



3500 Annapolis Lane North, Minneapolis, MN 55447  
 Telephone: (763) 509-2084 Telefax: (763) 559-0108

## Unit Specification

**KE08102**

**+10 Volt Ramped Valve Drive Amplifier**

**ISSUE:** 1

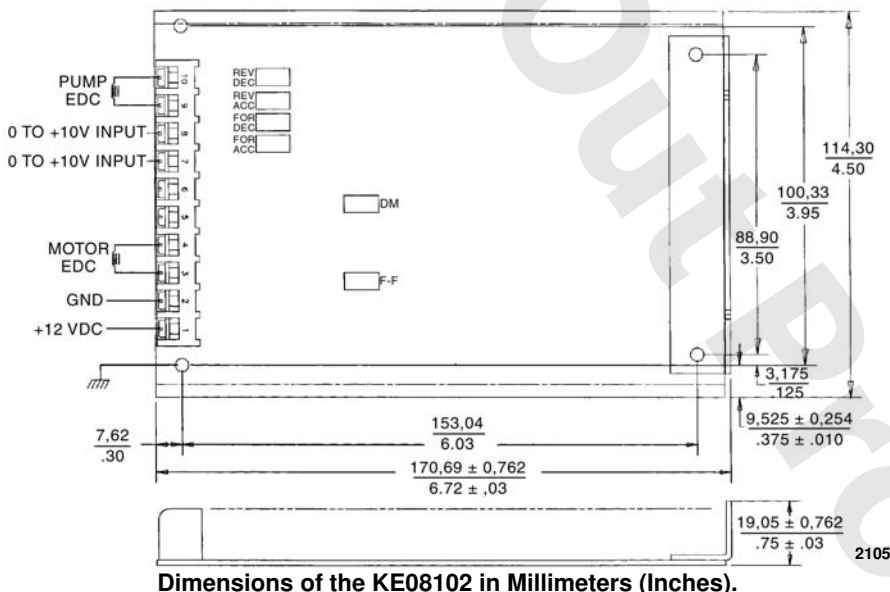
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### GENERAL DESCRIPTION

The function of the Ramped Valve Drive Amplifier is to take command voltage signals (0 to +10 Volts in terminal 8 for one direction and 0 to +10 Volts in terminal 7 for the other ) and limit the rate of output shaft speed change of a hydrostatic motor. The output of the controller produces 0 to 200 mA for the pump Electrical Displacement Controls (EDCs) and 0 to 150 mA for the variable motor EDCs. The pump EDC connection is automatically reversed as the speed decelerates to zero from one direction and starts to drive in the opposite direction. The pump and motor EDCs are connected in series. The first 0 to 90 mA produce only pump control. After reaching 95 mA and higher the pump stays at maximum and the motor progressively destrokes for higher speed. As the EDC current continues to increase, the pump EDC is clamped at about 150 mA by a bypass network.

The KE08102 is capable of producing a combined maximum output current of 400 mA (typically 0 to 200 mA to the pump EDC and 0 to 200 mA to the motor EDC). In the event that only a pump EDC is being controlled, install a 25 ohm, 3 watt load resistor should be connected across terminals 3 and 4.

The command inputs need to be separate such that both are positive voltage responding. A control handle or other device that can produce 0 to +10 Volts on one input for forward speeds and 0 to +10 Volts on the other input for reverse speed should be used. Input voltage could also be 0 to 5 Volts since the Volts are cut in half right away. Normal Accel/Decel control is maintained and the variable motor EDC control is retained as well.



### ELECTRICAL CHARACTERISTICS

SUPPLY VOLTAGE	12 Vdc
SUPPLY CURRENT	0.250 amp plus the load current
OUTPUT CURRENT	0.300 amps maximum
ACCEL/DECCEL	1 to 15 seconds
INPUT IMPEDANCE	4 kilohm per channel

### ADJUSTMENTS

Reference the Dimensions drawing for the adjustment potentiometer locations. There are a total of 6 adjustments that may be required. These are as follows:

- 4 separate ACC and DEC ramp adjustments (1 to 15 seconds) in each direction:

**REV DEC** this is in conjunction to +10 to 0 command input on pin 7

**REV ACC** this is in conjunction to 0 to +10 command input on pin 7

**FOR DEC** this is in conjunction to +10 to 0 command input on pin 8

**FOR ACC** this is in conjunction to 0 to +10 command input on pin 8

- 2 adjustments affect the output current:

**DM** this allows the reverse output current to match the forward output current with respect to the same input voltage level commands between inputs 7 and 8

**F-F** this allows the maximum output current to be set

All potentiometers are 20 turn. To increase the output, turn the potentiometer CW.