

1 Introduction

This general purpose, modulated, pulse-width, low voltage dc controller, can be operated in any of the following modes:

Motor Control: High Frequency (RT/RT1 no link) speed control set by a 5kΩ potentiometer.

Lighting/Heating Control: Low frequency (RT/RT1 linked) output level set by a 5kΩ potentiometer as above.

Temperature Control: Thermistor connected across RT/RT1, with a temperature range of 5-130°C. Temperature set by a 5kΩ potentiometer.

2 Applications

Include speed control of low voltage, high frequency, dc motors, low voltage lighting and medium frequency heaters.



3 Features

- Manual or signal control.
- Temperature control with optional sensor.
- 180 or 350Hz selectable frequency ranges.
- Short-circuit protection.
- 6 to 24V dc supply voltage range.

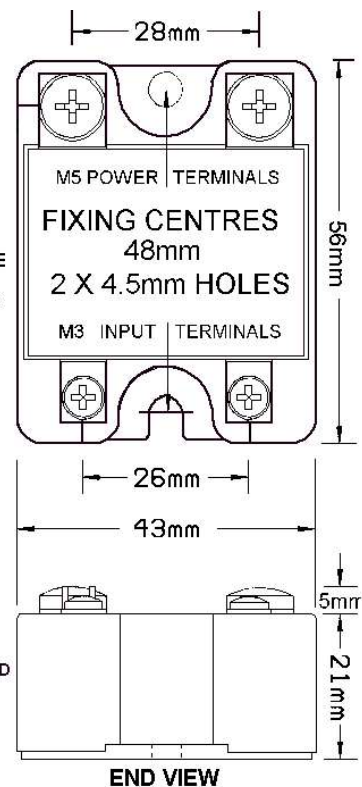
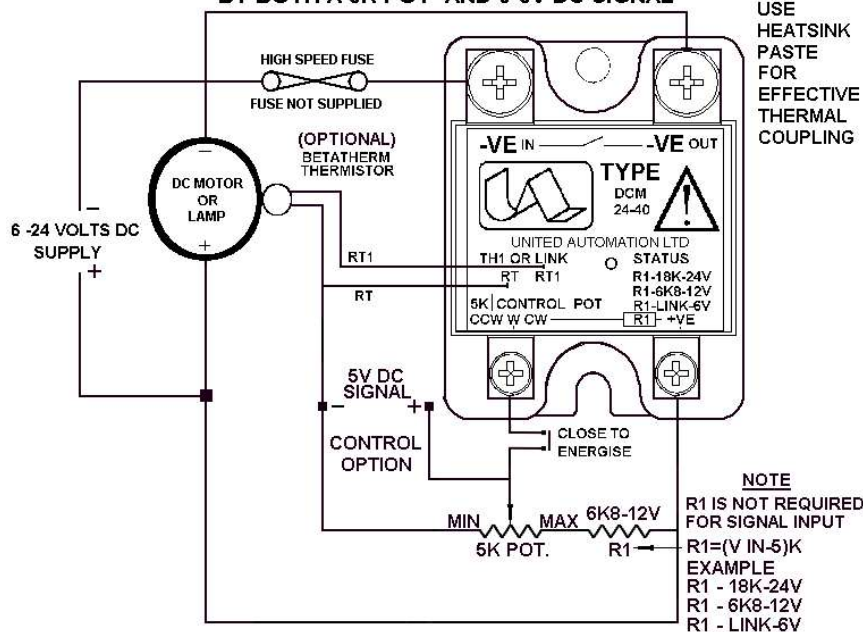
4 Installation

MOTOR CONTROL CONNECTIONS

WARNING

SWITCH OFF SUPPLY BEFORE COMMENCING ANY SERVICE WORK.

ALL SET POINTS CAN BE CONTROLLED BY BOTH A 5K POT AND 0-5V DC SIGNAL



NOTE
R1 IS NOT REQUIRED FOR SIGNAL INPUT
R1=(V IN-5)K
EXAMPLE
R1 - 18K-24V
R1 - 6K8-12V
R1 - LINK-6V



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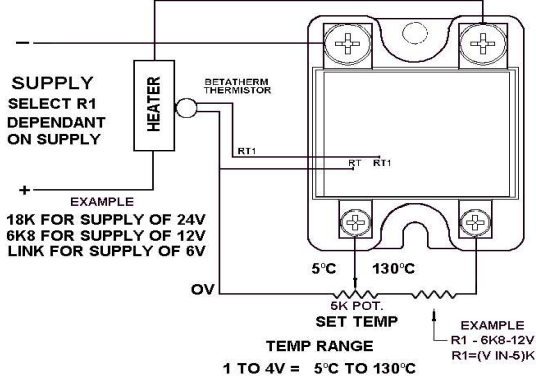
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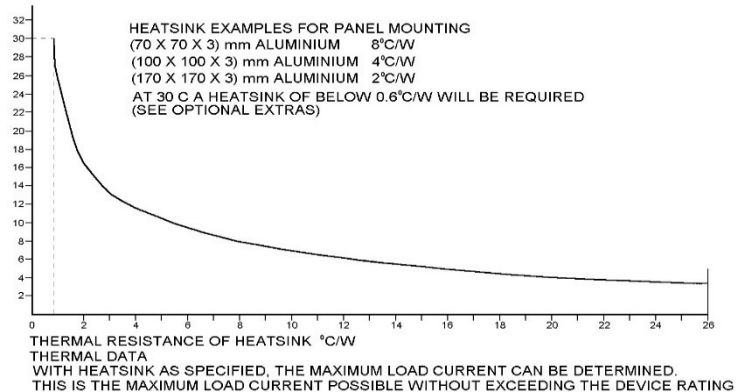
5 Installation

TEMPERATURE CONTROL CONNECTION FOR 12V SUPPLY

WARNING
SWITCH OFF SUPPLY BEFORE COMMENCING ANY SERVICE WORK.
ALL SET POINTS CAN BE CONTROLLED
BY BOTH A 5K POT AND 0-5V DC SIGNAL



COOLING REQUIREMENTS



PROTECTION NOTE:

For controller protection a 'TRANSIL' component device is recommended to be fitted (hard wired) across the following supply terminals – "M3 +ve" and "M5 -ve IN".

6 Specifications

Maximum dc system line voltage	24V dc
Unit limiting dc current	30A dc
Control input voltage range	0-5V dc
Control input current @ 5V typical	1mA dc
High frequency mode (no link across RT and RT1)	350Hz
Medium frequency mode (link RT and RT1)	180Hz
Optional for temperature control (terminals RT & RT1): Thermistor type- Betatherm - 10K3A1	5 - 130°C
Unit operating temperature range	0 to 65°C
Unit storage temperature range	0 to 85°C

7 Fusing

It is recommended that semiconductor, fast-acting type fuses or circuit breakers (semiconductor - MCB) be used for unit/device protection. On initial operation some loads may need an increased factor of safety for unit/device protection (see SRA datasheet for further information).

8 CE Marking

This product family carries a CE marking. For information see recommendation section and contact our sales des. (see Declaration of Conformity).

9 Recommendations

Other documents available on request, which may be appropriate for your application:-

Code	Identity	Description
X10229	RFI	Filter recommendations: Addressing the EMC Directive
X10213	ITA	Interaction: Uses for phase angle and for burst fire control
X10255	SRA	Safety Requirements: Addressing the Low Voltage Directive (LVD) including, Thermal Data/Cooling, Live Parts Warning, Earthing Requirements and Fusing Recommendations
P01.1	COS	UAL Conditions of Sale

10 Order Code

Part Number	State part number: DCM-24-30	Stock code A75228
Optional extras	Betatherm 10K3A1 bead sensor only	Stock code D80005
	Betatherm 10K3A1 bead (type-X) sensor with 1m PTFE leads	Stock code A26046
	Betatherm 10K3A1 enclosed (type-E) sensor with 1m PTFE leads	Stock code A26036
Further extras include	Heatsink assemblies for 30A capability; heat sink paste; 5K potentiometer	



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