X10811 – DCMC24-60
DC Motor Controller Module
Issue 3

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.

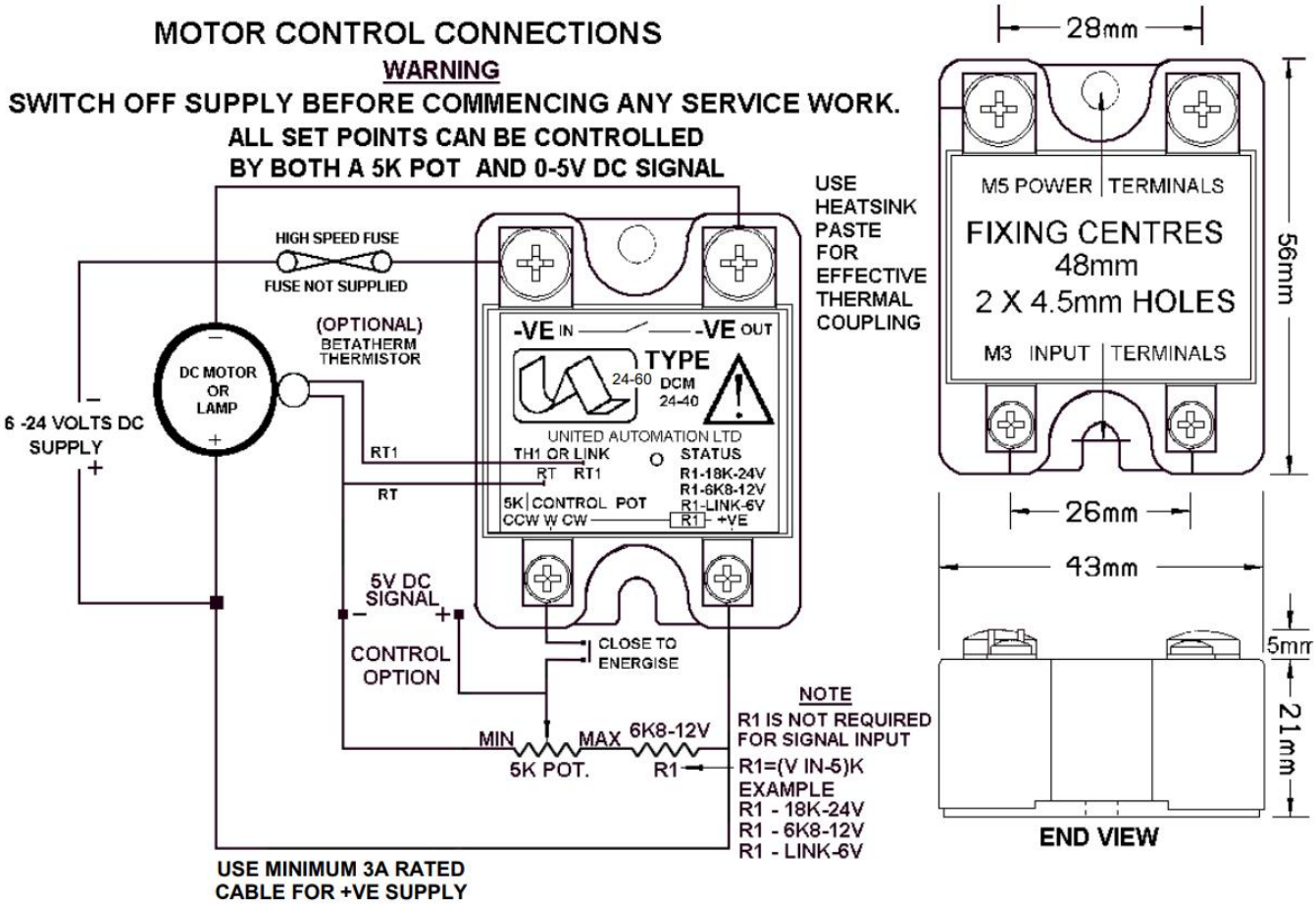
2 Applications

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

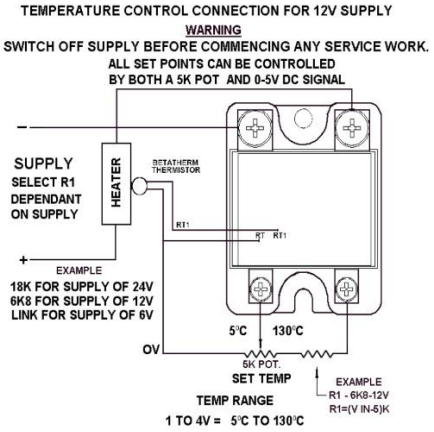


UNITED AUTOMATION LTD

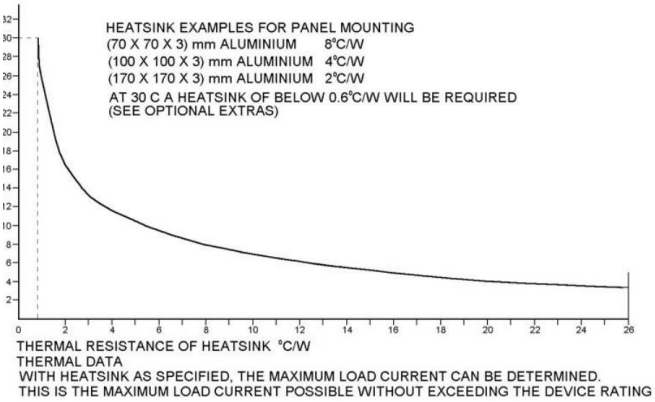
Southport Business Park
Wight Moss Way
Southport, PR8 4HQ
ENGLAND

Tel: 0044 (0) 1704 – 516500
enquiries@united-automation.com
www.united-automation.com
unitedautomationltd UA_Limited

4.1 Wiring Diagram (Example)



4.2 Cooling Requirements



Protection Note: Use a minimum of 3A rated cable for the +VE supply of the DCM controller

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"]

5 Technical Specifications

Maximum DC System Line Voltage	24V DC
Unit Limiting DC Current	40A 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°C – 130°C
Unit Operating Temperature Range	0°C – 65°C
Unit Storage Temperature Range	0°C – 85°C

6 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).

7 CE Marking

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

8 Recommendations & Safety Requirements

Other documents are available on request, which may be appropriate for your applications:

Code	Identity	Descriptions
X10229	RFI	Filter Recommendation: 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

Note: It is recommended that installation and maintenance of this equipment should be done with reference to the current edition of the I.E.T. (formally I.E.E.) regulations (BS7671) by suitably qualified/trained personnel. The regulations contain important requirements regarding installation and safety of electrical equipment. Specific installers should refer to local and national regulations.

9 Order Code

State Part Number	DCM-24-60	Stock Code: A75251
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
	Heatsink assemblies for 40A capability, Heatsink paste, 5KΩ potentiometer	

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