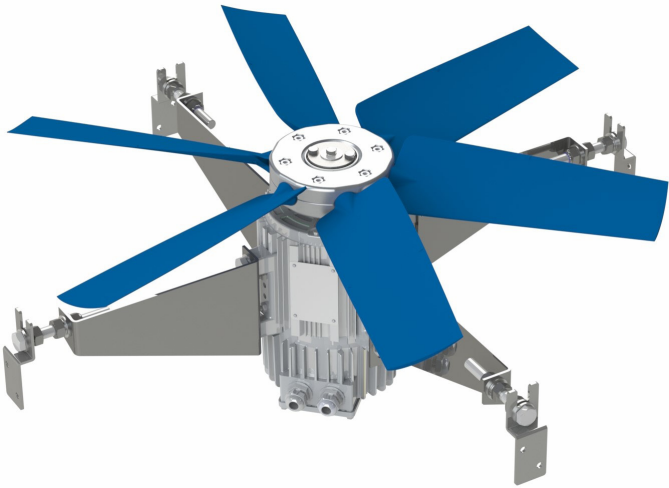




AGRI-MAX HAF EC

Installation & Maintenance

AGRI-MAX HAF EC

Installation Instructions

Installation and Maintenance Instructions.

THESE INSTRUCTIONS MUST BE READ FULLY BEFORE COMMENCING INSTALLATION.

Owner / installer: The life of this apparatus and its efficiency will be increased if its use and maintenance is carried out in accordance with these instructions and current statutory requirements. The installation and initial adjustments should be carried out by a qualified and competent technician, ensuring the correct PPE is used at all times. Elta should be consulted before substituting or fitting parts from another manufacturer. It is the responsibility of the installer to verify that the installation is in accordance with all current statutory requirements and the owner is given the current User's Manual.

Any modifications to the fan or its installation, even the smallest modification, change or elimination of security components or pieces that influence the efficiency or loss of ventilation, will result in the CE Certification and Elta's warranty being cancelled.

Please note the following indicators used within this document:

WARNING: Hazards associated with electric current and high voltages.

IMPORTANT: Important information.

Elta's policy is one of continual improvement and the right to change a specification at any time without notice is reserved. Whilst every care has been taken to ensure that the contents of this document are correct at time of publication, Elta shall be under no liability whatsoever in respect of such contents.

Elta cannot guarantee the operation of any equipment unless all documented instructions are complied with, without variation.

1. General

WARNING: Insulation Resistance Testing. Before performing insulation resistance testing, it is crucial to disconnect all EC products from the circuit. Failure to do this can damage the sensitive electronics within these products and is not covered by warranty.

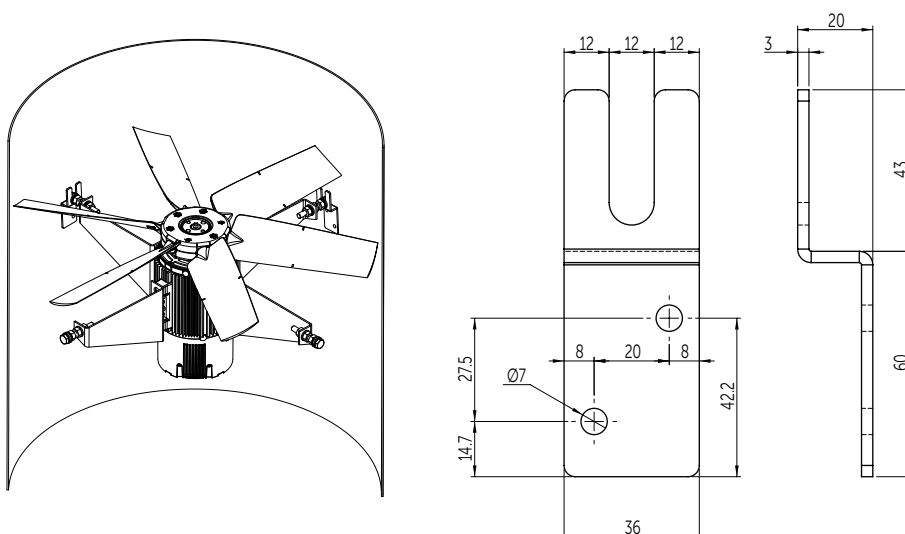
- 1.1 It is important these Installation and Maintenance Instructions are fully adhered to.
- 1.2 Full details of the unit supplied are shown on the product nameplate. If in doubt about any detail contact Elta or its agents for clarification.
- 1.3 All electrical installation must be carried out by suitably qualified and competent personnel in accordance with all current statutory requirements.
- 1.4 These instructions cover only the Elta product as supplied for incorporation into a wider system. This product is not intended to be operated on its own. The supply and installation of any necessary safety measures (e.g. adequate guarding of rotating parts and proper electrical isolation) must be carried out by the system integrator or installer before the product is put into service.
- 1.5 Any declarations made by Elta about product installation and safety, are dependent on the fan equipment being used within installations which themselves meet the requirements of the relevant Standards and Directives of your region.
- 1.6 The fan is designed for use in an ambient temperature of -20°C up to a maximum of +70°C, speed controlled operating temperatures of -20°C and +50°C and up to 95% relative humidity. EC fans are designed for ambient temperatures up to +60°C. The fan is not suitable for corrosive or explosive atmospheres.
- 1.7 The installer should provide easy access to the fan to facilitate future maintenance.
- 1.8 The installer should ensure the fan is adequately supported.
- 1.9 This product is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the product by a person responsible for their safety. Children should be supervised to ensure that they do not play with the product.

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2. Installation

- 2.1 The Agri-Max EC range of fans is normally supplied assembled.
- 2.2 Upon receipt, the fan equipment should be visually inspected to check for any damage. Ensure that the impeller is free to rotate.
- 2.3 If there are any queries concerning the fan equipment, Elta should be contacted prior to the installation.
- 2.4 The fan must be mounted securely in position.
- 2.4.1 **Replacement** - Lift the fan sub assembly into place, locating arms in to the Chimney mounting brackets. Tighten arm to bracket fixings. Ensure impeller is centrally located in the chimney and free to rotate
- 2.4.2 **New install** - Using the Chimney mounting brackets supplied, mark and drill the Chimney at 90 degree intervals (such that the bottom of the bracket is 130mm from the bottom opening) with 8mm holes to suit two sets of M6 Fixings per bracket. Bolt the Chimney fixings in place, ensuring the Form C washers are on the outside, spreading the weight. Loosen all 3 nuts on each mounting arm and lift the fan sub assembly into place, locating bolt heads into the Chimney mounting brackets. Tighten bolt to bracket with first nut on each arm. Ensure impeller is centrally located in the chimney by adjusting the pair of nuts either side of the mounting arm returns, then check it is free to rotate. Tighten the nuts either side of the mounting arm returns to secure assembly.



IMPORTANT: Do not use the impeller as a lifting or leverage point.

- 2.5 Check the details on the motor rating plate to ensure that the correct power supply (voltage, current, frequency and phase) is available. An incorrect power supply or overload setting will lead to permanent damage to the fan motor.
- 2.6 Refer to the appropriate wiring diagram. Ensure that all earth connections are made.
- 2.7 Means for electrical disconnection must be incorporated in the wiring installation in accordance with the relevant wiring and electrical regulations.
- 2.8 Precaution must be taken to locate the exhaust discharge terminal so as to avoid the backflow of gases into the room from the open flue of gas or other fuel burning appliances.
- 2.9 If the fan is being used through a speed regulation device (149-POT 10), please refer to the relevant control device instructions.

3. Start Up

- 3.1 Before power is supplied to the unit, check that the wiring is correct as per the fan connection diagram.
- 3.2 At initial start-up, check that impeller rotation and airflow direction is correct.
- 3.3 Check that the motor amperage drawn does not exceed the nameplate rating.
- 3.4 Minimum interval between consecutive starts: 5 minutes.
- 3.5 Maximum 1 connection from power supply cycle per 5 minutes.

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Installation Instructions

4. Fan Maintenance

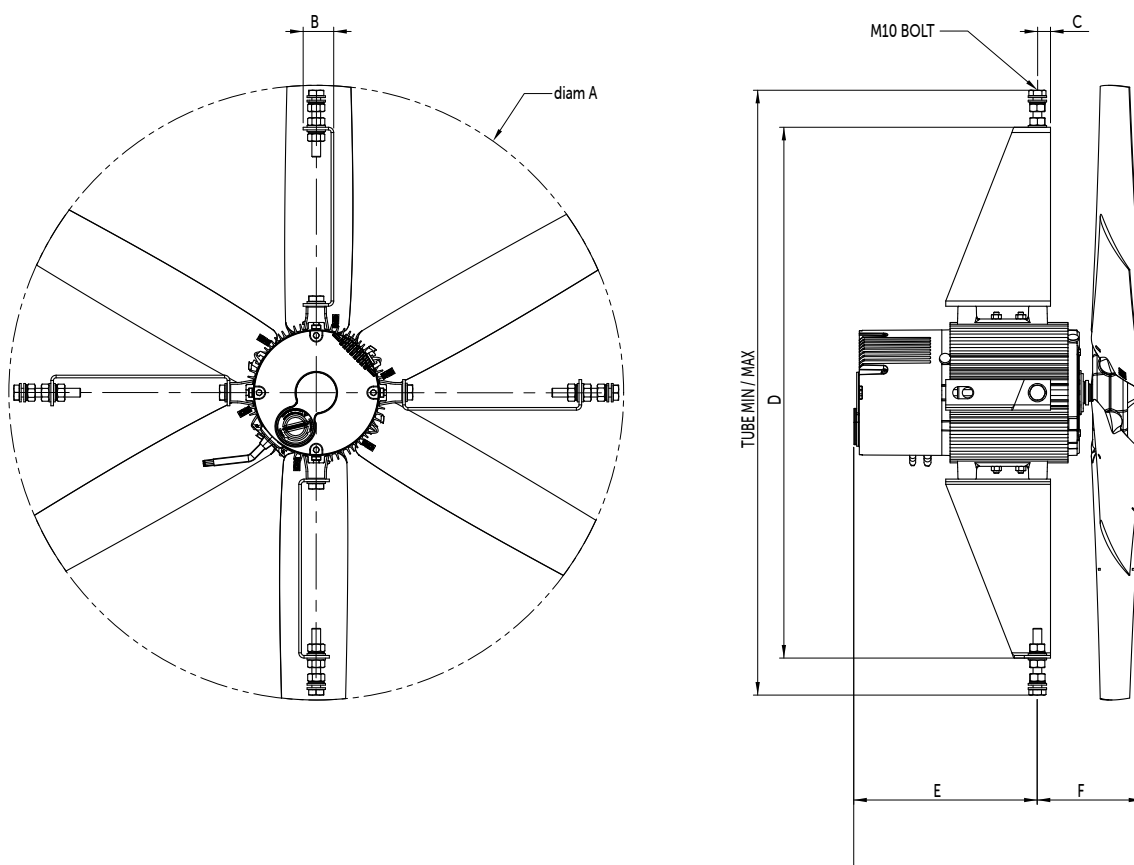
- 4.1 Inspection of the fan at least once every 3 months is recommended to ensure that the motor, fan blades, and supporting guards, are clean. Any build-up of dust and deposits on the blades or guards should be removed using a non-abrasive cleaner.
- 4.2 All fastenings including electrical should be checked for tightness. In addition, all rotating items should be checked.
- 4.3 Bearings are of the 'sealed for life' type and will not need a detailed inspection.

WARNING: The EC fan has internal electronic overload protection. Once the motor cools down the fan may start unexpectedly. Only a suitably qualified and competent person may carry out maintenance after the electrical supply has been isolated.

5. Dimensional Data

Product Code*	A	B	C	ØD	E	F
HAF7101EC	704	35	15	608	210	120

Dimensions in mm.



710mm unit will fit any 698-766mm tube or chimney.

You may need to use the included mounting hardware if the fan is not compatible with your existing mountings.

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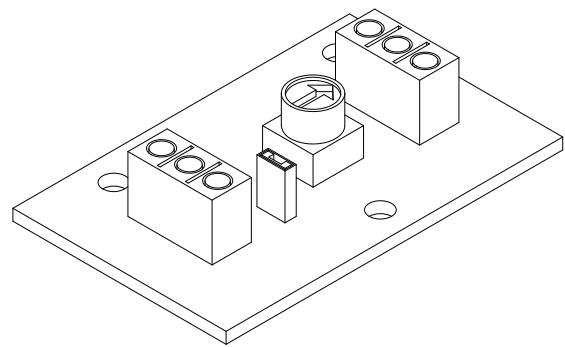
Installation Instructions

6. Wiring

- 6.1 Check that the fan unit supplied is suitable for the supply voltage and type of fan being replaced.
- 6.2 Remove the terminal plate on the motor which will provide access to the terminal connections. A suitably qualified and competent person should carry out the electrical installation in accordance with the current applicable regulations, in particular IEE 552-01-02/03. Particular attention should be paid to the connections of the capacitor.

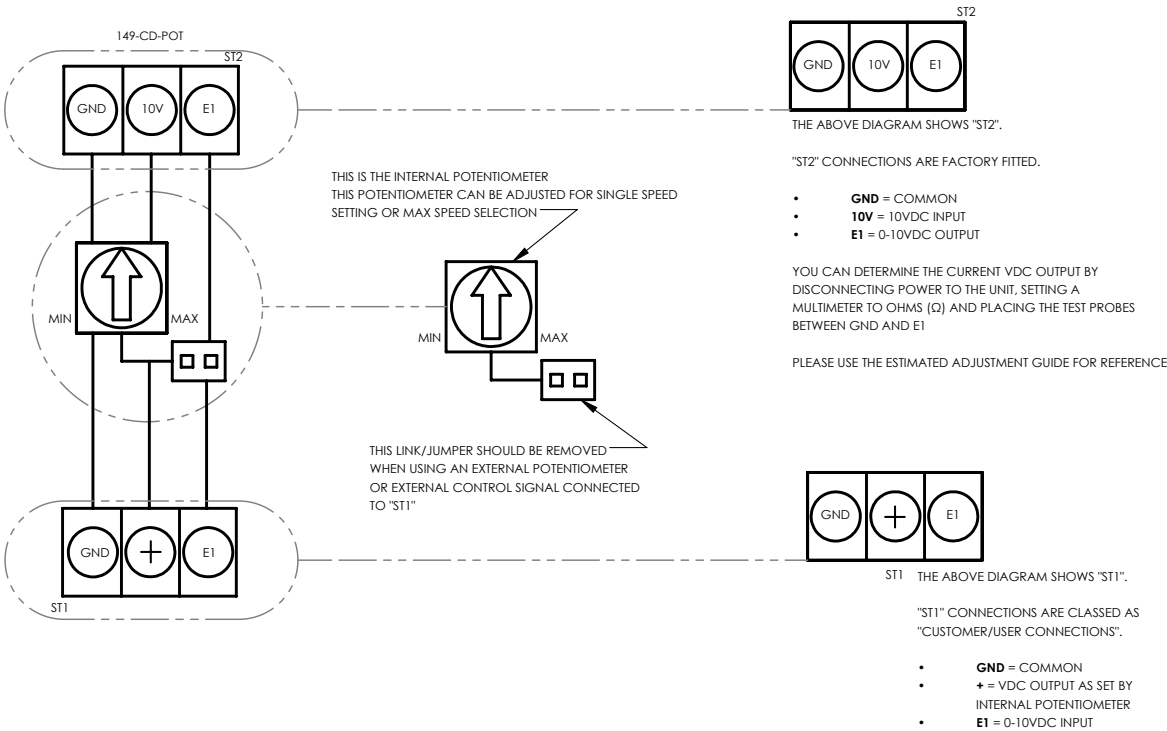
Level/Speed	Control Voltage (V)
10	10 (Ω)
9	9 (Ω)
8	8 (Ω)
7	7 (Ω)
6	6 (Ω)
5	5 (Ω)
4	4 (Ω)
3	3 (Ω)
2	1.5 (Ω)
1	500 (Ω)
0	1 (Ω)

149-CD-POT



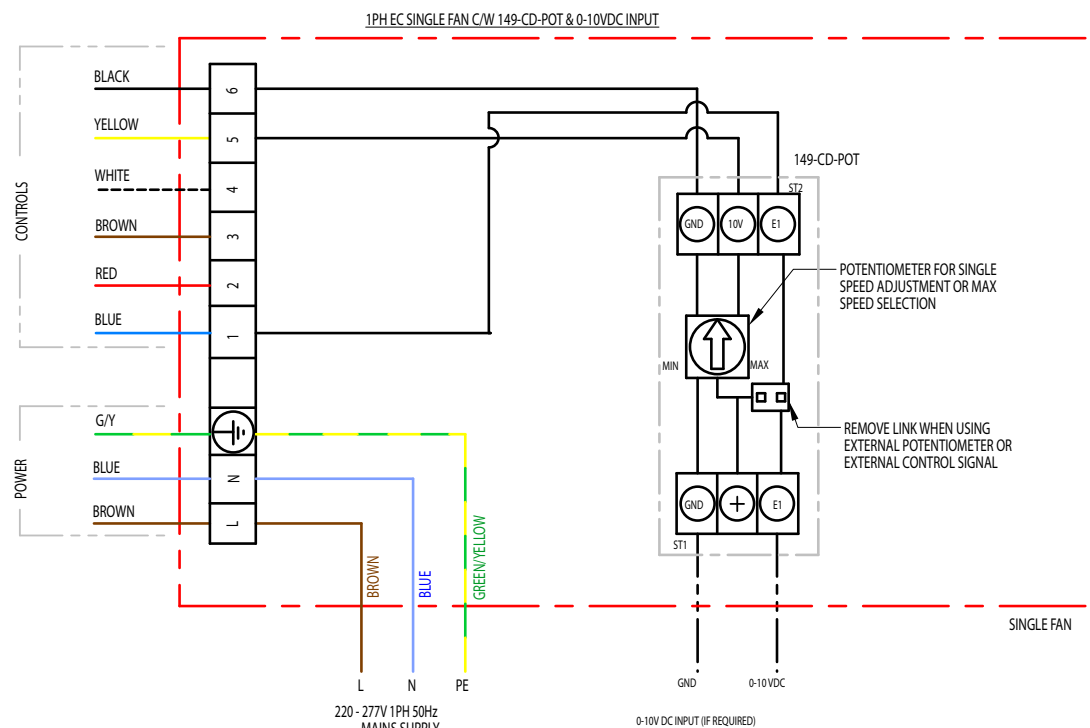
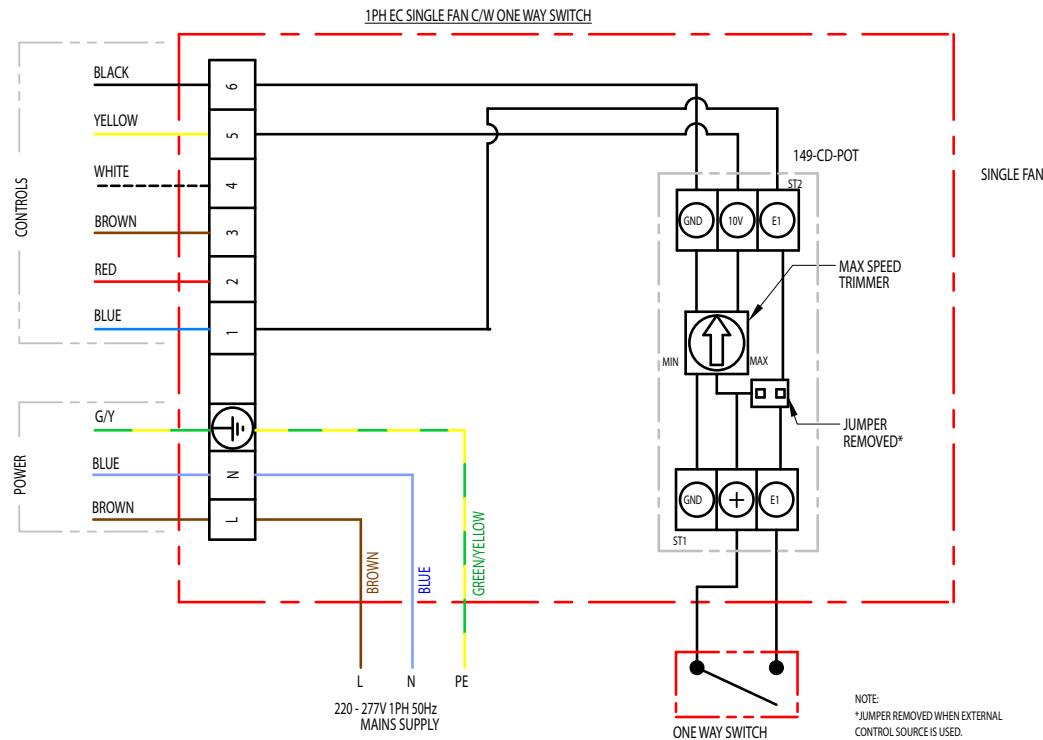
Please note: This is an estimated adjustment guide

The 149-CD-POT is a commissioning device designed to be used with our EC range of fans. The device will allow the for the installer to set the maximum operating speed of the fan that it is connected to. The installer or commissioning engineer can adjust the fan speed using the potentiometer built onto the 149-CD-POT board. This potentiometer can either be used for single speed adjustment or to set a maximum speed for the fan to operate at when an external control source is used. If external speed control is required, the jumper connection next to the potentiometer on the board would need to be removed, the installer can then connect to ST1 (using the diagram provided). When an external speed control is fitted, the maximum speed setting available to the external control is limited by the potentiometer setting of the commissioning device.



MK-152-711

Wiring Diagrams



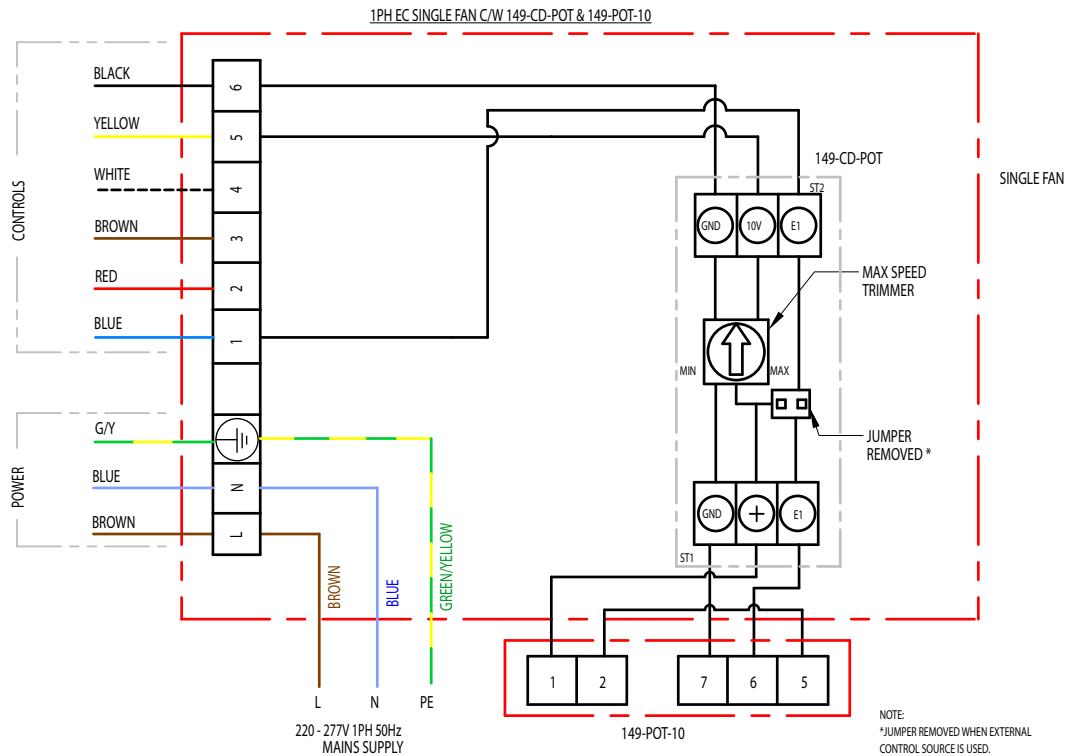
All wiring and control equipment must comply to the latest IEE regulations, in particular part BS 7671:2018+A2:2022, Regulations 552.1.2 and 552.1.3.

149-CD-POT Issue A: 10.07.2018

Check the individual product accessories table for fan controller compatibility.

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Wiring Diagrams



NOTE: TAG REFERENCES RELATE TO MOTOR CONTROL WIRES, AND NOT 149-POT-10

Tag	Purpose	Description
L	Live	Live power supply, 220-277V
N	Neutral	Neutral from power supply
	Permanent Earth	Permanent earth from power supply
1	DC Voltage [2-10V]	DC control voltage input (2 to 10VDC input)
2	DC Current [4-20mA]	DC control current input (4 to 20mA input)
3	Frequency [10-95%]	Frequency duty-cycle (PWM) Voltage: 10 to 24Vpk Frequency: 80Hz (10 to 95% input)
4	Speed Reference	Tacho output
5	10VDC output	10VDC source output
6	GND / Common	DC Common

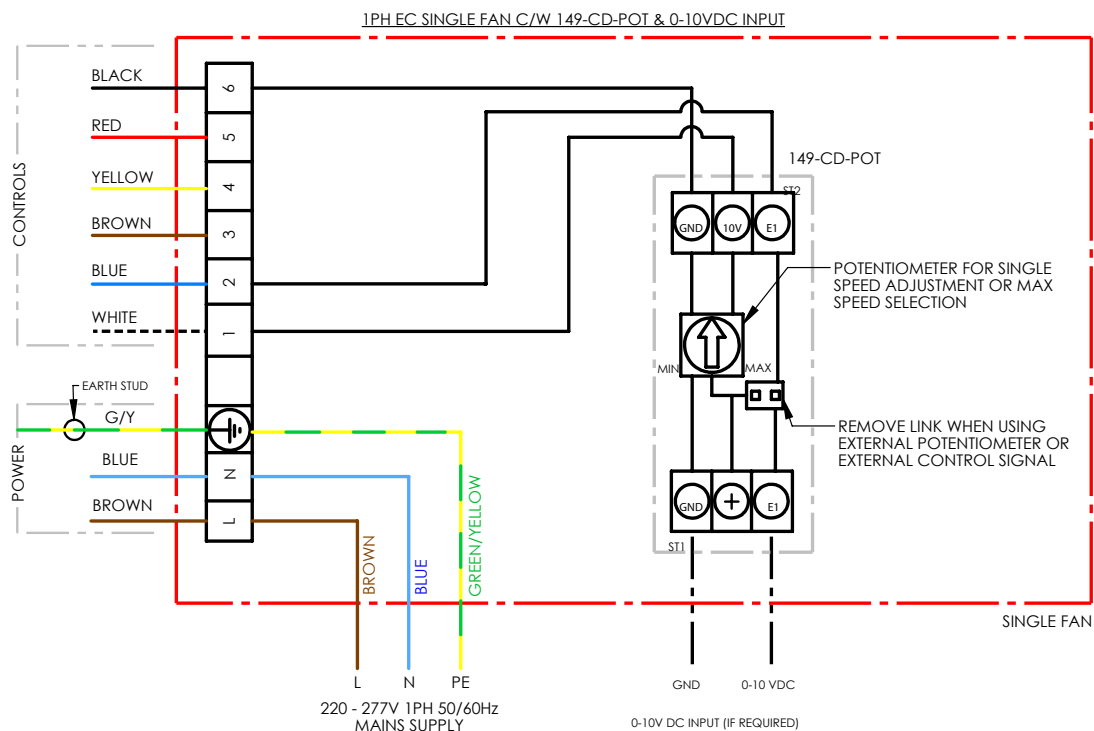
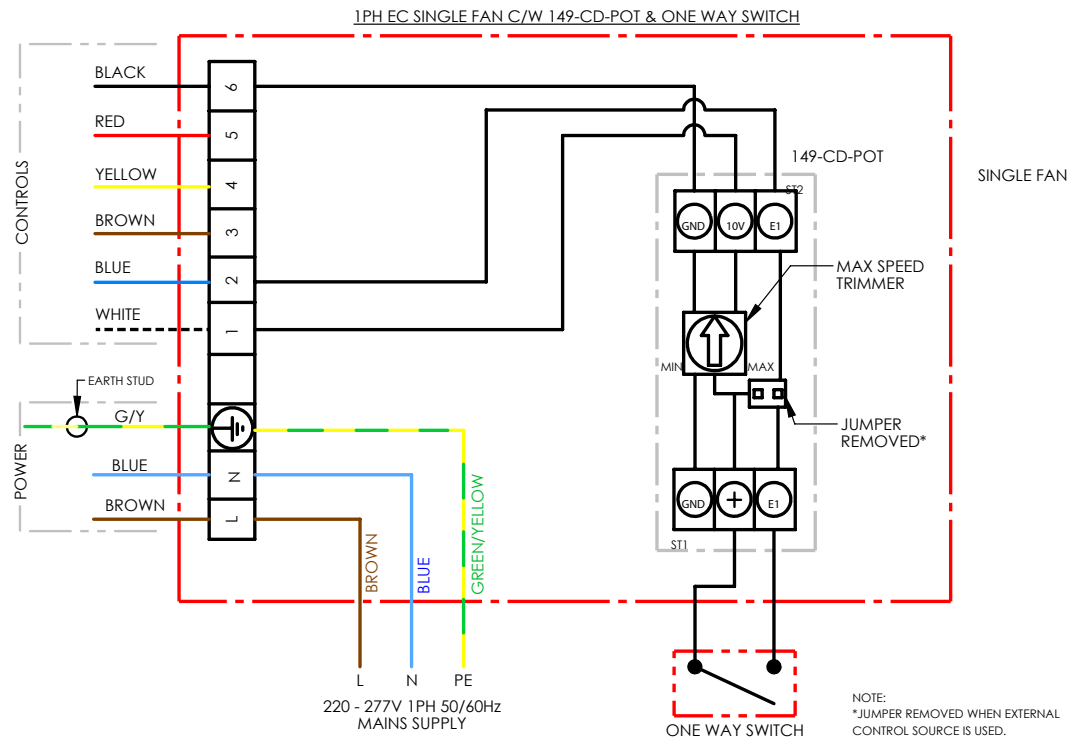
All wiring and control equipment must comply to the latest IEE regulations, in particular part BS 7671:2018+A2:2022, Regulations 552.1.2 and 552.1.3.

MK-152-711 Issue C: 15.01.2019

Check the individual product accessories table for fan controller compatibility.

MK-152-736

Wiring Diagram



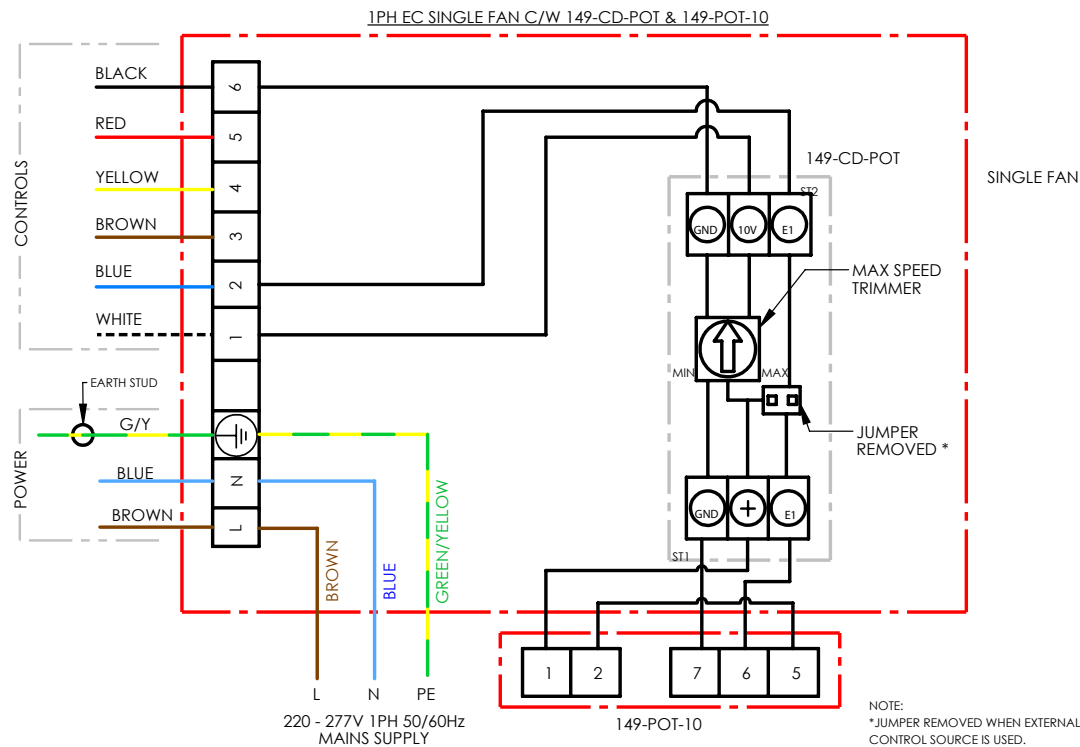
All wiring and control equipment must comply to the latest iee regulations, in particular part BS 7671:2018+A2:2022, Regulations 552.1.2 and 552.1.3.

152-736 Issue A: 04.03.2024

Check the individual product accessories table for fan controller compatibility.

MK-152-736

Wiring Diagram



CONTROL CABLE LENGTHS	
Control Type	Max. Length
VDC (voltage control)	150m
PWM (Frequency)	150m
External Controller	10m

NOTE: TAG REFERENCES RELATE TO MOTOR CONTROL WIRES, AND NOT 149-POT-10-**

Tag	Purpose	Description
L	Live	Live power supply, 220-277V
N	Neutral	Neutral from power supply
⏚	Permanent Earth	Permanent earth from power supply
1	10VDC output	10VDC source output
2	DC Voltage [2-10V]	DC control voltage input (2 to 10VDC input)
3	Frequency [10-95%]	Frequency duty-cycle (PWM) Voltage: 10 to 24Vpk Frequency: 80Hz (10 to 95% input)
4	RS485A	Modbus RS485A
5	RS485B	Modbus RS485B
6	GND / Common	DC Common

All wiring and control equipment must comply to the latest iee regulations, in particular part BS 7671:2018+A2:2022, Regulations 552.1.2 and 552.1.3.

152-736 Issue A: 04.03.2024

Check the individual product accessories table for fan controller compatibility.

AGRI-MAX HAF EC

Notes

[illegible]

AGRI-MAX HAF EC

Notes

[illegible]

**Guarantee**

Elta or its agents will, within a period of 1 year from the date of dispatch from their works, repair or, at its option, replace any goods, which are proven to have defects as a result of defective materials or workmanship.

The goods MUST be returned to Elta, carriage paid, for examination. An Elta Engineer or appointed person should attend to carry out any work, unless otherwise agreed. Elta will not accept accounts for workmanship by others.

Please see the Elta warranty booklet for full details on submitting a warranty claim.

Any modifications to the system or its installation, even the smallest modification, change or elimination of security components or pieces that influence the efficiency or loss of ventilation, will result in the CE Certification and Elta's warranty being cancelled.

Recycling

Elta use components, when possible, that are suitable for recycling at the end of the product's life, components can be segregated as stated below and processed in accordance with local regulations. Metallic items can be segregated and recycled; Electrical and Electronic equipment such as motors, cables and control devices can be segregated for WEEE recycling; Cardboard, wood, packaging, and plastic components can be widely recycled. Items not listed should be segregated in accordance with local authority zero waste hierarchy recommendations.

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