

Autotrafo TT 2600 - 230/200 V

Autotrafo TT 2600/3000 - 480/440 V

Autotrafo TT 2600/3000 - 500/460 V

Autotrafo MW 2600 - 230/200 V

Autotrafo MW 2600/3000 - 480/440 V

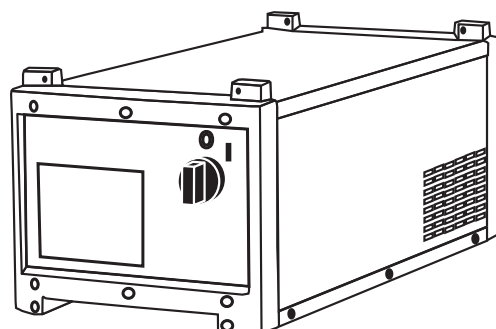
Autotrafo MW 2600/3000 - 500/460 V

Autotrafo MW 2600 - 575 V

Fitting Instructions

EN

Autotransformer



Contents

General	2
Concept	2
Versions	2
Controls and connections	4
Controls and connections „Version 1“	4
Controls and connections „Version 2“	4
Controls and connections „Version 3“	5
Setting the mains voltage	6
Safety	6
Converting the mains voltage for „Version 1“	6
Converting the mains voltage for „Version 2“	8
Putting the machine into service	9
Safety	9
Preparing to install	9
Installing the components	10
Connecting the auto-transformer „Version 1“	11
Connecting the auto-transformer „Versions 2 and 3“	11
Care, maintenance and disposal	12
General	12
Every start-up	12
Every 6 months	12
Every 12 months	12
Disposal	12
Troubleshooting	13
General	13
Troubleshooting	13
Technical data	15
Safety	15
Auto-transformer „Version 1“ (480/440 V, 500/460 V)	15
Auto-transformer „Version 1“ (230/200 V)	16
Auto-transformer „Versions 2 and 3“	17
Spare parts list	
Circuit diagrams	
Fronius Worldwide	

General

Concept

This range of digital machines is remarkably flexible and readily adaptable to a wide range of applications. These welcome features are due firstly to the modular product design and secondly to the scope that the system gives for troublefree system expansion. High-quality components, protective plastic frames and a powder-coated aluminium housing ensure excellent reliability and durability.

The auto-transformers are especially designed to meet the requirements of this range of digital machines.

They allow the machines to be used with available mains voltages.

Versions

Version 1:

- Auto-transformer TT 2600/3000 - 480/440 V
- Auto-transformer TT 2600/3000 -500/460 V
- Auto-transformer MW 2600/3000 - 480/440 V
- Auto-transformer MW 2600/3000 -500/460 V
- Auto-transformer MW 2600 - 200, 230/400 V
- Auto-transformer TT 2600 - 200, 230/400V



Fig. 1 Front view, „Version 1“



Fig. 2 Rear view, „Version 1“

Versions
(continued)

Version 2:

- Auto-transformer MW 2600/3000 - 480/440 V



Fig. 3 Front view, „Version 2“

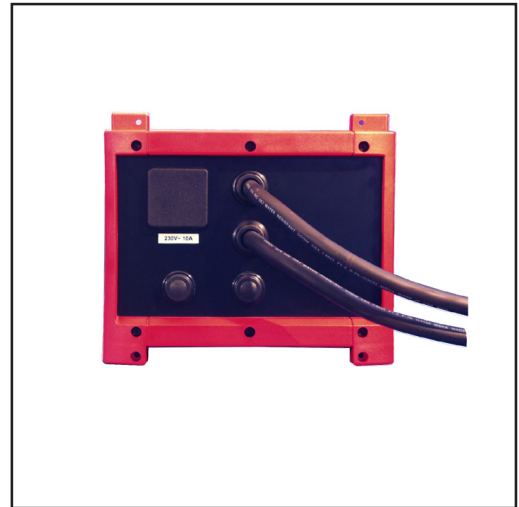


Fig. 4 Rear view, „Version 2“

Version 3:

- Auto-transformer MW 2600/3000 - 575 V



Fig. 5 Front view, „Version 3“

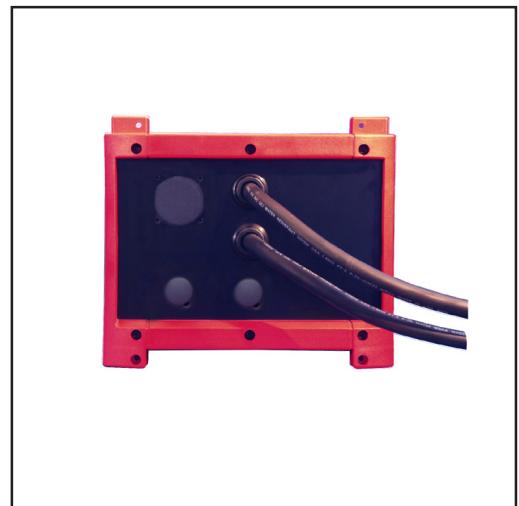


Fig. 6 Rear view, „Version 3“

Controls and connections

Controls and connections „Version 1“

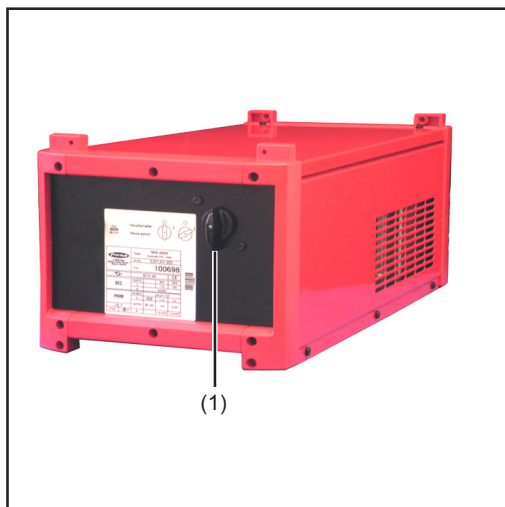


Fig. 1 Front view, auto-transformer TT 2600/3000 MW 2600/3000

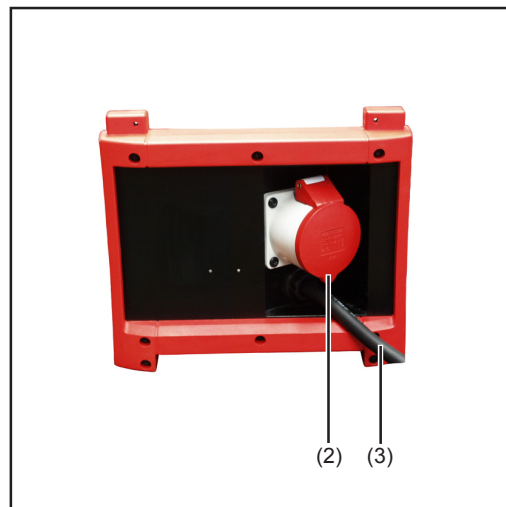


Fig. 2 Rear view, auto-transformer TT 2600/3000 MW 2600/3000

- (1) **Main switch** ... central switch for turning all system components of the welding machine on and off
- (2) **Power source connection socket** ... for supplying the power source with the transformed voltage.
- (3) **Mains cable** ... for supplying the auto-transformer with the mains voltage

Controls and connections „Version 2“

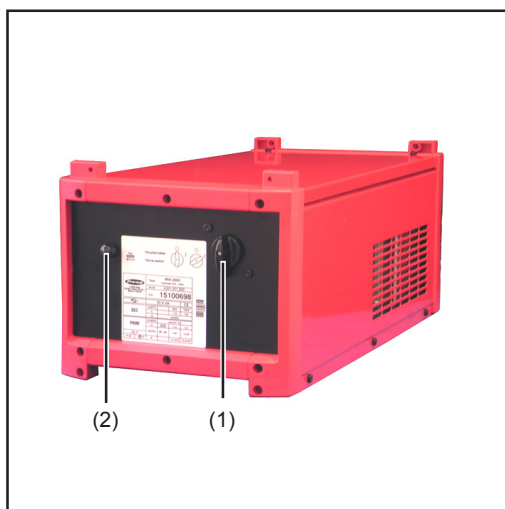


Fig. 3 Front view. Auto-transformer MW2600

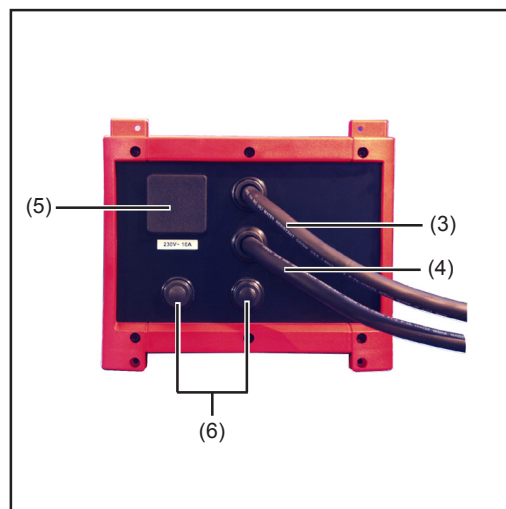


Fig. 4 Rear view. Auto-transformer MW2600

- (1) **Main switch** ... central switch for turning all system components of the welding machine on and off
- (2) **Socket fuse** ...T10A 440V
- (3) **Power source connection cable „OUTPUT 50/60 Hz“** ... for supplying the power source with the transformed voltage.

Controls and connections „Version 2“
(continued)

- (4) **Mains cable „INPUT 50/60Hz“** ... for supplying the auto-transformer with the mains voltage
- (5) **Socket outlet** ... 230V/10 A
- (6) **Strain relief devices** ... for connection cables of external devices

Controls and connections „Version 3“

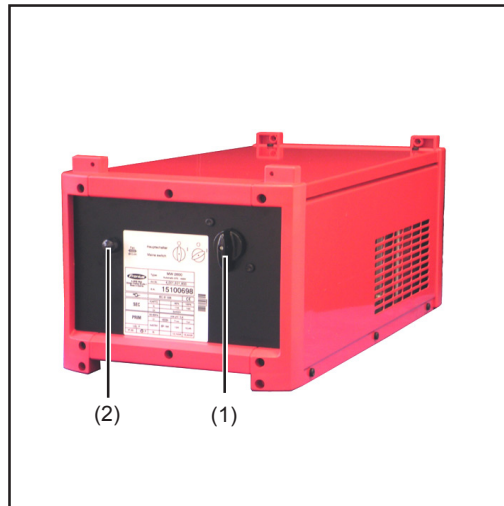


Fig. 5 Front view, auto-transformer MW2600 575 V

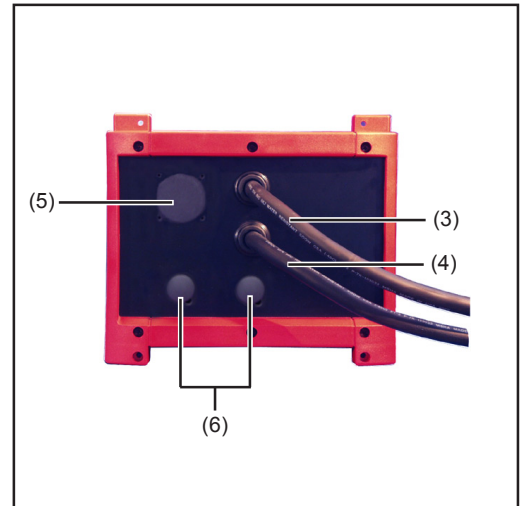


Fig. 6 Rear view, auto-transformer MW2600 575 V

- (1) **Main switch** ... central switch for turning all system components of the welding machine on and off
- (2) **Fan fuse** ...T400mA 440 V
- (3) **Power source connection cable „OUTPUT 50/60 Hz“** ... for supplying the power source with the transformed voltage.
- (4) **Mains cable „INPUT 50/60Hz“** ... for supplying the auto-transformer with the mains voltage
- (5) **Blanking cover**
- (6) **Blanking cover**



Setting the mains voltage

Safety



WARNING! Work performed incorrectly can cause serious injury and damage. The following activities must only be carried out by Fronius-trained qualified personnel! Take note of the safety rules in the power source operating instructions.



WARNING! An electric shock can be fatal. Before opening the unit, turn the main switch to the „0“ position and pull out the mains plug or disconnect the power supply.

Converting the mains voltage for „Version 1“

1. Turn the main switch on the auto-transformer to the „0“ position
2. Pull out the mains plug or disconnect the power supply
3. Remove the auto-transformer cover

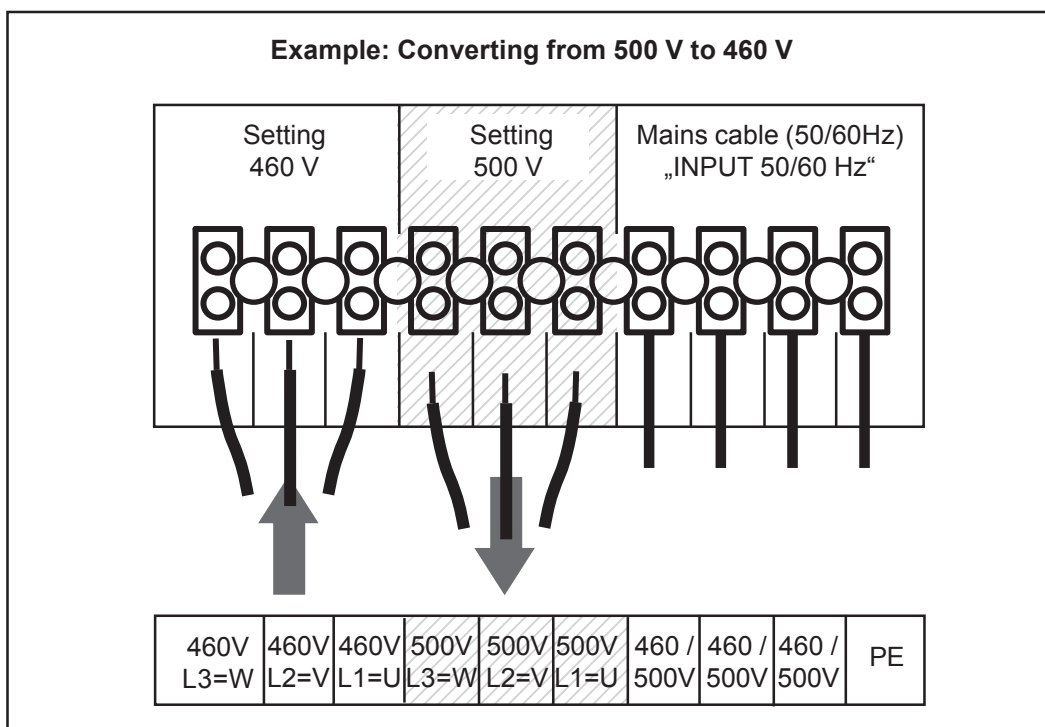


Fig. 7 Terminal strip TT 2600/3000 MW 2600/3000 - 500/460 V

Converting the mains voltage for „Version 1“ (continued)

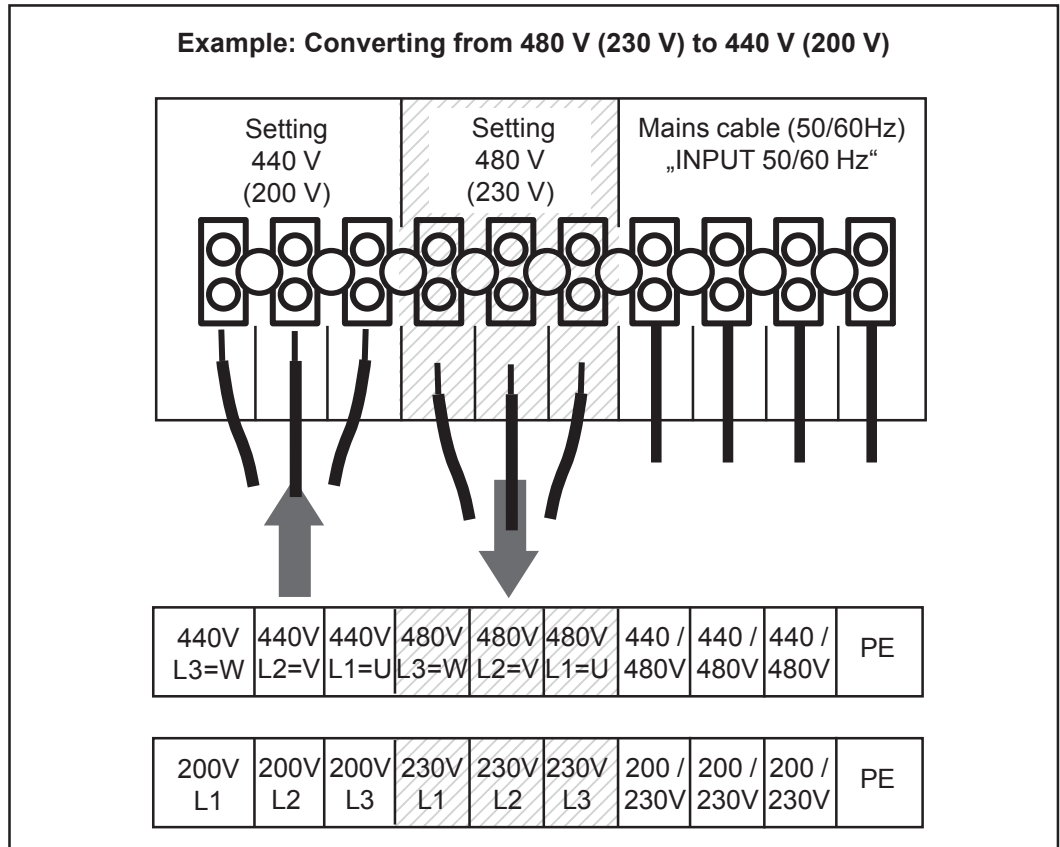


Fig. 8 Terminal strip TT 2600/3000 MW 2600/3000 - 480/440 V (TT 2600 MW 2600 - 230/200 V)

4. Disconnect the phase conductors (L1, L2, L3) in the „Setting 500 or 480 V (230 V)“ section



NOTE! Operating the auto-transformer with phase conductors only partially reconnected can cause serious damage. When converting the mains voltage, always make sure that all phase conductors are reconnected.

5. Connect the phase conductors (L1, L2, L3) in the „Setting 460 or 440 V (200 V)“ section
6. Check that all cables are securely connected to the terminal strip
7. Attach the auto-transformer cover
8. Cross out the mains voltage in the space above the rating plate and enter the mains voltage you have set in the empty box

CAUTION! Operating the equipment at an incorrect mains voltage can cause serious damage. The entered value must correspond to the mains voltage actually set.

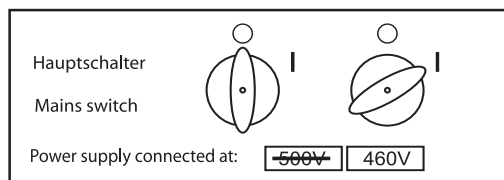


Fig.9 Entering the mains voltage set - example

Converting the mains voltage for „Version 2“

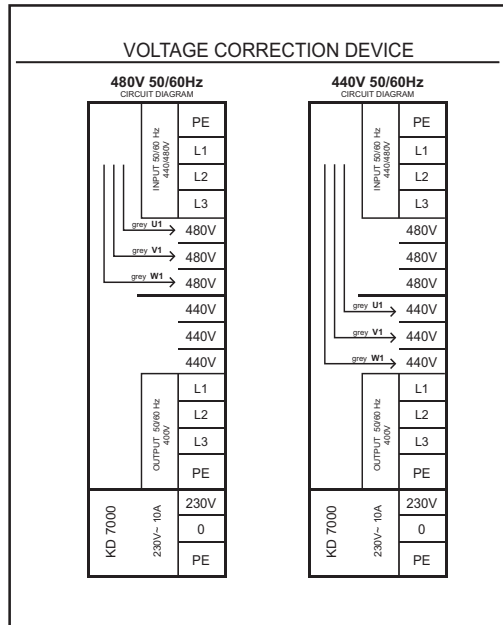


Fig. 10 Connecting MW 2600 480/440 V

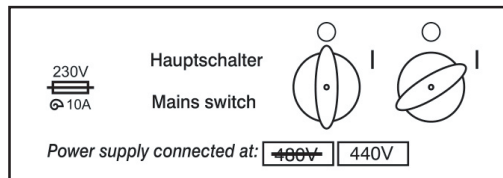


Fig. 11 Entering the mains voltage set

1. Turn the main switch on the auto-transformer to the „0“ position
2. Pull out the mains plug or disconnect the power supply
3. Remove the left side panel of the auto-transformer
4. Disconnect the phase conductors (U1, V1, W1) in the 480V section



NOTE! Operating the auto-transformer with phase conductors only partially reconnected can cause serious damage. When converting the mains voltage, always make sure that all phase conductors are reconnected.

5. Connect the phase conductors (U1, V1, W1) in the 440V section
6. Make sure all cables are securely connected
7. Attach the left side panel of the auto-transformer
8. Cross out the mains voltage in the space above the rating plate and enter the mains voltage you have set in the empty box



CAUTION! Operating the equipment at an incorrect mains voltage can cause serious damage. The entered value must correspond to the mains voltage actually set.

Putting the machine into service

Safety



WARNING! Work performed incorrectly can cause serious injury and damage. The following activities must only be carried out by Fronius-trained qualified personnel! Take note of the safety rules in the power source operating instructions.

Preparing to install



WARNING! An electric shock can be fatal. Only carry out work on the machine when

- the mains switch is in the „0“ position,
- the machine is unplugged from the mains.

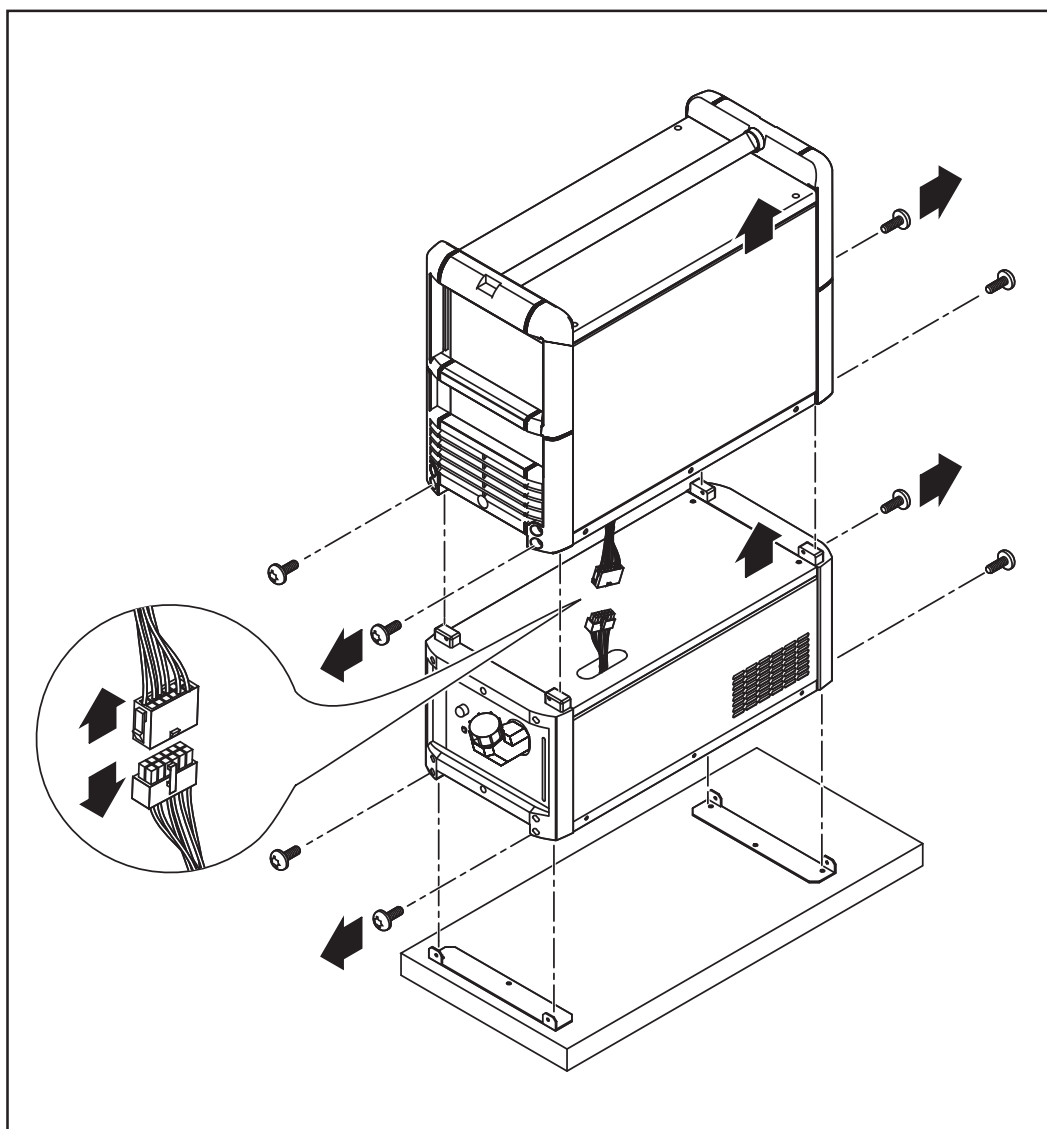


Fig. 12 Dismantling the components

Installing the components

CAUTION! Beware of the danger of the trolley tipping over. Always place the heavy auto-transformer at the bottom. This will reduce the danger of the trolley tipping over as the centre of gravity is now lower.

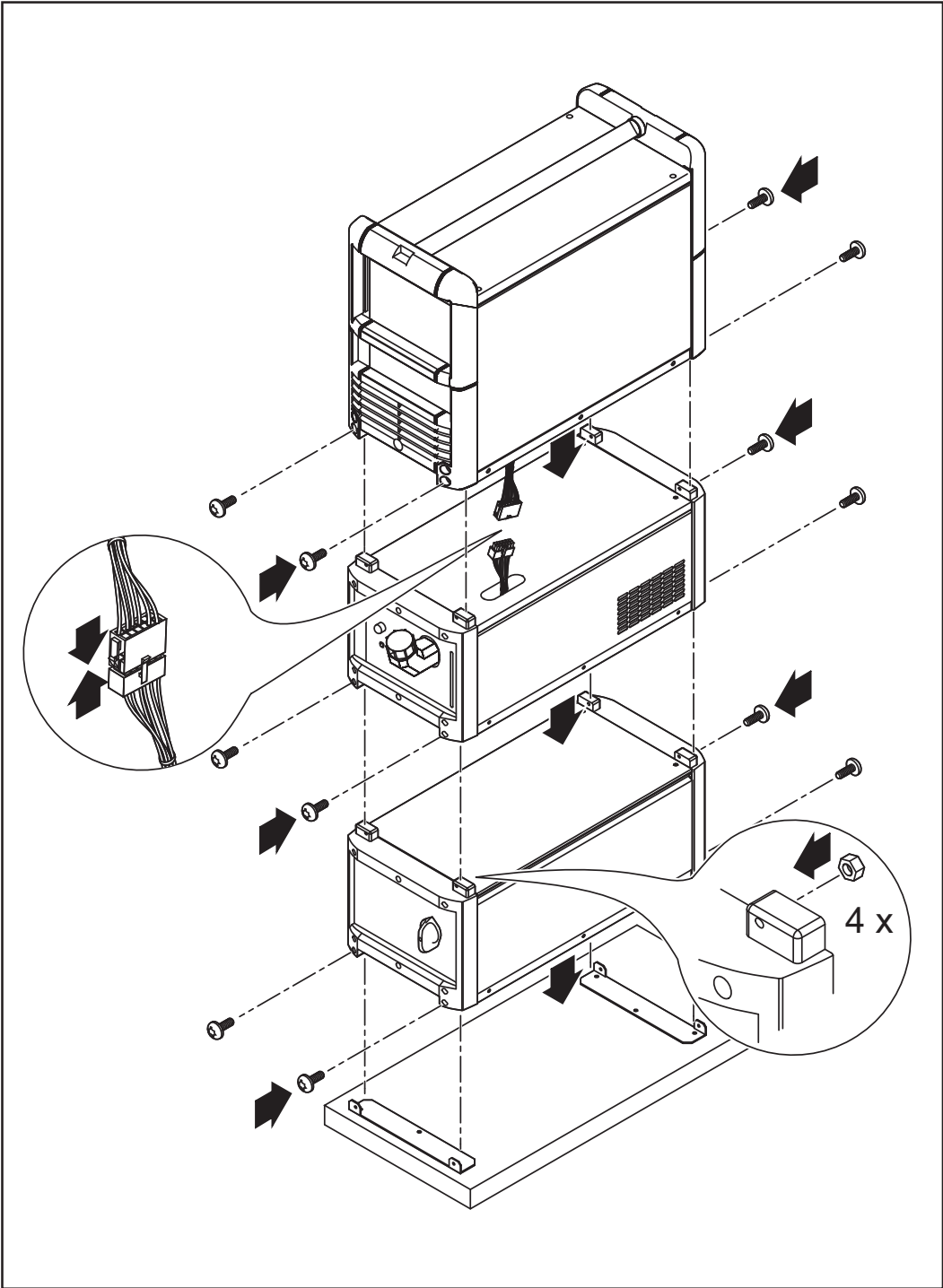


Fig. 13 Installing the components

Connecting the auto-transformer „Version 1“



WARNING! Operating the equipment incorrectly can cause serious injury and damage. Read the following sections of the power source operating instructions before starting the power source for the first time:

- Safety rules
- Putting the machine into service
- Putting the power source into operation

The ventilation of the auto-transformer is a very important safety feature. When deciding where to set up the system, ensure that cooling air can enter unhindered through the air slots on the underside and escape through the slots in the sides.

1. If the auto-transformer mains cable needs to have a plug attached, fit a suitable mains plug.
2. Switch the power source mains switch to the „0“ position
3. Turn the main switch on the auto-transformer to the „0“ position
4. Insert the mains plug of the auto-transformer and turn on the power supply.
5. Turn the main switch on the auto-transformer to the „I“ position
6. The auto-transformer is ready for use



Note: Operating the auto-transformer with phase conductors only partially connected can cause serious damage. When connecting the connection cable, always make sure that all phase conductors and the earth conductor are connected.

Connecting the auto-transformer „Versions 2 and 3“



WARNING! Operating the equipment incorrectly can cause serious injury and damage. Read the following sections of the power source operating instructions before starting the power source for the first time:

- Safety rules
- Putting the machine into service
- Putting the power source into operation

The ventilation of the auto-transformer is a very important safety feature. When deciding where to set up the system, ensure that cooling air can enter unhindered through the air slots on the underside and escape through the slots in the sides.

1. If the auto-transformer mains cable „INPUT 50/60HZ“ needs to have a plug attached, fit a suitable mains plug.
2. Switch the power source mains switch to the „0“ position
3. Turn the main switch on the auto-transformer to the „0“ position
4. Connect the auto-transformer with power source to the terminals „OUTPUT 50/60Hz“.
5. Insert the mains plug of the auto-transformer and turn on the power supply.
6. Turn the main switch on the auto-transformer to the „I“ position
7. The auto-transformer is ready for use



NOTE! Operating the auto-transformer with phase conductors only partially connected can cause serious damage. When connecting the connection cable, always make sure that all phase conductors and the earth conductor are connected.

Care, maintenance and disposal

General

Under normal operating conditions the auto-transformer requires only a minimum of care and maintenance. However, it is essential that certain important points are observed to ensure the welding machine remains serviceable for many years to come.



WARNING! An electric shock can be fatal. Before opening the machine, turn off the machine, disconnect the mains supply and attach a clearly legible and comprehensible warning sign to prevent anyone switching it on again. Discharge electrolytic capacitors where necessary. The housing screws provide an adequate PE conductor connection for earthing the housing. The screws must never be replaced with different screws unless a reliable PE conductor connection is set up.

Every start-up

- Check the mains plug and mains cable for damage
- Check that there is a gap of 0.5 m (1.6 ft.) all around the machine to ensure that cooling air can flow and escape unhindered.



NOTE! Air inlets and outlets must never be covered, not even partially.

Every 6 months

- Dismantle machine side panels and clean machine inside with dry reduced compressed air



NOTE! Risk of damage to electronic components. Do not bring the air nozzle too close to the electronic components.

- If a lot of dust has accumulated, clean the cooling air ducts.

Every 12 months

Carry out a safety inspection
(see the „Safety rules“ chapter in the power source operating instructions)

Disposal

Dispose of in accordance with the applicable national and local regulations.

Troubleshooting

General



WARNING! An electric shock can be fatal. Before opening the auto-transformer, turn the mains switch to the „0“ position, pull out the mains plug and attach a clearly legible and comprehensible warning sign to prevent anyone switching it on again. The housing screws provide an adequate PE conductor connection for earthing the housing. The screws must never be replaced with different screw fastenings unless a reliable PE conductor connection is set up.

Troubleshooting

Power source does not function

Mains switch is on, but indicators are not lit up

Cause: There is a break in the mains lead; the mains plug is not plugged in

Remedy: Check mains lead, check mains voltage if necessary

Cause: Mains fuse is faulty

Remedy: Replace mains fuse

Cause: Mains outlet socket or plug is faulty

Remedy: Replace faulty components

Cause: Mains switch is faulty

Remedy: Replace the mains switch

Cause: Phase conductors (L1, L2, L3) connected incorrectly

Remedy: Connect phase conductors as described

Mains fuse or automatic circuit breaker has tripped

Cause: Mains fuse underrated

Remedy: Rate mains lead fuse according to rating plate

Cause: Short circuit on the transformer windings

Remedy: Replace the auto-transformer

Output voltage too low on „Version 1“

Auto-transformer TT 2600/3000 MW 2600/3000 - 480/440V - 500/460 V

Cause: Incorrect mains voltage

Remedy: Check the mains voltage

Cause: Mains leads connected incorrectly

Remedy: Correct the mains connection

Cause: Mains voltage is 460 V or 440 V: Phase conductors (L1, L2, L3) connected in the „500 V“ or „480 V“ section

Remedy: Connect phase conductors (L1, L2, L3) in the „460 V“ or „440 V“ section

Output voltage too high on „Version 1“

Auto-transformer TT 2600/3000 MW 2600/3000 - 480/440V - 500/460 V

Cause: Mains voltage is 500 V or 480 V: Phase conductors (L1, L2, L3) connected in the „460 V“ or „440 V“ section

Remedy: Connect phase conductors (L1, L2, L3) in the „500 V“ or „480 V“ section

**Fault / Cause /
Remedy**
(continued)

Output voltage too low on „Version 2“

Auto-transformer MW 2600 480/440V

Cause: Incorrect mains voltage

Remedy: Check the mains voltage

Cause: Mains leads connected incorrectly

Remedy: Correct the mains connection

Cause: Mains voltage is 440 V: Phase conductors (U1, V1, W1) connected in the „480V“ section

Remedy: Connect phase conductors (U1, V1, W1) in the „440V“ section

Output voltage too high on „Version 2“

Auto-transformer MW 2600 480/440V

Cause: Mains voltage is 480 V: Phase conductors (U1, V1, W1) connected in the „440V“ section

Remedy: Connect phase conductors (U1, V1, W1) in the „480V“ section

Surface of auto-transformer housing feels hot

Cause: Permitted duty cycle exceeded

Remedy: Move power source mains switch to „0“ position, allow auto-transformer to cool

Important! The auto-transformer must remain switched on to allow the fan to operate

Cause: The connected welding machine is drawing too much current

Remedy: Check the current consumption of the connected welding machine

Cause: Faulty fan fuse (only on MW 2600 - 575 V „Version 3“)

Remedy: Replace fuse

Cause: Fan faulty

Remedy: Check fan connections, replace fan

Cause: Unsuitable installation location

Remedy: Change installation location (ensure air can move freely through openings in housing)

Cause: Ambient temperature too high

Remedy: Reduce ambient temperature or change installation location

Cause: Housing interior dirty

Remedy: Open auto-transformer and clean with dry compressed air

No voltage at the socket outlet („Version 2“ only)

Cause: Socket fuse faulty

Remedy: Replace fuse

Technical data

Safety



NOTE! Incorrectly rated mains plugs, mains leads or fuses can lead to serious damage. If the power source is designed for a special voltage, the technical data on the rating plate apply. The mains plug, mains lead and their fuse protection must be rated accordingly.



Auto-transformer „Version 1“ (480/440 V, 500/460 V)

	Auto-transformer 480/440 V	Auto-transformer 500/460 V
Mains voltage 1	3x480 V	3x500 V
Mains voltage 2	3x440 V	3x460 V
Mains voltage tolerance	+/- 10 %	+/- 10 %
Mains frequency	50/60 Hz	50/60 Hz
Output voltage	3x400 V	3x400 V
Mains fuse protection (slow-blow)	16 A	16 A
Maximum apparent power	12.1 kVA	12.1 kVA
Effective apparent power	10.4 kVA	10.4 kVA
Cos phi	0.9	0.9
Maximum primary current for		
Mains voltage 1	14.5 A	14 A
Mains voltage 2	15.5 A	14 A
Effective primary current for		
Mains voltage 1	12.5 A	12 A
Mains voltage 2	13.5 A	13 A
Secondary current for		
10 min / 40 °C 65 % d.c.	17 A	17 A
10 min / 40 °C 100 % d.c.	14 A	14 A
Protection	IP 23	IP 23
Type of cooling	F	F
Insulation class	F	F
Auto-transformer dimensions l/w/h		
TT 2600/3000	630/240/250 mm 24.80/9.45/9.84 in.	630/240/250 mm 24.80/9.45/9.84 in.
Dimensions l/w/h		
Auto-transformer MW 2600/3000	630/290/250 mm 24.80/11.42/9.84 in.	630/290/250 mm 24.80/11.42/9.84 in.
Weight	39.5 kg 87.1 lb.	39.5 kg 87.1 lb.
Marks of conformity	CE, CSA	CE, CSA

**Auto-transformer
„Version 1“ (230/
200 V)**

	Auto-transformer 230/200 V
Mains voltage 1	3x230 V
Mains voltage 2	3x200 V
Mains voltage tolerance	+/- 10 %
Mains frequency	50/60 Hz
Output voltage	3x400 V
Mains fuse protection (slow-blow)	35 A
Maximum apparent power	11.8 kVA
Effective apparent power	9.7 kVA
Cos phi	0.9
Maximum primary current for	
Mains voltage 1	34 A
Mains voltage 2	30 A
Effective primary current for	
Mains voltage 1	28 A
Mains voltage 2	25 A
Secondary current for	
10 min / 40 °C 65 % d.c.	17 A
10 min / 40 °C 100 % d.c.	14 A
Protection	IP 23
Type of cooling	F
Insulation class	F
Auto-transformer dimensions l/w/hTT 2600/3000	630/240/250 mm 24.80/9.45/9.84 in.
Dimensions l/w/hAuto-transformer MW 2600/3000	630/290/250 mm 24.80/11.42/9.84 in.
Weight	45 kg 99.20 lb.
Marks of conformity	CE

**Auto-transformer
„Versions 2 and
3“**

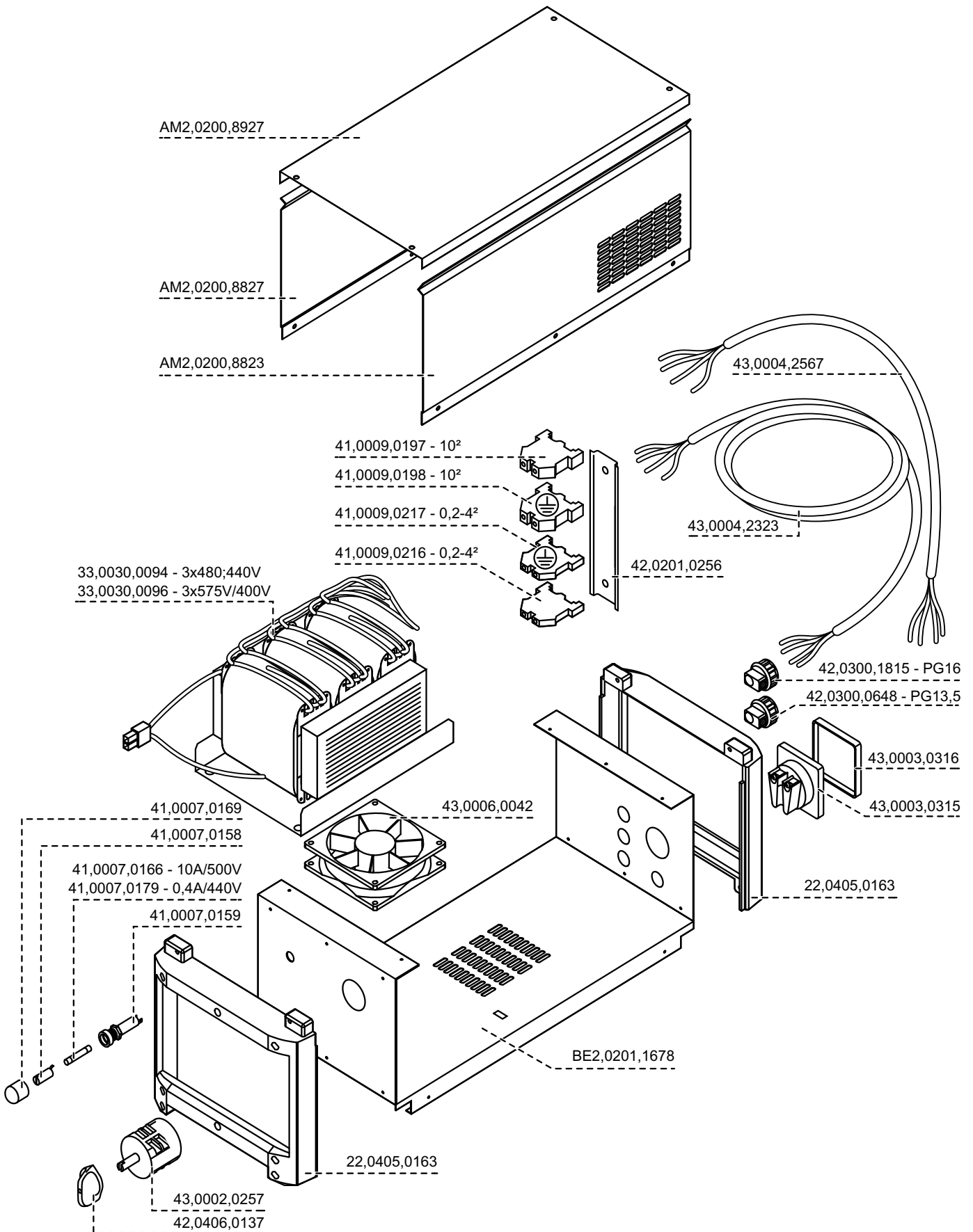
	Auto-transformer 480/440 V	Auto-transformer 575 V
Mains voltage 1	3x480 V	3x575 V
Mains voltage 2	3x440 V	-
Mains voltage tolerance	+/- 10 %	+/- 10 %
Mains frequency	50/60 Hz	50/60 Hz
Output voltage	3x400 V	3x400 V
Mains fuse protection (slow-blow)	16 A	16 A
Fan fuse (slow-blow)		0.4 A
230 V fuse (slow-blow)	10 A	-
Maximum apparent power	12.1 kVA	12.1 kVA
Effective apparent power	10.4 kVA	10.4 kVA
Cos phi	0.9	0.9
Maximum primary current for Mains voltage 1	14.5 A	12 A
Mains voltage 2	15.5 A	
Effective primary current for Mains voltage 1	12.5 A	10.4 A
Mains voltage 2	13.5 A	
Secondary current for 10 min / 40 °C 65 % d.c.	17 A	17 A
10 min / 40 °C 100 % d.c.	14 A	14 A
Protection	IP 23	IP 23
Type of cooling	F	F
Insulation class	F	F
Dimensions l/w/h	630/290/250 mm 24.80/11.42/9.84 in.	630/290/250 mm 24.80/11.42/9.84 in.
Weight	39 kg 86 lb.	39.5 kg 87.1 lb.
Marks of conformity	CE, CSA	CE, CSA



DE	Ersatzteilliste Schaltplan
EN	Spare Parts List Circuit Diagram
FR	Liste de pièces de rechange Schéma de connexions
IT	Lista parti di ricambio Schema
ES	Lista de repuestos Esquema de cableado
PT-BR	Lista de peças sobresselentes Esquema de conexões
NL	Onderdelenlijst Bedradingsschema
NO	Reservdelsliste Koblingsplan
CS	Seznam náhradních dílů Schéma zapojení
RU	Список запасных частей Электрическая схема
SK	Zoznam náhradných dielov Schéma zapojenia
SV	Reservdelslistan Kopplingsschema
TR	Parça Listesi Bağlantı şeması
PL	Czyszczenie palnika Schemat połączeń

Auto Transformer MW 2600 480;440V/400V
Auto Transformer MW 2600 3x575V/400V

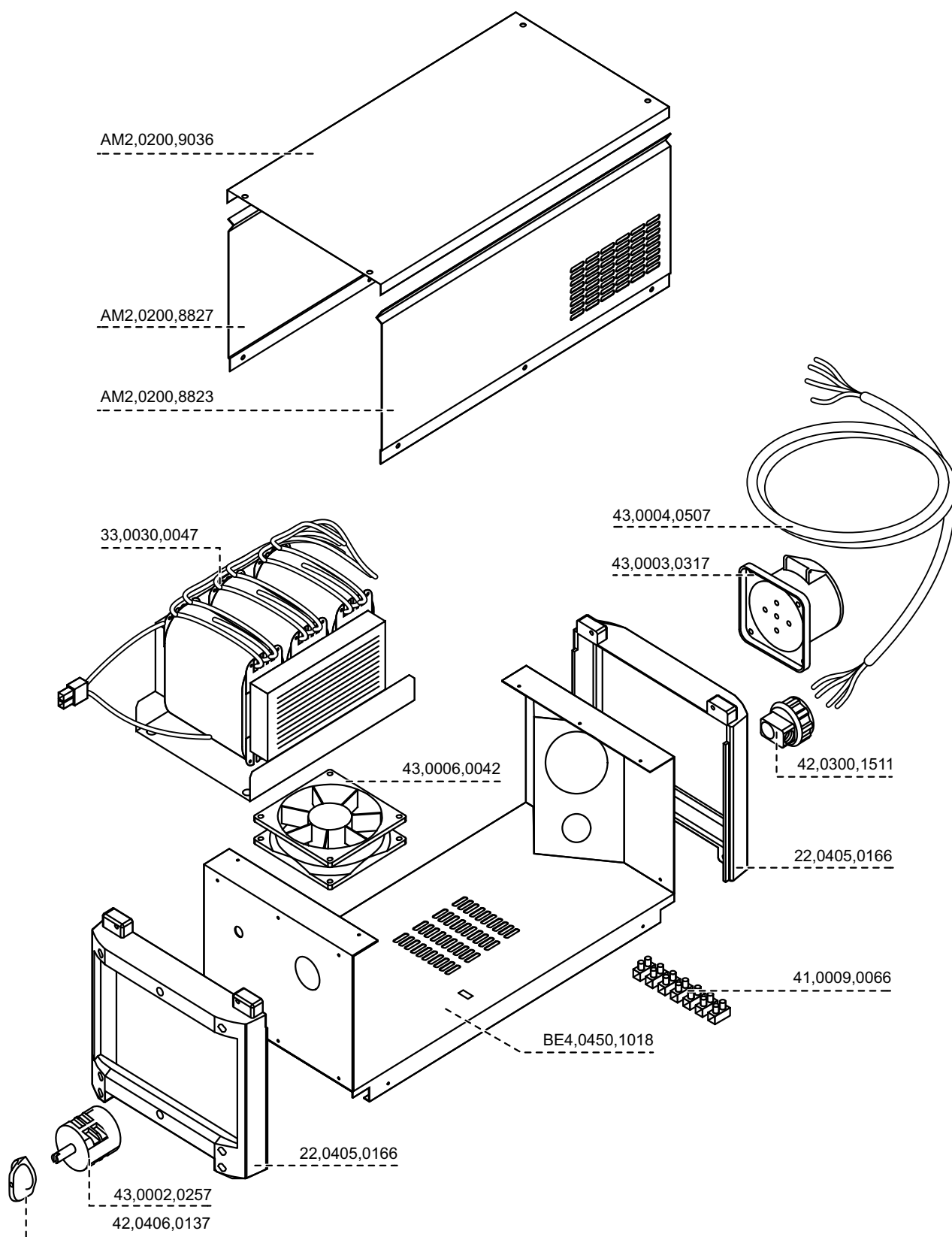
4,001,568,800
4,001,631,800



Auto - Transformer MW 2600

Ersatzteilliste / Spare parts list / Listes de pièces de rechange / Lista de repuestos / Lista de peças sobresselentes / Lista dei Ricambi

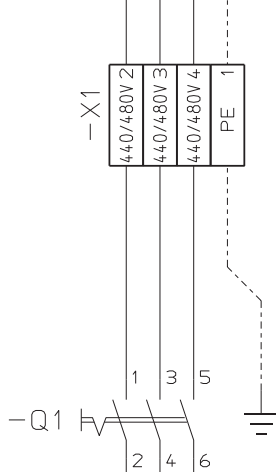
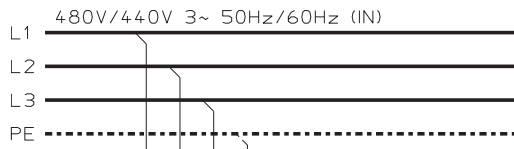
Auto Transformer 3x480; 440/400V TT 2600 4,001,614
 Auto Transformer 3x500; 460/400V TT 2600 4,001,615



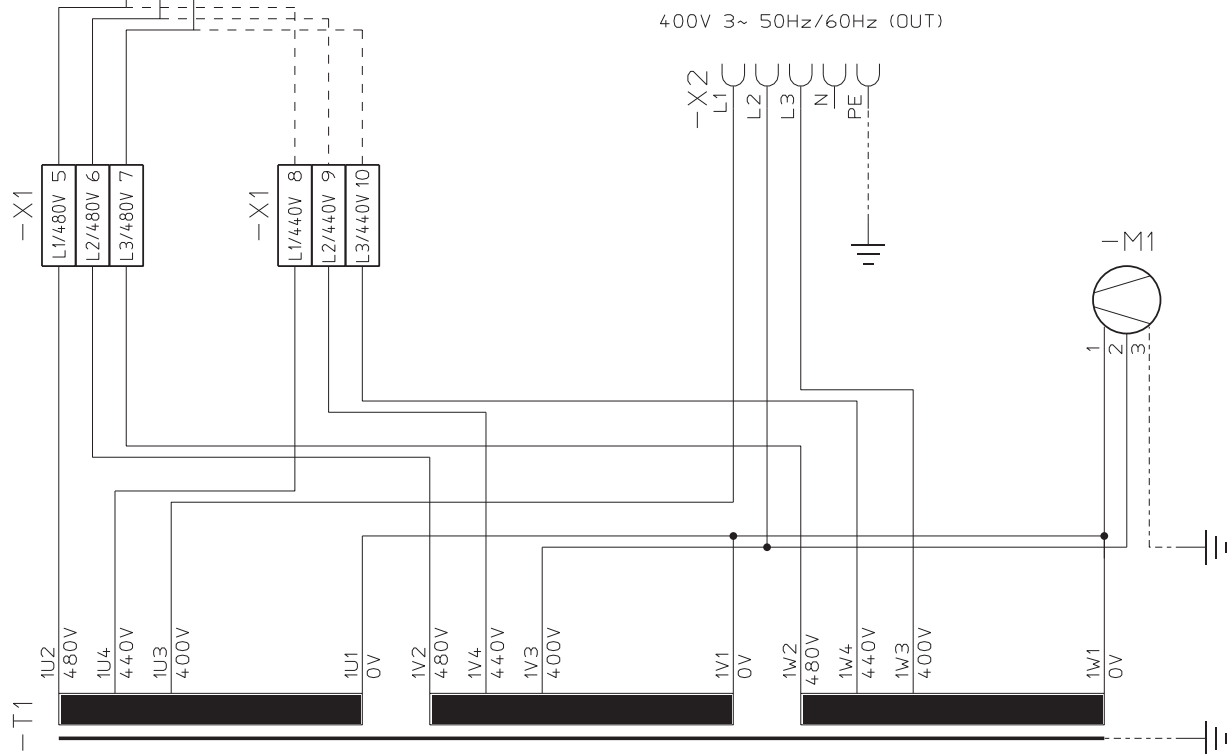
Auto - Transformer TT2600

Ersatzteilliste / Spare parts list / Listes de pièces de rechange / Lista de repuestos / Lista de peças sobresselentes / Lista dei Ricambi

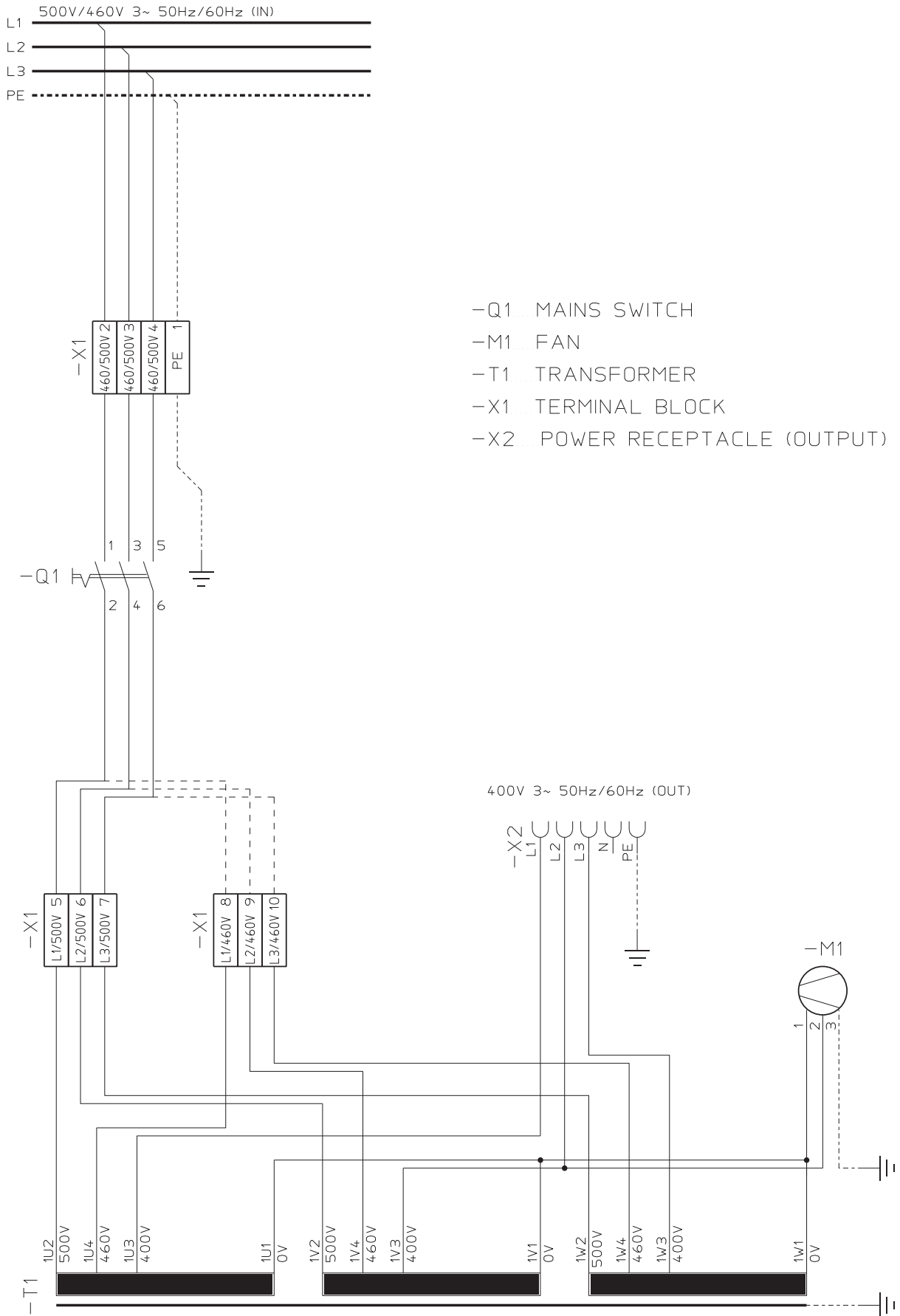
TT 2600/3000- MW 2600/3000 - 440/480 V („Ausführung 1“)



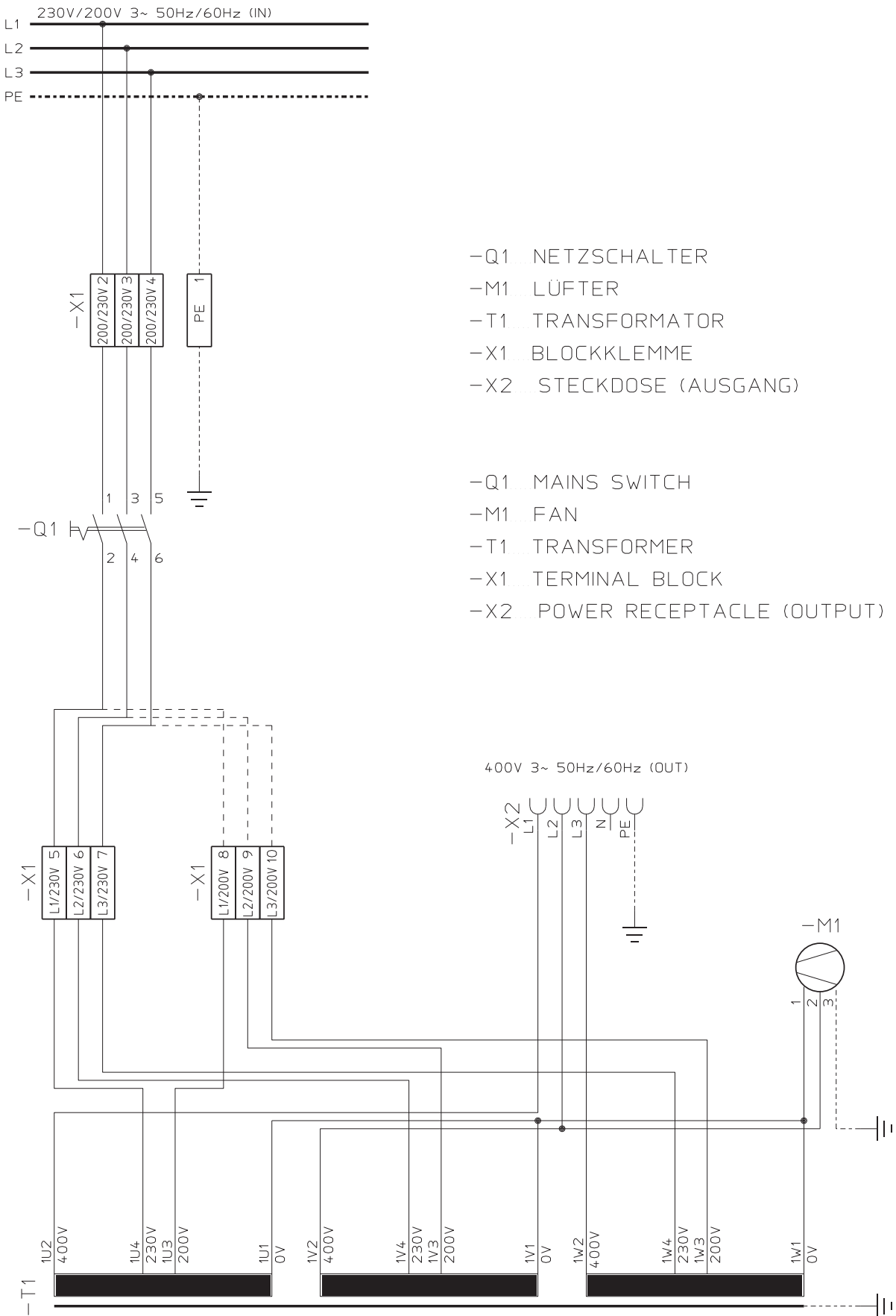
- Q1 MAINS SWITCH
- M1 FAN
- T1 TRANSFORMER
- X1 TERMINAL BLOCK
- X2 POWER RECEPTACLE (OUTPUT)



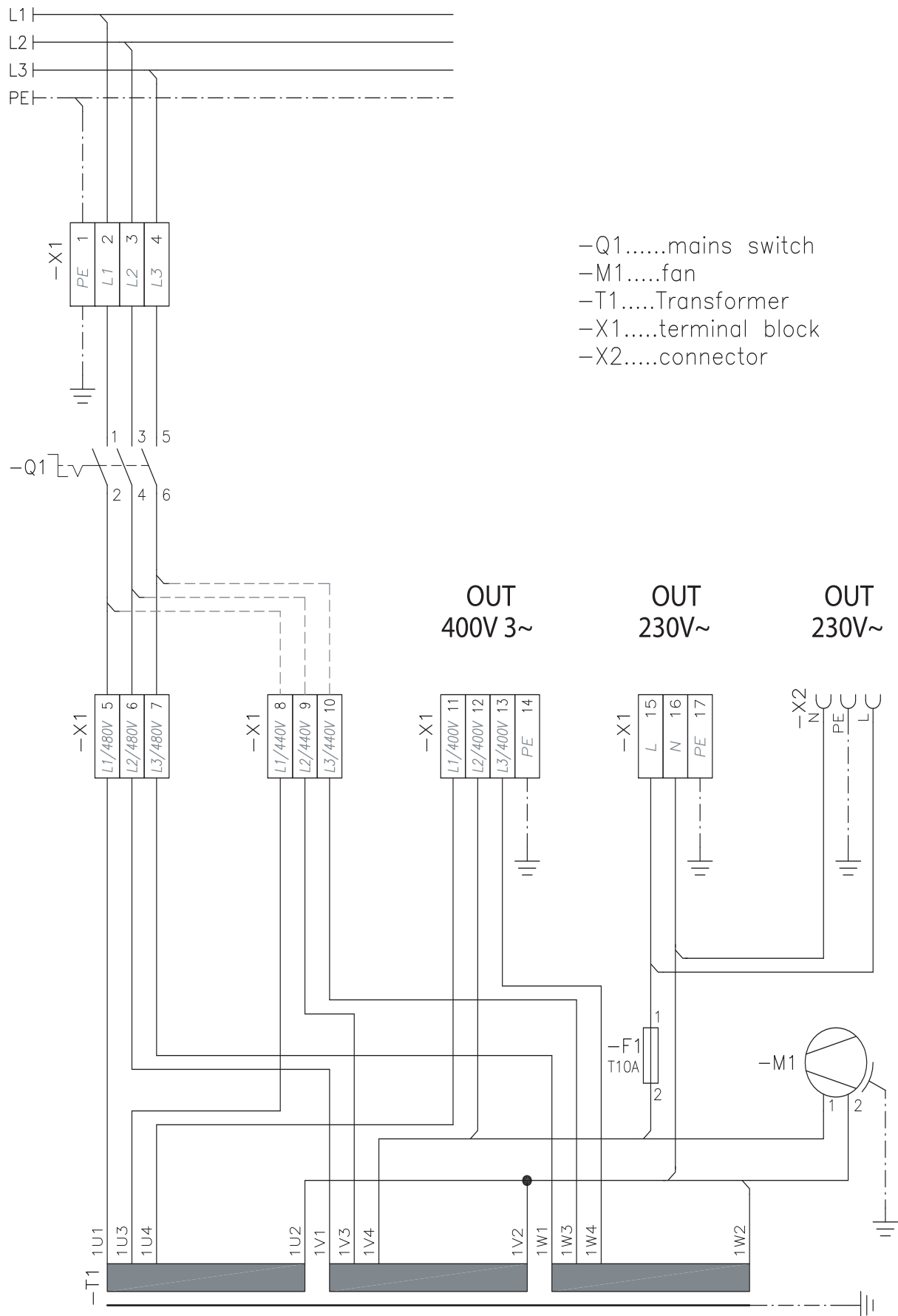
TT 2600/3000- MW 2600/3000 - 460/500 V („Ausführung 1“)



MW 2600 / TT 2600 - 230/200 V („Ausführung 1“)



MW 2600 - 440/480 V („Ausführung 2“)





FRONIUS INTERNATIONAL GMBH

Froniusplatz 1, A-4600 Wels, Austria
Tel: +43 (0)7242 241-0, Fax: +43 (0)7242 241-3940
E-Mail: sales@fronius.com
www.fronius.com

www.fronius.com/addresses

Under <http://www.fronius.com/addresses> you will find all addresses
of our Sales & service partners and Locations.