

Control of Single or Multiple EC Fans from an External Controller

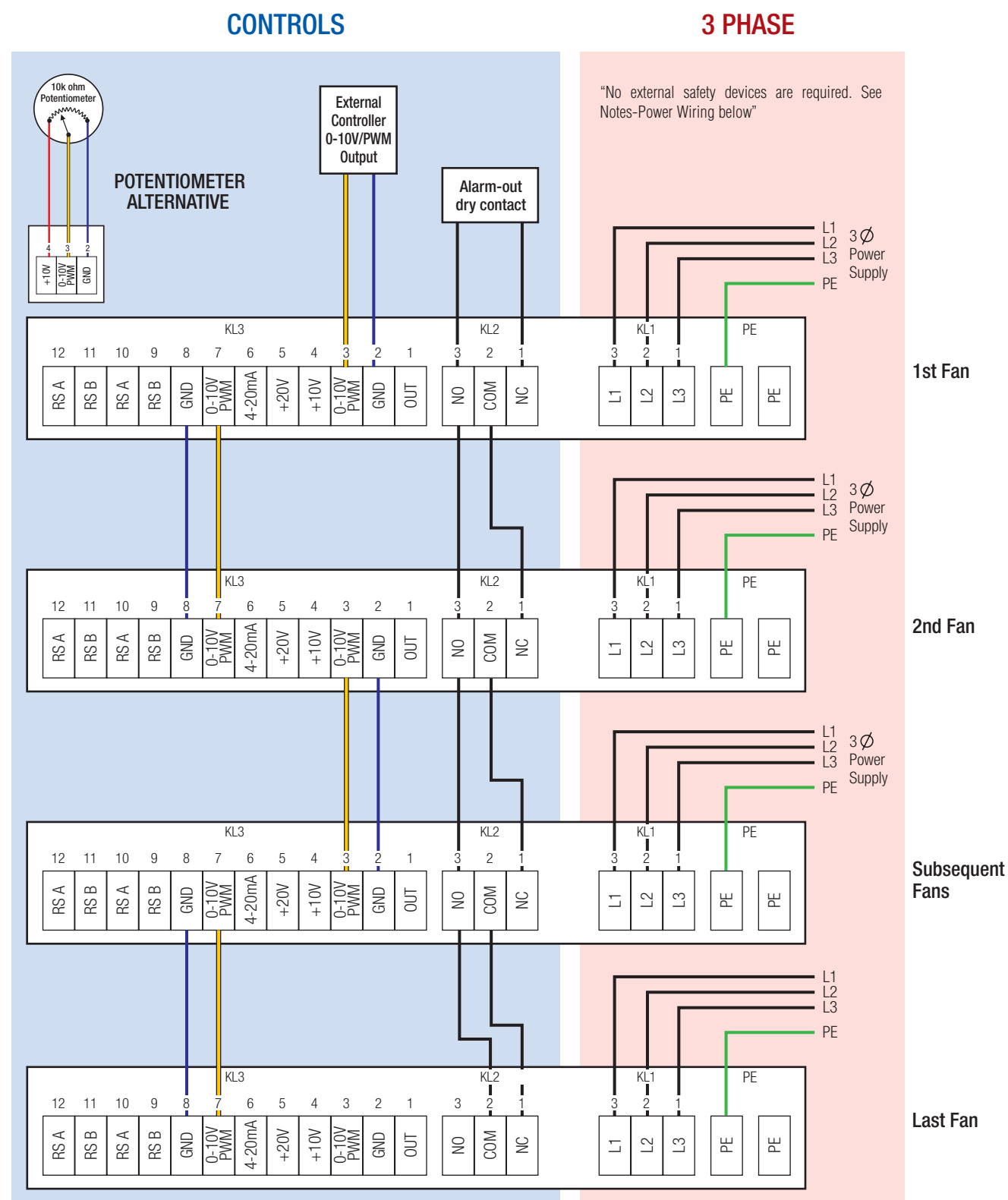
EC WD 4

Control of Single or Multiple EC Fans from an External Controller

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External Controller Connection Sequence

0-10V/PWM External Controller Output Signal



29th May 2007

The following KL3 terminals are paralleled: 3+7, 2+8

Alarm Circuit

Diagram depicts a "normally closed" circuit which opens on failure of any fan.
NB. Contacts are held in position only when power is connected to motor.

WARNING

Electricity is dangerous. Suitable electrical qualifications may be required to carry out the wiring.

Fans may start unexpectedly during this process. Ensure suitable safety precautions are in place before commencing.

General overview

This connection sequence is for applications where all fans are to operate in response to a 0-10 volt or PWM control signal.

- Object is to control the speed of all fans in response to a signal supplied from an external source. (External Controller or Potentiometer)
- The speed change is approximately linear from approximately 1 volt (10% PWM) to maximum speed 10 volts (100% PWM). Below approximately 1 Volt the fan is stationary.
- All fans are to operate in unison.
- The external controller is to supply the fans with a 0-10 Volt control voltage or PWM signal (Connected to terminals 2 & 3 or 7 & 8). The control signal is paralleled to all fans so that all fans receive the same control signal (Via terminals 2 & 3 or 7 & 8).
- All fans operate at the same speed.
- All fans are supplied factory set to operate on 0-10volt or PWM control. – No commissioning is required.

Notes - Power Wiring

- ebm-papst EC fans are complete with internal overload protection.
 - NO external motor protection is required. ebm-papst EC fans have soft start motors, inrush current on start-up is limited to full load amps.
 - Cables need only to be selected for full load amps.
- ebm-papst EC fans comply with AS/NZS 3000:2000 clause 2.4.3.4.
- Products complying with 2.4.3.4 of the Australian/New Zealand Standard AS/NZS 3000:2000, do not require external overload protection devices.
- AS/NZS 3000/2000 Rule 2.4.3.4 Omission of overload protective device.**

Devices for protection against overload current may be omitted in the following situations:

 - (b) A conductor where-
 - (iii) electrical equipment supplied by the conductor is not capable of causing overload currents.

10 Oxford Road,
Laverton North VIC 3026
Phone: (03) 9360 6400
Fax: (03) 9360 6464

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www.ebmpapst.com.au

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