



RAPTOR SPA

Installation & Maintenance

Installation Instructions

1.0 General

- 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 Fans Ltd 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 Fans Ltd product and do not include the supply or installation of any safety equipment that may be required e.g. adequate guarding or protection from rotating parts and proper electrical isolation.
- 1.5 Any declarations made by Elta Fans Ltd about product installation and safety, are dependant 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 (refer to the relevant table) and up to 95% relative humidity. 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.
- 1.10 At end-of-life, the unit must be disposed of in an environmentally friendly manner by suitably qualified and competent personnel in accordance with the requirements of applicable Standards and Directive

2.0 Installation

WARNING – The fan must be isolated from the power supply during installation and maintenance. The fan must be earthed in accordance with the local regulations.

- 2.1 Upon receipt, the fan equipment should be visually inspected to check for any damage. Ensure that the impeller is free to rotate.
- 2.2 If there are any queries concerning the fan equipment, Elta Fans Ltd should be contacted prior to the installation.
- 2.3 The fan must be securely mounted in the desired position to suit the application. The fan can be mounted at any angle.
- 2.4 Check the details on the motor rating plate to ensure that the correct power supply (voltage, frequency and phase) is available. An incorrect power supply will lead to permanent damage to the fan motor.
- 2.5 Refer to the appropriate wiring diagram. Ensure that all earth connections are made.
- 2.6 Means for electrical disconnection must be incorporated in the wiring installation in accordance with the relevant wiring and electrical regulations.
- 2.7 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.

3.0 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.

4.0 Fan Maintenance

- 4.1 Inspection of the fan at least once every 12 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 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 and the AC fan is fitted with an auto-reset thermal cut-out which switches the fan off in the event of a fault condition. 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.

5.0 Guarantee

Elta Fans Ltd will, free of charge, within a period of 1 year from the date of dispatch from their works, repair or at its option replace any goods which are proved to have defects as a result of defective materials or workmanship. The goods MUST be returned to Elta Fans Ltd carriage paid for examination.

RAPTOR SPA

Wiring Diagrams

Please use the table(s) below to match up the product code and the wiring diagram number.



Single Phase 220V to 240V /50Hz

Page No.	Product Code	Wiring Diagram No.
4	SPA250/2-1AC	152-177
4	SPA250/4-1AC	152-177
4	SPA315/4-1AC	152-177
4	SPA350/4-1AC	152-177
5	SPA400/4-1AC	152-104B
5	SPA450/4-1AC	152-104B
5	SPA450/6-1AC	152-104B
5	SPA500/4-1AC	152-104B
5	SPA500/6-1AC	152-104B
5	SPA560/4-1AC	152-104B
5	SPA560/6-1AC	152-104B
5	SPA630/6-1AC	152-104B



Single Phase 220V - 277V / 50Hz or 60Hz

Page No.	Product Code	Wiring Diagram No.
7	SPA350/4-1EC	152-00044
8	SPA400/4-1EC	152-00298951
7	SPA450/4-1EC	152-00044
9	SPA500/4-1EC	152-MOEA03K1
9	SPA630/4-1EC	152-MOEA03K1
9	SPA710/6-1EC	152-MOEA03K1

Three Phase 380V - 415V / 50Hz

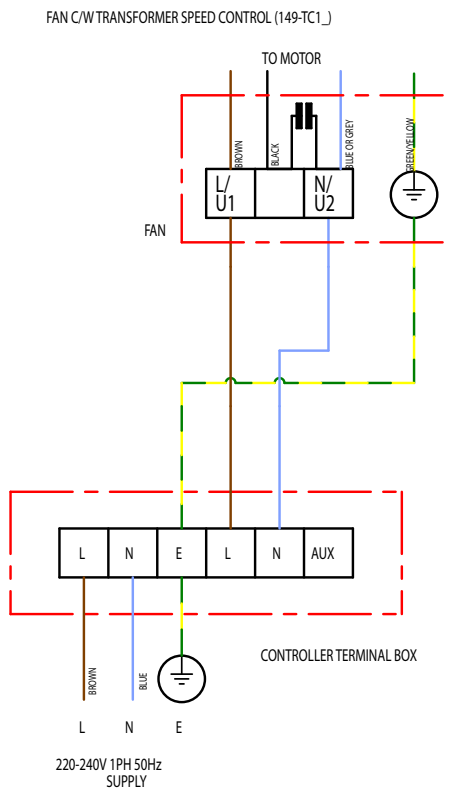
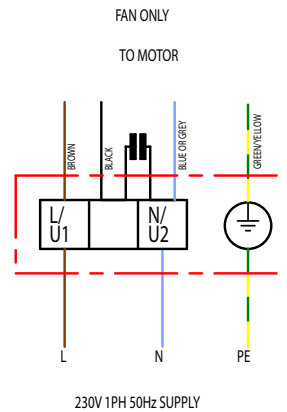
Page No.	Product Code	Wiring Diagram No.
6	SPA400/46-3AC	152-108
6	SPA450/46-3AC	152-108
6	SPA500/46-3AC	152-108
6	SPA560/46-3AC	152-108
6	SPA630/46-3AC	152-108
6	SPA630/68-3AC	152-108
6	SPA710/46-3AC	152-108
6	SPA710/68-3AC	152-108

Three Phase 380V to 480V 50Hz or 60Hz

Page No.	Product Code	Wiring Diagram No.
10	SPA500/4-3EC	152-MOEA03K3
10	SPA630/4-3EC	152-MOEA03K3
10	SPA710/6-3EC	152-MOEA03K3

152-177

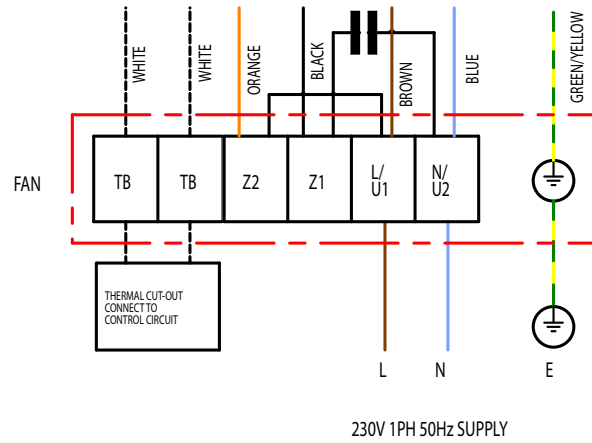
Wiring Diagrams



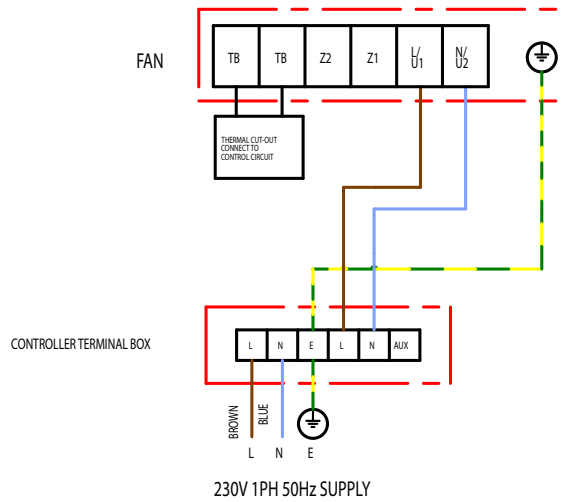
All wiring and control equipment must comply to the latest IEE regulations, in particular part 552-01-02/03.
MK-152-177 Issue C: 03.11.2017
Check the individual product accessories table for fan controller compatibility.

152-104B

Wiring Diagrams



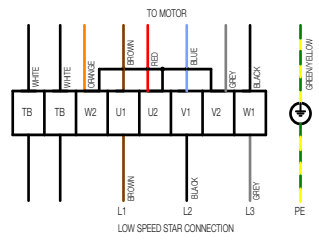
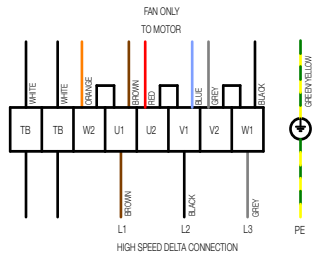
FAN C/W TRANSFORMER SPEED CONTROL (149-TC1_)



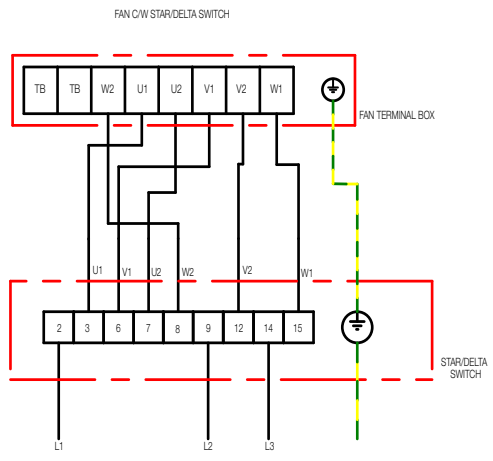
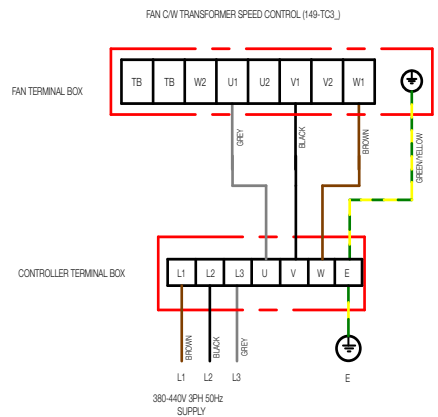
All wiring and control equipment must comply to the latest IEE regulations, in particular part 552-01-02/03.
MK-152-104B Issue C: 03.11.2017
Check the individual product accessories table for fan controller compatibility.

152-108

Wiring Diagrams



TO REVERSE ROTATION SWAP ANY TWO INCOMING SUPPLY CABLES



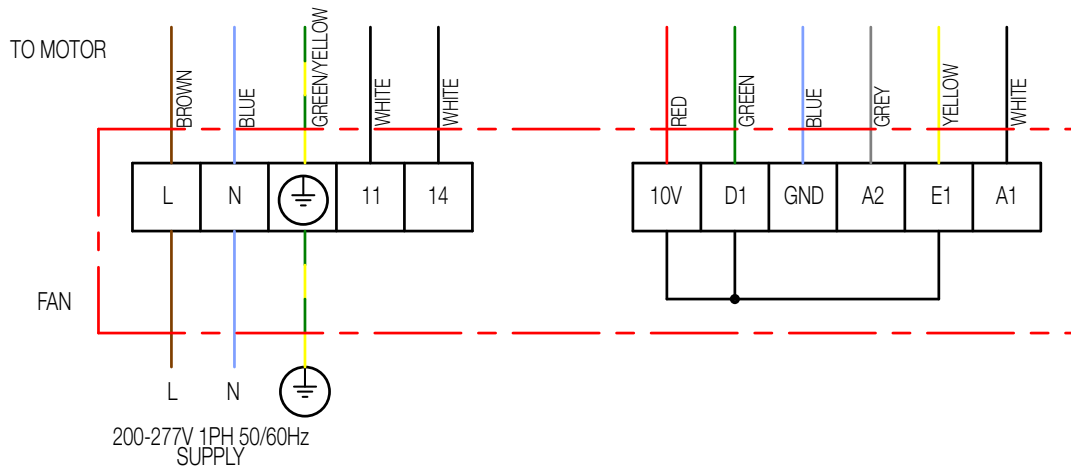
All wiring and control equipment must comply to the latest IEE regulations, in particular part 552-01-02/03.
 MK-152-108 Issue D: 11.07.2013
 Check the individual product accessories table for fan controller compatibility.

152-00044

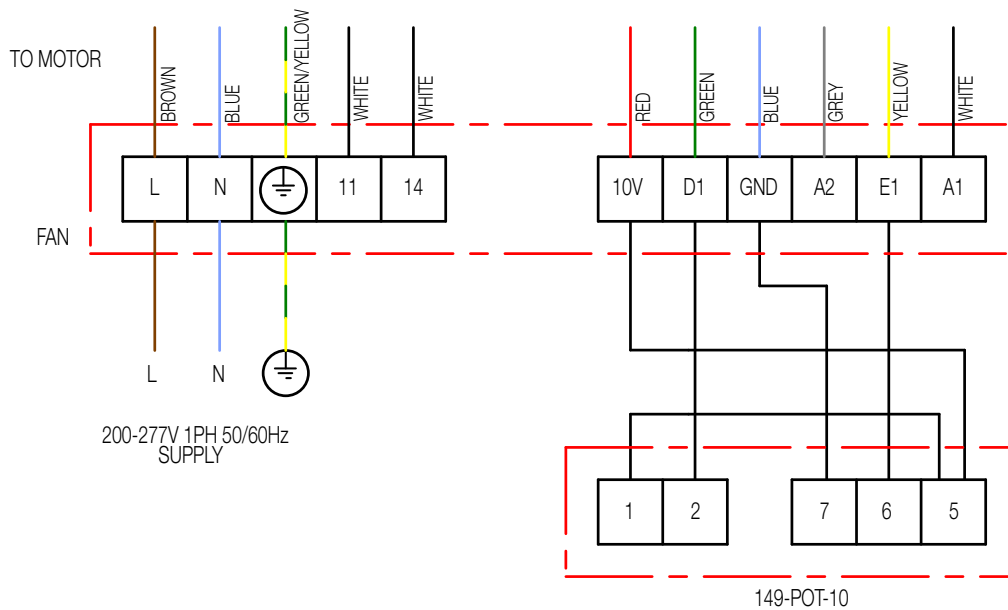


Wiring Diagrams

FAN ONLY



FAN C/W POTENTIOMETER SPEED CONTROL (149-POT-10)



All wiring and control equipment must comply to the latest IEE regulations, in particular part 552-01-02/03.

MK-152-00044 Issue C: 11.07.2013

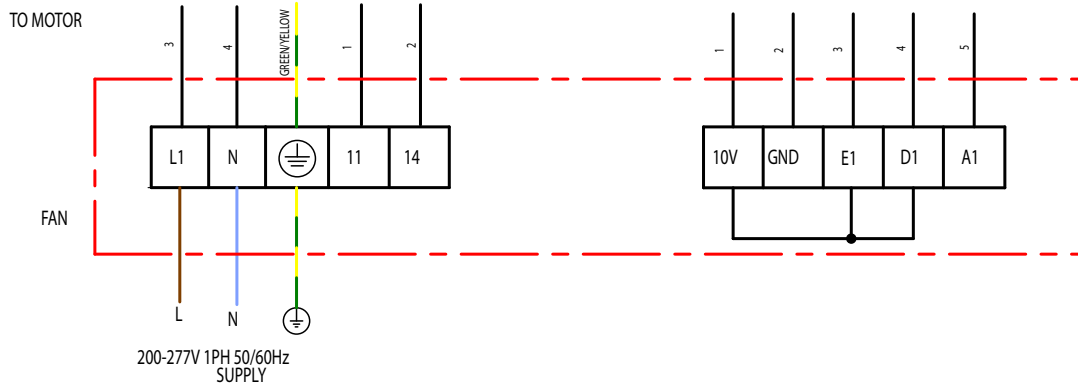
Check the individual product accessories table for fan controller compatibility.

152-00298951

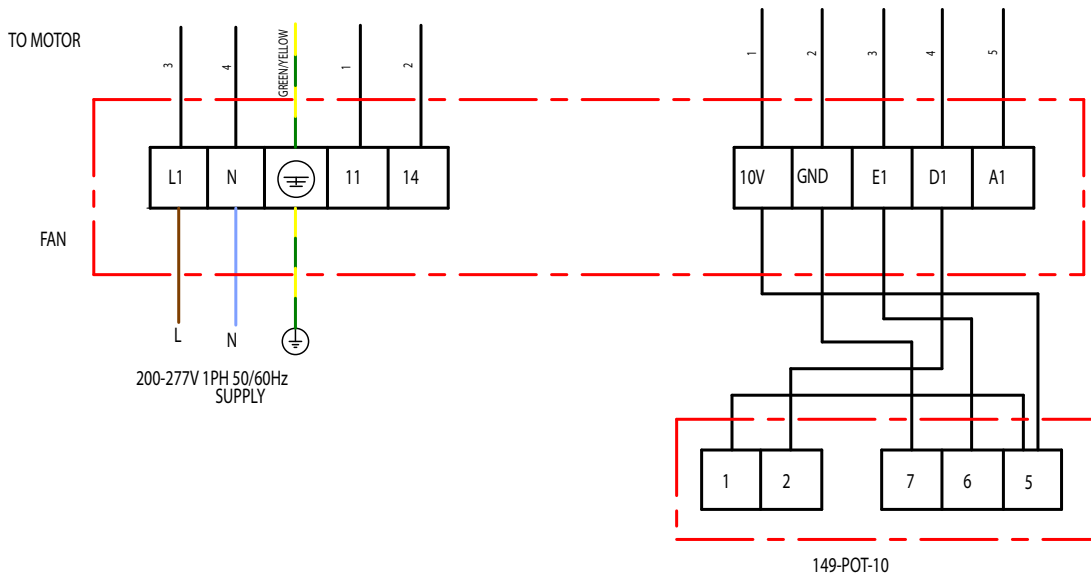


Wiring Diagrams

FAN ONLY



FAN C/W POTENTIOMETER SPEED CONTROL (149-POT-10)



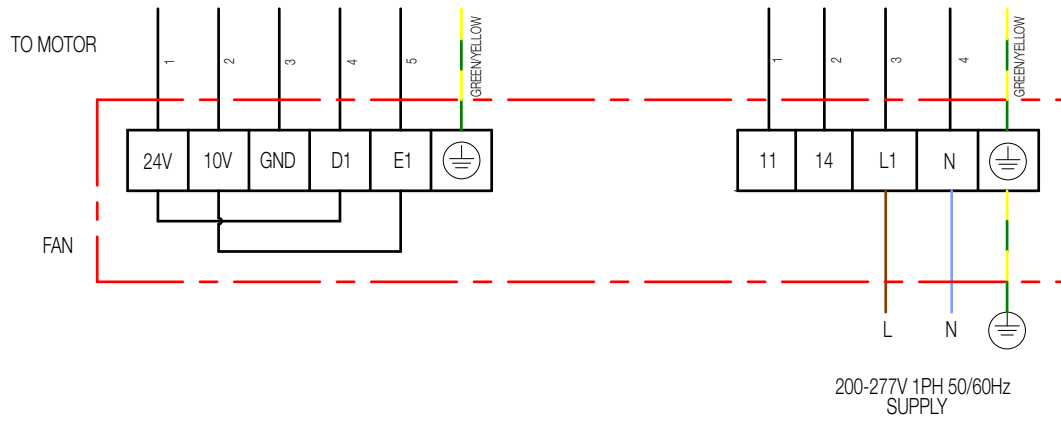
All wiring and control equipment must comply to the latest IEE regulations, in particular part 552-01-02/03.
MK-152-00298951 Issue A: 05.03.2014
Check the individual product accessories table for fan controller compatibility.

152-MOEA03K1

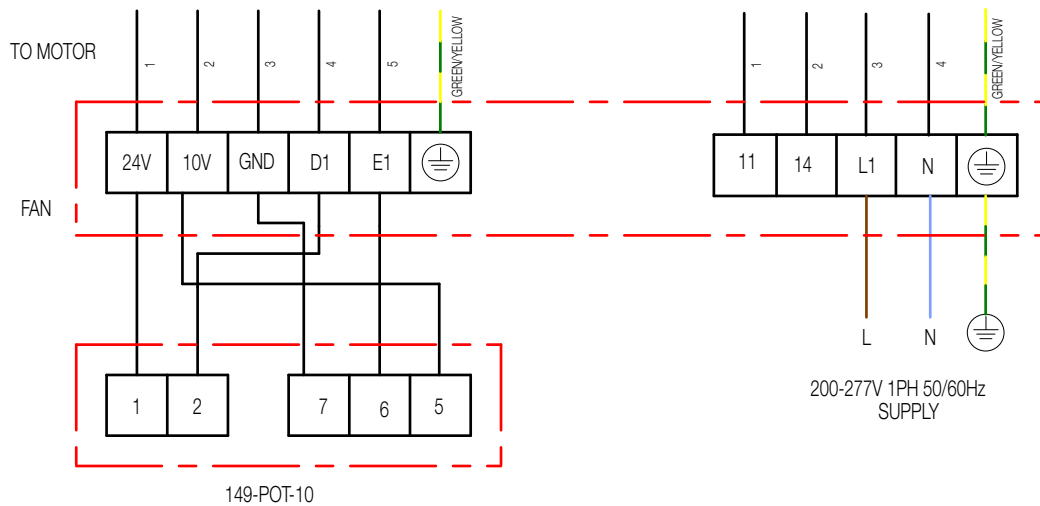


Wiring Diagrams

FAN ONLY



FAN C/W POTENTIOMETER SPEED CONTROL (149-POT-10)



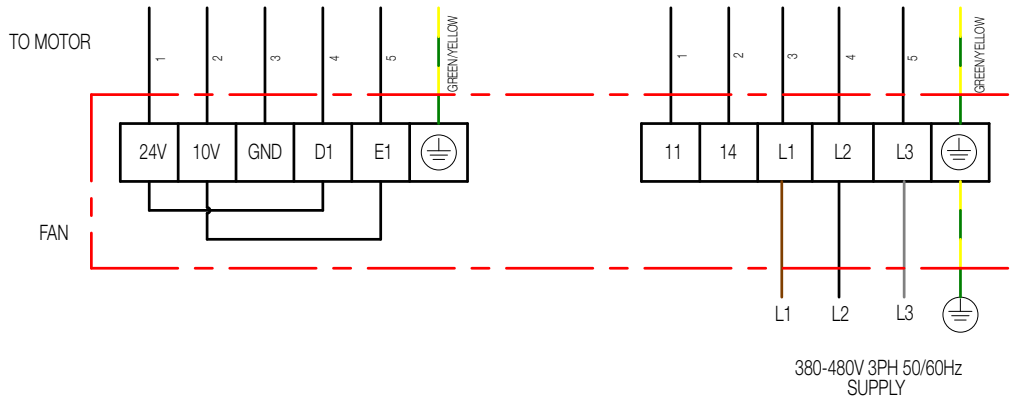
All wiring and control equipment must comply to the latest IEE regulations, in particular part 552-01-02/03.
 MK-152-MOEA03K1 Issue D: 18.07.2013
 Check the individual product accessories table for fan controller compatibility.

152-MOEA03K3

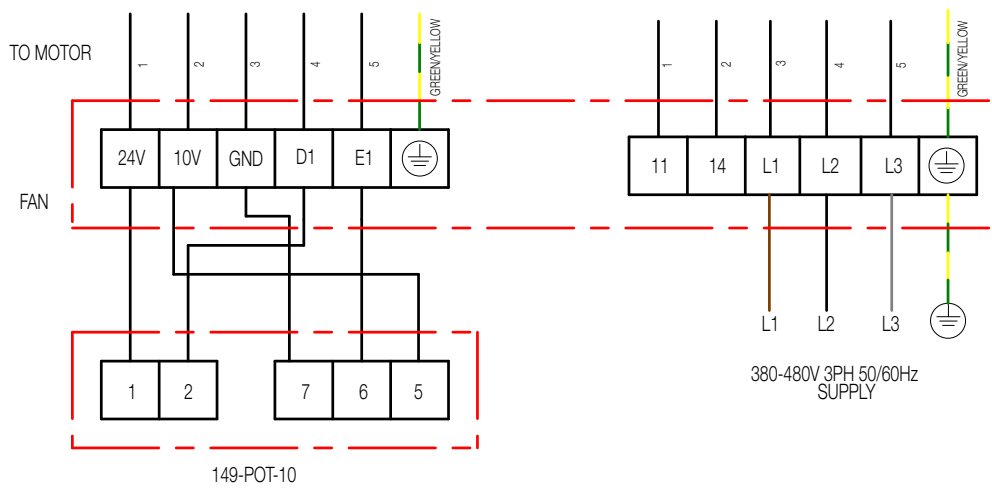


Wiring Diagrams

FAN ONLY



FAN C/W POTENTIOMETER SPEED CONTROL (149-POT-10)





All wiring and control equipment must comply to the latest IEE regulations, in particular part 552-01-02/03.
 MK-152-MOEA03K3 Issue D: 18.07.2013
 Check the individual product accessories table for fan controller compatibility.

EC Declaration of conformity/incorporation



Herewith we declare that the air movement equipment below, on the basis of its design and construction as partly completed machines brought onto the market complies with relevant health and safety requirements of the EC Directives stated below. In the event that alterations are made to the machinery without prior consent from Elta Fans Ltd, this declaration becomes invalid.

EC Declaration of Conformity	EC Declaration of Incorporation
<p>Description of Equipment: Building Services Ranges - Air movement fan</p> <p>Equipment model numbers for safe area fans: SCP, SPA, SAX, SCD, SDA, SCC, SLC, SCPP, SPP, SAMF, HIT, SEM, SEL, ISEO IMF, SH, SSD, SQS, SQSDCV, SQU, SMB, STD, SQT, SQT-DCV, SCH, SCHAT, SSTR, SSTRDCV, STDR, STDRDCV, SB, SQU-HT, SSQU-HT, SDF, ZFHIC, SRC, CF, TF</p> <p>Relevant / applied directives: Machinery directive 2006/42/EC, Low voltage directive 2014/35/EU</p> <p>Relevant / applied directives where applicable: Energy related products directive 2009/125/EC (when used in Europe) Electromagnetic compatibility directive 2014/30/EU (where driven via Inverter)</p> <p>Relevant / applied directives where applicable: BS EN ISO 12100 : 2010 BS EN 14694 : 2003 + A1 : 2011 BS EN 308:1997 BS EN ISO 5801:2008</p>	<p>In accordance with the Machinery Directive 2006/42/EC;</p> <p>The design of the partly completed machine, listed above, complies with the Essential Health and Safety Requirements (EHSRs) of ANNEX I, sections 1.1.2, 1.1.5, 1.4.1, 1.5.1 in EC Machinery Directive 2006/42/EC.</p> <p>Machinery is incomplete and must not be put into service until such time as the machinery which is partly complete, is to be incorporated, and has been assessed and Declared in Conformity with the provisions of any relevant parts of the Machinery Directive.</p> <p>We undertake to transmit, upon reasoned request by appropriate national authorities, relevant information relating to the partly completed machinery identified above.</p>
<p>Manufacturer: Elta Fans Limited 46 Third Avenue Pensnett Trading Estate Kingswinford West Midlands DY6 7US United Kingdom</p> <div style="text-align: right;">  </div>	
<p>Date / Signature of Manufacturer:</p> <div style="text-align: center;">  </div> <p>Name / Position of Signatory: Mr. Robert Rees Q.A.Manager Elta Fans Ltd This is an electronic document and is valid without a signature or date.</p>	<p>Document last revised: 28th March 2017</p> <p style="text-align: right;">Issue Status B</p>

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535-IOM0021 Issue A



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