Fronius RCU 2000 Remote Control Instruction Manual

Contents

Fronius RCU 2000 Remote Control

Specifications

- **Product Name:** RCU 2000
- **Compatibility:** MagicWave 1700/2200, MagicWave 2500/3000, MagicWave 4000/5000, TransTig 2200, TransTig 2500/3000, TransTig 4000/5000, TransPocket 4000/5000, TransSynergic 4000/5000, TransPuls Synergic 2700/3200/4000/5000
- **Features:** Remote operation of power sources, similar functions to MagicWave 1700/2200 control panel

Product Usage Instructions

Connecting the Remote Control

- Connect the remote control cable to the LocalNet connection on the power source unit.

Operating the Control Panel

- The control panel of the RCU 2000 is similar to that of the MagicWave 1700/2200 power source.

It includes features like:

- Operating Mode Selection Button
- 2-Takt and 4-Takt Operation Modes
- Job Operation Mode
- Adjustable Start Current, Slope Times, Main Current, End Crater Current, Electrode Diameter

Adjusting Parameters

- Use the control panel to adjust parameters such as start current, slope times, main current, end crater current, and electrode diameter according to your welding requirements.

Troubleshooting

- If you encounter issues like a tungsten electrode with a small diameter or incorrect balance settings, follow the troubleshooting steps provided in the manual to rectify the problem.

Frequently Asked Questions

Q: What power sources are compatible with the RCU 2000?

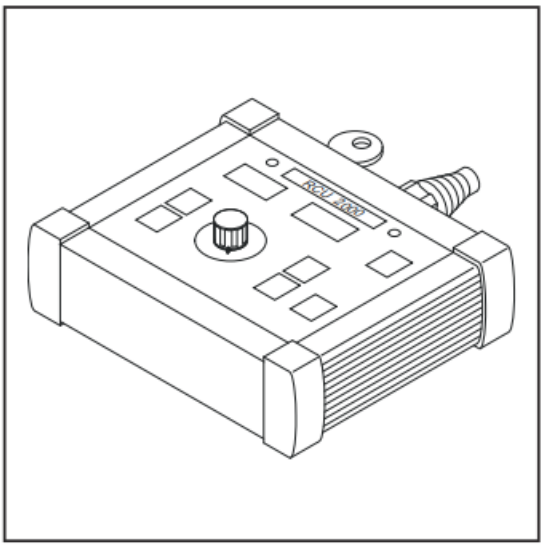
A: The RCU 2000 is compatible with power sources such as MagicWave 1700/2200, MagicWave 2500/3000, TransTig series, TransPocket series, and more. Please refer to the compatibility list for detailed information.

Q: How do I adjust the welding parameters using the RCU 2000?

A: You can adjust welding parameters such as start current, slope times, main current, and electrode diameter using the control panel of the RCU 2000. Refer to the user manual for specific instructions on parameter adjustments.

General

Product concept



RCU 2000 remote control unit

- The RCU 2000 remote control unit allows you to remote-operate a power source that is located e.g. inside a production cell – for set-up purposes, for example.
- The functions available on the remote control unit correspond to those on the control panel of the Ma-gicWave 1700/ 2200 power source.

System requirements

- The RCU 2000 remote control unit can be operated in conjunction with the following power sources.
- **MagicWave** 1700/2200
- **MagicWave** 2500/3000
- **MagicWave** 4000/5000
- **TransTig** 2200
- **TransTig** 2500/3000
- **TransTig** 4000/5000

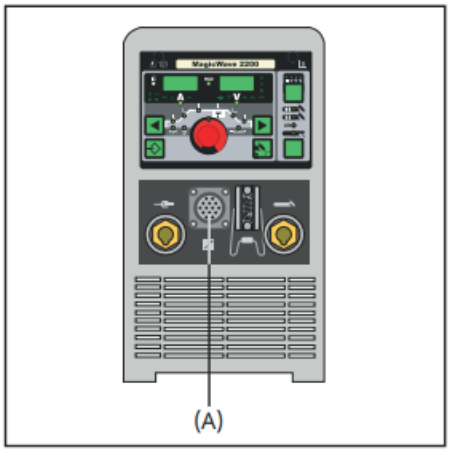
- **TransPocket** 4000/5000
- **TransSynergic** 4000/5000
- **TransPuls** Synergic 2700/3200/4000/5000
- **IMPORTANT!** If the TransTig 2200 power source is operated by the RCU 2000 remote control unit, the following buttons and indicators will be disabled.
- 

Process” button
- 

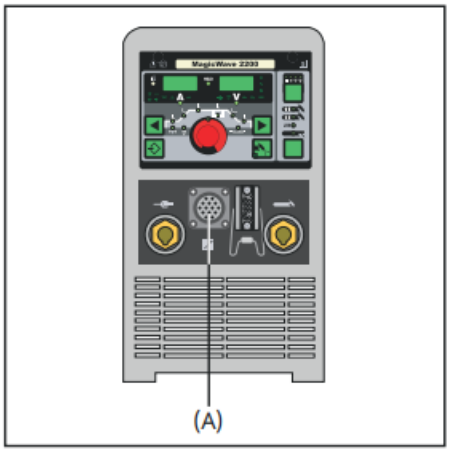
Balance” parameter
- **IMPORTANT!** All controls and display elements for HF ignition (high-frequency ignition) are disabled when one of the following power sources is controlled using the RCU 2000 remote control unit.
- TransPocket 4000/5000
- TransSynergic 4000/5000
- TransPuls Synergic 2700/3200/4000/5000

Connecting up the remote control unit

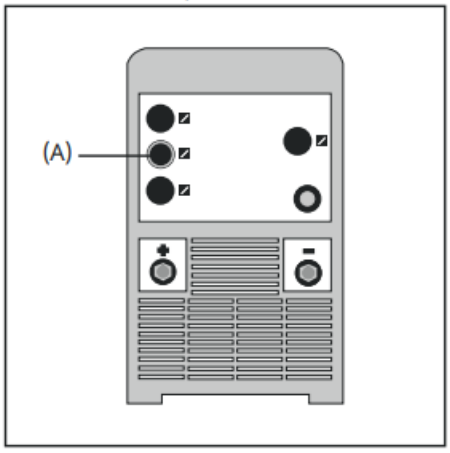
Insert the plug at the end of the remote-control cable into the LocalNet connection socket (A).



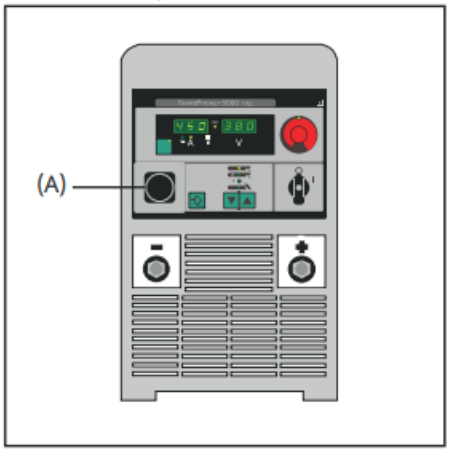
Front view MW/TT 1700/2200



Front view TPS 2700

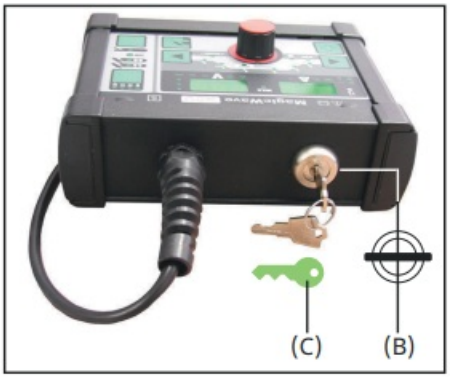


Rear view TS/TPS 3200/4000/5000



Front view TP 4000/5000

Keylock switch

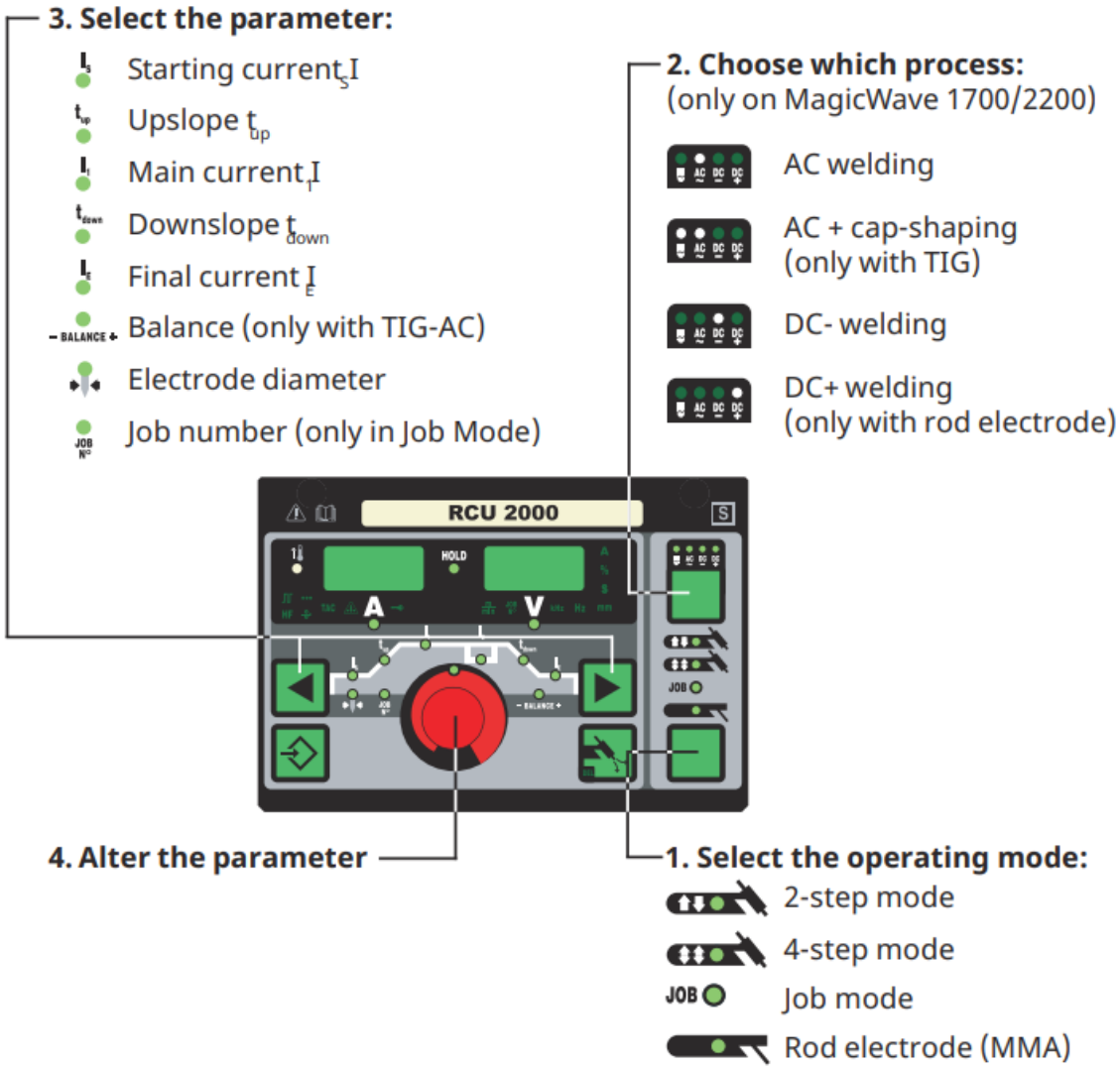


- **IMPORTANT!** When the keylock switch is in the horizontal position (B), all the buttons on the control panel are disabled.
- The “key” symbol (C) is lit up on the control panel
- If you still press any of the buttons, the disabled message “Clo SEd” will briefly appear on the displays.
- The only parameter that it is possible to alter (with the adjusting dial) is the one that was already selected at the time the keylock was activated.

Control panel

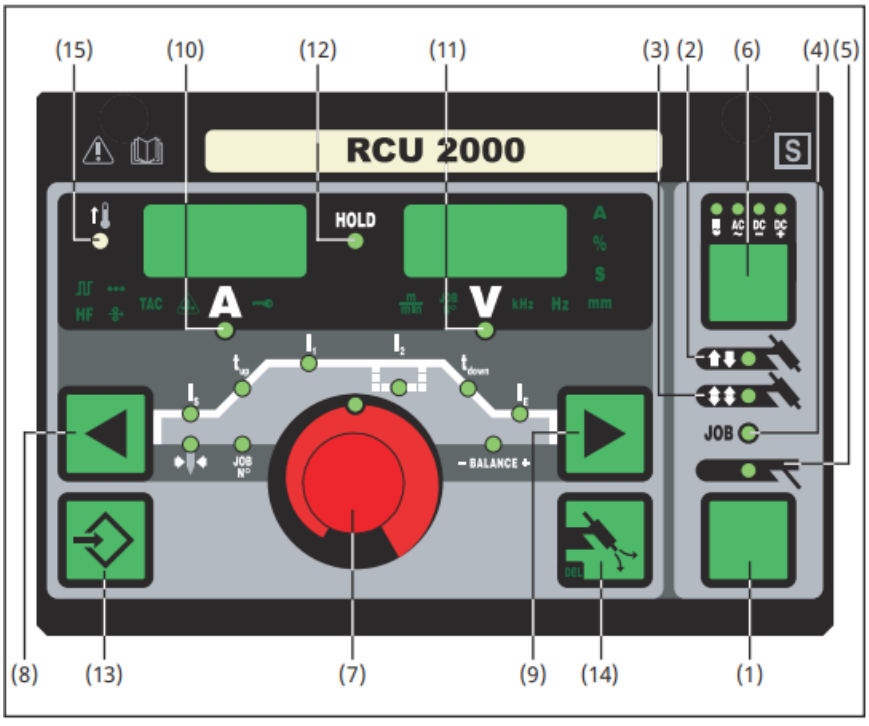
Overview

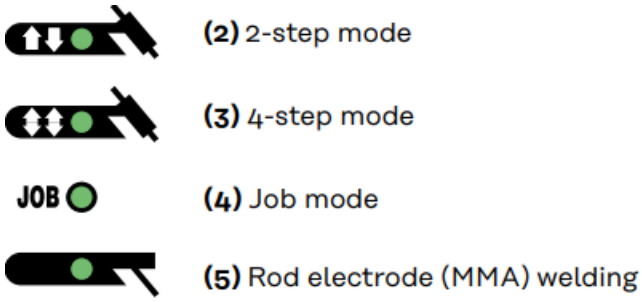
- The key feature of the control panel is the logical way in which the controls are arranged.
- All the main parameters needed for day-to-day work can easily be
- selected with the buttons
- altered with the adjusting dial
- shown on the display during welding.
- **NOTE!** Owing to software updates, you may find that your machine has certain functions that are not described in these Operating Instructions, or vice-versa.
- Also, certain illustrations may be very slightly different from the actual controls on your machine.
- However, these controls function in the same way.
- The illustration below shows an overview of the main settings needed for day-to-day working, based on the example of the MagicWave 1700/2200 control panel.
- You will find a detailed description of these settings in the following section (“Control panel”).



RCU 2000 con-trol panel

The RCU 2000 control panel corresponds to the control panel of the MagicWave 1700/2200 power source.





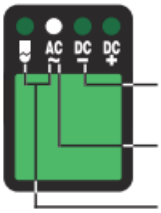
IMPORTANT! If you select the “Rod electrode (MMA) welding” mode (5), the welding voltage will only be available after a 3-second time lag.

Process button

- for selecting the process, depending upon which operating mode has been selected
- If 2-step / 4-step mode has been selected

Process:

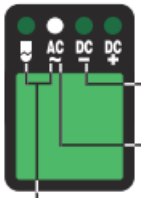
- **TIG-DC-** welding
- **WTIG-AC-** welding
- **TIG-AC** welding with activated cap-shaping function



- If “Job mode” (4) has been selected, the display shows the process that was saved for the current job.
- If “Rod electrode (MMA) welding mode” (5) has been selected:

Process:

- **Rod electrode** DC+ welding
- **Rod electrode** DC-welding
- **Rod electrode** AC welding



Adjusting dial

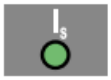
- for altering parameters. If the indicator is lit up on the adjusting dial, then the selected parameter can be altered.

Parameter selection buttons

- for selecting the parameters It is also possible to change parameters through the parameter selection buttons

(8) and (9) while the welding operation is in progress.

Available parameters where 2-step mode (2) has been selected:



Starting current Is
0 to 100 % of main current I_1
Factory setting:35%

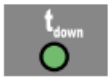
IMPORTANT! The starting current I_S is saved separately for the "TIG-AC welding" and "TIG DC- welding" operating modes

Up-Slope t_{up}
0.0 to 9.9 s, factory setting: 0.1 s

IMPORTANT! The upslope tup is saved separately for the 2-step and 4-step operating modes.

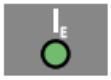
Main current I_1
- MagicWave 1700: 3 to 170 A
- MagicWave 2200: 3 to 220 A

IMPORTANT! On welding torches with Up/Down functionality, the entire setting range is available for selection while the machine is idling. During welding, the main current can be corrected by +/-20 A.



Downslope t_{down}
0.0 to 9.9 s, factory setting: 1 s

IMPORTANT! The downslope t_{down} is saved separately for the 2-step and 4-step operating modes.



Final current I_E
0 to 100 % of main current
Factory setting: 30 %

Balance (only with TIG-AC)
-5 / +5, factory setting: 0
-5 highest fusing power,
lowest cleaning action
+5 highest cleaning action,
lowest fusing power

Electrode diameter
0 to 4.0 mm (0.158 in.),
Factory setting: 2,4 mm (0.095 in.)

Available parameters where 4-step mode (3) has been selected:

Starting current Is
0 to 100 % of main current I_1
Factory setting: 35%

IMPORTANT! The starting current IS is saved separately for the "TIG-AC welding" and "TIG DC- welding" operating modes.

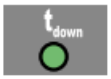
Upslope t_{up}
0.0 to 9.9 s, factory setting: 0.1 s

IMPORTANT! The upslope tup is saved separately for the 2-step and 4-step operating modes.

Main current I_1
- MagicWave 1700: 3 to 170 A
- MagicWave 2200: 3 to 220 A

IMPORTANT! On welding torches with Up/Down functionality, the entire setting range is available for selection while the machine is idling. During welding, the main current can be corrected by +/-20 A.

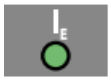
Reduced current I_2
0 to 100 % of main current I_1
Factory setting: 50%



Downslope t_{down}
0.0 to 9.9 s, factory setting: 1 s

WICHTIG! The downslope town is saved separately for the 2-step and 4-step operating modes.

WICHTIG! The downslope t_{down} is saved separately for the 2-step and 4-step operating modes.



Final current I_E
0 to 100 % of main current
Factory setting: 30 %

Balance (only with TIG-AC)
-5 / +5, factory setting: 0
-5 highest fusing power, lowest cleaning action
+5 highest cleaning action, lowest fusing power

Electrode diameter
0 to 4.0 mm, (0.158 in.)
Factory setting: 2.4 mm (0.095 in.)

Available parameters where "Job mode" (4) has been selected:

In "Job mode", the parameters that apply to the operating mode that has been stored in the selected job are made available. In addition, the following parameter is also available:

Job number
for selecting the desired job

Available parameters where the "Rod electrode (MMA) welding" mode (5) has been selected:

Main current I_1
- MagicWave 1700: 10 to 140 A
- MagicWave 2200: 10 to 180 A

IMPORTANT! On welding torches with Up/Down functionality, the entire setting range is available for selection while the machine is idling. During welding, the main current can be corrected by +/-20 A.

Welding current display

- for indicating the welding current for the parameters.
- **IS** (starting current)
- **I1** (main current)
- **I2** (reduced current)
- **IE** (final current)
- Before the start of welding, the left-hand display shows the command value.
- For IS, I2, and IE the right-hand display also shows the respective %-age of the main current I1.
- After the start of welding, the parameter I1 is automatically selected.
- The left-hand display shows the present actual value of the welding current.
- The control panel indicates which position has been reached in the welding process by means of a dimmed display of the parameters (IS, tup, …).
- IMPORTANT! If the parameter ACS (see the section headed “Set-up menu: Level 2”) is set to OFF, then the most recently selected parameter remains active during welding. No automatic selection of parameter I1 takes place.

Welding voltage display

- for indicating the actual welding-voltage value on the right-hand display.
- Where one of the TIG-welding modes has been selected, the right-hand display reads “0.0” before the start of welding. Where the “Rod electrode (MMA) welding” mode has been selected, there is first a 3-second time lag, after which the value for the open-circuit voltage “50V” is displayed.
- **IMPORTANT!** The value of “50 V” indicated where the “Rod electrode (MMA)” process has been selected refers to the mean value of the pulsed open-circuit voltage.

HOLD indicator
every time you finish a welding operation, the actual values for welding current and voltage are stored, and the “Hold” indicator lights up.

- The “Hold” indicator refers to the last value reached by the Main current I1. As soon as any other parameter is selected, the “Hold” indicator goes out.
- The “Hold” values will continue to be available, however, if Parameter I1 is selected once again.
- The “Hold” indicator is canceled whenever
- a new welding operation has been started
- The main current I1 is adjusted
- the operating mode is changed
- the process is changed
- **IMPORTANT!** If the main-current phase was never reached, or if a pe-dal remote control unit was being used, no “Hold” values are outputted.

Store button

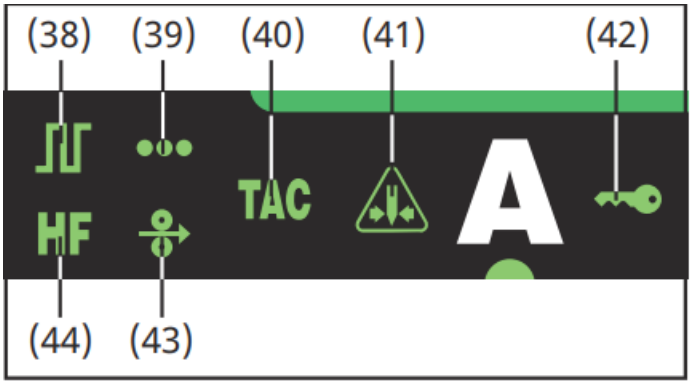
- for storing jobs. Is also used for accessing the Set-up menu.

Gas-test button

- for setting the required gas flow rate on the pressure regulator. After you press this button, gas will flow out for 30 s. Press the button again to stop the gas test-flow before the 30 seconds are up.

Overtemperature indicator

- lights up if the power source overheats (e.g. because the duty cycle has been exceeded). For more information on this, see the “Troubleshooting” section.
- The indicators shown glow for as long as the respective functions remain activated. The following description will give you an overview of these functions.
- In some cases, they will be described in even greater detail in the in-depth sections dealing with the function or parameter in question, to be found in.
- **The set-up menu:** Level 1
- **The set-up menu:** Level 2
- **Special** functions



Additional indicators

Pulsing is activated

- The set-up parameter “F-P” has been set to a certain pulsing frequency

Spot welding is activated

- The set-up parameter “SPt” has been set to a certain spot-welding time

Tracking is activated

- The set-up parameter “tAC” has been set to a certain duration

Electrode overload“ indicator“

- lights up when the cap at the tip of the tungsten electrode is overloaded.
- This means that there is a risk of an excessively large cap being formed.

Causes

- The tungsten electrode does not have a large enough diameter
- Main current I1 has been set to too high a value
- “Balance” has been set too far towards “+”

Remedies

- Use a tungsten electrode with a bigger diameter
- Reduce the main current and/or set “Balance” further towards “-”
- **IMPORTANT!** The “Electrode overload“ indicator (41) is fine-tuned to work with the following tungsten electrodes:
- TIG-AC welding: Pure tungsten electrodes
- TIG-DC welding: Ceriated electrodes
- For all other electrodes, the “Electrode overload” indicator (41) must be taken as a guideline only

Keylock activated” indicator

- lights up when the keylock is activated, as described in the section headed “Special functions”

The cold-wire feeder is connect

- This indicator lights up when a cold-wire feeder is connected

HF (high-frequency) ignition is activated

- The set-up parameter “HFt” has been set to a certain interval for the high-frequency impulses

Customer Service

- spareparts.fronius.com
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- **Fronius International GmbH**
- **Froniusstraße 1**
- **4643 Pettenbach**
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- At www.fronius.com/contact you will find the contact details of all Fronius subsidiaries and Sales & Service Partners.

Documents / Resources

	Fronius RCU 2000 Remote Control [pdf] Instruction Manual MagicWave 1700-2200, MagicWave 2500-3000, MagicWave 4000-5000, TransTig 2200, TransTig 2500-3000, TransTig 4000-5000, TransPocket 4000-5000, TransSynergic 4000-5000, TransPuls Synergic 2700-3200-4000-5000, RCU 2000 Remote Control, RCU 2000, Remote Control, Control

References

- Fronius Spare Parts
- User Manual