



# MCW101A, B

## Time Proportional Level Controller

BLN-95-8967-4

Issued: March 1992

### DESCRIPTION

The MCW101 Time Proportional Level Controller provides automatic transverse-axis control on paving, curbing and trenching machines by switching an on/off solenoid. Together with the Q625A or MCQ101 Remote Setpoint Unit it senses the difference between setpoint and actual slope with respect to a gravity reference, and provides control signals to reduce either plus or minus errors.

Two modules are housed in the case of the Controller. The slope sensing module electromagnetically measures the deviation between a gravity reference and the equipment it is mounted on. The amplifier module accepts the signal from the sensor and produces a voltage output to drive solenoid valves which, on a typical paving machine, operate lift cylinders to position the tow point of a floated screed. Within the amplifier's proportional band, the percent of time the output is on is proportional to slope error.

The MCW101A and B are the same with three exceptions: First, the "A" unit is switched on the hot side while the "B" unit is switched on the ground side. Second, the "A" has an internal grade/slope switch and the "B" has an external left/right side switch. Third, on the "A" model the deadband adjustment is a multiple turn trim potentiometer, while on the "B" model it is a single turn trim potentiometer.



### FEATURES

- Rugged aluminum housing
- Adjustable deadband varies sensitivity
- RUN/STANDBY switch permits operator to switch to manual control
- Dual clockwise/counterclockwise tilt lamps show deviation from setpoint in RUN and STANDBY modes.
- Proportional output suitable for driving on-off solenoids
- Reverse polarity and short circuit protected
- Moisture and corrosion resistant
- Withstands vibration and shock
- Accepts remote slope setpoint
- Models for both 12 and 24 Volt systems

### ORDERING INFORMATION

#### SPECIFY

1. Model Number MCW101A or B.
2. Voltage, 12 or 24 Vdc
3. Accessories

#### ACCESSORIES

1. Q625A or MCQ101, Remote Setpoint
2. KW01015, two foot coiled cable for power and output
3. KW01001, two foot coiled cable for panel-mount Remote Setpoint

TABLE A.

ORDER NUMBER	VOLTAGE	TYPE OF OUTPUT
MCW101A1023	12 Vdc	Hot Side Switching
MCW101A1031	24 Vdc	Hot Side Switching
MCW101B1006	12 Vdc	Ground Side Switching
MCW101B1014	24 Vdc	Ground Side Switching

# TECHNICAL DATA

## ELECTRICAL

### OPERATING VOLTAGE

12 Volt Model: 11 to 15 Vdc  
 24 Volt Model: 22 to 30 Vdc

### SUPPLY CURRENT

0.6 amps maximum, not including output current to the valve

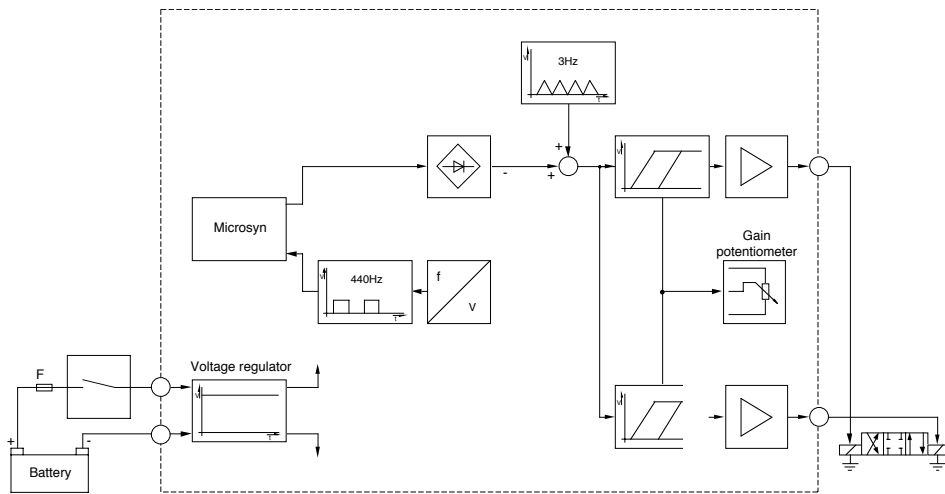
MAXIMUM VOLTAGE DROP (3 amp load current)  
 3.5 Vdc

CURRENT OUTPUT  
 3 amps, maximum

REVERSE POLARITY PROTECTION  
 200 Vdc, maximum

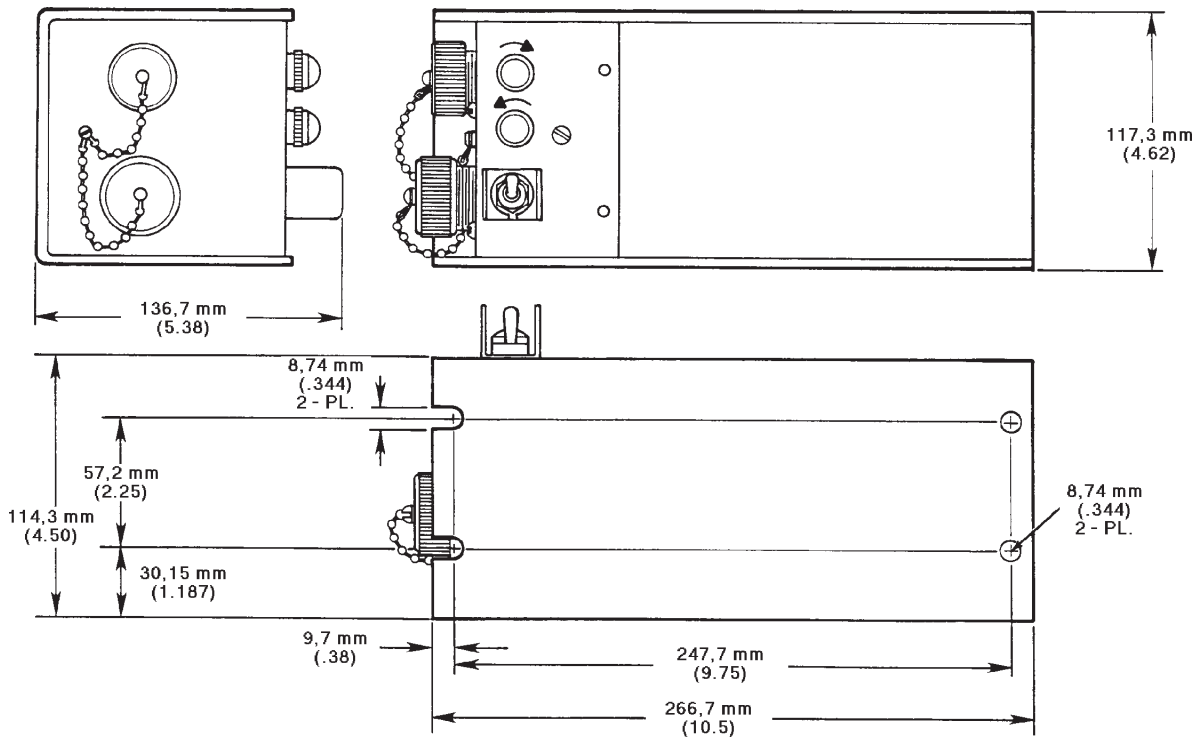
SHORT CIRCUIT PROTECTION  
 Full, with 0.5 ohm maximum resistance

## BLOCK DIAGRAM - High Side Switching



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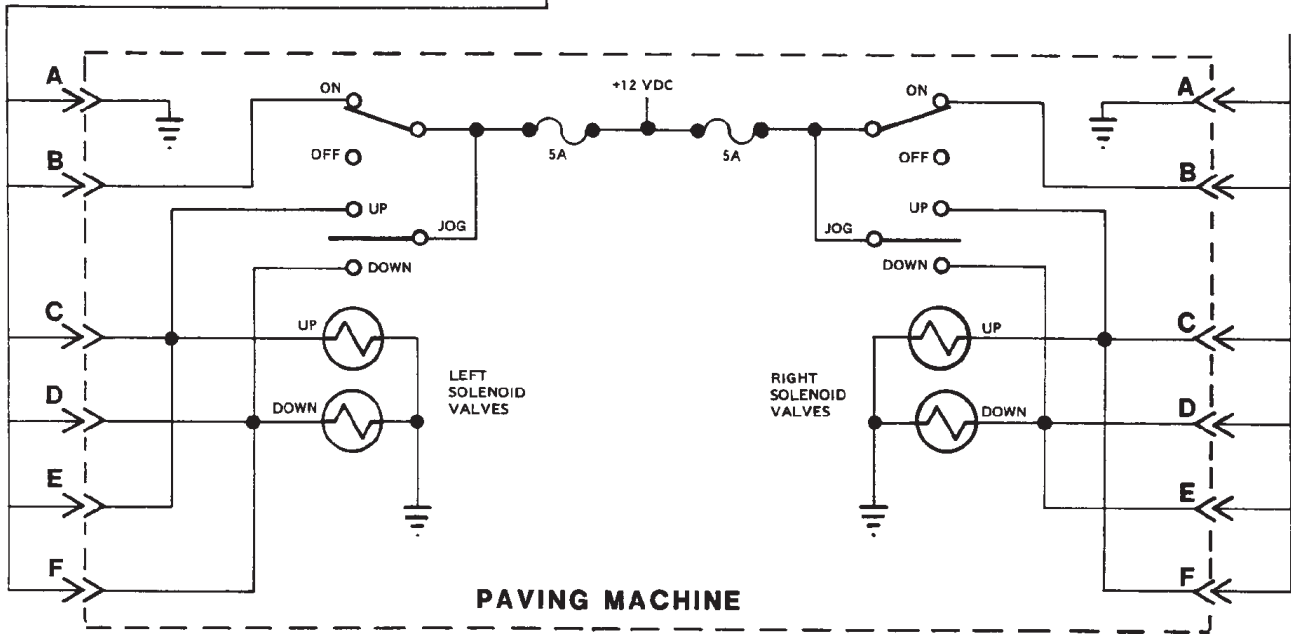
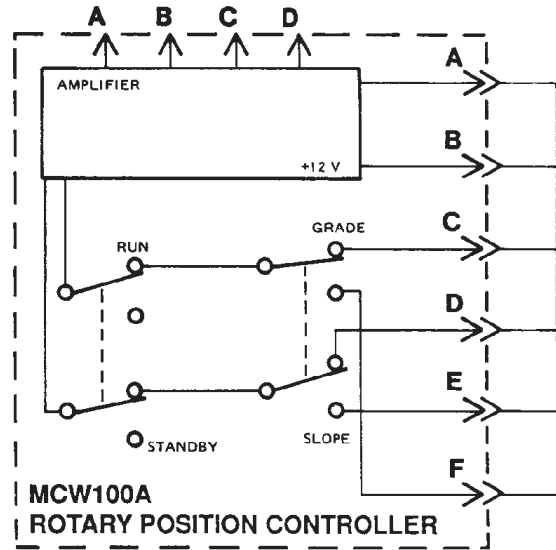
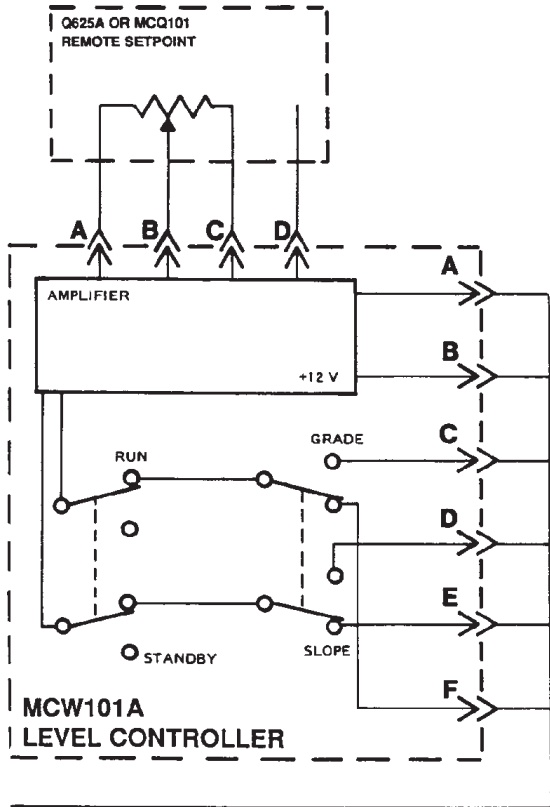
## DIMENSIONS



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Dimensions of the MCW101 in Millimeters (Inches).

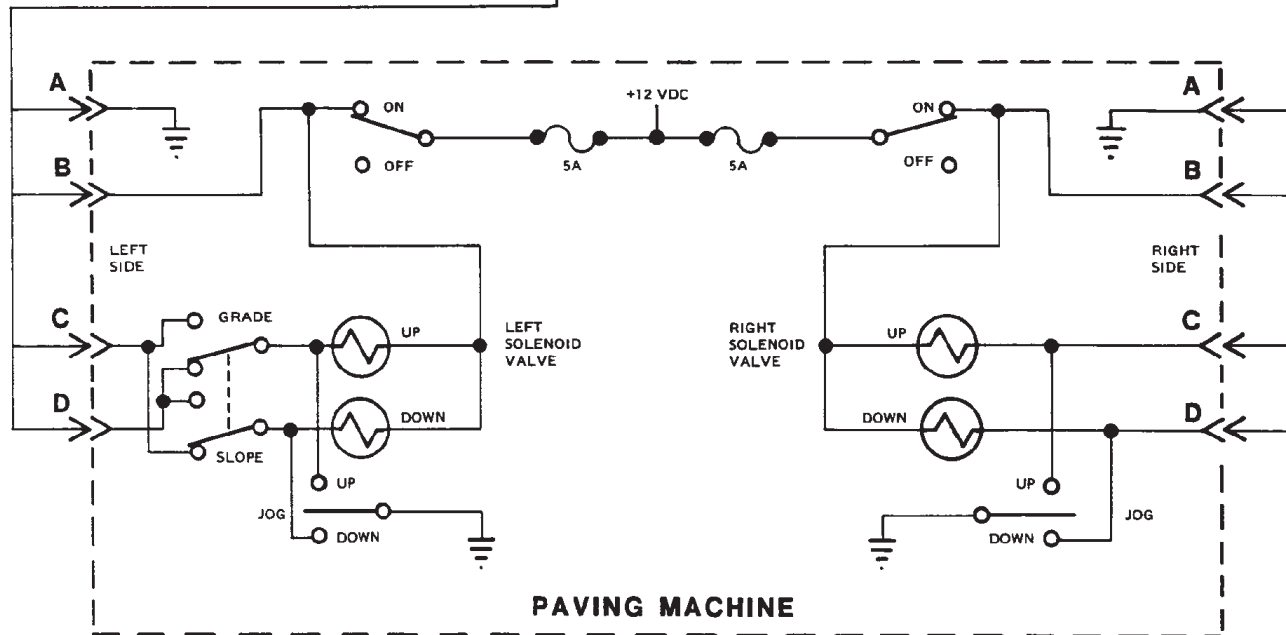
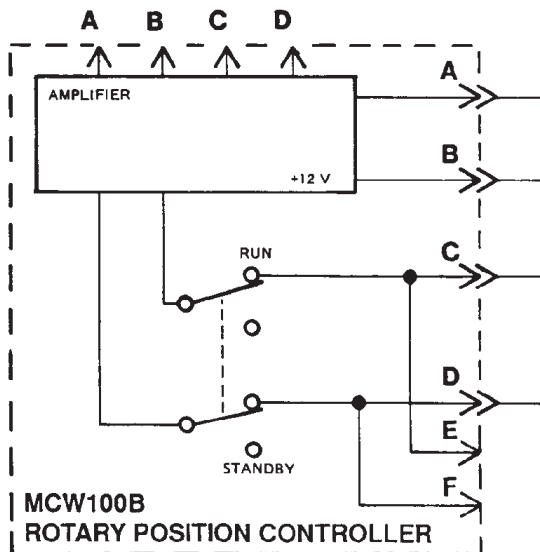
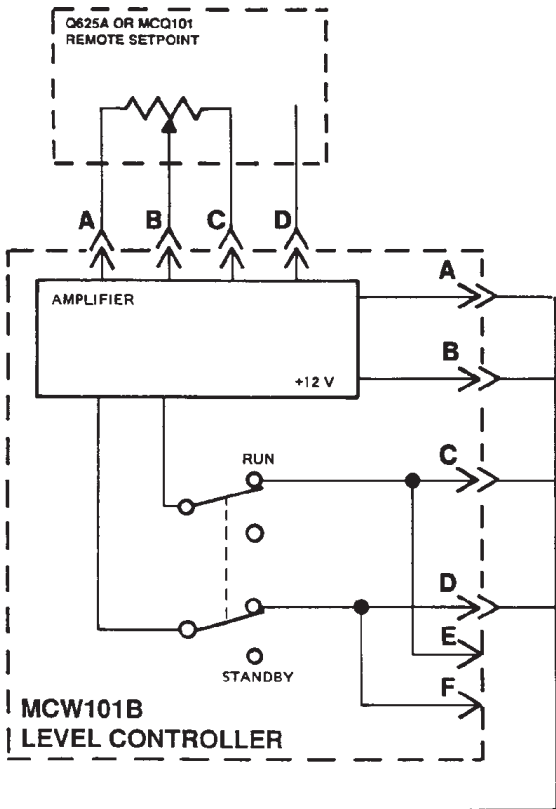
# CONNECTION DIAGRAM MCW101A



1156B

Typical Wiring Diagram for the MCW101A Level and MCW100A Rotary Position Control. Level and Rotary Position Controllers May Be Interchanged.

# CONNECTION DIAGRAM MCW101B



1157B

Typical Wiring Diagram for the MCW101B Level and MCW100B Rotary Position Control. Level and Rotary Position Controllers May Be Interchanged.

## CUSTOMER SERVICE

### **NORTH AMERICA**

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#### **ORDER FROM**

Danfoss (US) Company  
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#### **DEVICE REPAIR**

For devices in need of repair or evaluation, include a description of the problem and what work you believe needs to be done, along with your name, address and telephone number.

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