



**EN**

## Retrofit option

### ON 12pol Retox Tetrax T.0004

Connection socket, welding torch control cable

099-002466-EW501

Observe additional system documents!

23.05.2019

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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/en/specialist-dealers](http://www.ewm-group.com/en/specialist-dealers).**

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 For your safety

### 1.1 Safety instructions

#### 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!

**These supplementary sheets must be used in conjunction with the appropriate standard operating instructions for the described product! These supplementary sheets expand or replace one or more chapters of the same name(s) in the standard description.**

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

## 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!

### 2.2 Applications

Use the option described below to replace the factory-installed 5- or 8-pole welding torch connection socket with a 12-pole one in order to operate a welding torch with display or special functions.

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

- Tetrax 200 Comfort 2.0 puls 5P, -5P
- Tetrax 200 Comfort puls 5P, - 8P TG
- Tetrax 200 MV Comfort puls 5P TG
- Tetrax 300 Comfort 2.0 puls 5P, -8P TM
- Tetrax 300 AC/DC Comfort 2.0 puls 5P, -8P TM

### 2.3 Short description of the working steps required

- Remove the 5- or 8-pole connection socket (welding torch control cable)
- Install the 12-pole connection socket
- Connect the 12-pole connection socket (depending on the machine)
- Perform final inspection

## 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.  
Pull out 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).

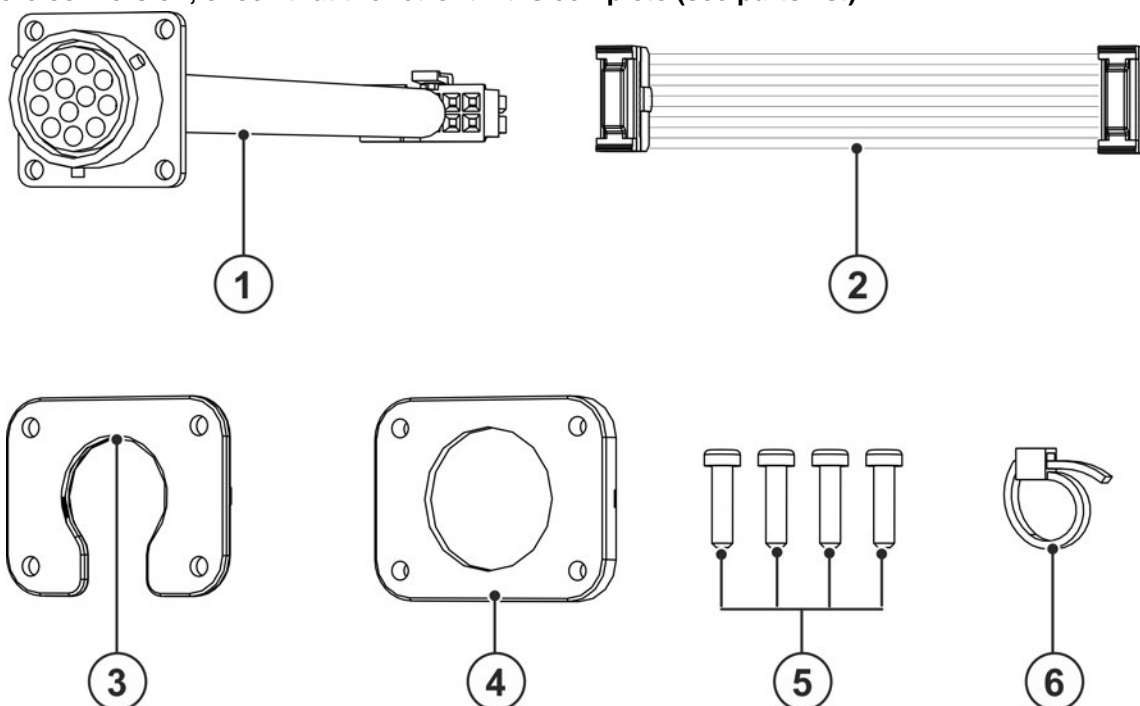


Figure 3-1

Item	Quantity	Description	Item number
1	1	Torch connection, 12-pole	094-013013-00000
2	1	D-SUB flat band cable	094-001409-00000
3	1	Reducing adaptor 8/12 pole	094-012147-00000
4	1	Assembly adaptor, 12-pole	094-012146-00000
5	4	Threaded grooved pin M3 x 14	094-011612-00000
6	5	Cable binders	044-001275-00000

### 3.3 Preparations

- Unscrew the casing cover.

**3.4 Assembly**

**3.4.1 Tetrix 200**

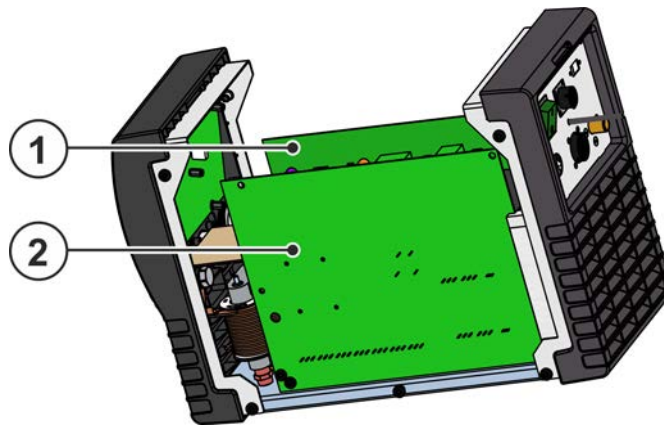


Figure 3-2

Item	Symbol	Description
1		HFBTf1 PCB installation position
2		T320 PCB installation position

- For Tetrix 200 with 5-pole connector plug:  
Remove the connector plug of the welding torch control cable from connection X3 of the HFBTf1 PCB.
- For Tetrix 200 with 8-pole connector plug:  
Remove the connector plug of the welding torch control cable from connection X2 of the HFBTf1 PCB.

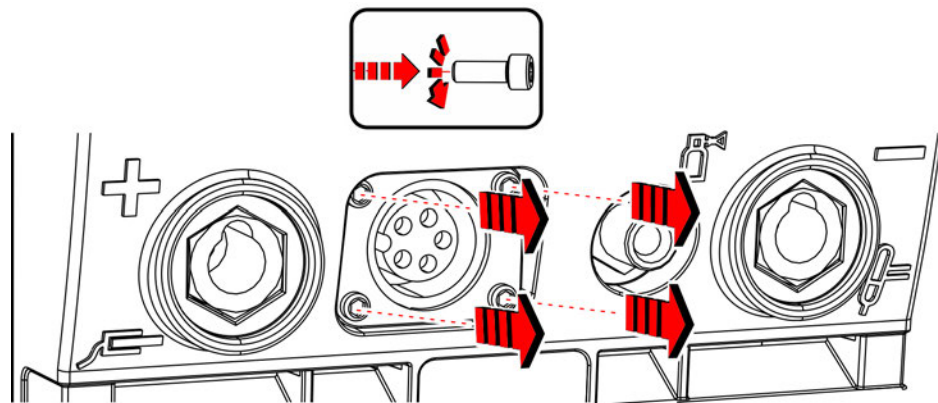


Figure 3-3

- Disconnect and remove the 5-pole/8-pole torch connection socket from the machine front.

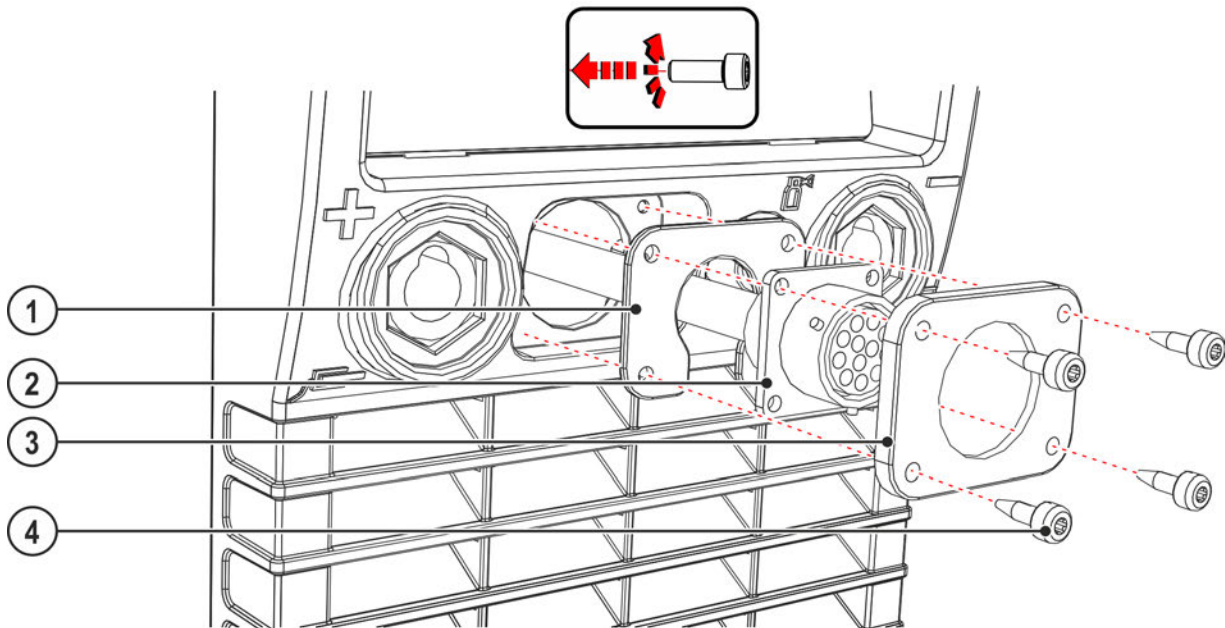


Figure 3-4

Item	Quantity	Description	Item number
1	1	Reducing adaptor 8/12 pole	094-012147-00000
2	1	Torch connection, 12-pole	094-013013-00000
3	1	Assembly adaptor, 12-pole	094-012146-00000
4	4	Threaded grooved pin M3 x 14	094-011612-00000

- Screw the 12-pole torch connection socket to the machine front using mounting material.

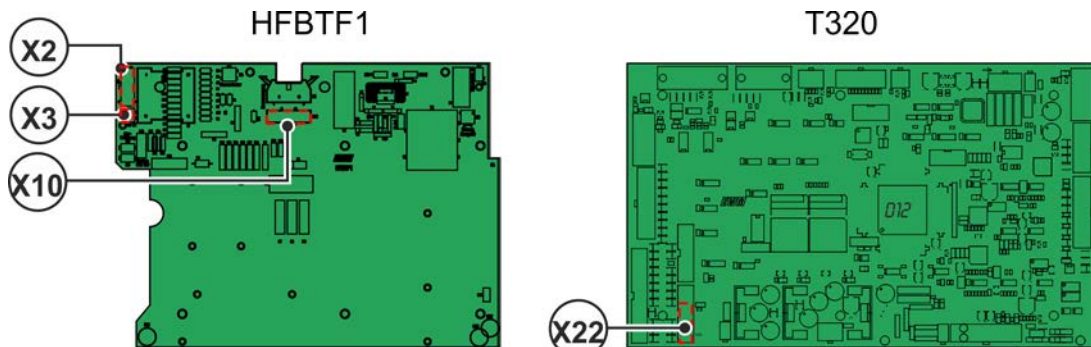


Figure 3-5

- Plug the torch control lead connector plug into the HFBTF1, X2 PCB.
- Connect the HFBTF1, X10 PCB and T320, X22 PCB using the flat band cable.
- Secure the flat band cable using the supplied cable binders.

## 3.4.2 Tetric 300

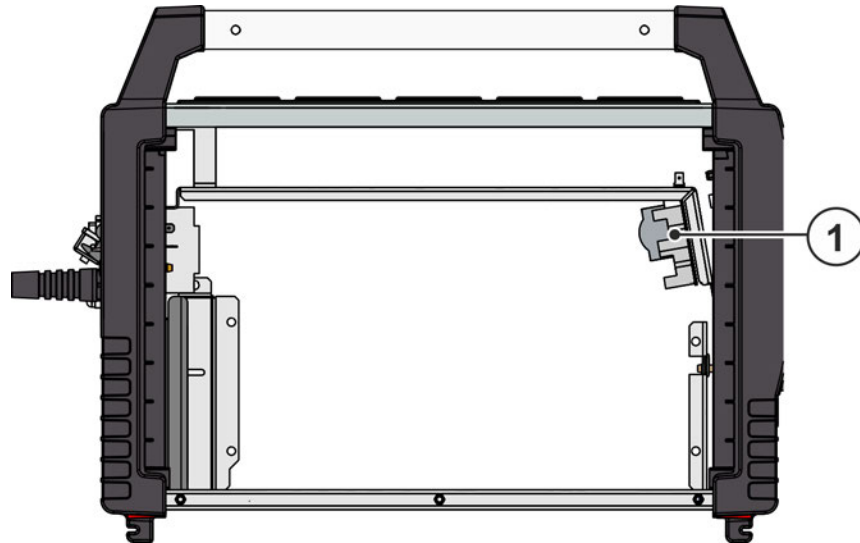


Figure 3-6

Item	Symbol	Description
1		BTF5 PCB installation position

- Disconnect the torch control lead from the BTF5, X3 PCB (with 5-pole versions) or the BTF5, X2 PCB (with 8-pole versions).

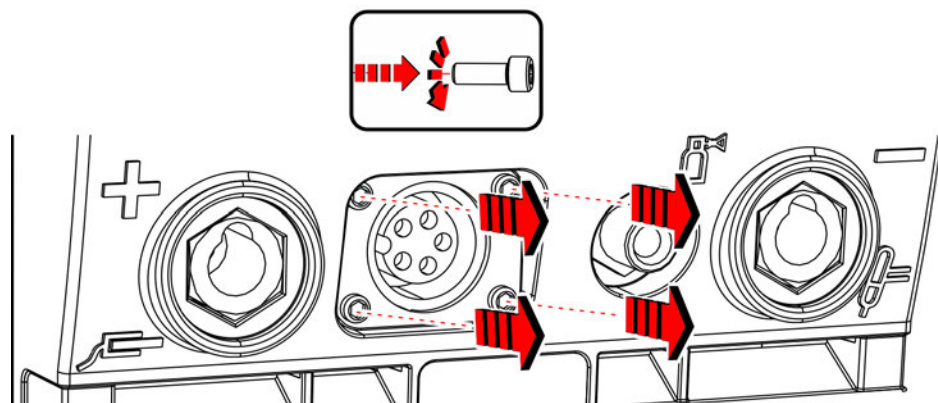


Figure 3-7

- Disconnect and remove the 5-pole/8-pole torch connection socket from the machine front.



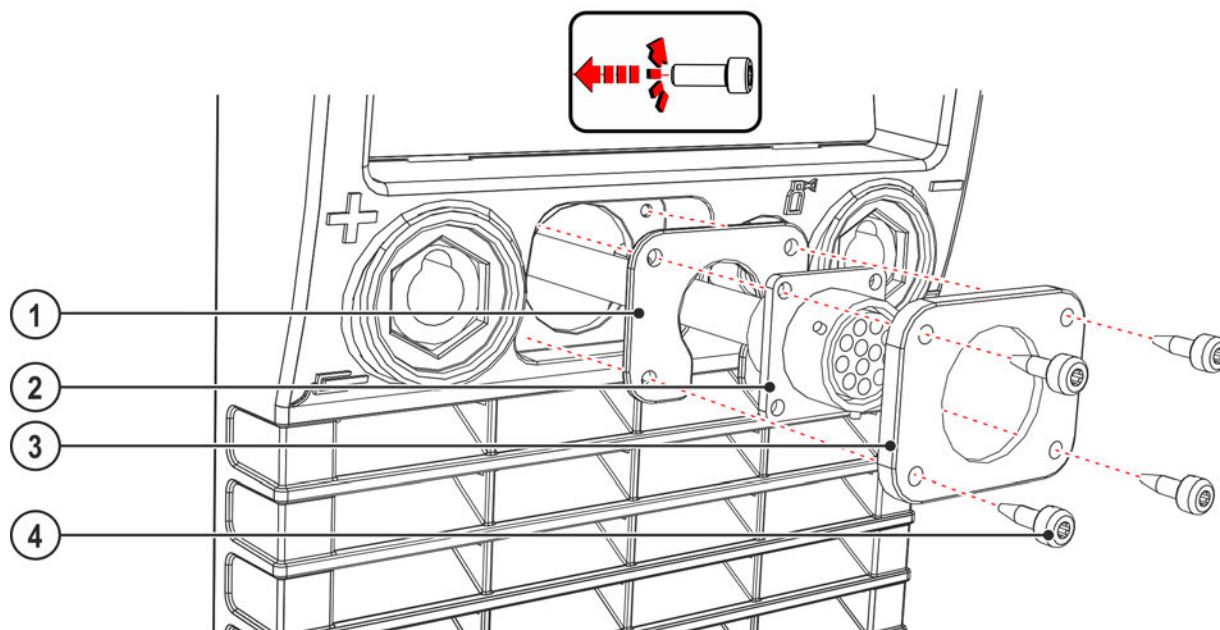


Figure 3-8

Item	Quantity	Description	Item number
1	1	Reducing adaptor 8/12 pole	094-012147-00000
2	1	Assembly adaptor, 12-pole	094-012146-00000
3	1	Torch connection, 12-pole	094-013013-00000
4	4	Threaded grooved pin M3 x 14	094-011612-00000

- Screw the 12-pole torch connection socket to the machine front using mounting material.

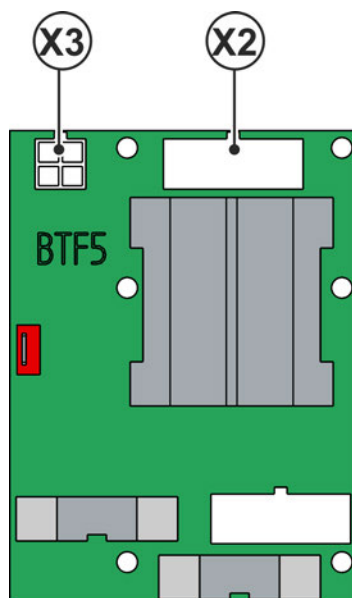


Figure 3-9

- Plug the torch control lead connector plug into the **BTF5, X2** PCB.



### 3.5 Final inspection

#### 3.5.1 General

#### 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!



##### **Dangers resulting from failure to perform test after conversion!**

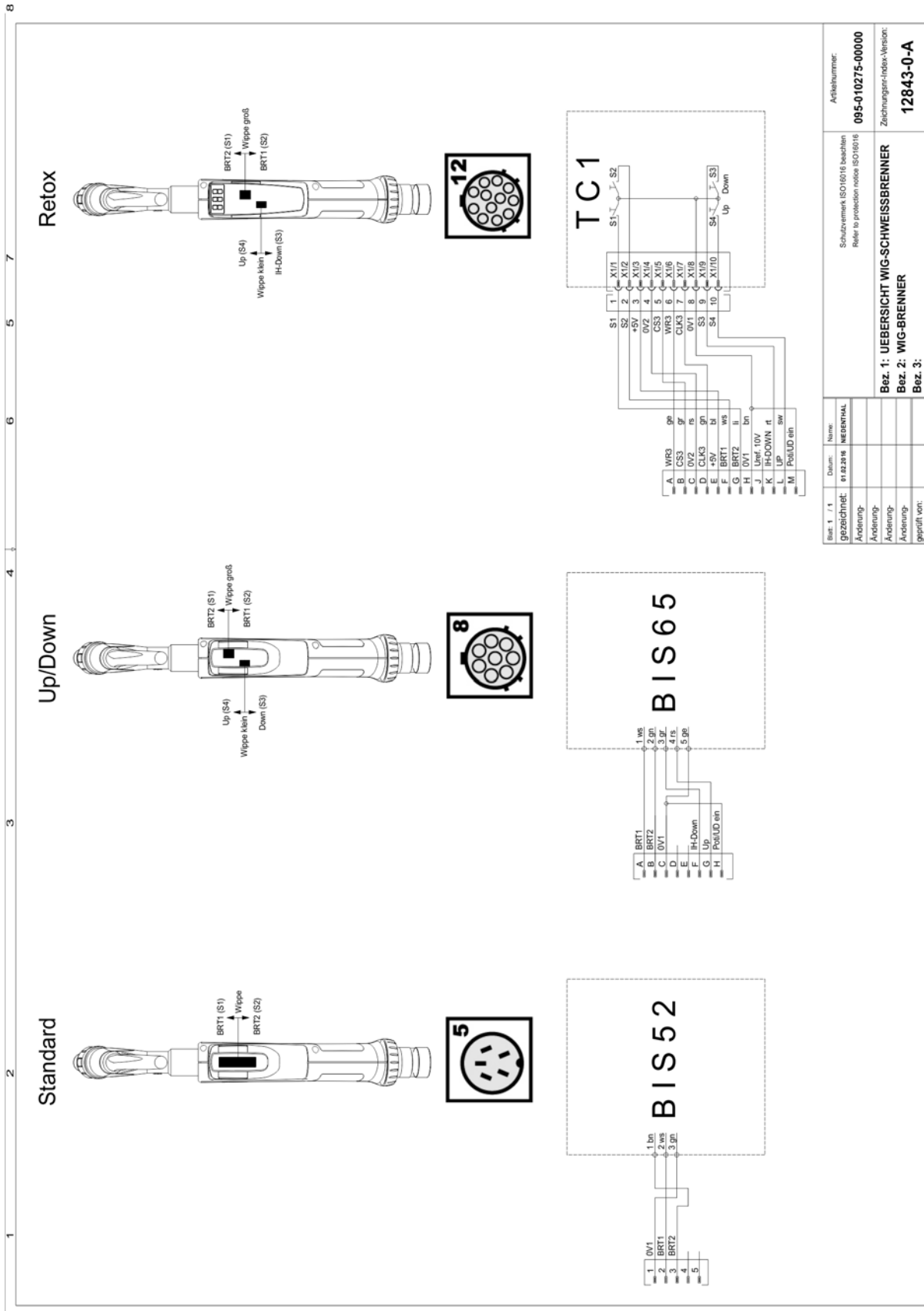
**Before reconnection, "Inspection and Testing during Operation" according to IEC/BS EN 60974-4 "Arc welding systems – Inspection and Testing during Operation" has to be performed!**

- Perform test to IEC / DIN EN 60974-4!

**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!**

## 4 Circuit diagram



Best: 1 / 1.1	Datum: 01.02.2019	Name: NEIDENTHAL	Arbeitsnummer: 095-010275-00000
Gezeichnet:	01.02.2019	NEIDENTHAL	Schutzemerk ISO 16016 beachten Relais protection notice ISO16016
Änderung:			
Änderung:			
Änderung:			
geprüft von:			
Bez. 1: UEBERSICHT WIG-SCHWEISSBRENNER			Ziehungsart-Index-Version: 12843-0-A
Bez. 2: WIG-BRENNER			
Bez. 3:			

Figure 4-1