

**Operating Instructions**

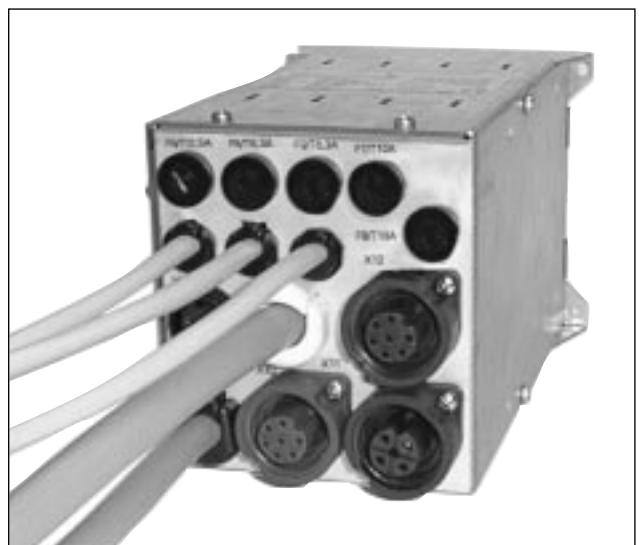
**TCS 303 / 603**

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**Pumping Station Control Unit**



TCS 303



TCS 603



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# 1. Safety Precautions

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- ☞ Read and follow all the instructions in this manual.
- ☞ Inform yourself regarding:
  - Hazards which can be caused by the unit,
  - Hazards which can arise in your system,
- ☞ Comply with all safety and accident prevention regulations.
- ☞ Check regularly that all safety requirements are being complied with.
- ☞ Do not carry out any unauthorised conversions or modifications on the unit.
- ☞ Only connect the right plugs.
- ☞ Take account of the ambient conditions when installing the TCS 303/603. The protection type is IP20. The unit is protected against the ingress of foreign bodies  $\geq \varnothing 12$  mm. Because water protection is not provided the unit must be fitted into a suitable housing (please see Section 3. Installation).
- ☞ Do not open the housing cover when the unit is connected to the mains nor during pumping operation.
- ☞ The supply line is designed for 25 A; appropriate connection parts must be used.
- ☞ When returning the unit to us please note the shipping instructions (please see Section 9).

## Pictogram Definitions:



Danger of an electric shock.



Danger of personal injury.






Danger of damage to the unit or system.

## 2. Understanding The TCS 303/603

### 2.1. For Your Orientation

#### Symbols Used

The following symbols are used throughout in the illustrations:

-  Fore-vacuum flange
-  Venting connection
-  Electrical connection

#### Position Numbers

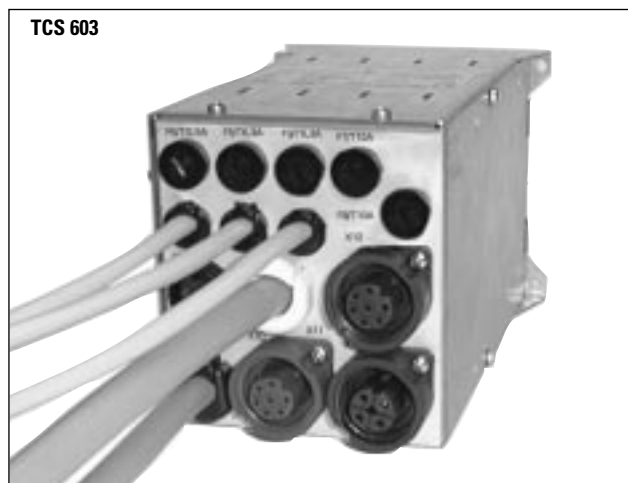
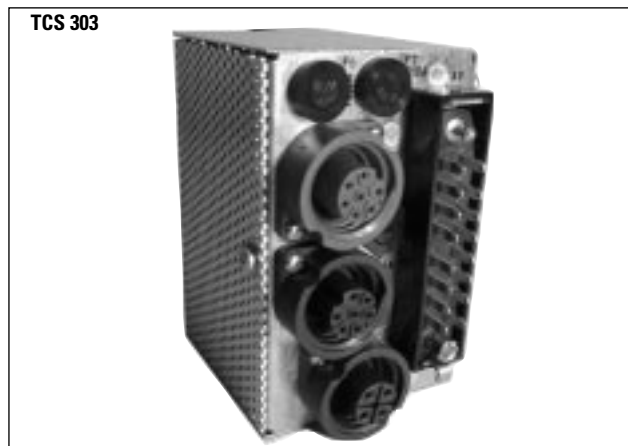
Identical accessory parts have the same position numbers in all illustrations.

#### Operating Instruction In The Text

➔ Here, you have to do something.

### 2.2. Product Description

The TCS 303 and TCS 603 are pumping station control units. With connection of a usual TCP they serve to control single phase vacuum pumps, cooling water monitors, cooling aggregates and, on the TCS 603 the venting valve. The operation is via the keypad on the Electronic Drive Unit. Complete pumping stations can be controlled with the combination TCP- TCS.



When switching on the TCP, all connected components are also set in operation.

Switching off the TCP also causes the shut down of the connected components.

In the event of an interruption of the cooling water or a defective backing pump, the pumping station is shut down. The error code "E005" is displayed on the TCP. This also occurs if there is a malfunction in the turbomolecular pump.

#### Proper Use TCS 303

- Use the TCS 303 only in conjunction with the TCP 121 or TCP 380.
- Pumping Station Control Unit TCS 303 serves, in conjunction with the Electronic Drive Units TCP 121 or 380, to control and monitor Pfeiffer pumping stations and turbopumps.
  - The Electronic Drive Units TCP 121 or 380 are necessary to control the turbopump, the venting valve, the air cooling and the TMP heating.
  - Installation, commissioning, operating and maintenance instructions must be complied with.

#### Proper Use TCS 603

- Use the TCS 603 only in conjunction with the TCP 600.
- Pumping Station Control Unit TCS 603 serves, in conjunction with the Electronic Drive Unit TCP 600, to control and monitor Pfeiffer pumping stations and turbopumps.
  - The Electronic Drive Units TCP 600 is necessary to control the turbopump, the venting valve, the air cooling and the TMP heating.
  - Installation, commissioning, operating and maintenance instructions must be complied with.

#### Improper Use

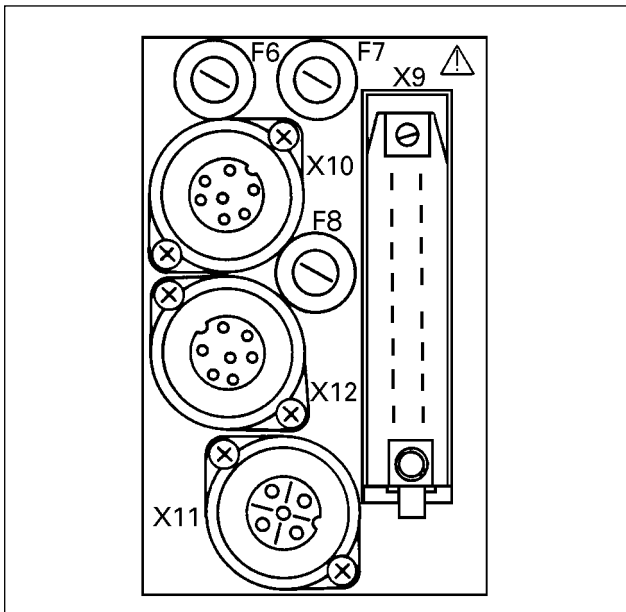
##### TCS 303/TCS 603:

The following is regarded as improper:

- The use for purposes which deviate from the above and, in particular:
  - The connection to pumps and components which is not permitted in the operating instructions for those units;
  - The connection to components which contain touchable, voltage carrying parts.
- The connection of backing pumps or cooling aggregates with too high levels of current (please see the catalog, Section 8, "Technical Data").

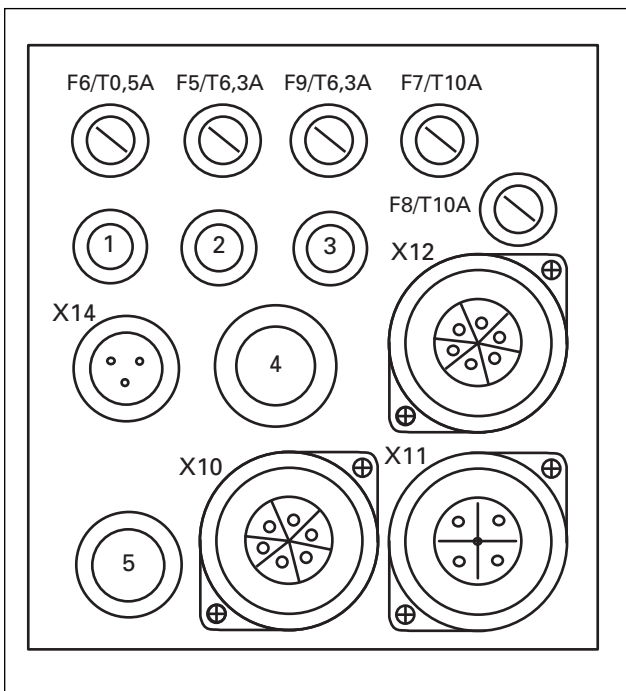
No liability or guarantee claims will be accepted where improper use is involved.

### 2.3. Definition Of The Rear Panel



#### Rear Panel TCS 303

- X9 - Mains connection
- X10 - Cooling water monitor TCW
- X11 - Cooling aggregate
- X12 - Backing pump
- F6 - Fuse, 0,5 AT
- F7 - Fuse, 10 AT
- F8 - Fuse, 10 AT



#### Rear Panel TCS 603

##### Free plug connections:

- X10 - Cooling water monitor TCW
- X11 - Cooling aggregate or air cooling
- X12 - Backing pump
- X14 - Venting valve
- F5 - Fuse, 6,3 AT
- F6 - Fuse, 0,5 AT
- F7 - Fuse, 10 AT
- F8 - Fuse, 10 AT
- F9 - Fuse, 6,3 AT

##### Fixed connection cables:

- 1 - Connection remote control (X16/TCP 600)
- 2 - Connection venting valve (X1/TCP 600)
- 3 - Connection potential free contacts (X20/TCP 600)
- 4 - Mains connection TCP 600 (X4)
- 5 - Mains connection TCS 603

## 3. Installation TCS 303

### 3.1. Preparations For Installation



Do not carry out any unauthorized modifications or conversions to the pumping station control unit. Installation work may only be carried out by authorized personnel.

- ➔ All electrical connections to be made in accordance with connections plan PM 041 940 -S (please see Section 9.1.).
- ➔ Disconnect the mains plug or make connections voltage free when carrying out installation work.

The TCS 303 can be used for all mains voltages 90 - 264 V, 50/60 Hz. All components to be connected must comply with these voltages. The unit protection type is IP 30.

- ➔ The TCS 303 may only be operated in conjunction with the TCP 121 or TCP 380.
- ➔ Connect mains voltage and the remote control switch to X9. N and L must not be interchanged (for example, on a "Schuko" plug).
- ➔ On X10 connect only Cooling Water Monitor TCW 002.
- ➔ On X11 connect only the cooling aggregate or the air cooling.
- ➔ On X12 connect only a single phase backing pump.
- ➔ All components should be selected in accordance with the mains voltage involved.
- ➔ The remote control switch on X9 must be insulated against mains voltage.

Components required for pumping station installation:

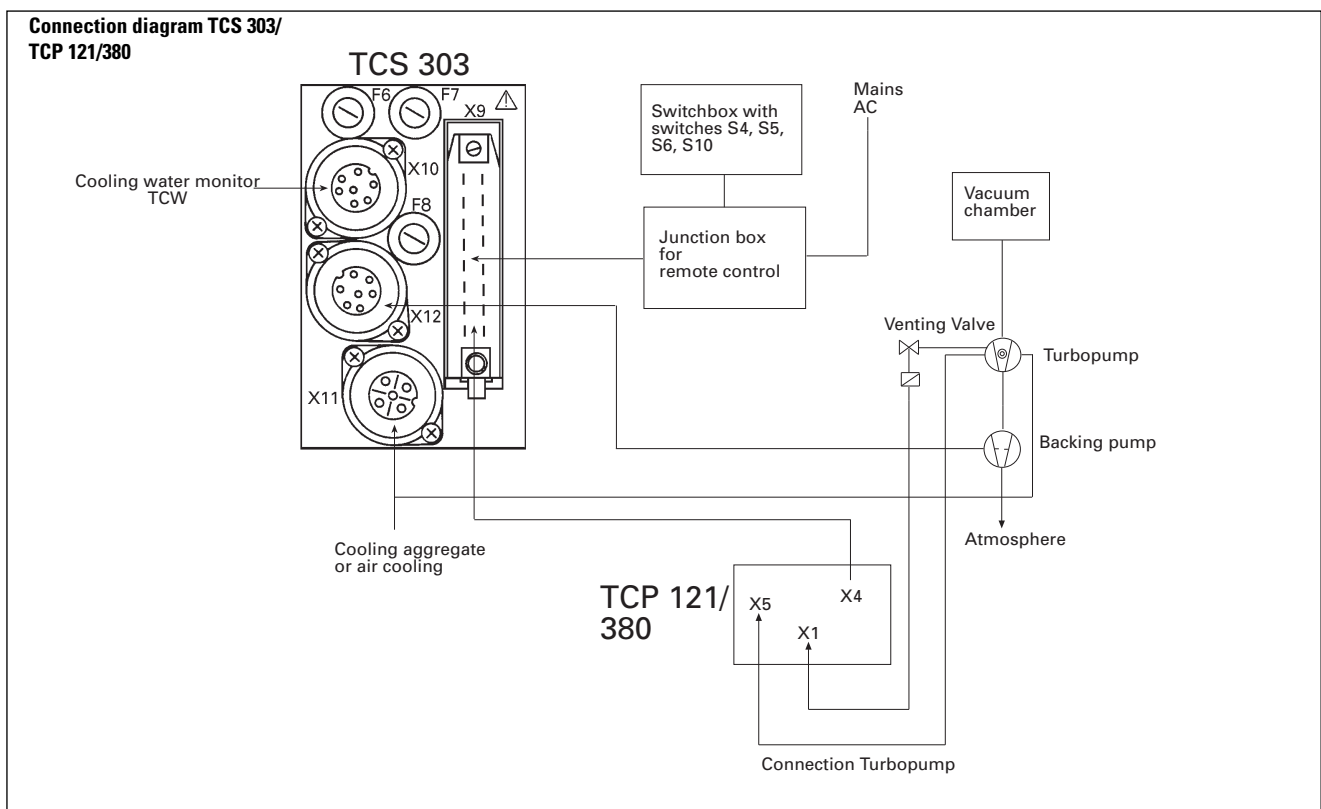
- Turbopump
- TCP 121 oder TCP 380
- TCS 303
- Cooling aggregate TZK 400 \*
- Backing pump
- Cooling Water Monitor TCW 002\*
- Mating plug to X9 from the TCP as well as X10, X11 and X12 from the TCS
- Cable 7 x 1,5 mm<sup>2</sup> for the backing pump
- Cable 10 x 1,5 mm<sup>2</sup> for the connection X9 – junction box remote control\*
- Cable 5 x 0,75 mm<sup>2</sup> for the cooling water monitor\*
- Cable 3 x 1,5 mm<sup>2</sup> for the lead to the mains X9\*
- Switch S4, 1 x UM (230 V/6A)\*
- Switch S5; S6; S10 1x AUS (230V/1A)\*
- Cable for the remote control (7 x 0,75 mm<sup>2</sup>)\*
- Junction box for the remote control\*
- Mains cable with plug 3 x 1,5 mm<sup>2</sup>
- Venting valve\*

\*Optional

### 3.2. Fitting The Unit Into A Switch Cabinet

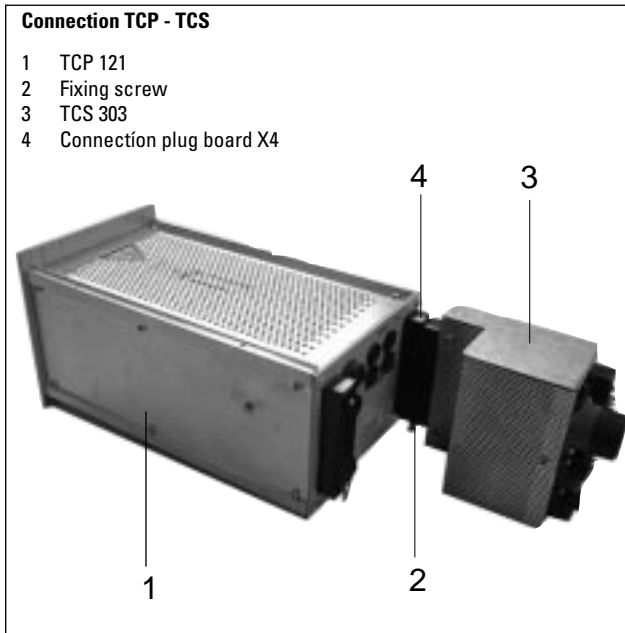
If the surroundings are suitable, the TCP and the TCS 303 can be fitted into an appropriate switch cabinet. For the fitting instructions please refer to the operating instructions for the TCP.

### 3.3. Connections diagram TCS 303/TCP 121 or TCP 380



### 3.4. Connection To The TCP 121/380

- Plug the TCS 303 into the plug strip X4 of the TCP (first latch on above) and tighten locking screw (2) below.



### 3.5. Connecting The Backing Pump

- ➔ Connect cable plug to the 7 core cable (6 + PE) of the backing pump in accordance with connection plan PM 041 940 -S , use green - yellow leads only for PE. Connect the wires 1 and 2 and 3 and 4 in the pump connection box.
- ➔ Connect the temperature switch of the backing pump to contacts 5 and 6. If a malfunction contact is not available, fit a bridge 5-6.
- ➔ Connect the backing pump plug to X12 on the back panel of the TCS.

### 3.6. Connecting The Cooling Aggregate

- ➔ Check whether the cooling aggregate and the backing pump do not take up more than 10 A together.
- ➔ Secure plug X11 on the cooling aggregate and connect to X11 on the back panel of the TCS.
- ➔ If the total power take-up is in excess of 10A, connect the cooling aggregate separately to the mains and switch on and off by hand.

### 3.7. Connecting The Cooling Water Monitor

- ➔ Connect plug X10 of the Cooling Water Monitor TCW 002 via cable 5 x 0,75 mm<sup>2</sup> + PE to X10 on the back panel of the TCS.

### 3.8. Connecting The Venting Valve

- ➔ Connect the venting valve to X1 on the back panel of the respective electronic drive unit in accordance with the operating instructions.

### 3.9. Connecting The Turbopump

- ➔ Latch plug X5 of the turbopump into the plug strip X5 on the TCP.

### 3.10. Connecting The Remote Control

- ➔ Fit remote control switches S4, S5, S6, S10 into a switch box.
- ➔ Connect the switch box with cable 7 x 0,75 mm<sup>2</sup> to the junction box.
- ➔ Connect the junction box via cable 10 x 1,5 mm<sup>2</sup> to X9.
- ➔ Connect the mains cable to the junction box.

### 3.11. Mains Power Connection

- ➔ Wire plug X4 (TCP) like the connection diagram of the plug X9 (TCS 303).

#### Without remote control:

- ➔ Solder on bridge a1-b1.

When using remote control switch S4 (pumping station ON/OFF), S5 (heating ON/OFF), S6 (reset on malfunction message), S10 (stand-by ON/OFF):

- ➔ Connect an additional distribution box with the mains plug X9 via a cable 9 x 1,5 mm<sup>2</sup> + PE and make the distribution to the remote control and the mains lead from this box.
- ➔ Insulate the touchable parts of the remote control switch against 300 V.
- ➔ Make the PE connection for the switch where a metal housing is involved.
- ➔ Plug the mains cable (not included in the delivery consignment for the TCP 121/380) into the plug strip X9 of the TCS (latch in first from above). The pumping station is ready to operate once the TCP is switched on.

### 3.12. Ambient Conditions

- ➔ Take account of the following ambient conditions when installing the TCS 303.

**Installation location:** Protected against the weather.

The following is applicable for open buildings and operations rooms which are not fully air conditioned:

**Temperature:** +5°C - +40°C.  
**Relative humidity:** 5 - 85%, non-condensing.  
**Air pressure:** 86 kPa - 106 kPa.

## 4. Installation TCS 603

### 4.1. Preparations For Installation



Do not carry out any unauthorized modifications or conversions to the pumping station control unit.

Installation work may only be carried out by authorized personnel.

- ➔ All electrical connections to be made in accordance with connections plan PM 051 055 -S (please see Section 9.).
- ➔ Disconnect the mains plug or make connections voltage free when carrying out installation work.
- ➔ The supply line is designed for 25 A; appropriate connection parts must be used.

The TCS 603 can be used for all mains voltages 90 - 132 V, 190 - 264 V 50/60 Hz. All components to be connected must comply with these voltages. The unit protection type is IP 30.

- ➔ The TCS 603 may only be operated in conjunction with the TCP 600.
- ➔ On X10 connect only Cooling Water Monitor TCW 002.
- ➔ On X11 connect only the cooling aggregate or the air cooling.
- ➔ On X12 connect only a single phase backing pump.
- ➔ On X14 connect only Venting Valve TSF 012.
- ➔ Connect mains to the cable "mains".
- ➔ All components should be selected in accordance with the mains voltage involved.
- ➔ Make all connections only in accordance with connection plan (please see Section 9.2.).

Components required for pumping station installation:

- Turbopump
- TCP 600
- TCS 603
- Cooling aggregate TZK 200 oder TZK 400\*
- Backing pump
- Cooling Water Monitor TCW 002\*
- Mating plugs X11, X12, X10 und X14
- Cable 7 x 1,5 mm<sup>2</sup> for backing pump
- Cable 5 x 0,75 mm<sup>2</sup> for the cooling water monitor\*
- Venting valve\*
- Cable 3 x 0,75 mm<sup>2</sup> (shielded) for the venting valve\*
- Plug for the mains connection\*\*
- 15 pole Sub-D cable, shielded\*

\* Optional

\*\* The connected components selected according to the required current.

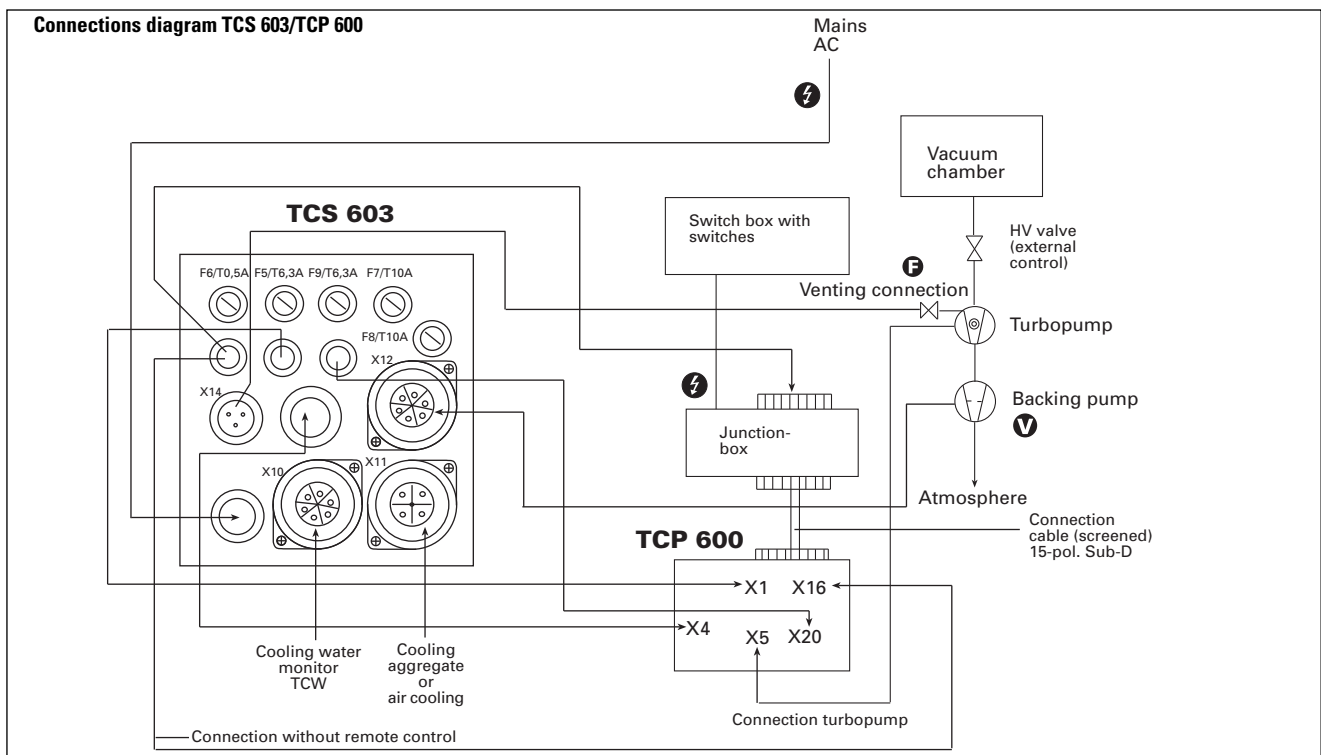
### 4.2. Fitting The Unit Into A Switch Cabinet



Danger of an electric shock.

- ➔ Screw the TCS with four M4 screws onto the assembly plate of the switch cabinet (please refer to the dimensions diagram for the TCS 603 Section 8.2.).
- The TCS must be installed in the proximity of the Electronic Drive Unit TC 600 because the connecting cable for the TCS is only 1m long.

### 4.3. Connections Diagram TCS 603/TCP 600





#### 4.4. Connection To The TCP 600

- ➔ Connect plugs X1, X4, X16, X20 on the TCS with the same named plug connectors on the rear side of the TCP 600.

#### 4.5. Connecting The Backing Pump

- ➔ Connect plug X12 to the mains supply line on the backing pump. If there is no temperature switch on the backing pump, connections 5 and 6 should be bridged.



The operating current must not exceed 10 A. If the backing pump requires more current, a separate relay is required (note the operating voltage) and a separate mains supply lead must be provided.

- ➔ Connect plug X12 on the backing pump with X12 on the rear panel of the TCS.

#### 4.6. Connecting The Cooling Aggregate

- ➔ Connect plug X11 to mains power supply on the cooling aggregate or on the air cooling and then connect to X11 on the rear panel of the TCS.



The operating current of the cooling aggregate must not exceed 6 A.

#### 4.7. Connecting The Cooling Water Monitor

- ➔ Connect cable 5 x 0,75 mm<sup>2</sup> + PE to the Cooling Water Monitor TCW 002 and secure plug X10 onto the cable.
- ➔ Connect plug X10 on the cooling water monitor to X10 on the rear side of the TCS.

#### 4.8. Connecting The Venting Valve

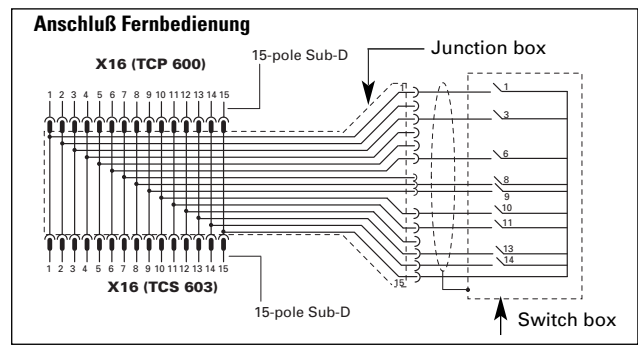
- ➔ Connect plug X14 via cable 3 x 0,75 mm<sup>2</sup> to Venting Valve TSF 012 and connect to X14 on the rear panel of the TCS.

#### 4.9. Connecting The Turbopump

- ➔ Latch plug X5 of the turbopump connection cable into the plug strip X5 on the TCP.

#### 4.10. Connecting The Remote Control

A junction box can be fitted between plug connection X16 on the TCP 600 for the purpose of remotely controlling the pumping station. A number of pumping station functions can be connected to the remote control switch.



When closing the switch, the following functions are carried out:

Switch	Function	ON/OFF
1	Start up time stop	ON
2	Current profile	ON
3	Rotation speed setting mode	ON
6	Heating	ON
8	Rotation speed monitoring	OFF
9	Stand-by	ON
10	Pumping station	OFF
11	Turbopump motor current	OFF
13	Reset*	
14	Venting*	ON

\*Key

- ➔ Construct the junction box with the respective plug connections (user).
- ➔ Connect the junction box with X16 (TCS 603) and connect, via a 15 pole Sub-D cable with X16 (TCP 600).
- ➔ Connect the switch box via a cable or a plug to the junction box.

#### 4.11. Mains Connection

If the connections X10 and X12 on the TCS 603 are not to be used:

- ➔ Fit short circuit bridges and plug in the mating plug provided.
- ➔ Connect the mains cable provided to "mains" on the TCS and connect to mains power. Once the TCP has been switched on, the pumping station is ready to operate.

#### 4.12. Ambient Conditions

- ➔ Take account of the following ambient conditions when installing the TCS 603.

**Installation location:** Protected against the weather.

The following is applicable for open buildings and operations rooms which are not fully air conditioned:

**Temperature:** +5°C - +40°C.  
**Relative humidity:** 5 - 85%, non-condensing.  
**Air pressure:** 86 kPa - 106 kPa.

## 5. Operations

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### 5.1. Switching ON

When the pumping station control is switched on via S1 at the TCP or with the remote control, the complete pumping station is switched on and monitored. All other functions are operated via the front panel of the TCP (please refer to the operating instructions for the respective electronic drive unit).

### 5.2. Remote Control

The use of remote control enables functions on plug X16 on the TCP 600 to be operated (please see the operating instructions for the TCP, Section 5.3.8.).

When the switch is closed the respective functions are executed. When the pumping station is "OFF" the error message "E005" is displayed.

When this message appears a re-start is possible without "reset".

### 5.3. Switching OFF

The pumping station is switched off via S1 on the TCP or the remote control. The function of the venting valve on the TCS 603 is retained as is the case with direct connection to the TCP 600.

## 6. What To Do In The Case Of Breakdowns ?

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### 6.1 Pumping Station Malfunctions

If a malfunction occurs on the backing pump or if the cooling water flow is interrupted, both turbopump and backing pump are switched off and the error message "E005" appears in the LC display on the TCP 600 (pumping station malfunction).

If the backing pump has no temperature message contact and fails the increase in the fore-vacuum pressure will cause the rotation speed of the turbopump to fall below the switchpoint. The error message "E006" will appear (delay time expired and  $f < \text{switchpoint}$ ) and the pumping station is switched off.

Reset of the pumping station is possible after eliminating the malfunction and pressing the "reset" key.

After error acknowledgement the pumping station starts automatically.

### 6.2 6.2 Checking The Fuses

If the backing pump or the cooling aggregate do not start even though the pumping station is switched on, the fuses in the TCS must be checked:

- ➔ If fuses have blown the current load on outputs X11 and X12 should be checked.
- ➔ If the current is too high, the backing pump should be supplied with separate mains power and switched on with an additional relay (please see the connection plans PM 041 940 -S and PM 051 055 AS).

## 7. Maintenance and Service

The units requires no maintenance. A damp cloth can be used to wipe away any dirt which has collected on the front panel. Ensure that the unit is first disconnected from the mains power supply.

### Do Make Use Of Our Service Facilities

In the event that repairs are necessary a number of options are available to you to ensure any system down time is kept to a minimum:

- Have the unit repaired on the spot by PFEIFFER Service Engineers;
- Return the unit to the manufacturer for repairs;
- Replace with a new value unit.

Local PFEIFFER representatives can provide full details.

When carrying out their own repairs customers must bear in mind that dangerous voltage levels are present. When carrying out own repairs or maintenance work on the units which are in contact with hazardous substances it is important to comply with all relevant safety regulations.

### Please note:

Units returned to us for repair or maintenance are covered by our general conditions of sale and supply.

### Contact addresses and telephone hotline:

Please refer to the back cover of this manual for contact addresses and telephone hotline numbers.

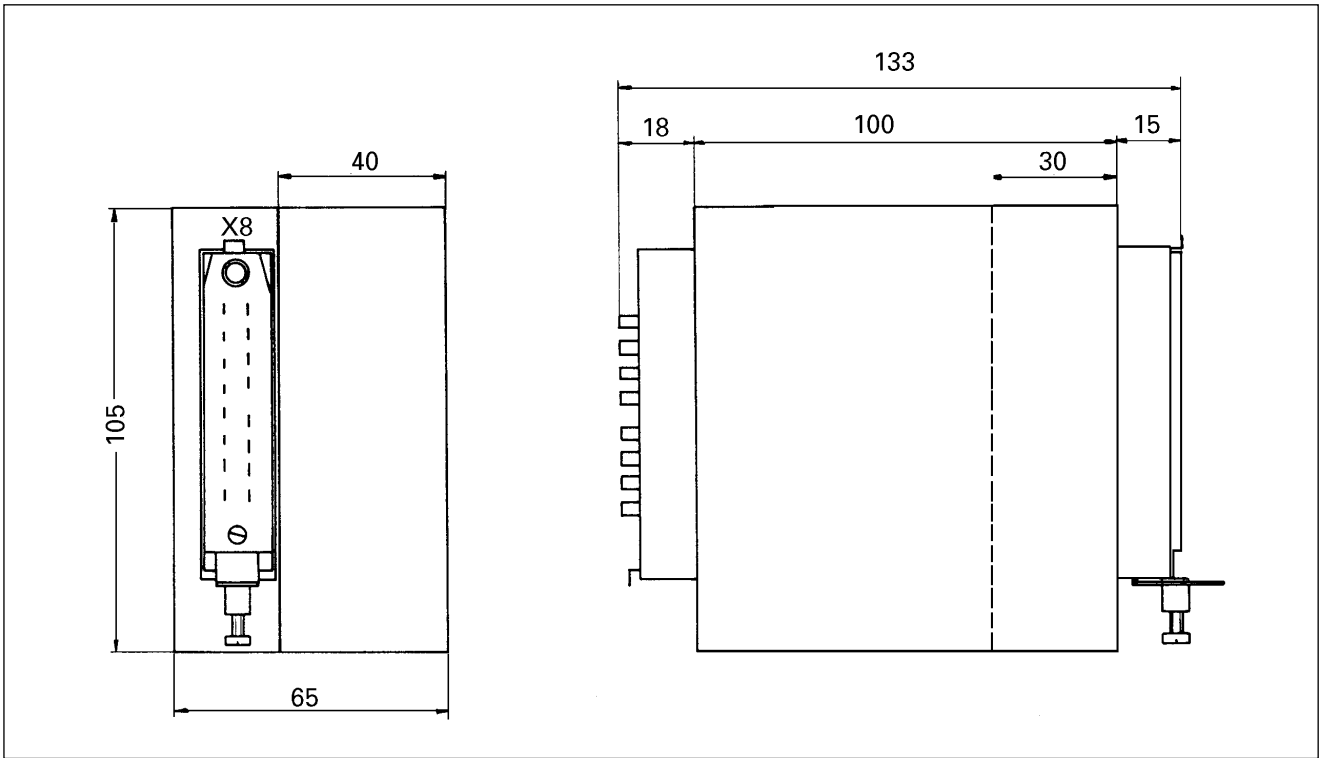
## 8. Technical Data

### 8.1. Data list TCS 303/603

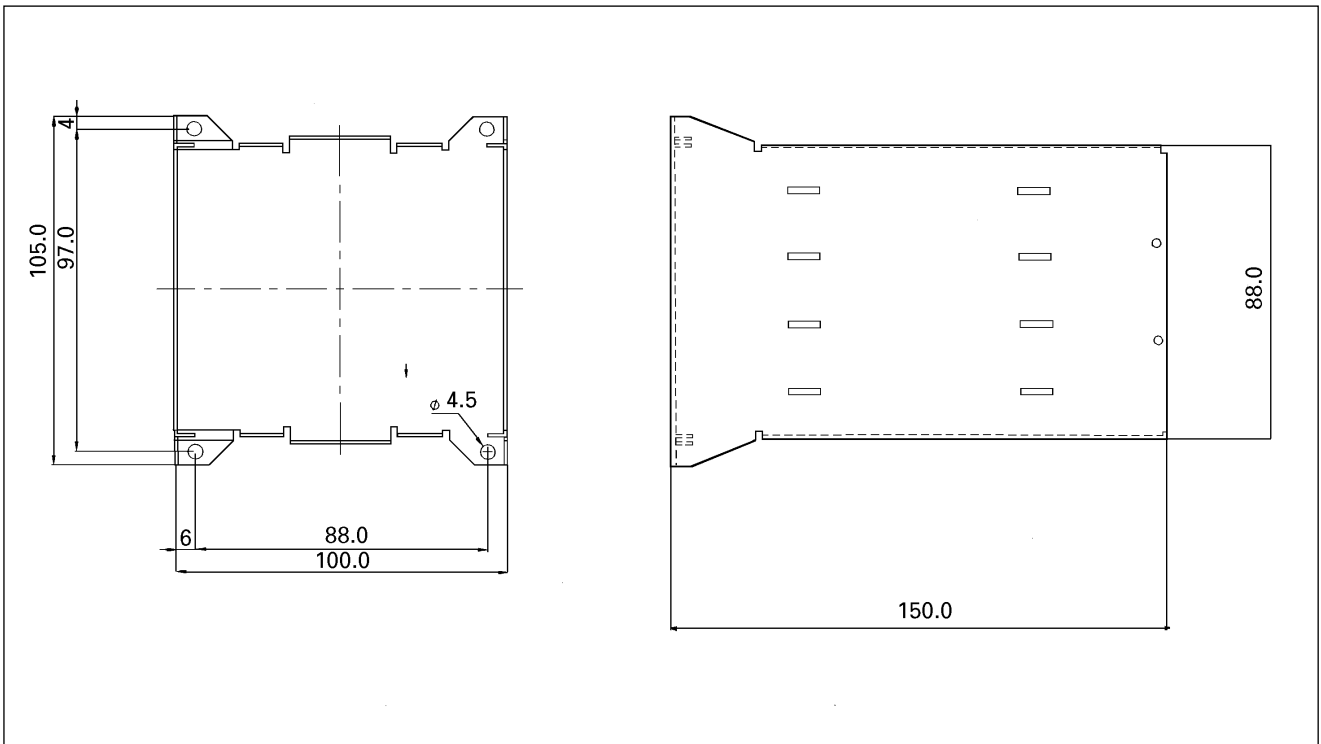
Pumping station control		TCS 303	TCS 603
Mains voltage	V AC	90-264	90 - 132/190-264
Phases		1	1
Frequency, operation with TCP	Hz	50/60	50/60
Maximum of constant current, backing pump	A	10*	10
Maximum of constant current, cooling aggregate	A	10*	6,3
Permissible ambient temperature	°C	0-50	0-50
Weight	kg	0,5	2,2

\*By using the TCS 303 the maximum of the constant current of the backing pump and the cooling aggregate must not exceed together 10 A.

### 8.2. Dimensions TCS 303

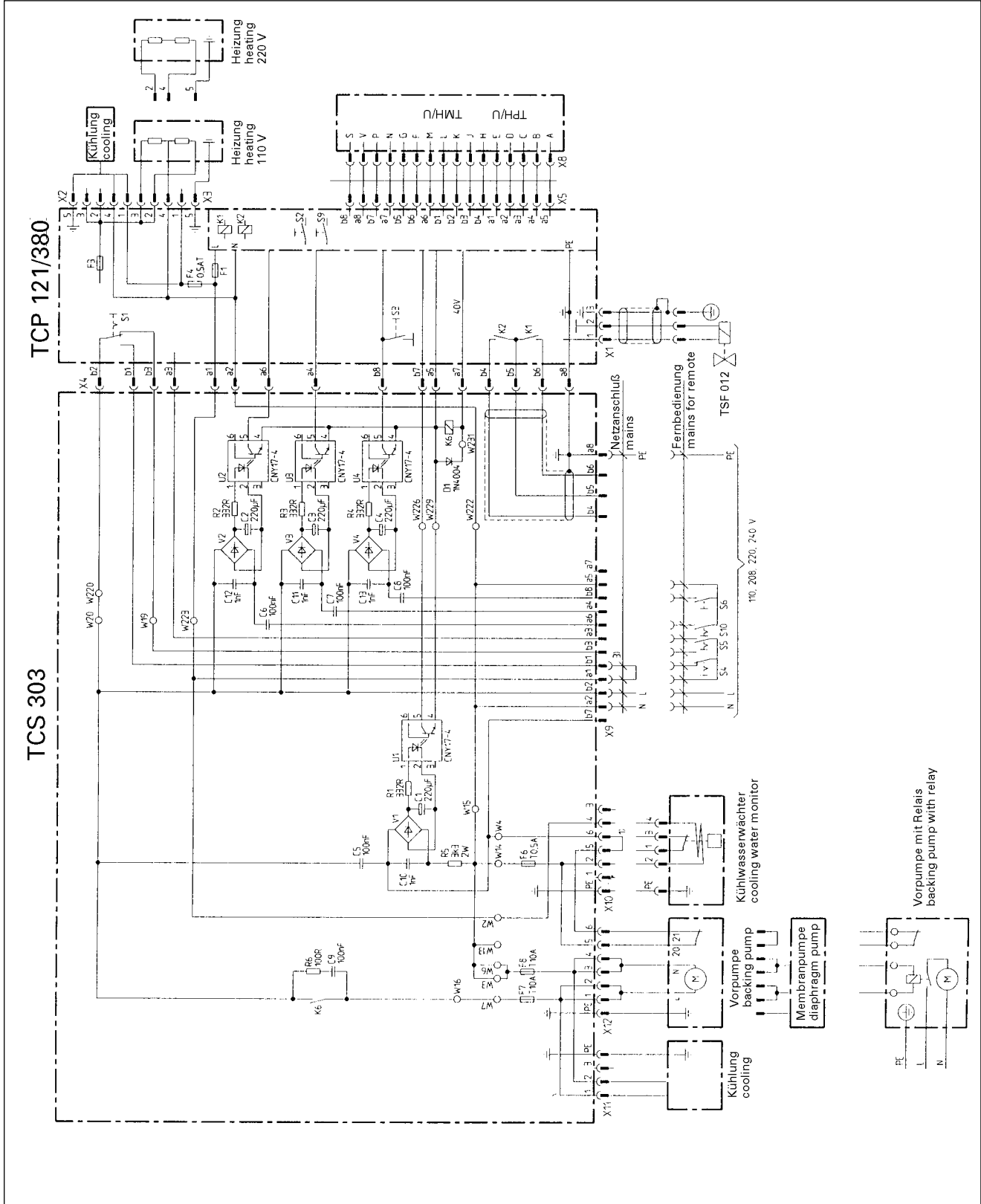


### 8.3. Dimensions TCS 603



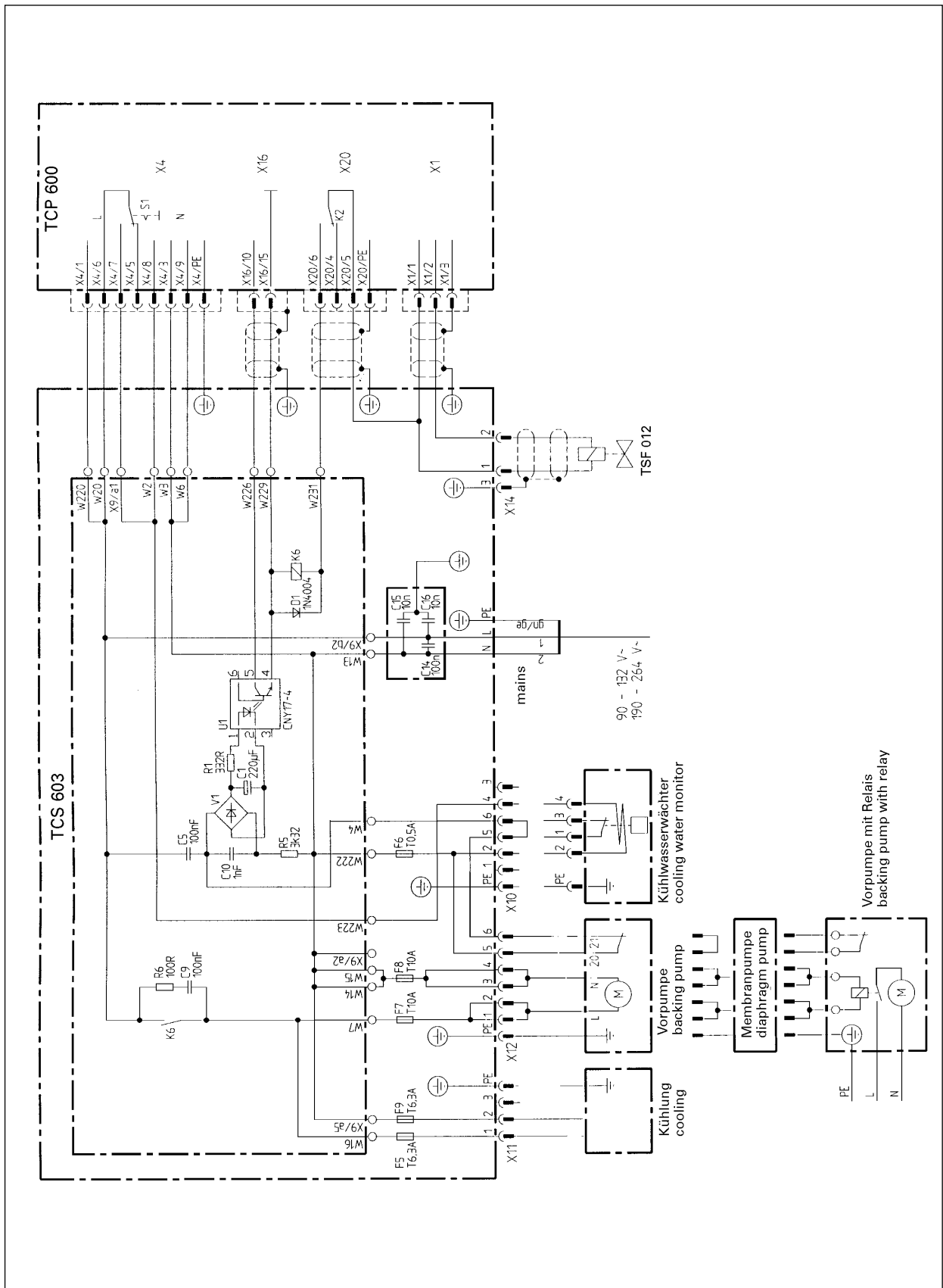
# 9. Wiring Diagrams

## 9.1. Wiring Diagram TCS 303



Wiring Diagram PM 041 940 -S

## 9.2. Wiring Diagram TCS 603



Wiring Diagram PM 051 055 AS

## 10. Accessories

Designation	Value	Pieces	Number	Notice	Order quantity
Mains cable for TCS 303 in case of connection to TCP 121/380:					
- Plug (Schuko)		1	PM 031 447 -X		
- UL plug	115 V	1	PM 041 264 -X		
- UL plug	208 V	1	PM 041 265 -X		

## 11. Spare Parts

Pumping Station Control TCS 303/603 Designation	Value	Pieces	Number	Notice	Order quantity
Fuse 6,3 AT, F5, F9		1	P 4666 452		
Fuse 0,5 AT, F6		1	P 4666 430		
Fuse 10 AT, F7, F8		1	P 0920 518 E		
Flange socket 7 pol.,rot, X10		1	P 0920 426 E		
Flange socket 7 pol.,schwarz, X12		1	P 0920 389 E		
Flange socket 4 pol., schwarz, X11		1	P 0920 388 E		
Plug 7 pol., rot, X10		1	P 0920 425 E		
Plug 7 pol., schwarz X12		1	P 0920 391 E		
Plug 4 pol., schwarz X11		1	P 0920 390 E		
Plug 3 pol., schwarz X14		1	?		

⇒ **DE, AT**

**Herstellereklärung im Sinne folgender EU-Richtlinien:**

- **Maschinen 89/392/EWG**
- **Elektromagnetische Verträglichkeit 89/336/EWG**
- **Niederspannung 73/23/EWG**

Hiermit erklären wir, daß das unten aufgeführte Produkt zum Einbau in eine Maschine bestimmt ist und daß deren Inbetriebnahme so lange untersagt ist, bis festgestellt wurde, daß das Endprodukt den Bestimmungen der EU-Richtlinie 89/392/EWG, Anhang II B entspricht.

Wir bestätigen Konformität mit der EU-Richtlinie über elektromagnetische Verträglichkeit 89/336/EWG und der EU-Niederspannungsrichtlinie 73/23/EWG. Die angewandten Richtlinien, harmonisierten Normen, nationalen Normen und Spezifikationen sind unten aufgeführt.

⇒ **GB, IE**

**Manufacturer's declaration pursuant to the following EU directives:**

- **Machinery Directive 89/392/EEC**
- **Electromagnetic Compatibility Directive 89/336/EEC**
- **Low Voltage Directive 73/23/EEC**

We hereby certify that the product specified below is intended for installation in a machine which is forbidden to be put into operation until such time as it has been determined that the end product is in accordance with the provision of EU Directive 89/392/EEC, Annex II B.

We certify conformity with EU Electromagnetic Compatibility Directive 89/336/EEC and EU Low Voltage Directive 73/23/EEC.

The guidelines, harmonized standards, national standards and specifications which have been applied are listed below.

⇒ **BE, FR**

**Déclaration du constructeur conformément aux directives CE suivantes:**

- **directive machine CE 89/392/CEE**
- **directive CE 89/336/CEE concernant la compatibilité électromagnétique**
- **directive CE 73/23/CEE concernant la basse tension**

Nous déclarons par la présente que le produit mentionné ci-dessous est prévu pour le montage sur une machine et que sa mise en service est interdite tant qu'il n'a pas été déterminé que le produit final répond bien aux dispositions de la directive CE 89/392/CEE, appendice II B.

Nous confirmons la conformité du produit avec la directive CE 89/336/CEE concernant la compatibilité électromagnétique et la directive CE 73/23/CEE concernant la basse tension. Les directives appliquées, normes harmonisées et les normes et spécifications nationales appliquées figurent ci-dessous.

⇒ **IT**

**Dichiarazione del costruttore ai sensi delle seguenti direttive UE:**

- **Macchinari 89/392/CEE**
- **Compatibilità elettromagnetica 89/336/CEE**
- **Bassa tensione 73/23/CEE**

Si dichiara che il prodotto qui menzionato è destinato al montaggio in una macchina e che la sua messa in funzione è vietata sin quando non è stato accertato che il prodotto finale non rispetta le disposizioni della direttiva UE 89/392/CEE, Appendice II B.

Attestiamo la conformità con la direttiva UE sulla compatibilità elettromagnetica 89/336/CEE e la direttiva UE sulla bassa tensione 73/23/CEE.

Sono riportate in basso le direttive applicate, le norme standardizzate nonché le norme e le specifiche nazionali utilizzate.

⇒ **ES**

**Declaración del fabricante al tenor de las siguientes Directivas de la UE:**

- **Maquinarias 89/392/MCE**
- **Compatibilidad Electromagnética 89/336/MCE**
- **Baja Tensión 73/23/MCE**

Por la presente declaramos que el producto mencionado más abajo está previsto para ser incorporado en una máquina y que la puesta en servicio de la misma queda prohibida en tanto que no se haya verificado que el producto final concuerda con las disposiciones resultantes de la Directiva 89/392/MCE de la UE, Apéndice II B.

De nuestra parte certificamos la conformidad con la Directiva 89/336/MCE de la UE sobre Compatibilidad Electromagnética y la Directiva 73/23/MCE de la UE sobre Baja Tensión.

Las directivas aplicadas, normas armonizadas y las normas y especificaciones nacionales aplicadas se mencionan abajo.

⇒ **NL**

**Verklaring van de fabrikant in de zin van de volgende EU-richtlijnen:**

- **machinerichtlijn 89/392/EEG**
- **richtlijn over elektromagnetische compatibiliteit 89/336/EEG**
- **richtlijn over laagspanning 73/23/EEG**

Hiermee verklaren wij dat het hieronder genoemde product is bedoeld om te worden ingebouwd in een machine en dat de ingebruikneming hiervan zolang verboden is, totdat is vastgesteld dat het eindproduct voldoet aan de bepalingen van EU-richtlijn 89/392/EEG, appendix II B.

Wij bevestigen de conformiteit met de EU-richtlijn over elektromagnetische compatibiliteit 89/336/EEG en de EEG-richtlijn over laagspanning 73/23/EEG

De toegepaste richtlijnen, geharmoniseerde normen en de toegepaste nationale normen en specificaties zijn hierna aangegeven.

⇒ **DK**

**Producenterklæring i henhold til følgende EU-direktiver:**

- **Maskiner 89/392/EWG**
- **Elektromagnetisk kompatibilitet 89/336/EWG**
- **Lavspænding 73/23/EWG**

Hermed erklærer vi, at det nedenstående produkt er beregnet til indbygning i en maskine og at dennes idriftsættelse er forbudt, indtil det er fastslået, at slutproduktet er i overensstemmelse med EU-direktiv 89/392/EWG tillæg II B.

Vi attesterer konformitet med EU-direktiv vedrørende elektromagnetisk kompatibilitet 89/336/EWG og med EU-lavspændingsdirektiv 73/23/EWG.

De anvendte direktiver, harmoniserede standarder og de anvendte nationale standarder og specifikationer er angivet nedenfor.





**Tillverkarens förklaring enligt följande EG-direktiv:**

- Maskindirektiv 89/392/EEC
- Elektromagnetisk tolerans 89/336/EEC
- Lågspänning 73/23/EEC

Härmed förklarar vi, att den nedan nämnda produkten är avsedd för inmontering i en maskin och att denna maskin inte får tas i drift förrän det har konstaterats, att slutprodukten stämmer överens med EG's direktiv 89/392/EEC, annex II B.

Vi bekräftar konformitet med EG's-direktiv om elektromagnetisk tolerans 89/336/EEC och EG's lågspänningsdirektiv 73/23/EEC. De riktlinjer, anpassade standarder, nationella standarder och specifikationer som har blivit accepterade, anges här nedan.



**Valmistajan vakuutus seuraavien EU-direktiivien mukaisesti:**

- konedirektiivi 89/392/ETY
- sähkömagneettinen siedettävyyys 89/336/ETY
- pienjännite 73/23/ETY

Vakuutamme täten, että allamainittu tuote on tarkoitettu asennettavaksi koneeseen ja sen käyttöönotto on kielletty kunnes on todettu, että lopullinen tuote vastaa EU-direktiivin 89/392/ETY vaatimuksia.

Vahvistamme vaatimustenmukaisuuden EU-direktiivin sähkömagneettinen siedettävyyys 89/336/ETY ja EU-pienjännitedirektiivin 73/23/ETY kanssa. Soveltamamme suuntaviitat, harmonisoidut standardit, kansalliset standardit ja rakennemääräykset on luteltu alempana.



**Declaração do fabricante, de acordo com as seguintes Directivas CE:**

- Máquinas, na redacção 89/392/CEE
- Compatibilidade electromagnética, na redacção 89/336/CEE
- Baixa tensão, na redacção 73/23/CEE

Com a presente, declaramos que o produto abaixo indicado se destina à montagem numa máquina e que é proibida a colocação em serviço da mesma antes de se ter declarado, que o produto final está em conformidade com o disposto na Directiva CE, na redacção 89/392/CEE, Apêndice II B.

Certificamos haver conformidade com o disposto na Directiva CE sobre compatibilidade electromagnética, na redacção 89/336/CEE, e o disposto na Directiva CE sobre baixa tensão, na redacção 73/23/CEE.

Abaixo, dá-se indicação das directivas aplicadas, das normas harmonizadas e das normas e especificações aplicadas no respectivo país.



Δήλωση κατασκευαστή κατά το νόημα των εθής οδηγιών της Ε.Ε.:

- περί μηχανών 89/392/Ε.Ο.Κ.
- περί ηλεκτρομαγνητικής συμβατότητας 89/336/Ε.Ο.Κ.
- περί χαμηλής τάσης 73/23/Ε.Ο.Κ.

Με την παρούσα δήλωση βεβαιώνουμε ότι το κατωτέρω αναφερόμενο προϊόν προορίζεται για την προσαρμογή σε μία άλλη μηχανή, και ότι η έναρξη λειτουργίας της απαγορεύεται μέχρις ότου διαπιστωθεί, ότι το συνολικό συγκρότημα ανταποκρίνεται στους ισχύοντες κανονισμούς της οδηγίας της Ε.Ε. 89/392/Ε.Ο.Κ., παράρτημα II Β.

Οι εφαρμοσθέντες κανονισμοί, οι εναρμονισμένες προδιαγραφές και οι εφαρμοσθείσες εθνικές προδιαγραφές και τεχνικές προδιαγραφές αναφέρονται κατωτέρω:

Produkt/Product/Produit/Prodotto/Producta/Produkt/Produkt/Producto/ Προϊόν:

**TCS 303/603**

Angewendete Richtlinien, harmonisierte Normen und angewendete, nationale Normen in Sprachen und Spezifikationen:

Guidelines, harmonised standards, national standards in languages and specifications which have been applied:

Les directives appliquées, normes harmonisées et les normes nationales appliquées en langues et spécifications:

Direttive applicate, norme standardizzate e norme nazionali utilizzate in lingue e specifiche:

Directivas aplicadas, normas armonizadas y normas nacionales aplicadas en idiomas y especificaciones:

Toegepaste richtlijnen, geharmoniseerde normen en toegepaste nationale normen met betrekking tot talen en specificaties:

Anvendte direktiver, harmoniserede standarder og de anvendte nationale standarder med sprog og specifikationer:

Directivas aplicadas, normas harmonizadas e normas aplicadas na linguagem e nas especificações do respectivo país:

Εφαρμοσθέντες κανονισμοί, εναρμονισμένες προδιαγραφές και εφαρμοσθείσες εθνικές προδιαγραφές σε γλώσσες και τεχνικές προδιαγραφές:

**EN 61 010, EN 55 011, EN 50 081-1, EN 50 082-2, IEC 801 1-4, VDE 0843-6**

Unterschriften/Signatures/Signature/Firme/Firmas/Handtekening/Underskrifter/Underskrift/ Allekirjoitukset/Assinaturas/ Υπογραφές:

Geschäftsführer (W. Dondorf)

Managing Director

Gérant d'affaires

Gerente

Διευθύνων Σύμβουλος

Administrerende Direktør

Verkställande Direktör

Directeur