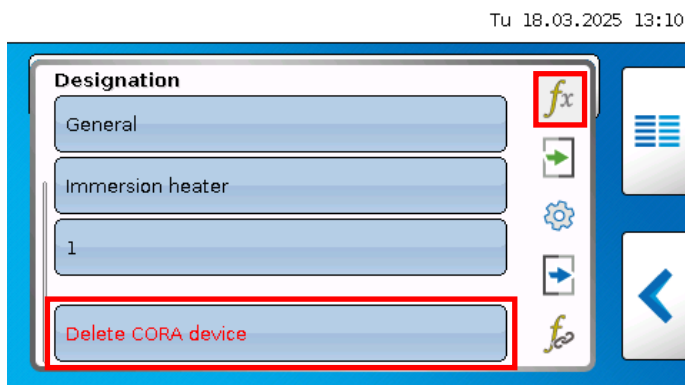
No settings are required on **CORA 2** either.

The only change to the pairing process is that CORA IDs are entered under **HOP1-3**.

To enable additional devices to relay the signal, they should be specified in the corresponding order under **HOP2** and then under **HOP3**. A data packet is sent by the transmitter to HOP1, HOP2, HOP3 and then to the target device (= "CORA ID") (if defined).

The entry **00000000** means that no relaying will occur.

## Deleting a pairing



Item **fx** contains item **Delete CORA device**.

## Wireless transmission interval

Values are only transmitted wirelessly when there is a sufficient change. The blocking time applies after each transmission process. Otherwise, values are always updated after the interval time has elapsed.

With change	<ul style="list-style-type: none"><li>• Real power: <math>\pm 5\%</math> and <math>\pm 5\text{ W}</math></li><li>• Temperature: <math>\pm 1\text{ K}</math></li><li>• 0-10 V: <math>\pm 0.2\text{ V}</math></li><li>• 4-20 mA: <math>\pm 0.5\text{ mA}</math></li></ul>
Blocking time	5 sec
Interval time	50 sec

# Programming

The SPP22 is inserted in the programming of the controller it is paired with. A new CORA device is created and the CORA ID (shown on a label on the SPP22) is entered. It is recommended that programming be performed with the PC software **TAPPS2**.

## Input variables

<b>Output 1 Socket</b>	<b>In TAPPS2:</b> Links the digital signal to switch the socket <b>On the controller:</b> Leads to a separate sub-menu with the following settings:
Type	Switching output/unused
Mode	Selection between automatic or manual mode on/off
Source	Where the switching command for the consumer comes from. The following input options appear after selection: <ul style="list-style-type: none"> <li>• Selection of specific sources</li> <li>• Measurement</li> <li>• Standard/inverse</li> </ul>
Designation	Selection of the designation group, designation and designation index in relation to the connected consumer.
Delay	Switch-on delay: This time must elapse once the command to switch on is issued, before the consumer is actually switched on. If the command is cancelled during this time, the consumer is not switched on.
Run-on	This time must elapse once the command to switch off is issued, before the consumer is actually switched off. If the command is cancelled during this time, the consumer is not switched off.
<b>Output 2 Analogue output</b>	<b>In TAPPS2:</b> Links the analogue signal for the analogue output <b>On the controller:</b> Leads to a separate sub-menu with the following settings:
Type	Unused/switching output/0-10 V/PWM An auxiliary relay is required for the <i>switching output</i> setting (special accessory)
Mode	Selection between automatic or manual mode on/off/value
Value, manual mode	Value that is output in "Manual" mode.
Source	Where the switching command for the consumer comes from. The following input options appear after selection: <ul style="list-style-type: none"> <li>• Selection of specific sources</li> <li>• Measurement</li> <li>• Standard/inverse</li> </ul>
Designation	Selection of the designation group, designation and designation index in relation to the connected consumer.
Output value digital/manual mode	If the analogue output is operated using a digital value (= ON/OFF) or in manual/ON or manual/OFF mode, the output value to be output for ON and OFF is defined here.
Scaling	Scaling of the input value to the output value using 2 input and target values.

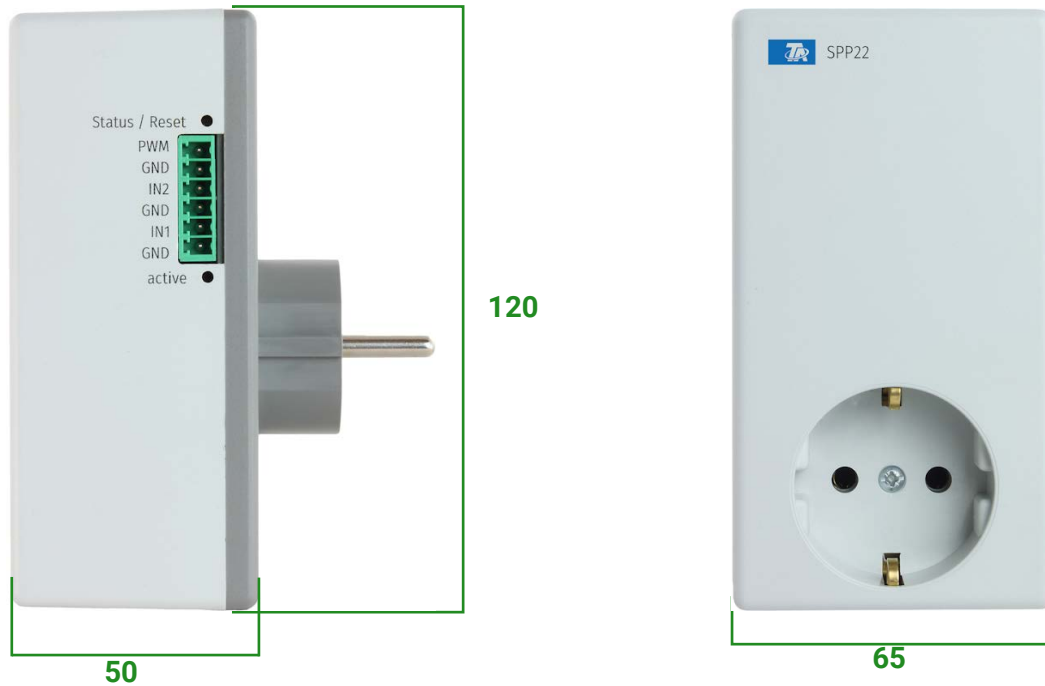
## Parameters

<b>Connection</b>	Only CORA wireless available
<b>CORA ID</b>	Enter the unique CORA ID, which can be read from the label on the CORA device
<b>HOP 1-3 ID</b>	For forwarding wireless signals
<b>Connect automatically [Yes/No]</b>	Selection of whether an attempt should be made to re-establish the connection after the wireless connection is lost.
<b>Blocking protection</b>	To prevent corrosion on consumers (e.g. for pumps and valves), consumers can be switched on briefly at intervals.
Mon-Sun Blocking protection time	Selection of the days of the week and time at which the assigned outputs are switched on for 30 seconds.
Output assignment	Selection of the outputs with active blocking protection.
Together with A1/A2	Setting determines whether the blocking protection of one output should also switch the other.
<b>Unit of current</b>	A/mA
<b>Unit of power</b>	W/kW
<b>Input &amp; output 1/2</b>	Only in TAPPS2: Individual designations, types, output values, scaling, etc. can be set for each input and output.

## Output variables

<b>Timeout</b>	Digital signal <b>Yes/No</b> <ul style="list-style-type: none"> <li>If <b>Yes</b>: Connection to the device lost</li> </ul>
<b>Input 1/2</b>	<b>In TAPPS2:</b> Output variables are made available for programming <b>On the controller:</b> The following settings can also be implemented here:
Type	Digital/analogue
Measured variable	
Designation	Selection of the designation group, designation and designation index in relation to the connected consumer.
Sensor correction	Only if <i>Analogue</i> type is selected: Possibility of sensor correction. The corrected value is utilised for all calculations and displays.
<i>Measurement</i>	The current measurement is displayed here.
Value at timeout	<ul style="list-style-type: none"> <li>Unchanged: In the event of a timeout, the last measured value remains at the output variable.</li> <li>User def.: In the event of a timeout, the <i>output value</i> to be set below is output.</li> </ul>
Output value	Only if "Value at timeout" is selected as "User def.": Entry of the output value at timeout
<b>Amperage</b>	Measured current of the consumer ( <i>Value at timeout</i> can also be set)
<b>Voltage</b>	Measured voltage of the consumer ( <i>Value at timeout</i> can also be set)
<b>Electrical power</b>	Apparent power, real power, reactive power, power factor cos phi, phase shift phi

## Dimensions in mm



## Technical data

Max. breaking capacity	16 A
Accuracy of power measurement	$\pm (10 \text{ W} + 3 \% \text{ of the instantaneous power})$
Temperature measurement accuracy	Typically 0.4 K, max. $\pm 1 \text{ K}$ within a range of 0-100 °C
Input 1	PT1000 sensor or current (0-20 mA)
Input 2	PT1000 sensor or voltage (0-10 V)
Analogue output	<b>0-10 V</b> (max. 20 mA) or <b>PWM</b> (10 V/1 kHz) in 1000 steps each (= 0.01 V or 0.1 % per step)
Connection	CORA wireless only
Frequency of wireless system	Main frequency: 868.5 MHz For signal forwarding/processor wake-up: 869.5 MHz

Technische Änderungen sowie Satz- und Druckfehler vorbehalten. Diese Anleitung ist nur für Geräte mit entsprechender Firmware-Version gültig. Unsere Produkte unterliegen ständigem technischen Fortschritt und Weiterentwicklung, wir behalten uns deshalb vor, Änderungen ohne gesonderte Benachrichtigung vorzunehmen.

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# EU Declaration of conformity (Energy meter)

Document- No. / Date: TA25002 / 05.03.2025  
Company / Manufacturer: Technische Alternative RT GmbH  
Address: A-3872 Amaliendorf, Langestraße 124

***This declaration of conformity is issued under the sole responsibility of the manufacturer.***

Product name: SPP22  
Product brand: Technische Alternative RT GmbH  
Product description: Switchable socket adaptor

***The object of the declaration described above is in conformity with Directives:***

2014/35/EU Low voltage standard  
2014/30/EU (11/09/2018) Electromagnetic compatibility  
2011/65/EU (01/10/2022) RoHS Restriction of the use of certain hazardous substances

***Employed standards:***

EN 60730-1:2021-06	Automatic electrical controls - Part 1: General requirements
EN IEC 61000-6-3:2022-06	Electromagnetic compatibility (EMC) - Part 6-3: Generic standards - Emission standard for equipment in residential environments
EN IEC 61000-6-2:2019-11	Electromagnetic compatibility (EMC) - Part 6-2: Generic standards - Immunity standard for industrial environments
EN IEC 63000:2019-05	Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances
EN 300220-2:2018-09	Short Range Devices (SRD) operating in the frequency range 25 MHz to 1 000 MHz - Part 2: Harmonised Standard for access to radio spectrum for non specific radio equipment
EN 301489-1:2020-06	ElectroMagnetic Compatibility (EMC) standard for radio equipment and services - Part 1: Common technical requirements - Harmonised Standard for ElectroMagnetic Compatibility
EN 301489-3:2019-08	ElectroMagnetic Compatibility (EMC) standard for radio equipment and services - Part 3: Specific conditions for Short-Range Devices (SRD) operating on frequencies between 9 kHz and 246 GHz

***Position of CE - label:*** On packaging, manual and type label



Issuer: Technische Alternative RT GmbH  
A-3872 Amaliendorf, Langestraße 124

***This declaration is submitted by***

Dipl.-Ing. Andreas Schneider, General manager,  
19.07.2019

This declaration certifies the agreement with the named standards, contains however no warranty of characteristics

The security advices of included product documents are to be considered.

## Warranty conditions

**Note:** The following warranty conditions do not in any way limit the legal right to warranty, but rather expand your rights as a consumer.

1. The company Technische Alternative RT GmbH provides a one-year warranty from the date of purchase for all the devices and parts which it sells. Defects must be reported immediately upon detection and within the guarantee period. Technical support knows the correct solution for nearly all problems. In this respect, contacting us immediately will help to avoid unnecessary expense or effort in troubleshooting.
2. The warranty includes the free of charge repair (but not the cost of on site troubleshooting, removal, refitting and shipping) of operational and material defects which impair operation. In the event that a repair is not, for reasons of cost, worthwhile according to the assessment of the Technische Alternative company, the goods will be replaced.
3. Not included is damage resulting from the effects of over-voltage or abnormal ambient conditions. Likewise, no warranty liability can be accepted if the device defect is due to: transport damage for which we are not responsible, incorrect installation and assembly, incorrect use, disregard of operating and installation instructions or incorrect maintenance.
4. The warranty claim will expire, if repairs or actions are carried out by persons who are not authorised to do so or have not been so authorised by us or if our devices are operated with spare, supplementary or accessory parts which are not considered to be original parts.
5. The defective parts must be sent to our factory with an enclosed copy of the proof of purchase and a precise description of the defect. Processing is accelerated if an RMA number is applied for via our home page [www.ta.co.at](http://www.ta.co.at). A prior clarification of the defect with our technical support is necessary.
6. Services provided under warranty result neither in an extension of the warranty period nor in a resetting of the warranty period. The warranty period for fitted parts ends with the warranty period of the whole device.
7. Extended or other claims, especially those for compensation for damage other than to the device itself are, insofar as a liability is not legally required, excluded.

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