X10805

Motors, Servos and controllers | DC Motor Control

DCM-24

24V - 30A, 40A, 60A
DC Motor Controller

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KEY FEATURES:

- ✓ **Manual or Signal Control:** Choose between manual or signal control, providing flexibility in operation.
- ✓ **Temperature Control with Optional Sensor:** Incorporate temperature control using an optional sensor for precise adjustments.
- ✓ **Selectable Frequency Ranges:** Opt for either 180Hz or 350Hz frequency ranges to match your specific requirements.
- ✓ **Short-Circuit Protection:** Ensure the safety of your equipment with built-in short-circuit protection.
- ✓ **6 to 24V DC Supply Voltage Range:** Accommodate a wide range of applications with a supply voltage range of 6 to 24V DC.

APPLICATIONS:

Ideal for a range of applications, including:

- ➢ Speed control of low-voltage DC motors
- ➢ High-frequency operations
- ➢ Low-voltage lighting
- ➢ Medium-frequency heaters

Enhance the performance of your DC motors with our versatile DC Motor Controller, a state-of-the-art electronic device designed to efficiently manage direct current (DC) motors. This modulated pulse-width controller provides comprehensive control over motor functions, including start/stop, speed adjustments, torque management, and more.

Flexible Operating Modes:
Operate the controller in various modes to suit your specific needs:

- **Motor Control:** Achieve high-frequency speed control with a 5kΩ potentiometer.
- **Lighting/Heating Control:** Utilize low frequency output levels with a 5kΩ potentiometer.
- **Temperature Control:** Connect a thermistor across RT/RT1 for temperature control in the range of 5-130°C. Set temperature using a 5kΩ potentiometer.

⚠ **Important Note on Rotation Direction:**
Please note that while the controller can be configured for either **clockwise (CW)** or **counterclockwise (CCW)** rotation, **this setting is fixed after configuration.** The unit does **not support real-time or dynamic reversal** of motor rotation. This is by design, as the system uses a **single MOSFET,** which simplifies the circuitry and enhances reliability for fixed-direction applications.

Upgrade your motor control system with our DC Motor Controller, offering a comprehensive set of features for diverse applications. Whether you need precise speed control, efficient lighting management, or temperature regulation, our controller delivers flexibility and reliability. Choose advanced control for your DC motors with our cutting-edge controller.

TECHNICAL SPECIFICATIONS

Specifications	DCM24 - 30	DCM24 - 40	DCM24 - 60
Unit Limiting DC Current	30A	40A	60A
Maximum DC System Line Voltage	24V 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°C to 65°C		
Unit Storage Temperature Range	0°C to 85°C		

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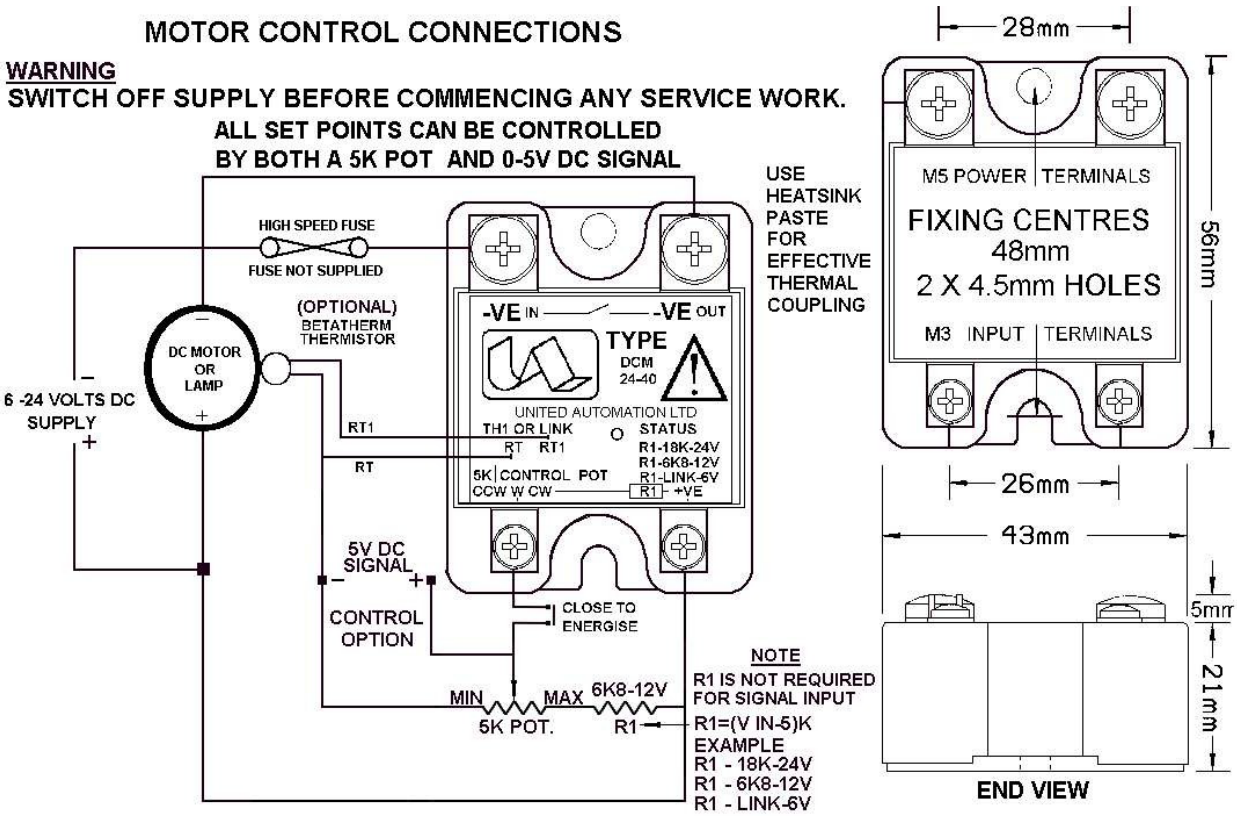
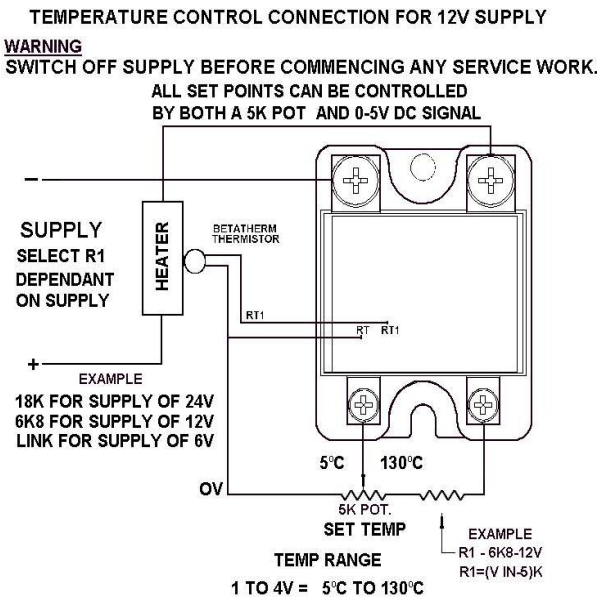
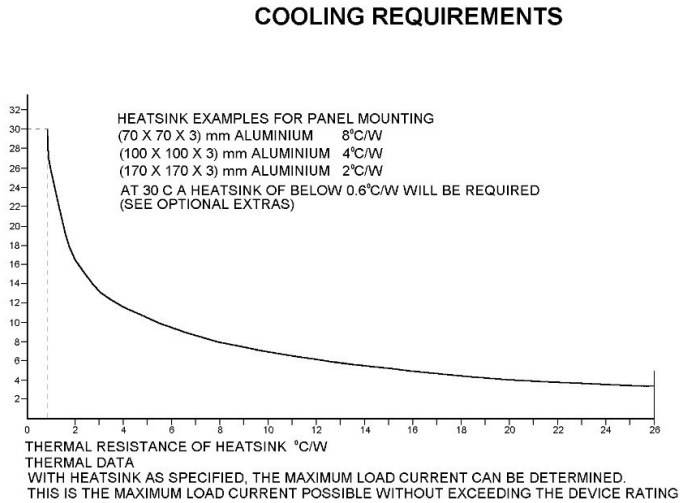
INSTALLATION

DIMENSIONS & CONNECTIONS







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".

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RECOMMENDATIONS

FUSING

It is recommended to use semiconductor (fast acting) type fuses or circuit breakers (Semiconductor - MCB) for unit protection. On initial switch on some loads may need an increased Factor of Safety (F of S) for unit and/or device protection. See SRA datasheet for information.

DOCUMENTS

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

It is recommended that installation and maintenance of this equipment should be done with reference to the current edition of the I.E.T. regulations (BS7671) by suitably qualified/trained personnel. The regulations contain important requirements regarding the safety of electrical equipment. For International standards refer STANDARDS on D of C.

OPTIONAL EXTRAS

Product Code	Product Description
D80005	Betatherm 10K2A1 bead sensor only
A26046	Betatherm 10K3A1 bead (type - X) sensor with 1m PTFE leads
A26036	Betatherm 10K3A1 enclosed (type - X) sensor with 1m PTFE leads
Z01062	Heatsink Compound Syringe **(Must be applied while fitting)**
A403001	5K Potentiometer
A80030	SSR Cover Kit
A15216	KA100 Black Plate Mounted Heatsink
A15217	KA100 DIN Rail Mounted Heatsink

PRODUCT CODE AND RELATED PRODUCT CODE

Product Code	Product Description
A75228	DCM24-30 24V DC 30A Motor Controller
A75250	DCM24-40 24V DC 40A Motor Controller
A75251	DCM24-60 24V DC 60A Motor Controller