

IVC 60/24-2 Tact² Service Manual



Contents

Preface	3
Safety instructions	3
Hazard levels	3
Description in this service manual	4
Service groups	4
Functional group structure	4
Textual description	4
Technical Features	4
Field of application	4
Safety installations	4
Type plate	4
Parts of the system	5
Front view	5
AB Service group setup	5
010 Safety information	5
020 Overview	5
030 Function	5
040 Service activities	6
ABHA Uninstalling / installing cover	6
ABIT Uninstall / install instrument panel	7
ABZR Uninstall / install intermediate ring	8
050 Maintenance and inspection	8
060 Error diagnosis	8
070 Peculiarities/ others	8
AC Service group suction system	9
010 Safety information	9
020 Overview	9
030 Function	9
040 Service activities	9
ACSK Uninstall / install suction head	9
ACST Uninstall/ install suction turbine	10
ACFF Uninstall / install flat fold filter	12
ACTE Uninstall / install Tact unit	12
ACTM Uninstall / install Tact magnets	14
050 Maintenance and inspection	14
060 Error diagnosis	14
070 Peculiarities/ others	14
AH Service group	15
010 Safety information	15
020 Overview	15
030 Function	15
040 Service activities	15
AHFS Uninstall / install filling level sensor	15
AHGA Uninstall / install power switch	16
AHNK Uninstalling / installing mains cable	17
AHSE Uninstall / install control electronics 1	17
AHSF Uninstall / install control electronics 2	18
050 Maintenance and inspection	18

060 Error diagnosis	18
070 Peculiarities/ others	18
Technical Documentation	19
Technical specifications	19
Circuit diagram	20

Preface

Good service work requires extensive and practice-oriented training as well as well-structured training materials. Hence we offer regular basic and advanced training programmes covering the entire product range for all service engineers.

In addition to this, we also prepare service manuals for important appliances - these can be initially used as instruction guides and later on as reference guides.

Apart from this, we also regular information about product enhancements and their servicing.

If you should require supplements, have corrections or questions regarding this document, please address these citing the following subject to:

international-service@de.kaercher.com

Subject: **Fall 120333**

The responsible product specialist will take care of your issue.

Copying and duplication of texts and diagrams as well as third-party access to this information is permitted only with the explicit permission of the company:

Alfred Kärcher GmbH & Co. KG

Postfach 160

71349 Winnenden (Germany)

www.kaercher.com

Safety instructions

Service and maintenance tasks may only be performed by qualified and specially trained specialists.

Observe safety information in the chapters!

⚠ DANGER

First pull out the plug from the mains before carrying out any tasks on the machine.

⚠ CAUTION

Risk of damage by electrostatic discharge (ESD)! Take suitable measures for discharging electrostatic charge prior to performing work on the appliance electronics.

Hazard levels

⚠ DANGER

For an immediate danger which can lead to severe injuries or death.

⚠ WARNING

For a possibly dangerous situation which could lead to severe injuries or death.

⚠ CAUTION

For a possibly dangerous situation which can lead to minor injuries or property damage.

ATTENTION

Pointer to a possibly dangerous situation, which can lead to property damage.

Note

Indicates useful tips and important information.

Description in this service manual

Service groups

Example:

Install/uninstall ANRA wheel axle

AN	RA	Install/uninstall wheel axle
Service group	Component	Activity

Observe the allocation of service groups to the appliance components in the overview diagram in Chapter "Overview over the service and functional groups".

Functional group structure

010	Safety instructions
020	Overview
030	Function
040	Service activities
050	Maintenance and inspection
060	Error diagnosis
070	Peculiarities/ others
080 - 100	Not assigned

Textual description

- Instruction
- Preparatory operations
- 1
- 2 Key numerical
- A
- B Key alphanumerical
- Enumeration / General list

⚠ Safety note

Pointer to hazards, sources of errors.

Technical Features

- Cable hook
- Filter cleaning

Field of application

This service manual describes the appliance family:

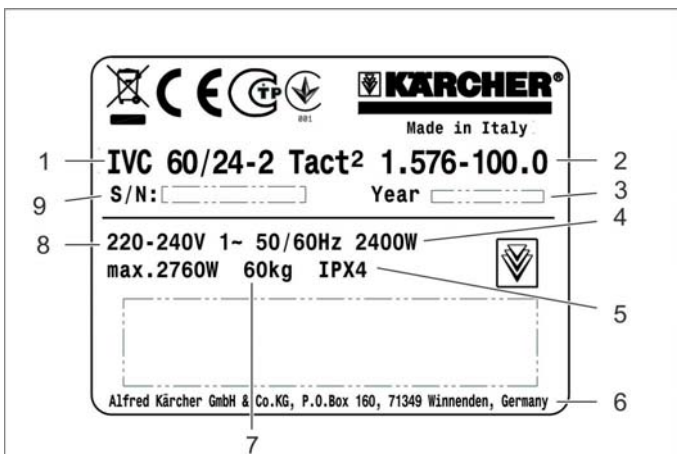
- IVC 60/24-2 Tact²

Safety installations

Safety devices serve to protect the user and must not be rendered in operational or their functions bypassed.

Observe safety information in the chapters!

Type plate



The type plate is located on the rear of the appliance.

- 1 Appliance description
- 2 Part number
- 3 Year of manufacture
- 4 Connection output
- 5 Type of protection
- 6 Address of manufacturer
- 7 Typical operating weight
- 8 Main Supply
- 9 Serial number

Parts of the system

Front view



- 1 Power switch
- 2 Instrument panel
- 3 Intermediate ring
- 4 Sediment container
- 5 Suction head

AB Service group setup

010 Safety information

⚠ WARNING

Switch off the appliance and remove the plug from the socket.

Observe general safety information!

020 Overview



*ABIT Uninstall / install instrument panel
ABHA Uninstalling / installing cover
ABZR Uninstall / install intermediate ring*

030 Function

No special functional characteristics.

040 Service activities

Note

Unless otherwise described, the installation takes place in reverse order.

ABHA Uninstalling / installing cover



■ ABIT Uninstall / install instrument panel

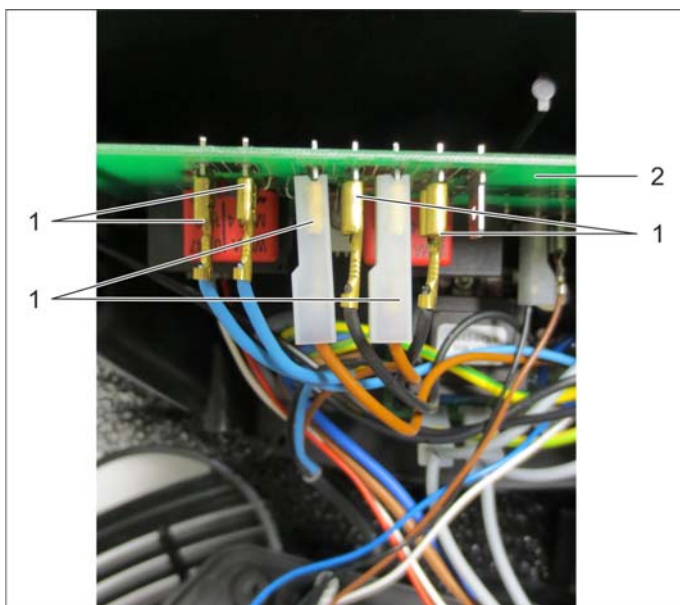
- 1 Screw
- 2 Handle

- Loosen screws.
- Remove the handle.



- 1 Screws
- 2 Cover filter

- Open the cover of the filter.
- Unscrew the screws.



- 1 Electric socket plug connections
- 2 Control electronics 1

- Separate the electric connectors.

Note

Observe the connection diagram.



- 1 Instrument panel
- 2 Hood

Note

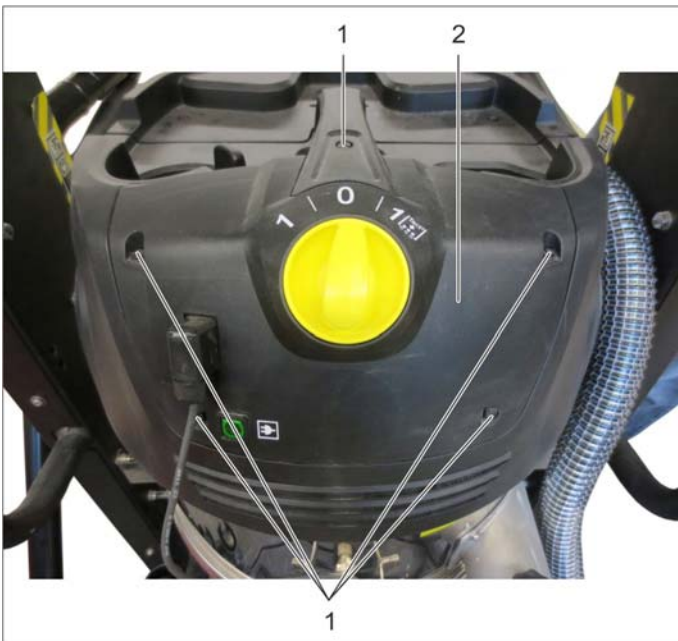
Mind the wiring when removing the cover.

- ➔ Thread the instrument panel through the opening of the cover.
- ➔ Remove the hood.

Installation information

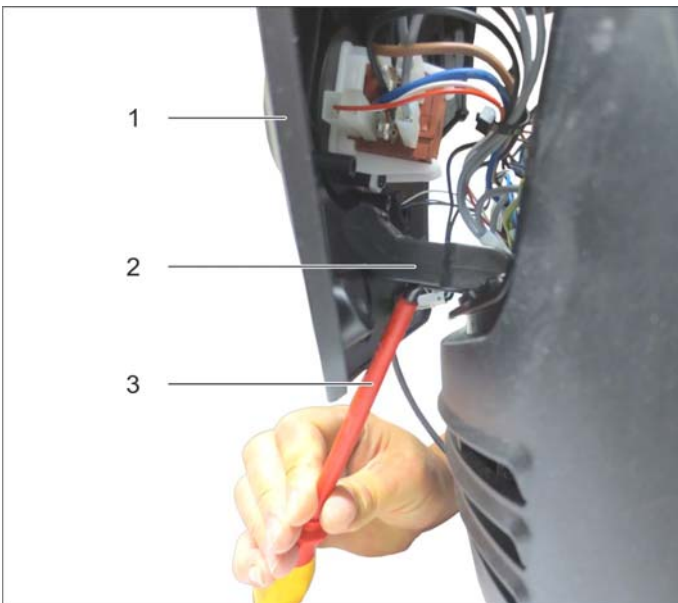
Upon reinstallation, make sure that no cables are jammed!

ABIT Uninstall / install instrument panel



- 1 Screws
- 2 Instrument panel

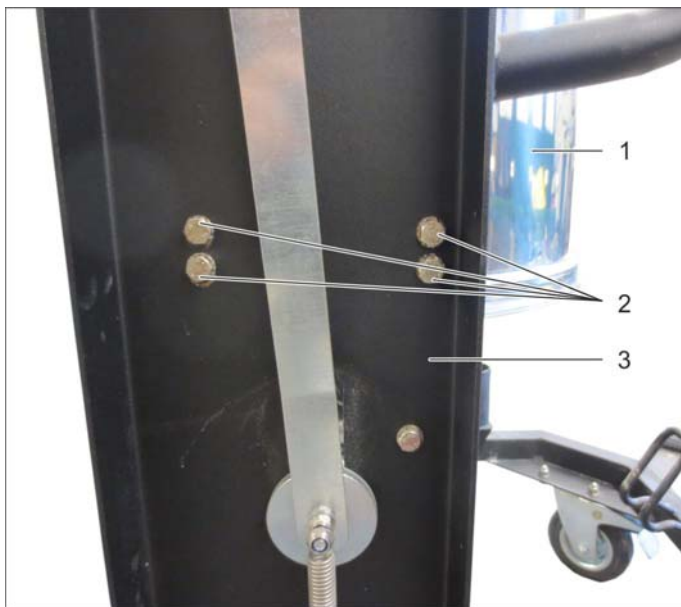
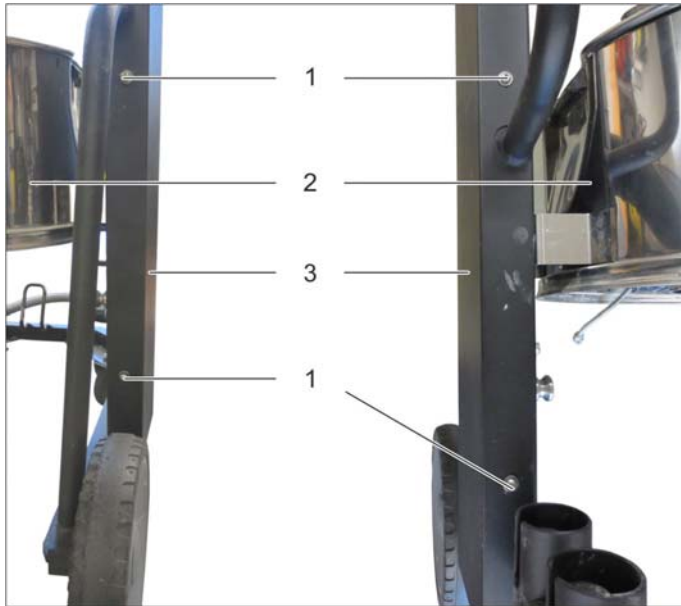
- ➔ Unscrew the screws.
- ➔ Tilt the instrument panel forwards.



- 1 Instrument panel
- 2 Hinge
- 3 Screwdriver

- ➔ Lever the instrument panel out of the hinges using a screwdriver.

ABZR Uninstall / install intermediate ring



■ ACSK Uninstall / install suction head

- 1 Screws
- 2 Intermediate ring
- 3 Side plate

- ➔ Remove the sediment container.
- ➔ Unscrew the screws.
- ➔ Remove side plate.

- 1 Intermediate ring
- 2 Screws
- 3 Machine frame

- ➔ Unscrew the screws.
- ➔ Remove intermediate ring.

050 Maintenance and inspection

Service group does not contain any maintenance and inspection points.

060 Error diagnosis

The service group does not contain any error diagnosis.

070 Peculiarities/ others

The service group does not contain any peculiarities.

AC Service group suction system

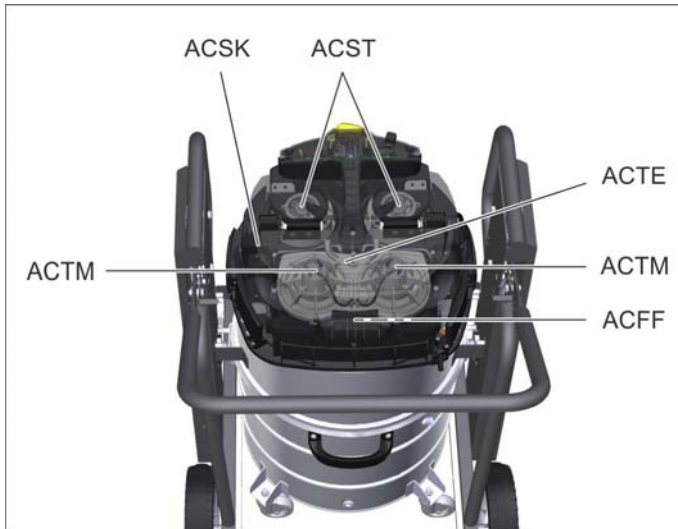
010 Safety information

⚠ WARNING

Switch off the appliance and remove the plug from the socket.

Observe general safety information!

020 Overview



ACTM Uninstall / install Tact magnets
ACSK Uninstall / install suction head
ACST Uninstall/ install suction turbine
ACTE Uninstall / install Tact unit
ACFF Uninstall / install flat fold filter

030 Function

No special functional characteristics.

040 Service activities

Note

Unless otherwise described, the installation takes place in reverse order.

ACSK Uninstall / install suction head



- 1 Nut
- 2 Electric connectors

- Unscrew the nut.
- Separate the electric connectors.

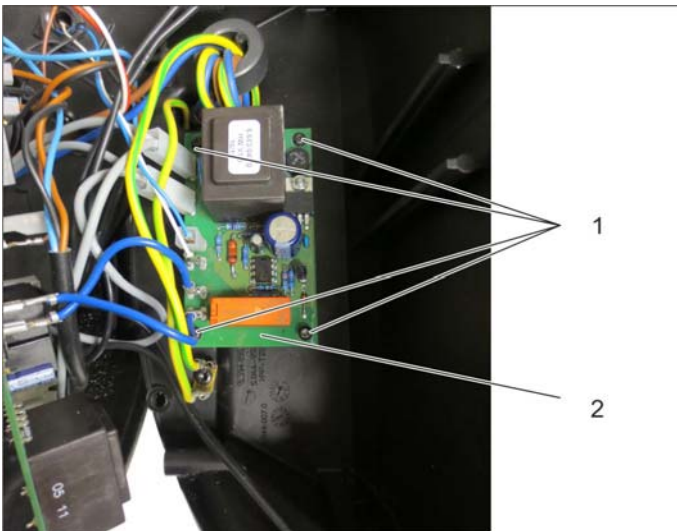


- 1 Lock latches
- 2 Suction head

- ➔ Open lock latches.
- ➔ Remove the suction hand.

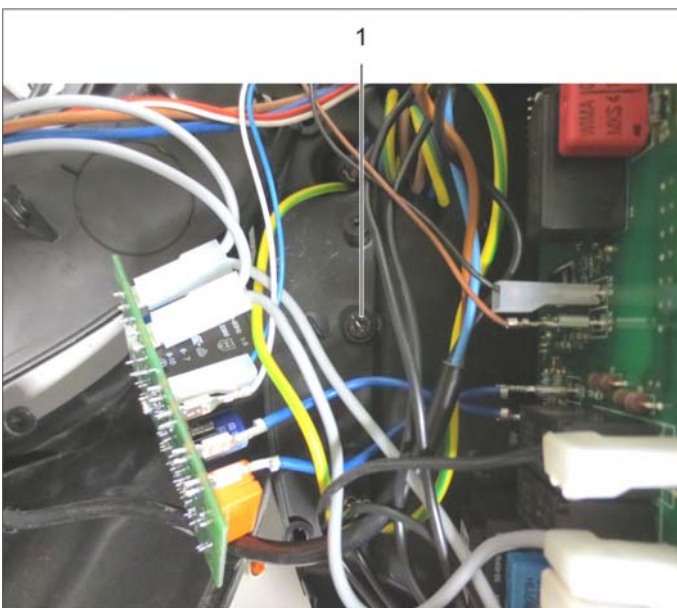
ACST Uninstall/ install suction turbine

■ *ABHA Uninstalling / installing cover*



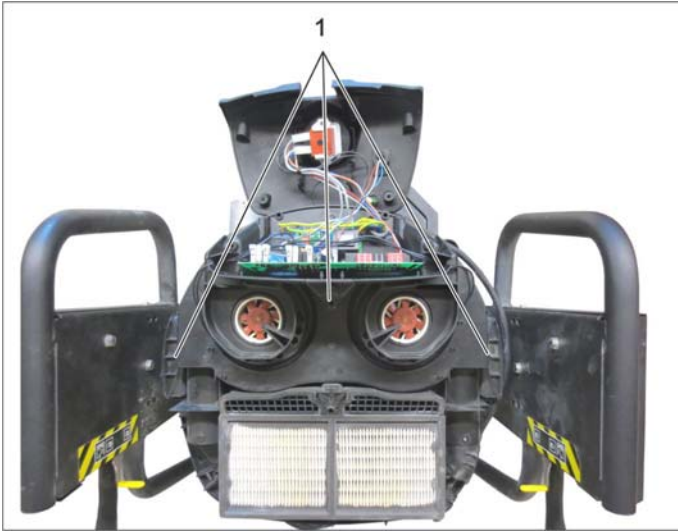
- 1 Screws
- 2 Control electronics 2

- ➔ Unscrew the screws.
- ➔ Remove control electronics 2.



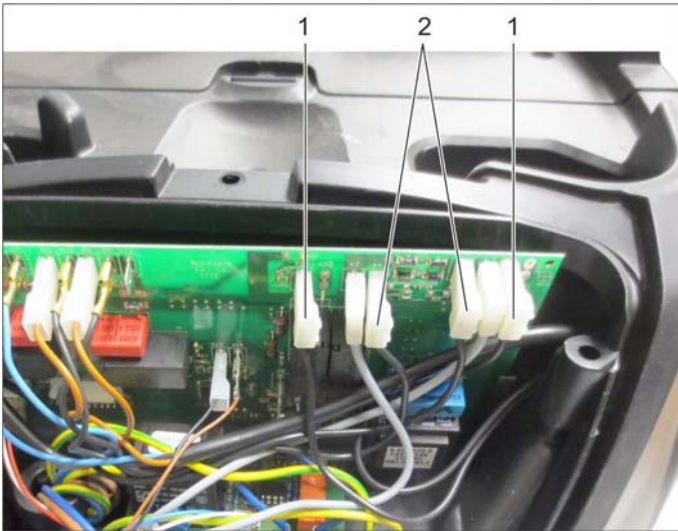
- 1 Screw

- ➔ Loosen screws.



1 Screws

→ Unscrew the screws.



1 Electrical socket plug connections (suction turbine 1)

2 Electrical socket plug connections (suction turbine 2)

→ Separate the electric connectors.

Note

Observe the connection diagram.



1 Screws

2 Casing suction turbine

3 Suction turbine

→ Unscrew the screws.

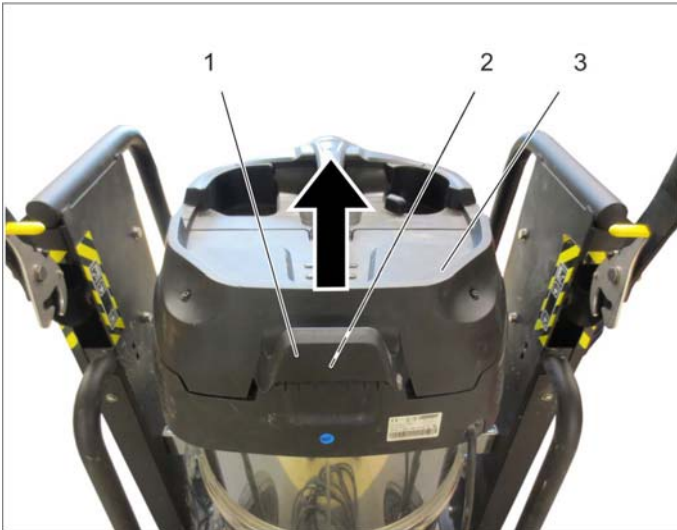
→ Remove the casing of the suction turbine.

→ Remove the suction turbine.

Note

Mind correct installation of the lines.

ACFF Uninstall / install flat fold filter



- 1 Handle
- 2 Locking
- 3 Cover filter

- Pull on the lock.
- Open the cover of the filter.



- 1 Flat fold filter

- Remove flat folded filter.

ACTE Uninstall / install Tact unit



■ ABHA Uninstalling / installing cover

- 1 Screws
- 2 Cover Tact unit

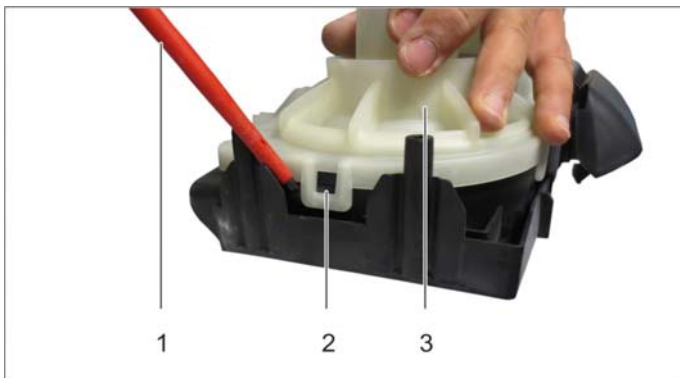
- Unscrew the screws.
- Remove cover Tact unit.



- 1 Tact magnets
- 2 Tact unit

- ➔ Remove tact magnets.
- ➔ Remove tact unit.

Opening / closing the Tact unit



- 1 Screwdriver
- 2 Locking nose
- 3 Casing cover Tact unit

- ➔ Detach the Tact unit from the latches using a screwdriver.
- ➔ Remove casing cover of the Tact unit.



- 1 Sealings
- 2 Guide Tact magnets
- 3 Bottom part of the casing of the Tact unit
- 4 Spring

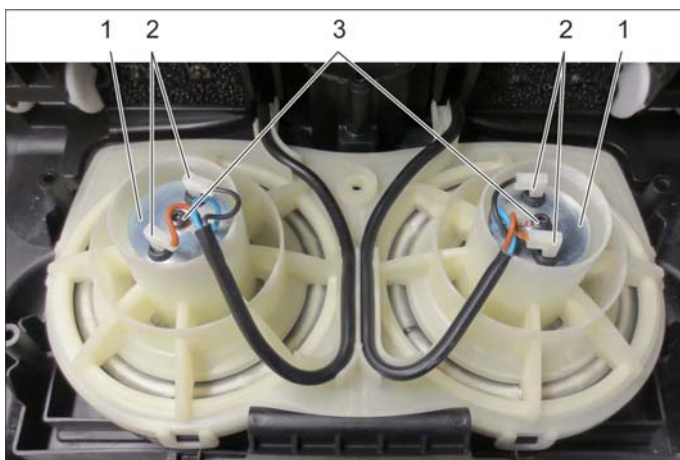
ACTM Uninstall / install Tact magnets



■ ABHA Uninstalling / installing cover

- 1 Screws
- 2 Cover Tact unit

- Unscrew the screws.
- Remove cover Tact unit.



- 1 Tact magnets
- 2 Electric socket plug connections
- 3 Electric screw connections

- Separate the electric connectors.
- Disconnect electric screw connections.
- Remove tact magnets.

Installation information

Observe the connection diagram.

050 Maintenance and inspection

The pocket filter should be serviced or, if necessary, replaced after one year.

060 Error diagnosis

The service group does not contain any error diagnosis.

070 Peculiarities/ others

The service group does not contain any peculiarities.

AH Service group

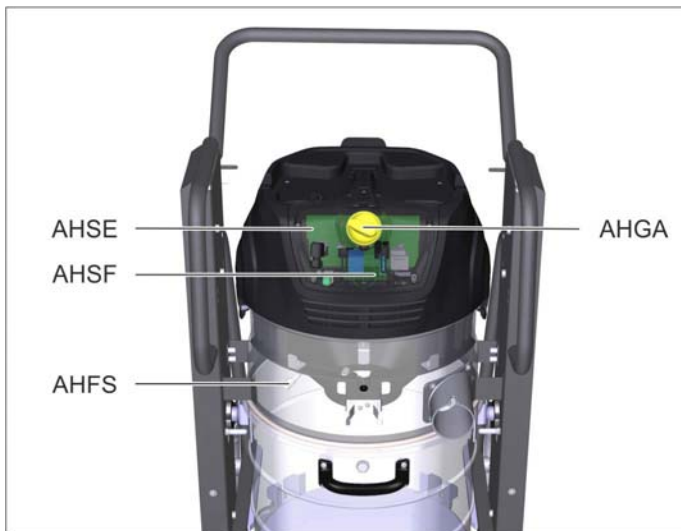
010 Safety information

⚠ WARNING

Switch off the appliance and remove the plug from the socket.

Observe general safety information!

020 Overview



AHFS Uninstall / install filling level sensor
AHGA Uninstall / install power switch
AHSE Uninstall / install control electronics 1
AHSF Uninstall / install control electronics 2

030 Function

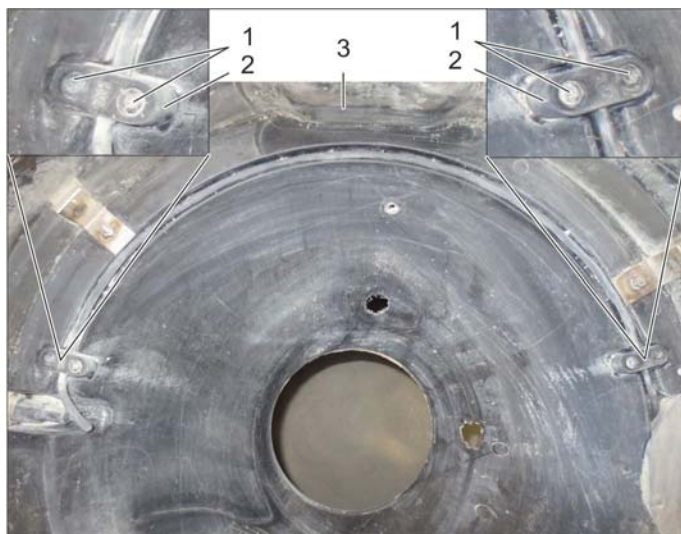
No special functional characteristics.

040 Service activities

Note

Unless otherwise described, the installation takes place in reverse order.

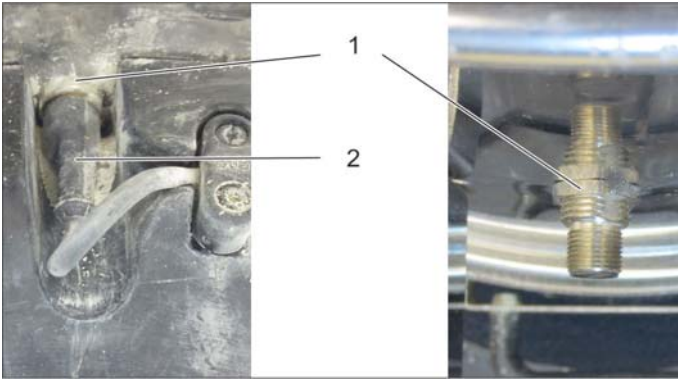
AHFS Uninstall / install filling level sensor



■ *ACSK Uninstall / install suction head*

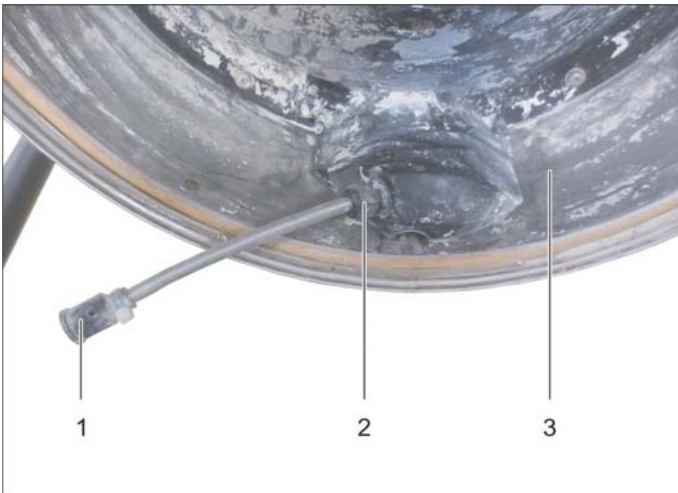
- 1 Bracket filling level sensor
- 2 Screws
- 3 Intermediate ring

- ➔ Unscrew the screws.
- ➔ Remove the bracket of the filling level sensor.



- 1 Screw connection
- 2 Plug

➔ Disconnect screw connection.

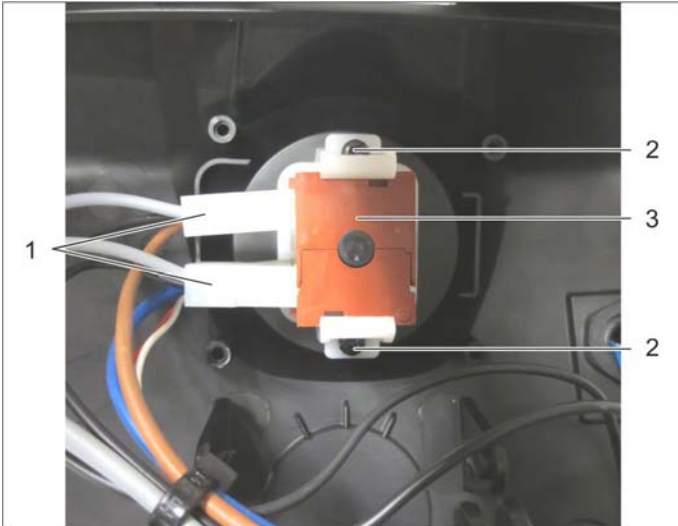


- 1 Level sensor
- 2 Union joint
- 3 Intermediate ring

➔ Unscrew the covering nut.

➔ Pull the filling level sensor out of the intermediate ring.

AHGA Uninstall / install power switch



■ ABIT Uninstall / install instrument panel

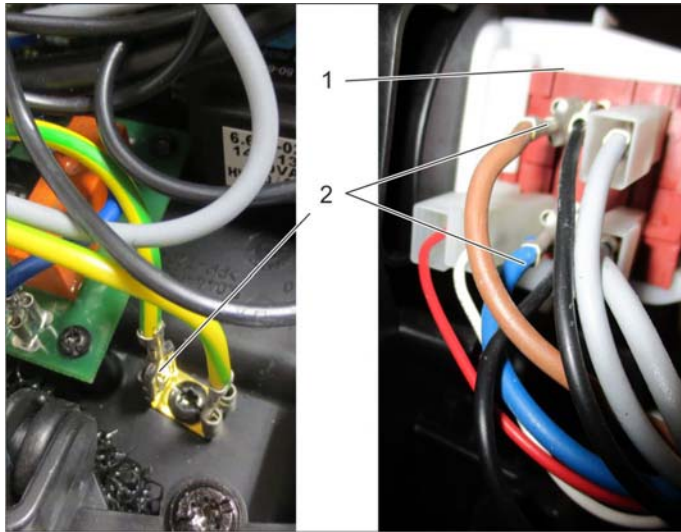
- 1 Electric socket plug connections
- 2 Screws
- 3 Power switch

➔ Separate the electric connectors.

➔ Unscrew the screws.

➔ Remove appliance switch.

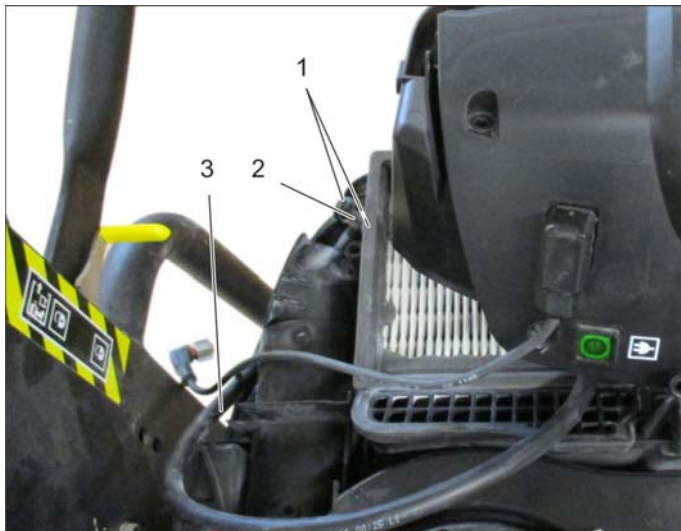
AHNK Uninstalling / installing mains cable



■ ABHA Uninstalling / installing cover

- 1 Power switch
- 2 Electric socket plug connections

→ Separate the electric connectors.



- 1 Screws
- 2 Cord grip
- 3 Mains cable

→ Unscrew the screws.
→ Remove strain relief.
→ Remove mains cable.

Note

Mind correct installation of the lines.

AHSE Uninstall / install control electronics 1



■ ABIT Uninstall / install instrument panel

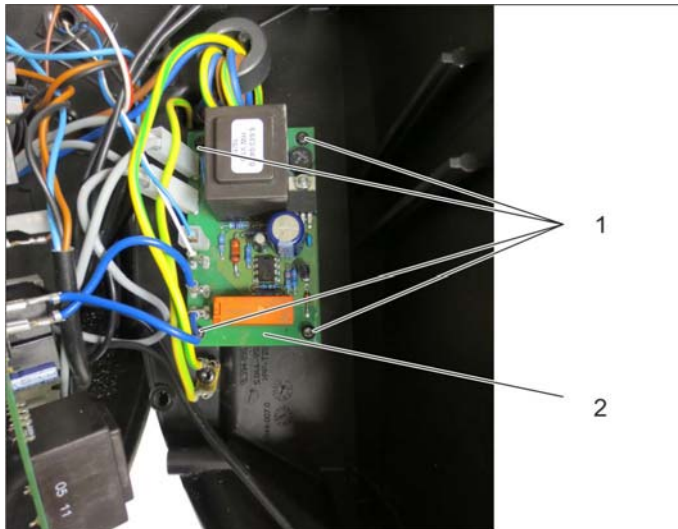
- 1 Control electronics 1

→ Disconnect all electrical connections.
→ Remove control electronics 1.

Note

Observe the connection diagram.

AHSF Uninstall / install control electronics 2



■ AHSE Uninstall / install control electronics 1

- 1 Screws
- 2 Control electronics 2

- Disconnect all electrical connections.
- Unscrew the screws.
- Remove control electronics 2.

Note

Observe the connection diagram.

050 Maintenance and inspection

Service group does not contain any maintenance and inspection points.

060 Error diagnosis

The service group does not contain any error diagnosis.

070 Peculiarities/ others

The service group does not contain any peculiarities.

Technical Documentation

Appliance type	Appliance no.	Operating instructions	Spare parts list
IVC 60/24-2 Tact ²	1.576-100.0	5.963-949.0	5.971-299.0

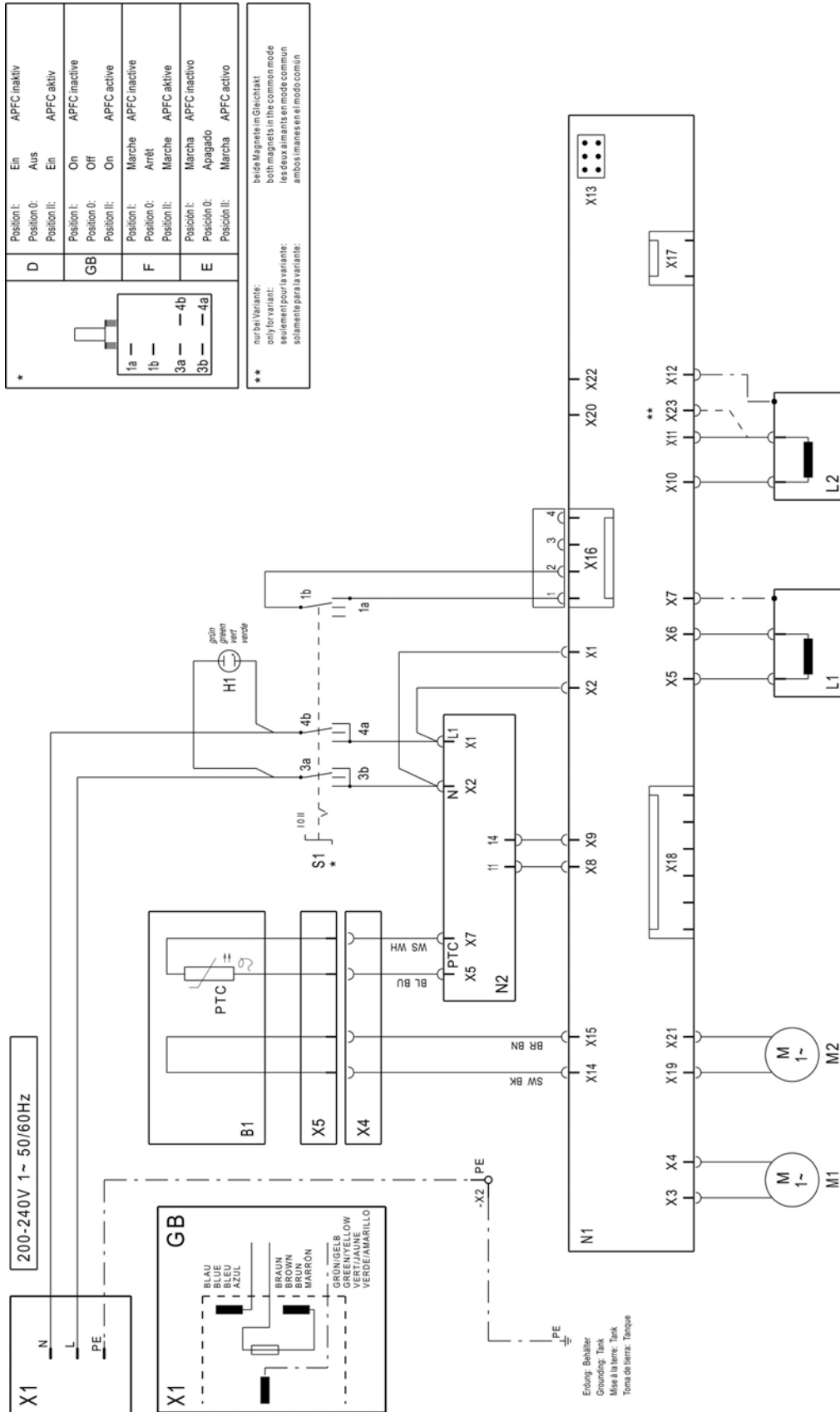
Technical specifications

		IVC 60/24-2 *EU *CH	IVC 60/24-2 *GB
Mains voltage	V	220-240	110
Frequency	Hz	1~ 50/60	1~ 50/60
Max. performance	W	2760	2450
Rated power	W	2400	2150
Container capacity	l	60	60
Air volume (max.)	l/s	2x 74	2x 66
Negative pressure (max.)	kPa (mbar)	25,4 (254)	22,0 (220)
Type of protection	--	IP X4	IP X4
Protective class	--	I	I
Suction hose connection (C-DN/C-ID)	DN	72	72
Nominal width of suction hose	DN	42/52	42/52
Length x width x height	mm	970 x 690 x 995	970 x 690 x 995
Filter area	m ²	0,95	0,95
Typical operating weight	kg	60	60
Max. ambient temperature	°C	+40	+40
Values determined to EN 60335-2-69			
Sound pressure level L _{pA}	dB(A)	73	73
Uncertainty K _{pA}	dB(A)	1	1
Hand-arm vibration value	m/s ²	<2,5	<2,5
Uncertainty K	m/s ²	0,2	0,2

Power cord	H07RN-F 3x1,5 mm ²	
	Part no.:	Cable length
EU	6.649-915.0	10 m
CH	6.650-168.0	10 m

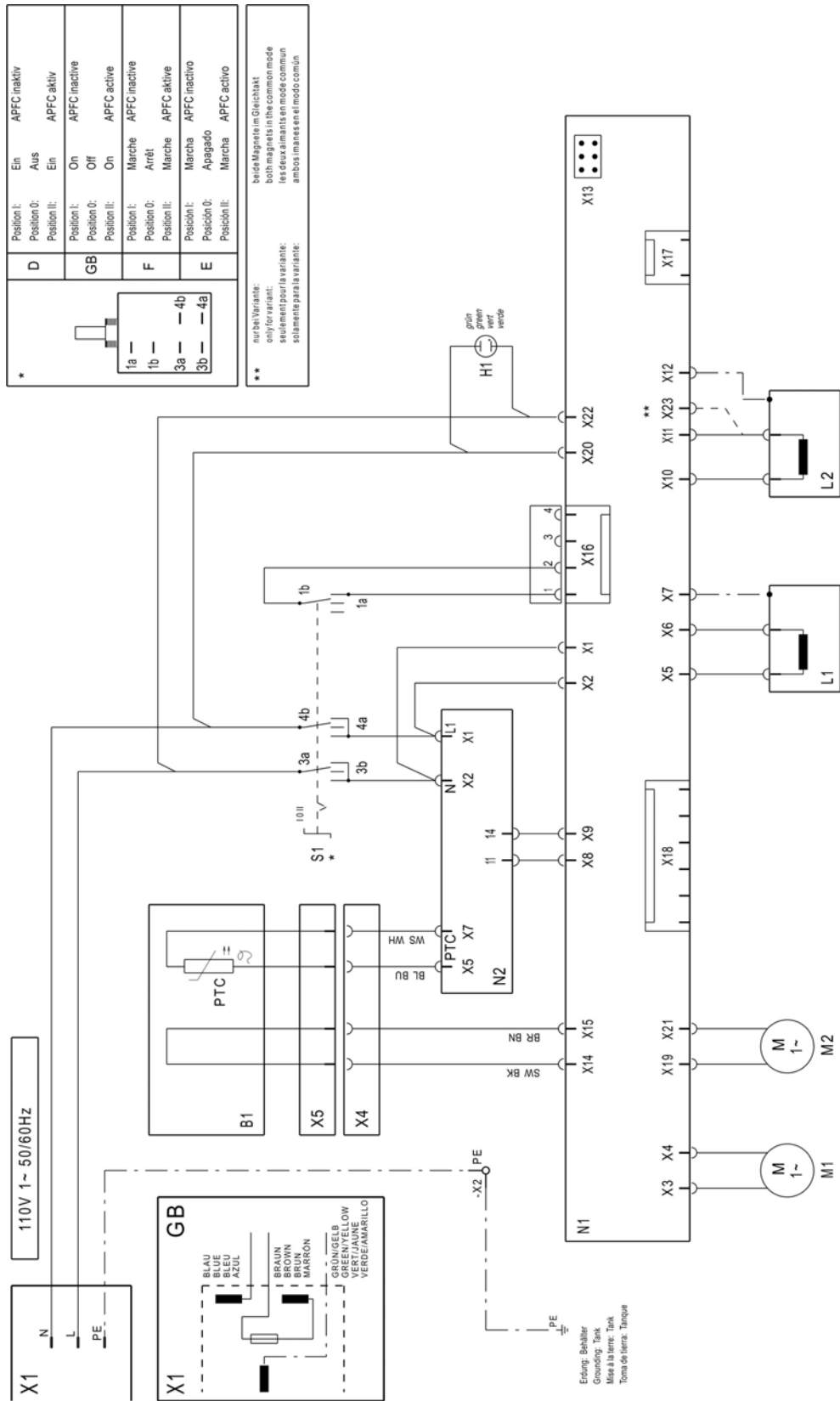
Power cord	H07RN-F 3x2,5 mm ²	
	Part no.:	Cable length
GB	6.650-169.0	10 m

Circuit diagram



* 	Position I: Ein	APFC inaktiv
	Position 0: Aus	APFC aktiv
	Position II: Ein	APFC aktiv
	Position I: On	APFC inactive
GB	Position 0: Off	APFC active
	Position II: On	APFC active
F	Position I: Marche	APFC inactive
	Position 0: Arrêt	APFC active
E	Position I: Marche	APFC inactive
	Position 0: Apagado	APFC activo
	Position II: Marche	APFC activo

** nur bei Variante: only for variant: seulement pour la variante: solamente para la variante:
bei de Magnet in Gleichtakt both magnets in the common mode
les deux aimants en mode commun
ambos imanes en el modo común



D	Position I: Ein	APFC inaktiv
	Position 0: Aus	APFC aktiv
GB	Position I: On	APFC inactive
	Position 0: Off	APFC active
F	Position I: Marche	APFC inactive
	Position 0: Arrêt	APFC active
E	Position 0: Apagado	APFC inactivo
	Position II: Marcha	APFC activo

*
1a
1b
3a
3b
4b
4a

**
nur bei Variante: beide Magnete im Gleichtakt
only for variant: both magnets in the common mode
seulement pour la variante: les deux aimants en mode commun
solamente para la variante: ambos imanes en el modo común

- B1 Level sensor
- H1 Indicator lamp
- L1 Magnet
- L2 Magnet
- M1 Suction turbine
- M2 Suction turbine
- N1 Control electronics 1
- N2 Control electronics 2
- S1 Power switch
- X1 Mains plug
- X2 Terminal strip
- X4 Plug socket contacts filling level sensor
- X5 Plug pin contacts filling level sensor