

ebmpapst

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Installation and Maintenance Instructions and Guarantee



Safety information

- Installation, commissioning and electrical installation are only to be performed by trained service personnel and in accordance with the latest IEE regulations.
- Check that the details given on the fan data plate agree with the supply voltage and frequency. Only operate within these ranges.
- Designer, manufacturers or operators are responsible for proper and safe installation as well as for safe operation.
- Safety features, e.g. guard grilles, are not to be dismantled, circumvented or made inoperative.
- Allowable testing voltage for thermistors max. 2.5v.
- For motors without temperature monitors, it is imperative that a motor cut-out switch should be employed.



Operating conditions

- Do not operate the fan in an explosive atmosphere (except for certified fans).
- Switching frequency:
 - The fan is rated for S1 continuous operation.
 - Controls must not allow extreme switching operation.
- All products are high voltage tested more than once during manufacture. Additional high voltage testing is not recommended as it will cause permanent damage to the insulation and may lead to reduced operating life.



Transport, storage

- Fans and motors are packaged at the factory to comply with requirements for the agreed mode of transport.
- Transport the fan(s) either in the original packaging or using the transport fixtures provided (housing flange, mounting brackets, bored holes in the motor housing to screw in lifting eye bolts). Use suitable lifting equipment.
- Do not lift the fan by the connecting cable or fan impeller.
- When transporting manually, please refer to EC guidelines for recommended maximum weight.
- Avoid excessive vibration and shockloads.
- Watch out for any damage to the packaging or the fan.
- Store the fan in the original packaging in a dry area protected from the weather or protect it from dirt and weather until final installation.
- Avoid exposure to extreme heat and cold.
- Avoid excessive storage periods (we recommend a one year max.) and inspect the motor bearings for proper operation prior to installation.



Installation

Installation, electrical connection and commissioning are only to be performed by trained service personnel. Adhere to all machinery-related requirements and specifications supplied by the system manufacturer or machine builder. Failure to comply will invalidate the guarantee on our fans and accessories.

- The following applies for all fans:
 - Do not install without adequate support.
 - Flange and mounting bracket must be fixed flat on a level surface.
 - Do not apply force (levering, bending).
 - Ensure that the clearance (gap) between the fan impeller and the stationary housing section is constant.
 - Secure all connection points with a suitable fastener.
 - Secure bolted connections with a locking compound.
 - If the motors are mounted with the shaft in the vertical position, the condensation drain holes, where fitted, underneath the shaft must be open.
- The following applies for all motors/fans with terminal boxes:
 - Do not use metal compression-gland fittings with plastic terminal boxes.
 - Use a dummy plug seal for the compression-gland fitting as well.
 - For operation under extreme conditions (damp operating environment, open-air installation) use pre-installed sealing elements.
 - Depending on the type of cable gland, attach a water drain sleeve or use a sealing compound.
 - Secure fan connection cable to the contact protection grille, the motor struts or the rear wall of the housing with cable fasteners.

Installation cont'd

- Most ebm-papst motors have internally wired motor protection devices. Some have thermal contact connection leads brought out of the motor. These open the circuit when the motor overloads. They are wired to a terminal strip or brought out as flying leads and are marked TK. These must be connected to a suitable motor protection device.
- Where capacitors are not supplied by ebm-papst UK Ltd, capacitors used must be rated at 400 VDB minimum and have rated operation life exceeding 30,000 hours at 400 VDB. Capacitor classification HPFMS.
- For control equipment refer to and following the safety instructions supplied with the equipment.
- Where EC fans are being installed refer to the specialist instructions supplied with the fan. EC products have part numbers starting with A3G, S3G, W3G, R3G, G3G, D3G.



Operation

- Before initial operation, check the following:
 - Installation and electrical connection have been properly completed.
 - Safety equipment is in place (Contact protection).
 - All left over installation materials and other foreign materials have been removed from the fan cavity.
 - Protective conductor has been connected.
 - Temperature monitor motor cut-out switch has been properly installed and is operational.
 - Cable glands, where fitted, are sealed (see 'Installation').
 - Installation position and ensure the condensation drain holes, if fitted, are positioned correctly to allow condensation to drain from the motor.
 - Connection data complies with the specifications on the type plate.
 - Motor operating capacitor data complies with the specifications on the type plate.
- It is important to ensure the correct direction of rotation. Some products cannot be operated in reverse without damaging the motor. If you are unsure, please consult the relevant catalogue.



Maintenance, service

The following points must be observed when performing any maintenance or service operation:

- Fan impeller has come to a standstill.
- Power supply interrupted and secured against restoration.
- Observe personnel safety regulations.
- Keep fan way open; use a cleaning brush as necessary:
 - Regular cleaning helps prevent motor imbalance.
 - Under no circumstances is a high-pressure cleaner ('steam jet') to be employed.
- **Do not bend fan blades.**
- Take note of abnormal operating noise.
- All motors are fitted with 'Sealed for Life' ball bearings or pre-lubricated sleeve bearings which require no attention.

Guarantee

In the event of any goods supplied by the Company being found to be defective the Company shall, subject as hereinafter provided, be responsible only for the repair or (at its discretion) replacement of the goods 'free of charge' for labour and materials. All other claims (including claims for consequential loss but excluding other claims for death or personal injury) relating to any express or implied warranties as to merchantable quality and fitness for purpose of the goods shall be excluded. The liability of the Company hereunder shall cease after expiry of 12 months from the date of delivery and shall in any event only arise on condition that:

- a) The goods shall not have been overloaded nor had any improper use made of them.
- b) The goods shall have been installed in accordance with the wiring and installation instructions provided and the Company shall be given access to verify the same.
- c) The correct electrical supply specified shall have been used.
- d) No unauthorised repairs shall have been made to the goods.
- e) The goods shall have been returned, carriage paid, to the company or its appointed distributor.

Manufacturer service address

Our products are manufactured in compliance with applicable international standards and regulations.

If you have any queries regarding the use of our products, or if you are planning a special application, please contact:



ebm-papst UK Ltd
Chelmsford Business Park
Chelmsford
Essex CM2 5EZ

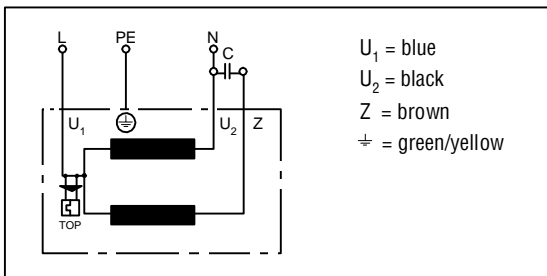
Telephone: 01245 468555

Facsimile: 01245 466336

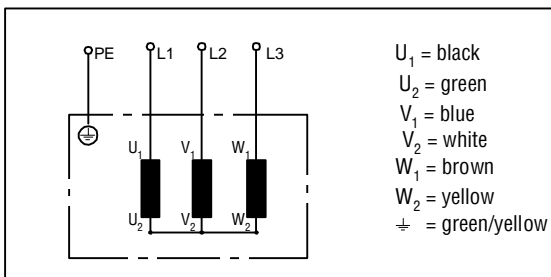
Website: www.ebmpapst.co.uk

Electrical connections AC

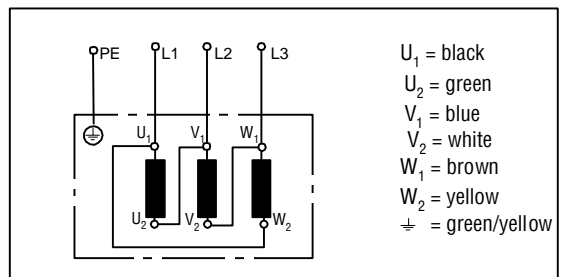
Single-phase capacitor motor



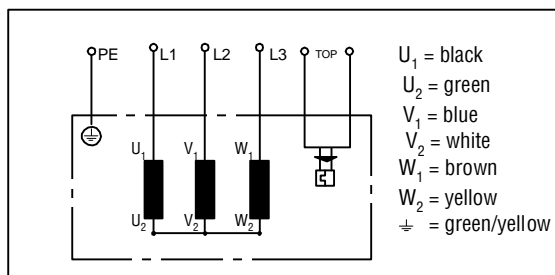
3-phase motor in star connection



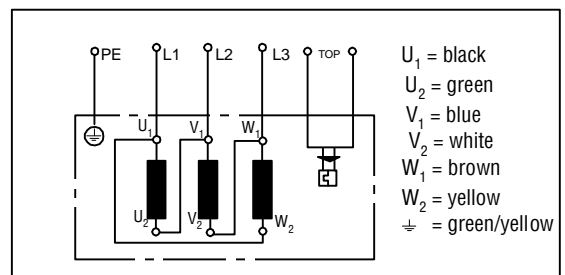
3-phase motor in delta connection



3-phase motor with T.O.P. in star connection



3-phase motor with T.O.P. in delta connection



ebmpapst

Shaded Pole

Designation

L	black
N	black
E	green/yellow

DC Motors

Designation

+ supply	red
- 0V ground	blue
sensor signal	white
control input	yellow (or purple)

EC Motors

Designation

L	brown
N	Blue
E	green/yellow
+10V DC output	red
0-10V / PWM control input	yellow
-0V ground	blue
Sensor signal	white

Other connection systems

For connection system other than above e.g. EC motors with terminal block connection refer to either the catalogue or specialist instructions supplied with the product.