

WALPOL

Assembly and operating instructions

Speed controller type AW / AD



Version 5.1
B11

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1. General information

1.1. Note symbols



Danger

Immediate hazard

Failure to observe the warning will result in immediate death or serious injury.



Caution

Low-risk hazard

Failure to observe the warning may result in moderate injury.



Warning

Potential hazard

Failure to observe the warning may result in death or serious injury.

Important

Danger with risk of damage to property

Failure to observe the warning may result in damage to property.



Note

Useful information and instructions

2. Important safety instructions

Planners, system builders and operators are responsible for proper installation and operation in accordance with the intended use.

- Read the operating instructions completely and carefully.
- Operating instructions and applicable documents, such as electrical connection diagrams or operating instructions for the motor, must be kept with the speed controller. They must always be available at the place of use.
- Local and national laws and regulations must be observed and complied with.
- Take into account the system-relevant conditions and requirements of the system manufacturer or system builder.
- Safety devices must not be dismantled, bypassed or rendered inoperative.
- The speed controller may only be used if it is in perfect condition.
- The generally prescribed electrical and mechanical protective devices must be provided.
- Secure the installation site and the premises against access by unauthorised persons during installation, electrical connection, commissioning, troubleshooting and maintenance.
- Safety devices must not be dismantled, bypassed or rendered inoperative.
- Ensure that all warning labels on the speed controller are complete and legible.
- This appliance is not intended for use by persons (including children) with reduced physical or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.
- Children must not play with the appliance.

2.1. Personnel

The speed governor may only be operated by qualified, instructed and trained personnel. These persons must know the relevant safety regulations in order to recognise and avoid possible dangers. The individual actions and qualifications can be found in Table 1 Qualification.

Table 1 Qualification

Actions	Qualification	
Storage, operation, transport, cleaning, disposal	Trained personnel (see following instructions)	
Electrical connection, commissioning, electrical disconnection, installation, Dismantling	Qualified electricians or persons with appropriate qualifications	
Maintenance	Qualified electricians or persons with appropriate qualifications	Qualified fitters or persons with appropriate qualifications
Repairs	Qualified electricians or persons with appropriate qualifications Qualified fitters or persons with appropriate qualifications	Assembly specialist or persons with appropriate qualifications



Note

The operator must ensure that the personnel have been instructed in the operation and have understood the operating instructions. If anything is unclear, please contact Walpol or our representatives.

2.2. Personal protective equipment

Protective equipment must be worn when assembling / commissioning the speed controller.

- Protective clothing
- Safety shoes

2.3. Safety rules for working in and on electrical systems

- | | | |
|---|--|---|
| 1. Disconnect (disconnect all poles of an electrical system from live parts | 2. Secure against being switched on again
3. Check that no voltage is present | 4. Earth and short-circuit
5. Cover or isolate adjacent live parts |
|---|--|---|

- De-energise the device and secure it against being switched on again.
- Check that no voltage is present using a two-pole voltage tester.
- It is strictly forbidden to carry out work on parts that are live.
- Electrical connection only in accordance with the enclosed wiring diagrams
- Connection of the unit only on a suitable base and only on permanently laid cables.
- The unit must be closed during operation.

3. Warranty

For warranty claims to be valid, the products must be properly connected and operated and used in accordance with the data sheets.

4. Delivery, transport, storage

Safety instructions

Warning:

- For any work in the vicinity of the speed controller, protective equipment must be worn, see 2.2 Personal protective equipment,

Delivery

- Each speed controller leaves our factory in perfect electrical and mechanical condition. It is recommended that the speed governor be transported to the installation site in its original packaging.

Check delivery

- Check the packaging for transport damage. Any damage must be noted in the cargo manifest.
- Check that the delivery is complete.

Unpacking



Warning

When removing the transport packaging, there is a risk of damage from sharp edges, nails, staples, splinters, etc.

- Unpack the speed governor carefully.
- Check the speed governor for obvious transport damage.
- Do not remove the packaging until shortly before assembly.
- Wear protective equipment when carrying out any work in the vicinity of the speed governor, see 2.2 Personal protective equipment

Transport

Safety instructions

Warning: Electrical or mechanical hazard due to fire, moisture, short circuit or malfunction.

- In the case of open transport, ensure that no water can enter the speed controller.
- It is recommended that the speed controller be transported to the installation site in its original packaging.

Storage

- Store the speed controller in its original packaging in a dry, dust-free place protected from the weather.
- Avoid exposure to extreme heat or cold.
- Store in the temperature range -5°C to $+50^{\circ}\text{C}$

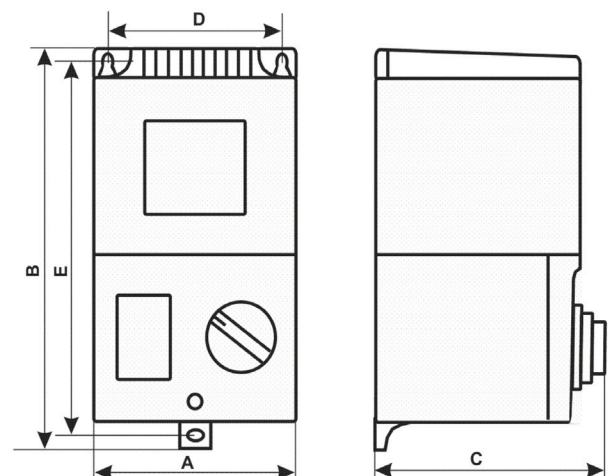
5. Description

5.1. Speed controller type AW (230V)

- The speed controllers of type AW are intended for use as speed controllers for single-phase fans with voltage-controllable motors.

Type	Voltage	Operating data UR[V] / IR[A]					Fuse T
		1	2	3	4	5	
3 AW	230 V	70/1,5	85/1,8	105/2,2	145/2,7	230/3,0	3,15A
5 AW	230 V	80/4,0	105/4,3	135/4,6	170/5,0	230/5,0	6,3A
7 AW	230 V	80/6,0	105/6,3	135/6,6	170/7,0	230/7,0	8,0A
10 AW	230 V	80/6,5	105/7,5	135/8,5	170/10,0	230/10,0	12,5A
14 AW	230 V	80/8,0	105/9,5	135/11,0	170/12,5	230/14,0	16,0A

Type	Dimensions in mm		
	A x B x C	D x E	°
3 AW	105x200x115	80x165	M5
5 AW	146x272x150	113x255	M6
7 AW	146x272x150	113x255	M6
10 AW	146x272x150	113x255	M6
14 AW	146x272x150	113x255	M6



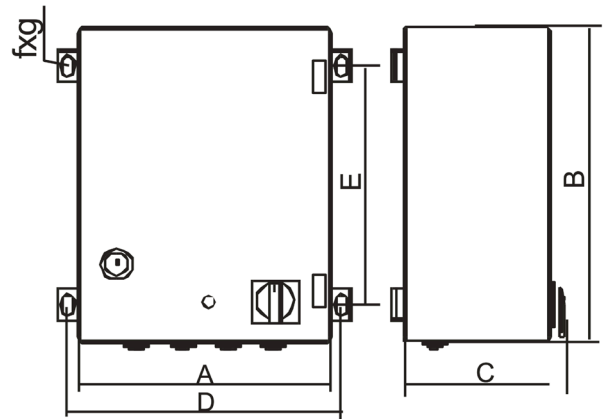
Protection class of enclosure	IP54
Temperature class	ta 40B
Protection class	II
Fuse protection	<ul style="list-style-type: none"> protected against occasional overload (ARW3,0-7/S) Fine-wire fuses in external circuit, Fuses internal to the control +TK Electronic system for temperature sensors in the motor
Conformity with standard	PN-EN61558-2-13

5.2. Speed controller type AD (380V)

- The speed controllers of type AD are intended for speed control of three-phase fan motors.

Type	Voltage	Control stages UR[V]					IR[A]
		1	2	3	4	5	
5 AD	3x400V	3x95	3x145	3x190	3x240	3x400	max 5,0A
8 AD	3x400V	3x95	3x145	3x190	3x240	3x400	max 8.0A
10 AD	3x400V	3x95	3x145	3x190	3x240	3x400	max. 10.0A

Type	Dimensions in mm			Weight kg
	A x B x C	D x E	f x g	
5 AD	300x300x185	315x190	15x6,5	20
8 AD	300x300x185	315x190	15x6,5	24
10 AD	400x300x215	415x190	15x6,5	35



Protection class of the housing	IP43
Temperature class	ta 25B
Protection class	II
Fuse protection	<ul style="list-style-type: none"> Fuses in the external circuit Electronic TK-Circuit for the heat sensors in the motor
Conformity with the standard	PN-EN61558-2-13

6. Installation



Note

This is not a ready-to-plug-in unit.

After installation as intended, this is a component in a system. The system as a whole must be installed in accordance with the relevant regulations. The VDE and EVU regulations must be observed. If necessary, the installer must coordinate the effect of this unit on the function of a ventilation and heating system with the system planner and the system operator.

- The manufacturer reserves the right to make changes to the unit or documentation without prior notice, e.g. to improve performance.**
- The manufacturer is not liable for damage caused by misuse, improper use, incorrect use or as a result of unauthorised repairs/modifications.**
- Before installation, check the surface for load-bearing capacity - Attention - do not mount directly on kitchen bonnets!
- Take all static and dynamic loads into account.

- The controller must be screwed to a flat surface (e.g. wall) using suitable screws provided by the customer. CAUTION! Do not tighten the screws too "tightly" - this can damage the housing and affect the stability of the housing!
- Connect the unit only to permanently laid cables.
- Electrical connection only in accordance with the currently valid VDE and EN directives as well as TAB's (Technical Connection Conditions) of the regional power supply companies
- Please note that the permissible ambient temperature of the controller (approx. 25°C) must be observed.
- Open the controller housing by loosening the screws of the cover incl. grommets.
- Pull the cables through the grommets.
- The connection must be carried out according to the wiring diagram.
- Before closing the cover, position the internal cables correctly.
- Installation fuses must be installed in the external mains supply circuit.

General safety instructions

- Installation may only be carried out by appropriately qualified persons, for details, see Table 1 Qualification.
- Take into account the system-relevant conditions and requirements of the system manufacturer or system builder.
- Safety devices must not be dismantled, bypassed or rendered inoperative.
- There is a risk of electric shock when installing a live controller.
- The maximum continuous current of the consumer must not exceed the current IR for which the controller is designed in the respective control stages.

Prerequisites

- Make sure that the speed controller and all its components are undamaged.
- Make sure that there is sufficient space for mounting the speed controller.
- When mounting, protect the unit from dust and moisture.
- Make sure that the information on the type plate (speed controller and motor) corresponds to the operating conditions.
- Mount the speed controller so that there is sufficient access for troubleshooting, maintenance and repair work.

7. Electrical connection



Warning

Danger due to electrical voltage!

- The safety rules must be observed, see Safety rules for working in and on electrical installations
- Prevent water from entering the terminal box.
- The electrical connection may only be carried out by suitably qualified persons, for details see. Table Qualification

Warning: Danger due to electrostatic influence of medical implants!

- Persons with medical implants should keep sufficient distance to the corresponding devices.

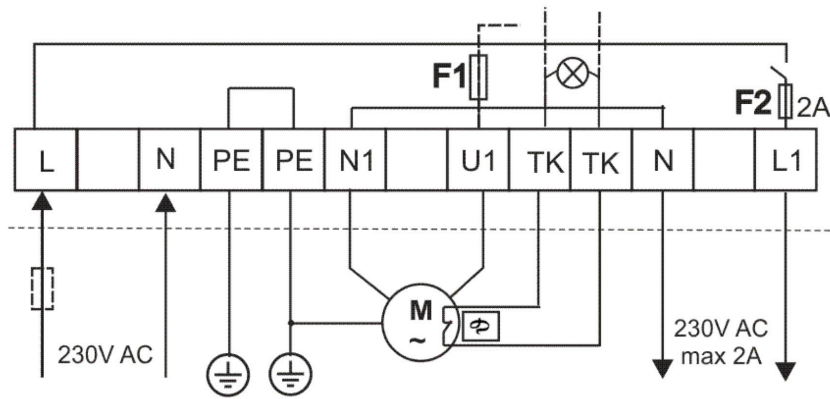
Regulations:

- Accident prevention regulations VGB, BGV A3, TRBS
- DIN VDE 0100, DIN VDE 0105
- EN 60730 (Part 1)
- Regulations (TAB's) of the local VNB
- As well as generally recognised rules of technology.

7.1. Speed controller type AW (230V)

- The max. continuous current in the consumer should be lower than the IR current, the values given in the table.
- The T-fuses must be replaced inside the control unit after opening the housing and switching off the supply voltage.

Wiring diagram and terminal assignment (230V)



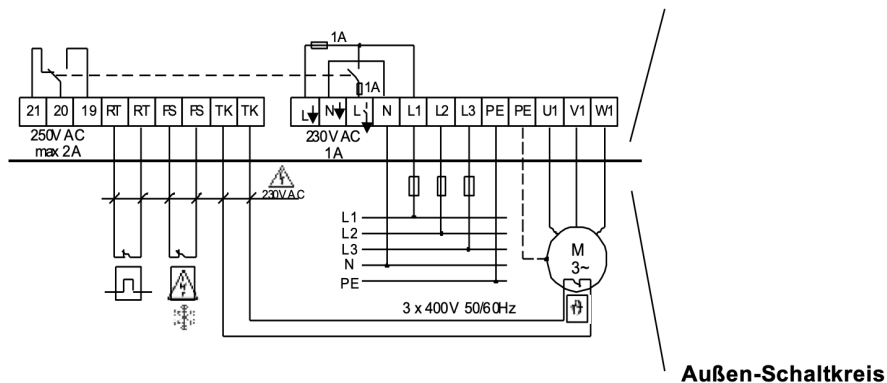
Note: If the contacts TK/TK - are not used, a jumper must be set.

In this case, we recommend a motor protection switch.

7.2. Speed controller type AD (380V)

- The maximum continuous current of the load must not exceed the current IR for which the controller is designed in the respective control stages.
- The 1.0 A fuses in the controller must be replaced after the mains voltage has been switched off and the cover has been opened.

Wiring diagram and terminal assignment.



Klemmen

Außen-Schaltkreis

L1, L2, L3: 3x400V 3N~ 50/60Hz U1,V1,W1: 3x/400-240-190-145-95-0/V

↓ L, N: 230V 1A nicht abschaltbar 1,0 A

↓ L, N: 230V 1A abschaltbar 1,0 A

FS – Frostschutzthermostat RT – Raumthermostat TK – Thermokontakte des Motors

19, 20, 21 – potenzialfreie Kontakte 250 V, 2,0 A

Note: If the contacts FS/FS + RT/RT + TK/TK - are not used, a jumper must be set.

no TK/TK = In this case we recommend a motor protection switch.

8. Commissioning

The warranty is only valid if commissioning has been carried out correctly and written proof of this has been provided. Terminal assignment

Safety instructions

Commissioning may only be carried out by appropriately qualified persons, for details see table Qualification

Requirements

- Assembly and electrical connection have been completed properly.
- Residual material from the installation and foreign bodies have been removed from the speed controller and the ducts.
- Check the speed controller for visible damage before switching it on and ensure that the protective devices are functioning properly.
- The cable glands have been tightened firmly.
- The data on the type plate correspond to the connection data.

9. Disposal

- Ensure that the material is recycled. Observe the national regulations.
- The unit and the transport packaging consist mainly of recyclable raw materials.

10. Spare parts

- Only use original spare parts from Walpol!
- When ordering spare parts, state the serial number of the speed controller. This is indicated on the type plate.

11. EU Declaration of Conformity

DEKLARACJA ZGODNOŚCI DECLARATION OF CONFORMITY

(znak handlowy/
trade mark)



(dostawca /
supplier)

BREVE-TUFVASSONS Sp. z o.o.
PL 93-347 Łódź, ul. Postępowa 25/27
Tel.: +48 42 6401539 Fax.: +48 42 6401541

Niniejszym deklarujemy, że następujący wyrób:
Declare, that the electrical product:

Autotransformatory obudowane
(nazwa wyrobu / name)

ARW /S
(typ wyrobu / type or model)

Zakres prądów SEC: 1,5-14 A
(opis wyrobu / product description)

spełnia wymagania norm:

to which this declaration relates is in conformity with the following standards:

PN - EN 61558-1 PN - EN 55 014-1 PN - EN 55014-2
PN - EN 61558-2-13 PN - EN 61 000-3-2 PN - EN 61 000-3-3

i jest zgodny z postanowieniami dyrektyw : LVD - 2014/35/UE , EMC - 2014/30/UE
following the provisions of LVD-2014/35/UE , EMC - 2014/30/UE directives:

Wyrób jest oznaczony znakiem **CE** od 05.2004r.
The product is CE-marked in

Zbigniew Wandzel / Dyrektor/Managing Director

Łódź, 21.04.2016r.
(data i miejscowość / place, date)

Breve-Tufvassons Sp. z o.o.
PL 93-347 Łódź, ul. Postępowa 25/27
(podpis i stanowisko sygnatariusza
signature, name and function the signatory)

DEKLARACJA ZGODNOŚCI DECLARATION OF CONFORMITY

(znak handlowy/
trade mark)



(dostawca /
supplier)

BREVE-TUFVASSONS Sp. z o.o.
PL 93-347 Łódź, ul. Postępowa 25/27
Tel. +48 42 6401539 Fax: +48 42 64015341

Niniejszym deklarujemy, że następujący wyrób:
Declare, that the electrical product:

Autotransformatory obudowane
(nazwa wyrobu / name)

A3RW
(typ wyrobu / type or model)

Zakres prądów SEC: 1,5-14 A
(opis wyrobu / product description)

spełnia wymagania norm:

to which this declaration relates is in conformity with the following standards:

PN - EN 61558-1 PN - EN 55 014-1 PN - EN 55014-2
PN - EN 61558-2-13 PN - EN 61 000-3-2 PN - EN 61 000-3-3

i jest zgodny z postanowieniami dyrektyw : LVD - 2014/35/UE , EMC - 2014/30/UE
following the provisions of LVD-2014/35/UE , EMC - 2014/30/UE directives:

Wyrób jest oznaczony znakiem **CE** od 09.2010r.
The product is CE-marked in

Zbigniew Wandzel / Dyrektor/Managing Director

Łódź, 21.04.2016r.
(data i miejscowość / place, date)

Breve-Tufvassons Sp. z o.o.
PL 93-347 Łódź, ul. Postępowa 25/27
(podpis i stanowisko sygnatariusza
signature, name and function the signatory)

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