

Part No	RM-ECv & CN1063		
Description	Controller 0-10V with adjustable limits		
			
Issue	Date	Bug no	Comments
1	11/06/10	Bxxx	First issue
2			
3			

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Introduction

The RM-ECv controller is a 0-10V controller mounted in an IP54 enclosure and is suitable for use with ebm-papst's range of EC fans. The RM-ECv controller has adjustable upper and lower limits, thus both minimum and maximum speeds can be preset using the board mounted trimmers.

The CN1063 is a bare board version of the RM-ECv.

Specification

		RM-ECv	CN1063
Supply Voltage	V DC	10	10
Supply Current	mA	1.0	1.0
Inputs / Outputs	Supply	10V dc	10V dc
	Ground	0V dc	0V dc
	Speed Demand	0-10V dc	0-10V dc
	Tacho	--	--

Installation – RM-ECv

The RM-ECv should be mounted to a secure surface and all wiring should be carried out by qualified personnel only. The enclosure is IP54 when installed correctly with suitable cable glands fitted.

Installation – CN1063

The CN1063 should be mounted to a secure surface and all wiring should be carried out by qualified personnel only.

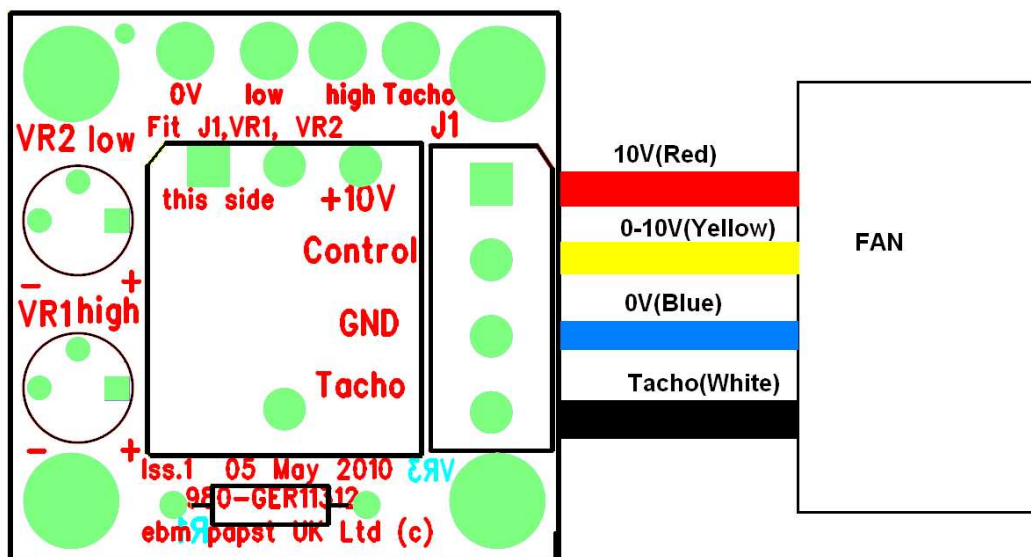
Connection Details

Wiring to the RM-ECv and CN1063 should be carried out in accordance with the diagram below.

All wiring to the RM-ECv should be connected through the cable knock outs which should be fitted with a suitable gland or grommet to prevent the wire chaffing and for cable restraint.

All wiring to the CN1063 should be fitted with a cable restraint device to prevent the wire chaffing and for cable restraint.

A single controller can only be used to control one fan.



Commissioning – RM-ECv & CN1063

The following instructions apply to both the RM-ECv and CN1063 unless otherwise stated.

To adjust the upper and lower fan speeds use a suitable flat bladed screwdriver to adjust VR1 or VR2 as follows.

To adjust the top limit

- Set the main potentiometer to fully CW. Adjust the trimmer 'VR1' or 'high' to fully CW
- Check the voltage reads 10V using a DVM connected across the output and 0V (GND)
- Rotate VR1 to achieve the required voltage.

To adjust the bottom limit

- Set the main potentiometer to fully CCW. Adjust the trimmer 'VR2' or 'low' to fully CCW
- Check the voltage reads 0V using a DVM connected across the output and 0V (GND)
- Rotate VR2 to achieve the required voltage.

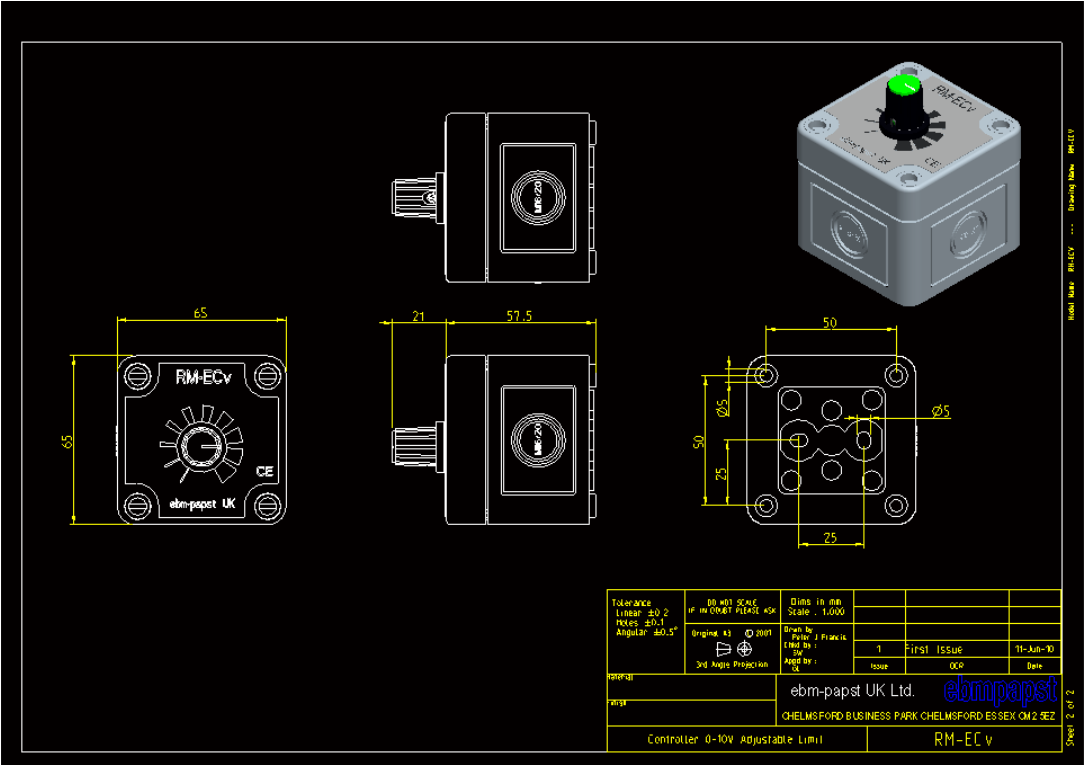
NOTE

1. There will be some drift of the upper and lower limits when setting the limits it is therefore advisable to always recheck both the upper and lower limits by rotating the main potentiometer from fully CCW (lower limit) to fully CW (upper limit) and adjusting VR1 or VR2 as required.
2. Care should be taken not to set the bottom limit to a voltage above that of top limit this will cause the main potentiometer to work in reverse.

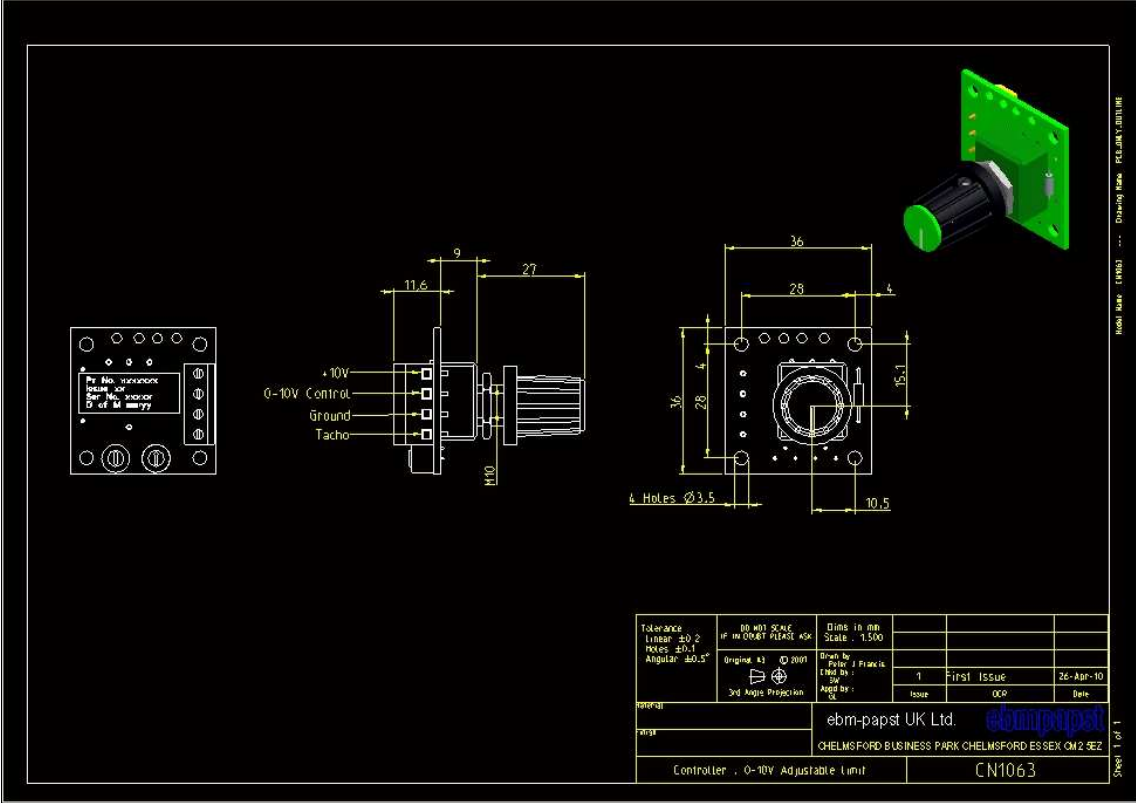
Ensure the lid is replaced correctly with the marks on the labels correctly aligned once all adjustments have been completed.

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Mechanical Outline RM_ECv



Mechanical Outline CN1063



Operation

The rotary potentiometer varies the required speed of the fan between the preset lower and upper limits, to adjust the fan speed rotate the main potentiometer (at the centre of the pcb) clockwise to increase speed or counter clockwise to decrease speed.

Safety

- The controller is only suitable for a low voltage (10V DC) supply
- Electrical installations should only be carried out by qualified personnel
- This appliance is intended to be enclosed in the equipment and not accessed by the user. Access is limited to service personnel only.
- Residual risk of contact with fan. Maintenance personnel should take due care and attention.

Transport and Storage

Maintenance and Servicing

This product contains no user serviceable parts.

Declaration of Conformity

(Copy of Approved D of C here)

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