



# DC MOTOR CONTROLLER MODULE

**DCMC24-60**  
**X10811**

## 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.

## APPLICATIONS

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

## FEATURES

**RoHS Compliant**

- 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.



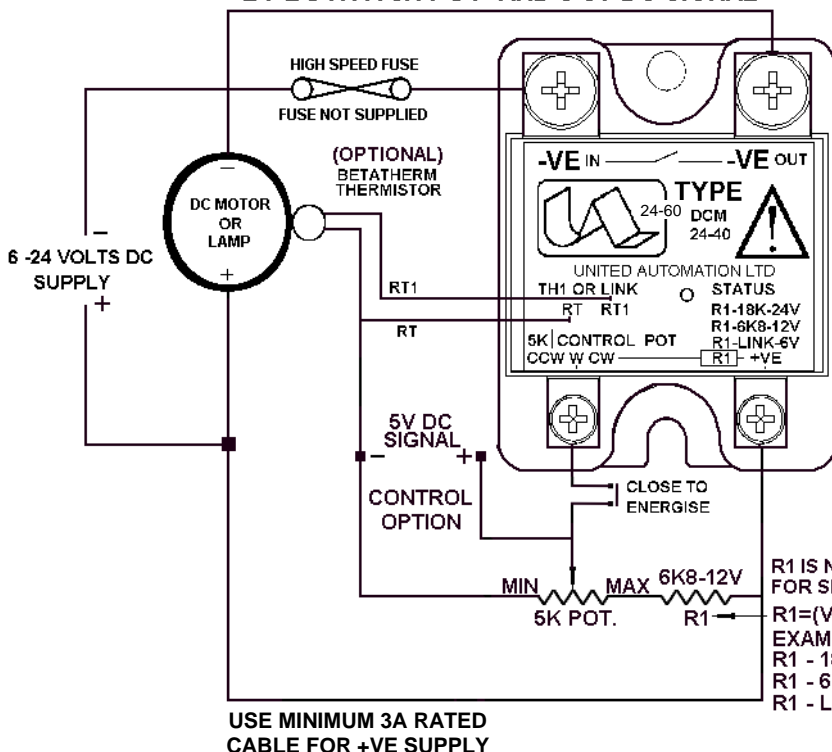
## INSTALLATION

### MOTOR CONTROL CONNECTIONS

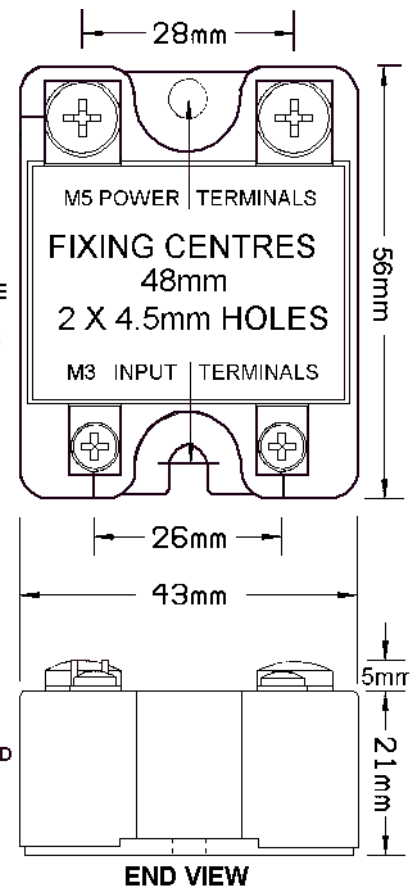
#### WARNING

**SWITCH OFF SUPPLY BEFORE COMMENCING ANY SERVICE WORK.**

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



USE HEATSINK PASTE FOR EFFECTIVE THERMAL COUPLING



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

USE MINIMUM 3A RATED CABLE FOR +VE SUPPLY

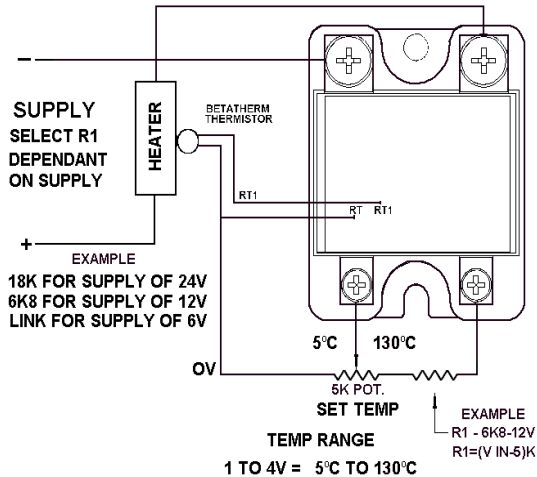
## INSTALLATION

### TEMPERATURE CONTROL CONNECTION FOR 12V SUPPLY

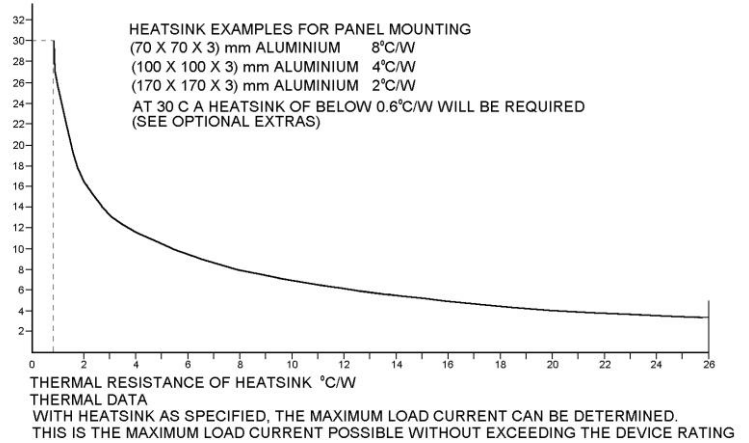
#### WARNING

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:

Use a minimum 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".

## SPECIFICATIONS

Maximum dc system line voltage  
Unit limiting dc current  
Control input voltage range  
Control input current @ 5V typical  
High frequency mode (no link across RT and RT1)  
Medium frequency mode (link RT and RT1)  
Optional for temperature control (terminals RT & RT1): Thermistor type- Betatherm - 10K3A1  
Unit operating temperature range  
Unit storage temperature range

24V dc  
40A dc  
0-5V dc  
1mA dc  
350Hz  
180Hz  
5 - 130°C  
0 to 65°C  
0 to 85°C

## 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).

## CE MARKING

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

## RECOMMENDATION

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

CODE	IDENTITY	DESCRIPTION
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, earth 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.

#### ORDER CODE:

Optional extras include: -

State part number: DCM –24-60

Betatherm 10K3A1 bead sensor only –

Betatherm 10K3A1 bead (type-X) sensor with 1m PTFE leads:

Betatherm 10K3A1 enclosed (type-E) sensor with 1m PTFE leads

Heatsink assemblies for 40A capability; Heat sink paste; 5K potentiometer.

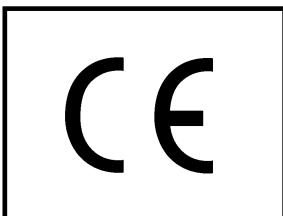
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Stock code D80005

Stock code A26046

Stock code A26036

Further extras include: -



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