



EN

Retrofit option

ON Key Switch Tetrix

Key switch

099-001828-EW501

Observe additional system documents!

31.03.2017

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General instructions

WARNING



Read the operating instructions!

The operating instructions provide an introduction to the safe use of the products.

- Read and observe the operating instructions for all system components, especially the safety instructions and warning notices!
- Observe the accident prevention regulations and any regional regulations!
- The operating instructions must be kept at the location where the machine is operated.
- Safety and warning labels on the machine indicate any possible risks. Keep these labels clean and legible at all times.
- The machine has been constructed to state-of-the-art standards in line with any applicable regulations and industrial standards. Only trained personnel may operate, service and repair the machine.
- Technical changes due to further development in machine technology may lead to a differing welding behaviour.



In the event of queries on installation, commissioning, operation or special conditions at the installation site, or on usage, please contact your sales partner or our customer service department on +49 2680 181-0.

A list of authorised sales partners can be found at www.ewm-group.com.

Liability relating to the operation of this equipment is restricted solely to the function of the equipment. No other form of liability, regardless of type, shall be accepted. This exclusion of liability shall be deemed accepted by the user on commissioning the equipment.

The manufacturer is unable to monitor whether or not these instructions or the conditions and methods are observed during installation, operation, usage and maintenance of the equipment.

An incorrectly performed installation can result in material damage and injure persons as a result. For this reason, we do not accept any responsibility or liability for losses, damages or costs arising from incorrect installation, improper operation or incorrect usage and maintenance or any actions connected to this in any way.

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1 Safety instructions**1.1 For your safety****⚠ WARNING**

Do not carry out any unauthorised repairs or modifications!

To avoid injury and equipment damage, the unit must only be repaired or modified by specialist, skilled persons!

The warranty becomes null and void in the event of unauthorised interference.

- Appoint only skilled persons for repair work (trained service personnel)!



Risk of accidents due to non-compliance with the safety instructions!

Non-compliance with the safety instructions can be fatal!

- Carefully read the safety instructions in this manual!
- Observe the accident prevention regulations and any regional regulations!
- Inform persons in the working area that they must comply with the regulations!



This document is valid only in combination with the operating instructions for the product being used!

- ***Read and observe the operating instructions for all system components, especially the safety instructions!***



Obligations of the operator!

The respective national directives and laws must be complied with when operating the machine!

- ***Implementation of national legislation relating to framework directive 89/391/EEC on the introduction of measures to encourage improvements in the safety and health of workers at work and associated individual guidelines.***
- ***In particular, directive 89/655/EEC concerning the minimum safety and health requirements for the use of work equipment by workers at work.***
- ***The regulations applicable to occupational safety and accident prevention in the country concerned.***
- ***Setting up and operating the machine as per IEC 60974.-9.***
- ***Brief the user on safety-conscious work practices on a regular basis.***
- ***Regularly inspect the machine as per IEC 60974.-4.***

2 Intended use

2.1 General

WARNING



Hazards due to improper usage!

The machine has been constructed to the state of the art and any regulations and standards applicable for use in industry and trade. It may only be used for the welding procedures indicated at the rating plate. Hazards may arise for persons, animals and material objects if the equipment is not used correctly. No liability is accepted for any damages arising from improper usage!

- The equipment must only be used in line with its designated purpose and by trained or expert personnel!
- Do not improperly modify or convert the equipment!

These instructions apply only for the conversion of the following machines:

- Tetrax 351 AC/DC AW FW
- Tetrax 351 AW FW
- Tetrax 351 FW
- Tetrax 401 FW
- Tetrax 451 AC/DC AW FW
- Tetrax 451 AW FW
- Tetrax 451 FW
- Tetrax 551 AC/DC AW FW
- Tetrax 551 AW FW
- Tetrax 551 FW

2.2 Short description of the working steps required

- Preparing the machine for conversion.
- Installing and wiring of components.

3 Conversion

3.1 General

DANGER



Risk of injury from electric shock!

Servicing machines that are not disconnected from the mains can lead to serious injuries!

- Disconnect the machine completely from the mains.
- Unplug the mains plug!
- Wait for 4 minutes until the capacitors have discharged!



Wiring the accessories has to follow the machine's circuit diagrams at all times!

The circuit diagrams can be found in the machine (document pouch on the casing cover) and may also be included in these conversion instructions!

3.2 Parts list

Before conversion, check that the retrofit kit is complete (see parts list).

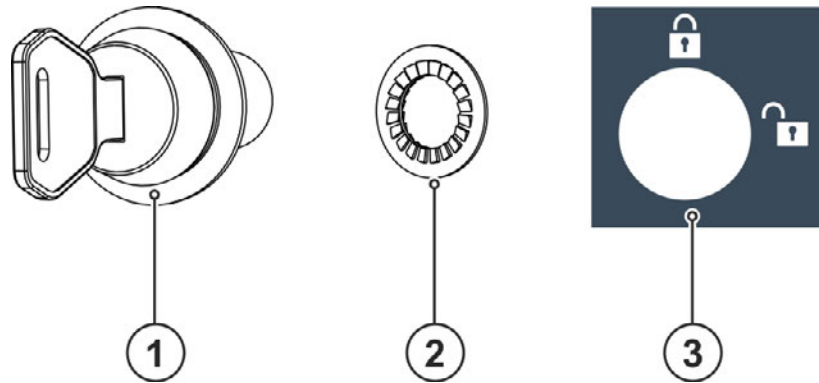


Figure 3-1

Item	Quantity	Description	Item number
1	1	Key switch	092-001855-00000
2	1	Flap disc, M18	094-002057-00000
3	1	Adhesive film	094-008925-00001

3.3 Assembly

WARNING



Danger due to failure to carry out the final inspection!

After installation or conversion, all mechanical and electrical connections must be checked for correct installation to avoid any potential injuries.

- No leads or tubes should be squashed or laid on sharp edges.
- Check all mechanical connections to ensure that they are fitted correctly!
- Carry out the final inspection!
- Carry out the functional test!

3.3.1 Preparations

- Unscrew the right side of the casing.
- Unfasten earth cable from side panel.

3.3.2 Installing and wiring of components

Depending on the casing concept, the installation position of the option can vary; it is indicated by the symbol to the left.

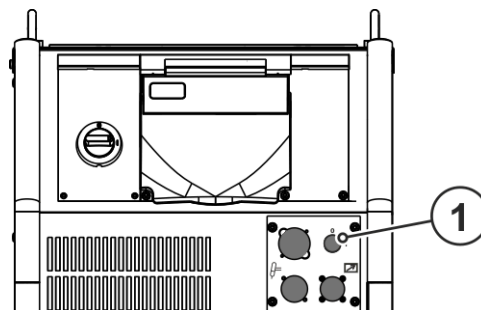


Figure 3-2

Area	Name
1	Cap

- Remove cap.

⚠ WARNING



The key switch is earthed by the casing. For this purpose, the powder coating inside the casing front section has to be removed at the installation position before installation.

- Remove the powder coating inside the casing front section where the installation position will be.
- Attach the adhesive film as shown.

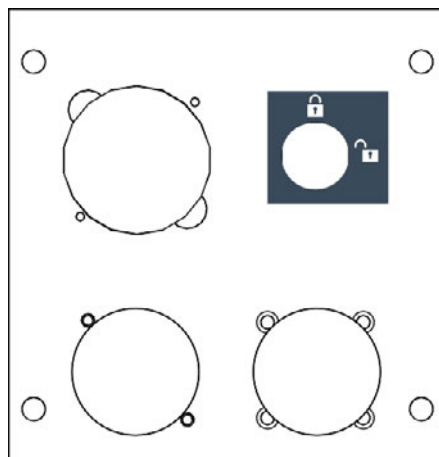


Figure 3-3

- Remove the fixing nut from the key switch.
- From outside, insert the key switch with the cable harness through the casing opening.
- Insert the key in the key switch and turn to the right stop.
- Align the key switch horizontally in the casing panel.

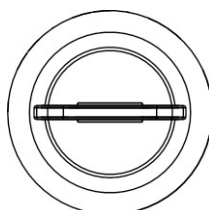


Figure 3-4

- From inside, slide the flap disc onto the key switch.
- Screw the key switch to the casing using the fixing nut.

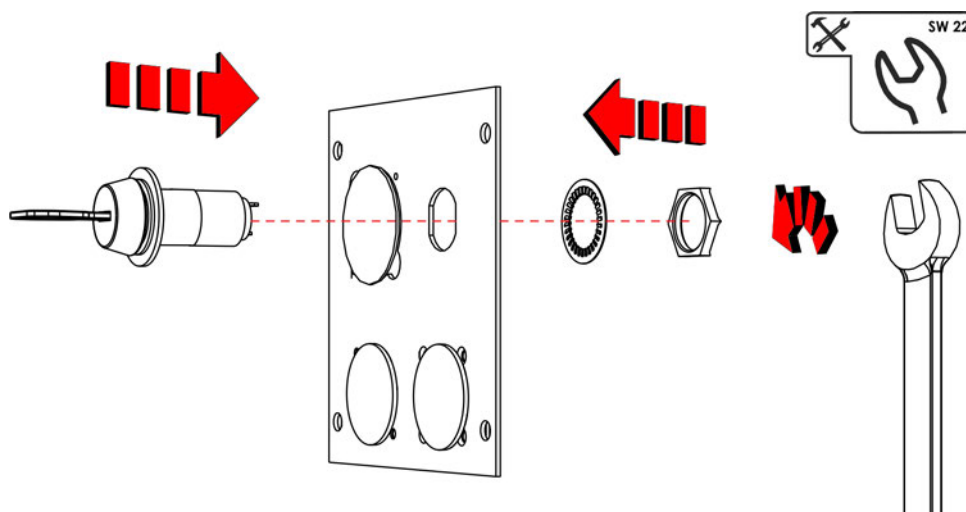


Figure 3-5

- Remove the wire jumper from the X2 connection of the machine control keyboard PCB.
- Plug the 2-pole connector plug of the key switch into the X2 connection.

4 Final inspection

 **WARNING****Protective earth PE!**

To protect persons and animals against dangerous live voltages and electric shocks in the event of a fault, the casing panels on the unit are connected to a green/yellow protective earth.

- After conversion, re-connect the protective earth to the casing panels!

**Danger due to failure to carry out the final inspection!**

After installation or conversion, all mechanical and electrical connections must be checked for correct installation to avoid any potential injuries.

- No leads or tubes should be squashed or laid on sharp edges.
- Check all mechanical connections to ensure that they are fitted correctly!
- Carry out the final inspection!
- Carry out the functional test!

- Assemble the machine in the reverse order.

**Test!**

Before re-commissioning, it is essential that an "inspection and test during operation" is carried out conforming to IEC / DIN EN 60974-4 "Arc welding devices - inspection and testing during operation"!

- *For detailed instructions, please see the standard operating instructions for the welding machine.*

**Keep the conversion instructions with the machine documentation!**

When ordering spare parts, ensure that the item number and serial number of the machine are quoted!