



Operating and Maintenance Manual



EFU 2.7-Twin

EFU 3.8

EFU 5.6

0235221; 0235231; 0235241

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1. Introduction

This operating and maintenance manual is designed to help you become familiar with your converter and enable you to maintain it and use it for its intended purpose.

The safety instructions and warnings provided in this manual will help avoid hazards, reduce repair and downtime costs and increase the reliability and operational readiness of your converter. Follow these instructions precisely.

This operating and maintenance manual must always be kept at the implementation site of the converter and be available to the operator.

Enclosed with this manual is a valid declaration of conformity and a spare parts lists for orders of spare parts. Store these documents carefully.

Turn to your Weber MT dealer if you require any additional information.

Found on the last page of this manual is a QR code. Scan it to acquire the current contact addresses of all Weber MT branches.

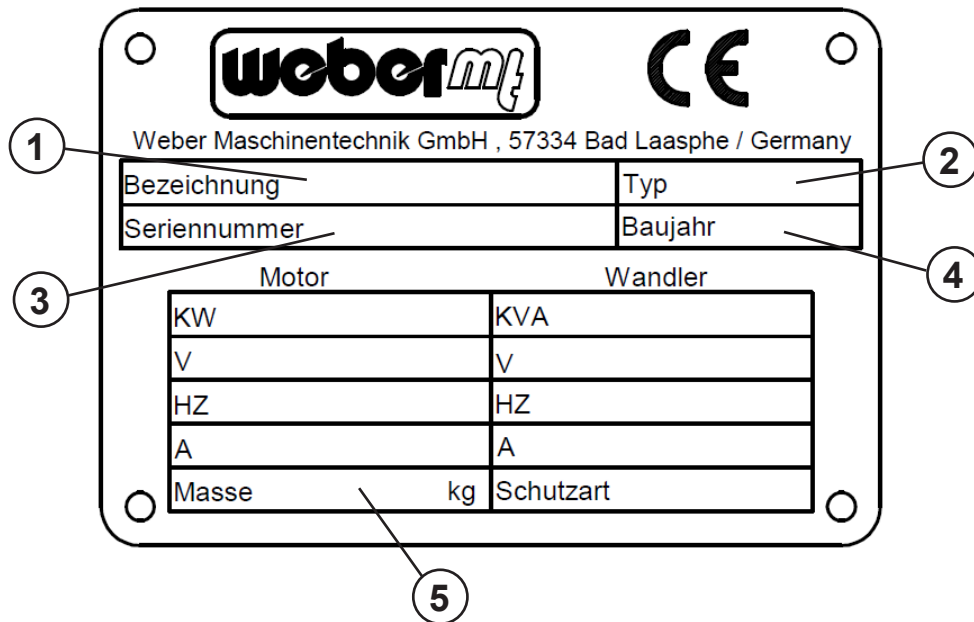
2. Description

This device is an electronic frequency converter for operation with high-frequency internal vibrators made by Weber MT.

3. Technical data

| | | EFU 2.7-Twin | EFU 3.8 | EFU 5.6 |
|-----------------------------|-----|-----------------|---------|---------|
| Weight | | | | |
| Operating weight | kg | 30 | 34 | 39 |
| Connection | | | | |
| Input voltage | V | 230 | 400 | 400 |
| Power input | A | 16 | 13 | 15 |
| Frequency | Hz | 50 | 50 | 50 |
| Output | | | | |
| Output voltage | V | 48 / 250 | 48 | 48 |
| Output current | A | 32 / 7 | 48 | 75 |
| Output power | kVA | 2.7 | 4.0 | 6.0 |
| Output frequency | Hz | 200 | 200 | 200 |
| Power outlets | | 2 / 1 | 3 | 3 |
| Degree of protection | | IP 44 | IP 44 | IP 44 |
| Sound pressure level | Lpa | Below 70 dB (A) | | |

Note down this information so that you can recreate the rating plate should the plate be lost.



1 Designation

.....

2 Type

.....

3 Serial no.

.....

4 Year of construction

.....

5 Weight

.....

4. Safety

General

All safety instructions must be read and complied with, as non-compliance will result in

- Danger to life and limb of the user,
- Impairments to the machine or other property.

In addition to the operating manual, the accident-prevention regulations in the country where the appliance is used must be complied with.

Intended use

The converter should only be used in technically faultless condition, as intended, in a safety-conscious and hazard-conscious manner, and in compliance with the instructions in the operating manual.

Malfunctions that impair safety must be eliminated without delay.

The converter is designed exclusively for the following operations:

- Connection and operation of Weber MT high-frequency internal vibrators of the types IV, IV-D (EFU 1.3) or IV-S (only EFU 2.7-Twin)

Non-intended use

Unless used as intended, the device involves a risk of personal injury and property damage. The device is expressly not suitable for:

- Use as a step.
- The connection of other devices.

The responsibility for any damage arising from non-intended use falls on the owner / operator rather than the manufacturer.

Requirements on the operator

This converter may only be operated by suitable operators who are 18 years or older. They must be instructed on how to operate the device by the owner or by the owner's assigned personnel and need to be physically and mentally fit to use the device.

Personal protective equipment

Personal protective equipment consisting of

- Protective goggles
- Hearing protection
- Work shoes or boots with toe guard

must be worn during operation and the execution of maintenance on the device.

Spare parts, changes and conversions

Changes and conversions are prohibited unless made with original Weber MT spare parts. If the machine is modified with other accessories without the approval of Weber MT, the manufacturer will not assume liability for any resulting personal injury or property damage.

All maintenance and repairs must be carried out with original Weber MT spare parts. Untested spare parts may affect the reliability and safety of the machine.

Prior to commissioning

The device must not be operated unless all safety devices (mechanical and electrical) are complete and operational.

To prevent overload and other types of damage, the device may only be connected to the mains supply specified on the rating plate. The mains supply must be equipped with a grounding conductor.

If the device tips over or slides around, plugs or individual cables on the inside of the device may detach. There is a risk of short circuits. The device must therefore be set up in a stable position and secured against tipping over or sliding around.

Damage to the cable may compromise the insulation of individual wires. There is a risk of short circuits. The cable must therefore be protected against mechanical damage.

Do not lay the cable across sharp edges and keep it protected against heat and oil.

There is a risk of short circuits if moisture enters the interior of the device. Therefore, do not expose the device to rain and do not operate the device in a wet or moist environment.

The device must not be operated in an explosive atmosphere.

Check if the control and safety devices are effective to prevent damage from electric current or equipment that was switched on inadvertently.

During operation

To keep connected equipment from being switched on inadvertently, the device must not be switched on or off by inserting or removing the connector plug into and from the power outlet.

As individual wires on the inside of the plug or the device may detach, the cable must not be used for pulling out the power plug.

Check the cable for mechanical damage (e.g. cuts) regularly during operation in order to prevent short circuits or electric shocks.

To avoid accidents of any kind, the device must not be used unless all protective fixtures are operational. If detecting defects on the protective fixtures, stop operation immediately, disconnect the device from the power supply by pulling the plug out of the power outlet and notify your supervisor.

Maintenance / repair

The device does not require any maintenance.
Should repairs become necessary, have them performed by trained professionals.
In case electronic components are affected, the work may only be performed by a trained electrician.
To ensure safe operation following any necessary repairs, all protective fixtures must be checked.
This includes a check of whether current can pass through the grounding conductor.

Transport





When loading the device with a crane, use lifting gear with sufficient bearing capacity.
When transporting the device on a vehicle, secure the device against tipping over, rolling away and sliding around.

Inspection

Have converters inspected for operationally safe status in accordance with the regulations applicable in the country of use at least every 6 months or more frequently if necessary.

Safety instructions and warnings

A variety of safety instructions and warnings are used throughout this operating manual.
The following explains the meaning of signal words and symbols.

| | |
|---|--|
|  | ATTENTION warns of the danger of material damage. |
|  | CAUTION warns of the danger of slight injury. |
|  | WARNING warns of a danger that may lead to death or serious injury. |
|  | DANGER warns of a danger that will lead to death or serious injury unless avoided. |



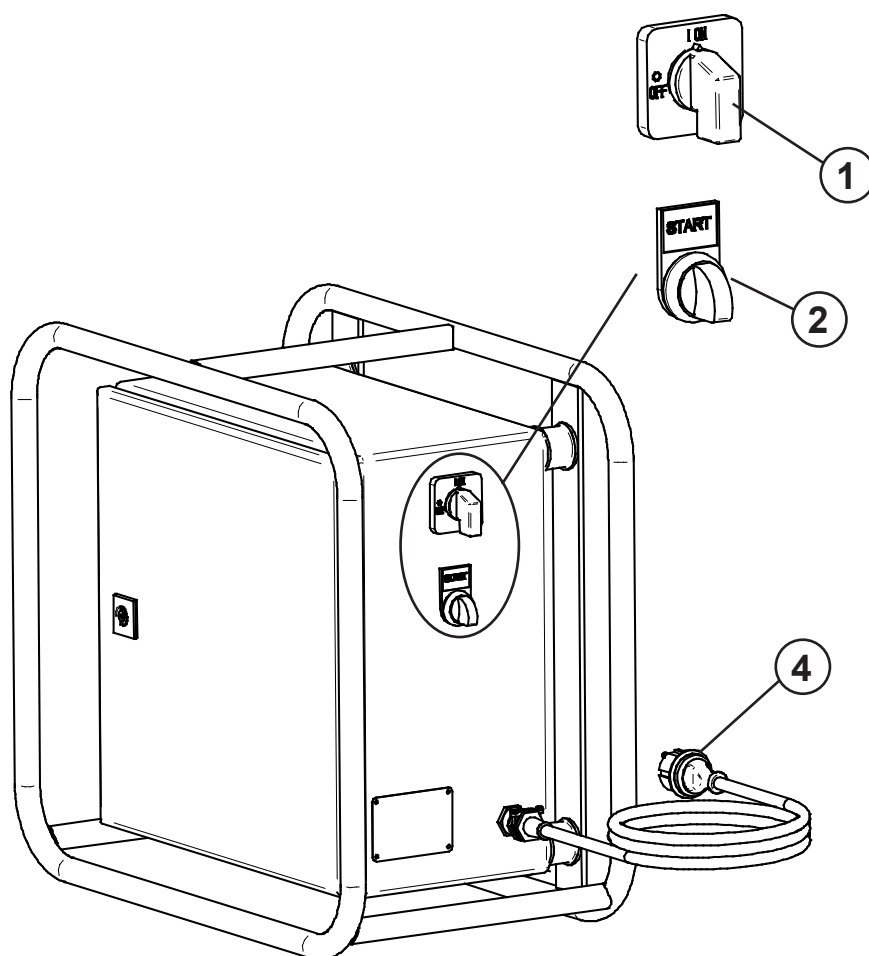
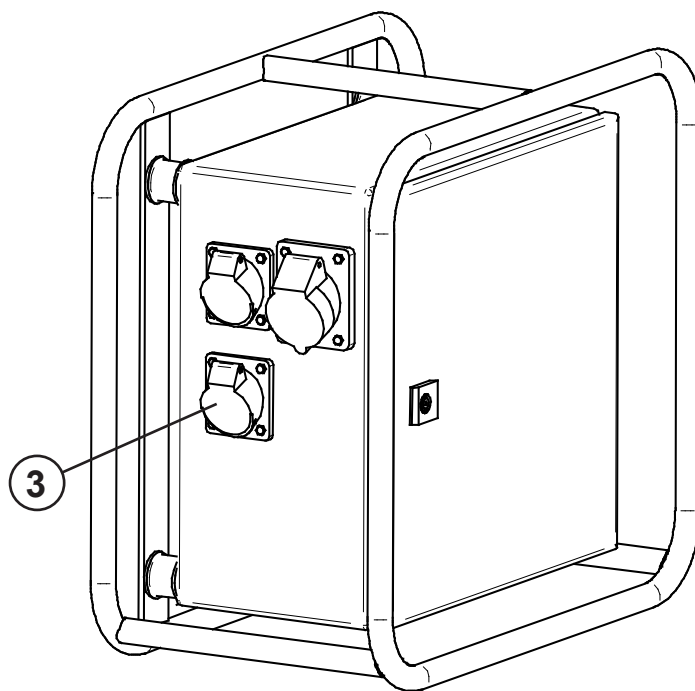
The information symbol provides supplemental information on the operation of the machine and points to complementary technical information.

5. Operation

Preparing the machine for initial use

- ▶ Remove all packaging material.
- ▶ Check all components for visible damage. Do not start the device if detecting visible damage. Contact the responsible dealer.
- ▶ Check if the shipment of the device and its components is complete.
- ▶ Set up the device at its place of use.

Operating positions on the device



- 1 Main switch
- 2 Device switch "Start"
- 3 Power outlet
- 4 Power plug

Connection to the mains supply

- ▶ Before connecting the device to the mains supply, perform a visual inspection to verify that the device is undamaged.
- ▶ Make sure the mains voltage corresponds to the voltage and frequency specified on the rating plate.
 - ▲ **WARNING!** Danger from an electric shock caused by parts that have become live due to a fault.
- ▶ Do not connect the converter to a mains supply that is not protected by an RCD type B residual current circuit breaker.
- ▶ Insert the plug into a suitable power outlet.

Commissioning of the converter

- ▶ Set the main switch (1) to "1" (ON).
- ▶ Switch the converter on at the device switch "Start" (2).
- ✓ The converter is switched on, and the equipment can be connected.

Connection of internal vibrators

ATTENTION

Danger of material damage from overload! The power input of the connected internal vibrators must not exceed the specified output current of the converter!

CAUTION

Danger of material damage and slight injury if the connected internal vibrators are switched on inadvertently.

- ▶ Before connecting the converter, always make sure that the connected internal vibrators have been switched off at their own device switch.
- ▶ Connect the device to the corresponding power outlet of the converter (green).

Shutdown of the converter

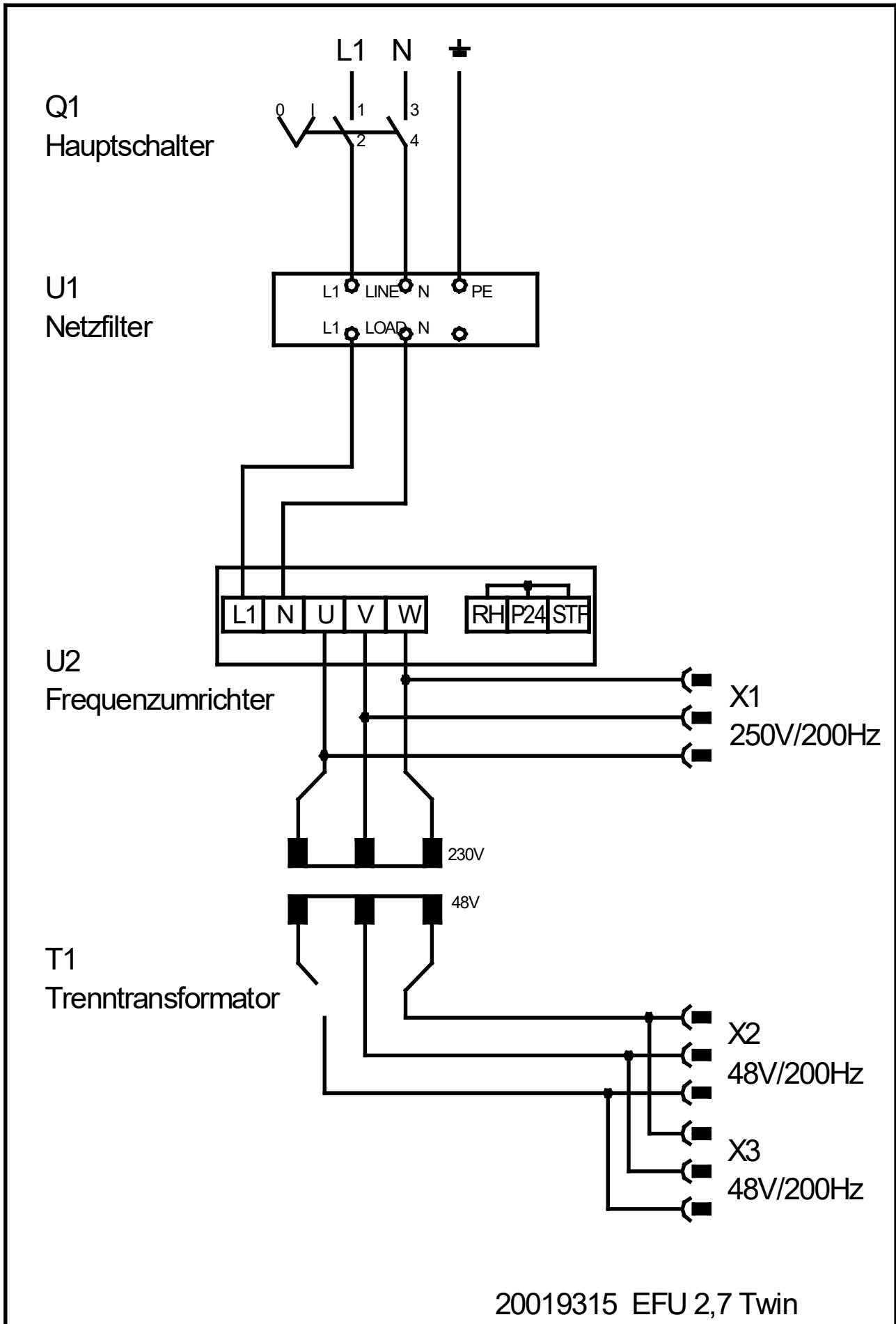
- ▶ Start by shutting down the connected internal vibrators to keep the internal vibrators from being switched on inadvertently during the next operation of the converter.
- ▶ Switch the converter off at the device switch "Start" (2).
- ▶ Set the main switch to "0" (OFF).
- ✓ The converter is switched off. The power plug can be pulled out of the power outlet.
 - ▲ **ATTENTION!** Danger of material damage! Never pull on the cable to remove a plug.

6. Maintenance

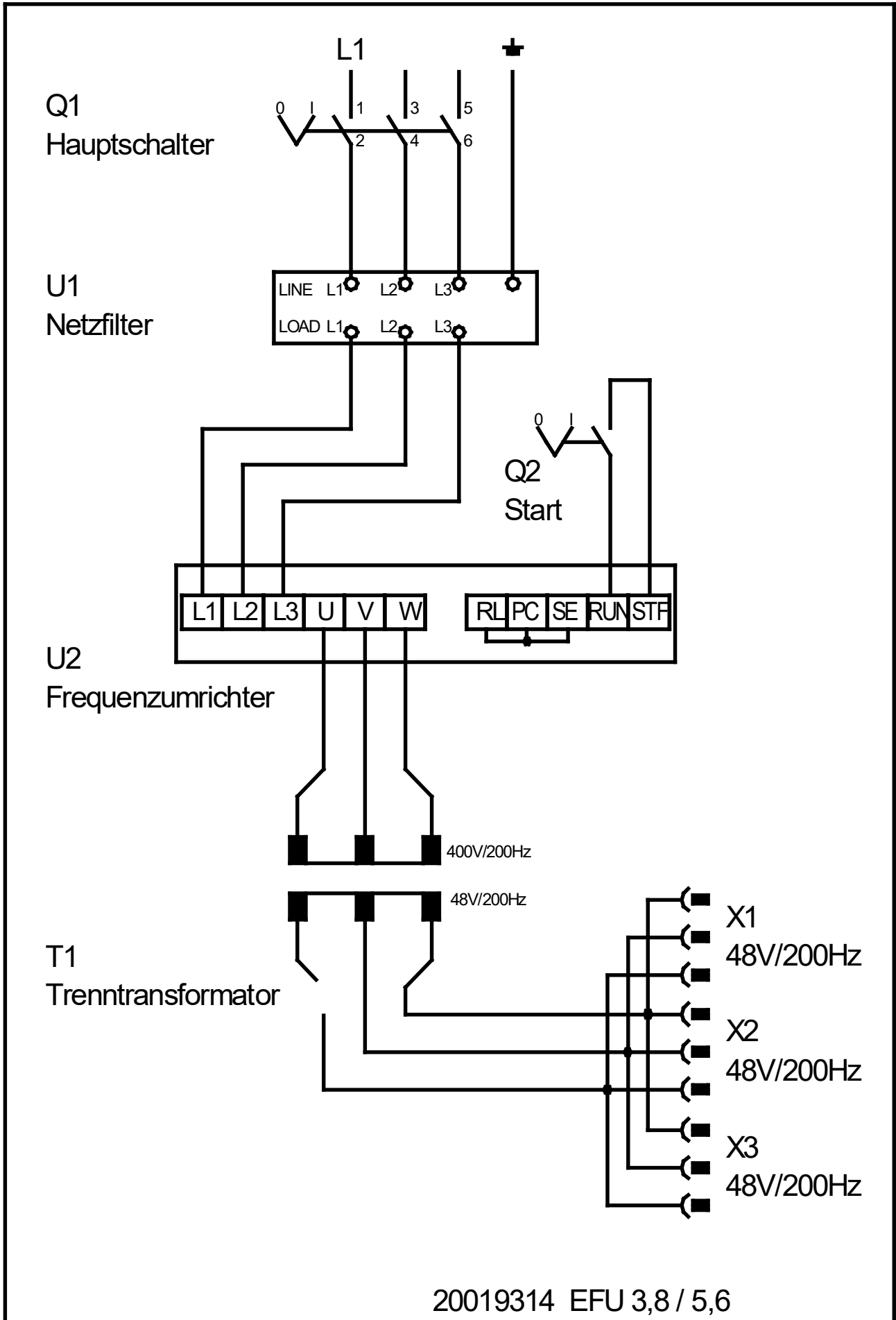
The device requires next to no maintenance. No maintenance is needed except for a daily visual inspection of the device and cable for exterior damage.

If the visual inspection reveals damage on the device, the damage must be corrected by trained professionals. If in doubt, contact the responsible Weber MT partner.

Circuit diagram EFU 2.7-Twin



Circuit diagram EFU 3.8 / 5.6





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Original operating manual