

# MCW100A, B

## Time Proportional Rotary Position Controller

BLN-95-8966-4

Issued: March 1992

### DESCRIPTION

The MCW100 Time Proportional Rotary Position Controller provides automatic grade or steering control of paving, trenching and curbing machines by switching an on/off solenoid valve. The Controller uses a wand follower to sense the grade level or steering command from a stringline or surface.

Two modules are housed in the case of the Controller. The grade sensing module electromagnetically measures the deviation between the true grade of the machine through the follower. The amplifier module receives the signal from the sensor module and produces a voltage output to drive solenoid valves which, on a typical paving machine, operate lift cylinders. Within the amplifier's proportional band, the percent of time the output is on is proportional to the grade error.

The MCW100A 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 that the "B" does not have. Third, on the "A" model the deadband adjustment is a multiple turn trim potentiometer and on the "B" model it is a single turn trim potentiometer.



### FEATURES

- May be mounted on either side of machine
- Adjustable tracking force
- Rugged aluminum housing
- Adjustable deadband varies sensitivity
- RUN/STANDBY switch permits operator to switch to manual control
- Dual UP/DOWN lamps show deviation from setpoint in RUN and STANDBY modes
- Reverse polarity and short circuit protected
- Moisture and corrosion resistant
- Withstands vibration and shock
- Models for both 12 and 24 Volt systems

### ORDERING INFORMATION

#### SPECIFY

1. Model Number MCW100A or B
2. Voltage, 12 or 24 Vdc
3. Cable Part Number
4. Follower Part Number(s)

TABLE A.

ORDER NUMBER	VOLTAGE	TYPE OF OUTPUT
MCW100A1025	12 Vdc	Hot Side Switching
MCW100A1033	24 Vdc	Hot Side Switching
MCW100B1008	12 Vdc	Ground Side Switching
MCW100B1016	24 Vdc	Ground Side Switching

#### ACCESSORIES

1. STEERING FOLLOWER  
Straight tubular follower, 16 inches long overall with breakaway joint. For steering only. Part Number KG07002.
2. RIGHT ANGLE GRADE FOLLOWER  
With breakaway joint. For grade applications only. Follows a stringline. Also used with skate assembly, or skate and ski assembly for following hard reference surface. Part Number KG04003.
3. RIGHT ANGLE GRADE FOLLOWER LESS SENSING ARM  
For grade applications utilizing the skate and/or skate and ski assemblies. Same as Part Number KG04003 above, but without the sensing arm and breakaway joint. Part Number K09274.

## ORDERING INFORMATION (continued)

### 4. SKATE ASSEMBLY

For grade applications. Use with right angle grade follower (Part Number K09274) on hard reference surface. Part Number KG06001.

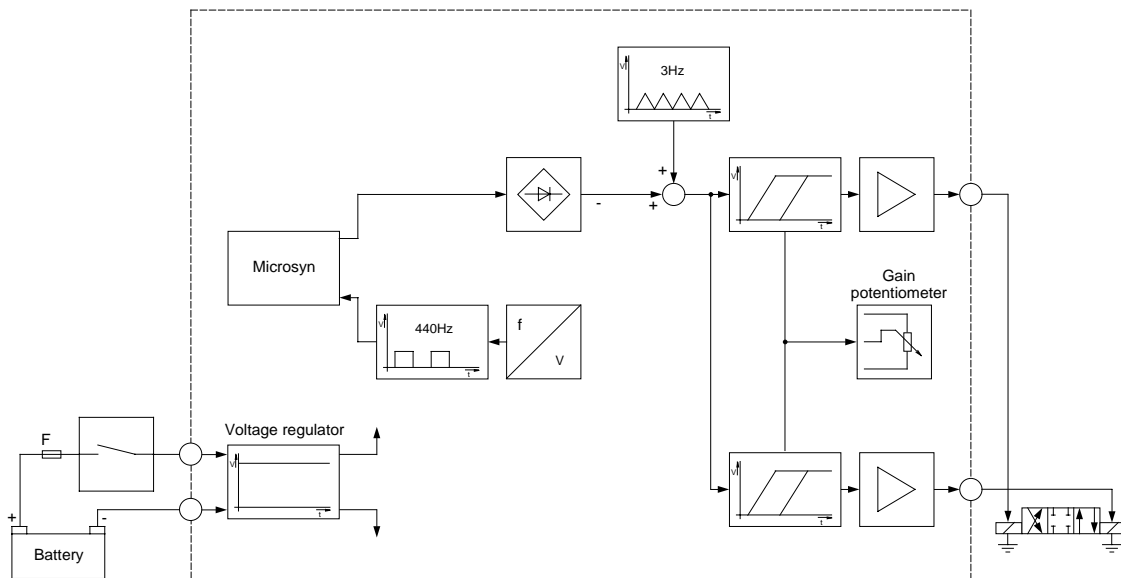
### 5. SKI ASSEMBLY

For grade applications. Used with right angle grade follower (Part Number K09274), and skate assembly (Part Number KG06001) on hard reference surface. Part Number KG02001.

### 6. CABLE ASSEMBLY

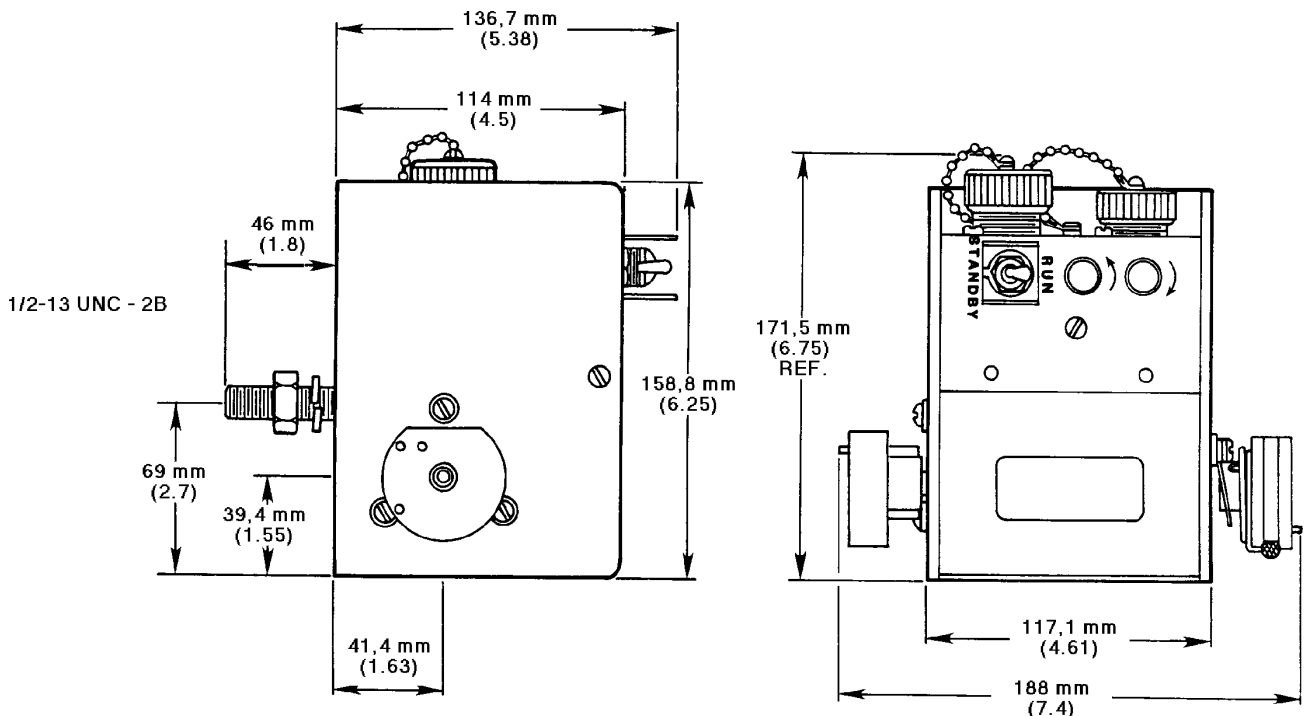
KW01015 two-foot coiled cable that extends to ten feet (3 meters). Has right angle connector on one end, and straight connector on the other end to make connections between the MCW100 and Bendix Type No. MS3102A18-1P plug. (Part Number K03989.)

## BLOCK DIAGRAM: High Side Switching



1605

## DIMENSIONS



Approximate Dimensions of the MCW100 in Millimeters (Inches).

1149

# 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

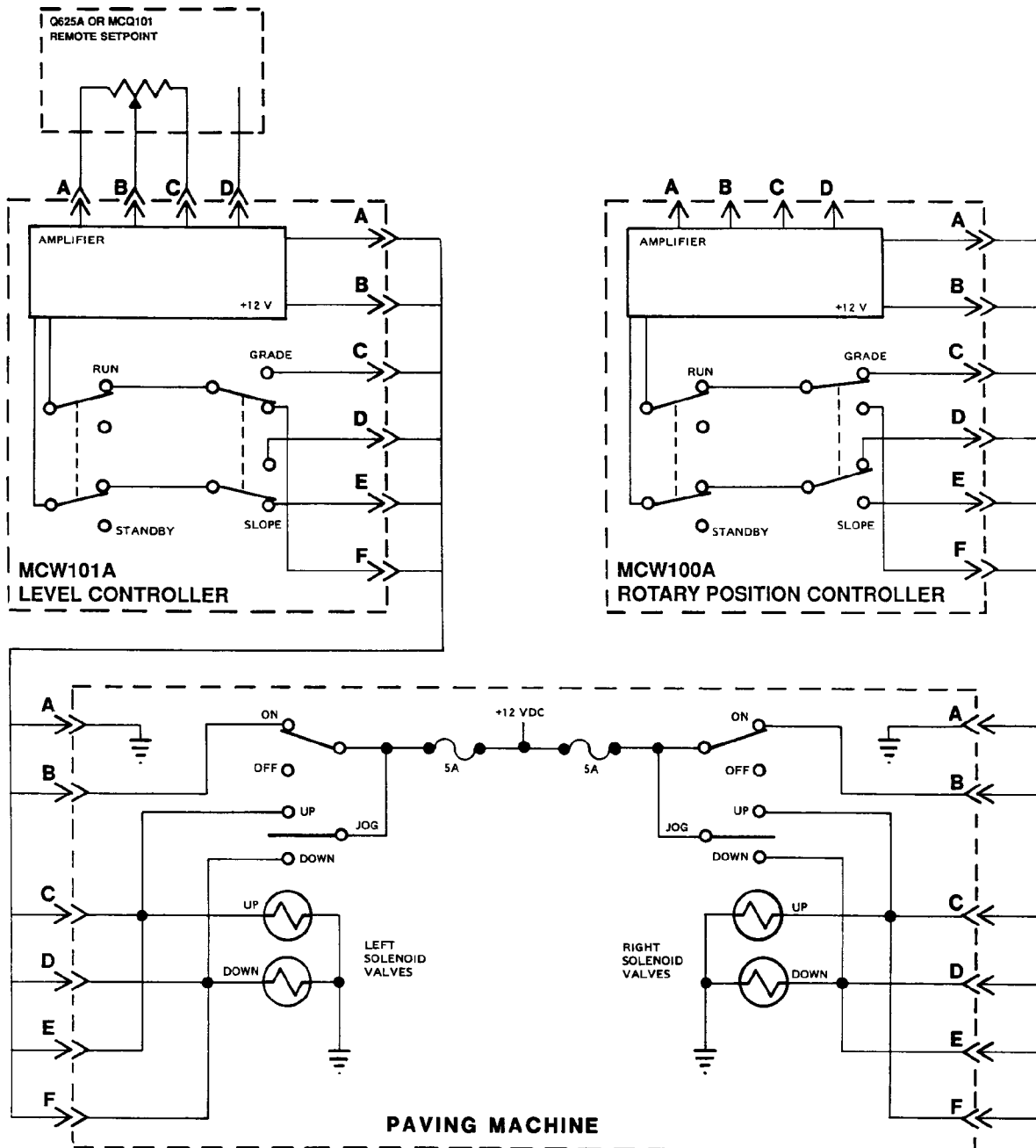
### REVERSE POLARITY PROTECTION

200 Vdc maximum

### SHORT CIRCUIT PROTECTION

Full, with 0.5 ohm maximum resistance

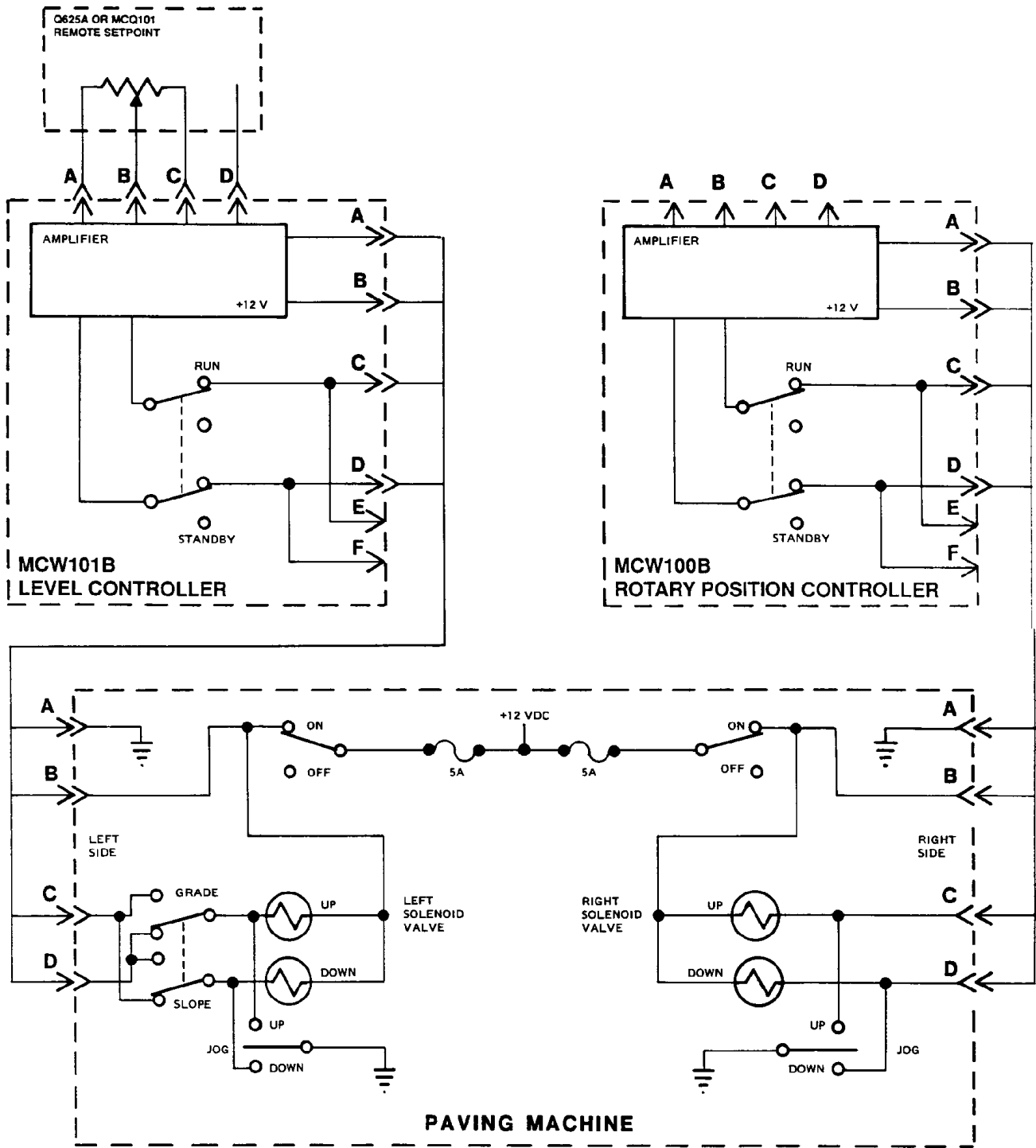
## CONNECTION DIAGRAM MCW100A



1156B

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

# CONNECTION DIAGRAM MCW100B



1157A

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

## CUSTOMER SERVICE

### **NORTH AMERICA**

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#### **ORDER FROM**

Sauer-Danfoss (US) Company  
Customer Service Department  
3500 Annapolis Lane North  
Minneapolis, Minnesota 55447  
Phone: (763) 509-2084  
Fax: (763) 559-0108

#### **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.

### **RETURN TO**

Sauer-Danfoss (US) Company  
Return Goods Department  
3500 Annapolis Lane North  
Minneapolis, Minnesota 55447

### **EUROPE**

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#### **ORDER FROM**

Sauer-Danfoss (Neumünster) GmbH & Co.  
Order Entry Department  
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