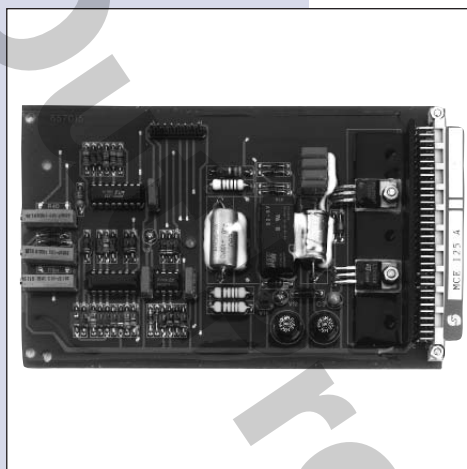


MCE125A  
Ramp Card  
Amplifier

Technical  
Information



#### DESCRIPTION

The Sauer-Danfoss MCE125A Ramp Card Amplifier provides a time-delayed control for MCV104A, MCV105A or MCV111B Electrical Displacement Controls (EDC) for hydrostatic transmissions. The adjustable ramptime is the same for up and down. The Amplifier operates uni- or bidirectionally.

#### FEATURES

- Proportional driving of an EDC with a potentiometer.
- Adjustable output current.
- Adjustable ramptime (0 - 8 seconds).
- ON/OFF switching of the delay time possible.
- Operates uni- or bidirectionally.
- Simple adjustments.
- 12V<sub>DC</sub> or 24V<sub>DC</sub> supply voltage.
- Reverse polarity and short circuit protected.
- Withstands vibration and shock.

#### ORDERING INFORMATION

Controller	Supply voltage [V <sub>DC</sub> ]	Ramp time [seconds]	Id. No.
MCE125A1001	12 or 24	0 - 8	662338
MCE125A1002	12 or 24	0 - 20	502539

#### TECHNICAL DATA

Supply voltage: 12V<sub>DC</sub> or 24V<sub>DC</sub>

Ripple: ≤ 20%

Power load: 3,6W or 7,2W

Setpoint: External potentiometer 5 kΩ ± 10%, ≥ 1W

#### EDC ADJUSTMENT

Output current range: 40 mA - 150 mA (at 23 Ω)

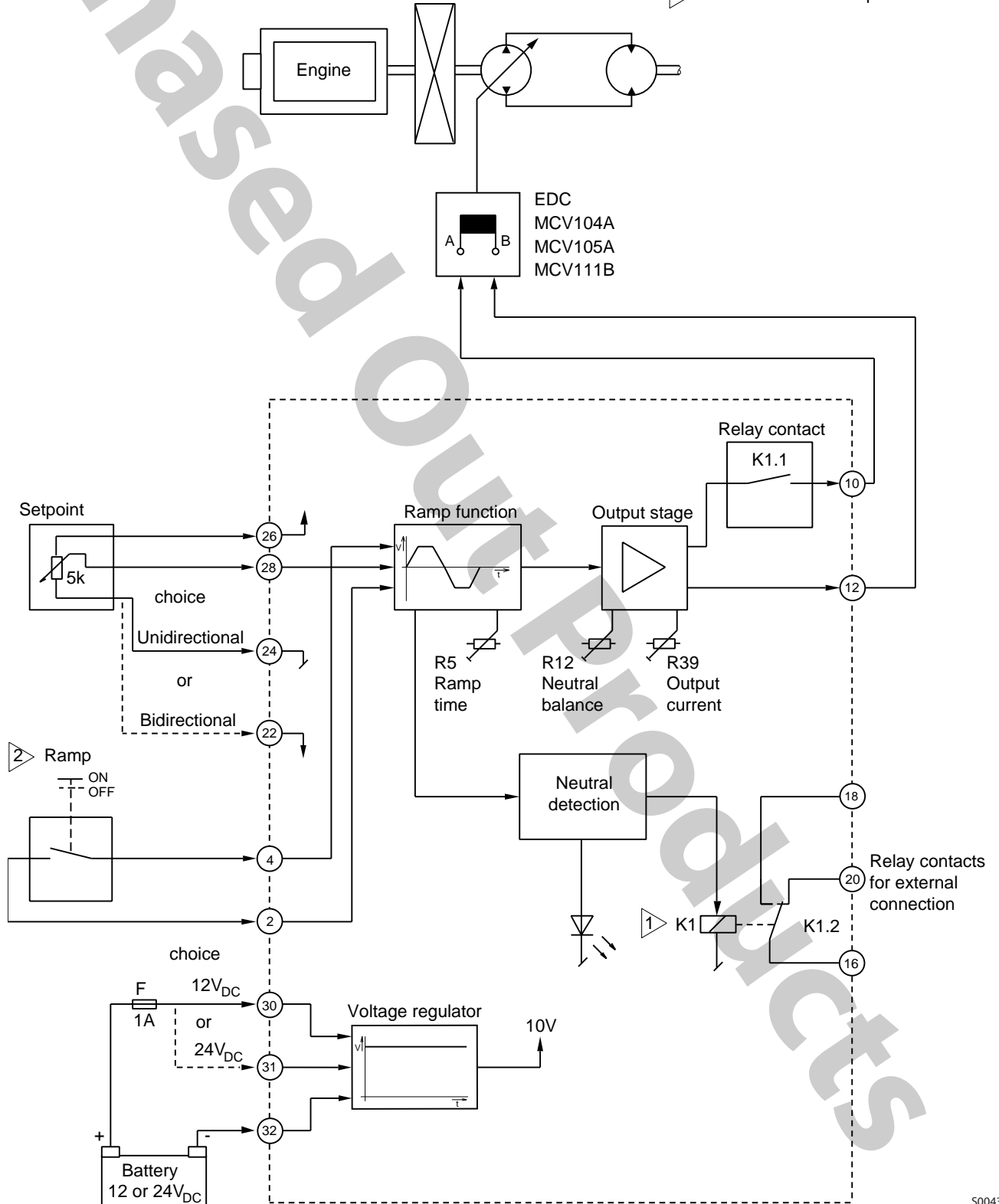
Adjustable ramptime: 0 - 8 seconds (Up or Down)

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**BLOCK DIAGRAM**

- 1 Position shown: Neutral
- 2 Position shown: Ramp active



**THEORY OF OPERATION** **General**

The MCE125A Ramp Card Amplifier can be powered with 12V<sub>DC</sub> (PIN 30) or 24V<sub>DC</sub> (PIN 31). Both inputs are protected by 680 mA fuses.

The external fuse should be 480 mA.

The external setpoint potentiometer should be 5 kΩ ± 10%, ≥ 1W. The potentiometer will be supplied by an internally generated stabilized voltage. As shown in the connection diagram, it is possible to work with the ramp card in uni- or bidirectional mode.

Two way contacts, open or closed depending on neutral position, are available for such things as neutral start. The ramptime is adjustable with the potentiometer R5 over 0 - 8 seconds. The neutral adjustment of the output current is adjustable with R12 and the maximum output current with R39.

**Unidirectional Operation**

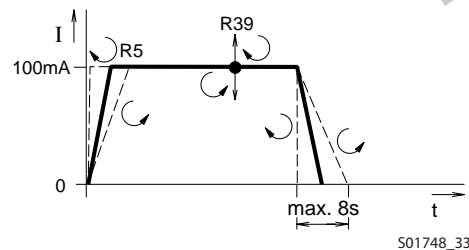
The setpoint potentiometer is connected to pins 24, 26 and 28 (see figures 1 and 2).

**Bidirectional Operation**

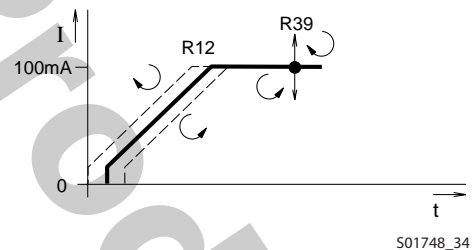
The setpoint potentiometer is connected to pins 22, 26 and 28 (see figures 3 and 4). In the center position of the potentiometer (neutral position) the value of the output current is <± 5 mA. In this range a neutral position sensor switches off to the EDC and defines a true neutral position.

**OPERATION DIAGRAMS**

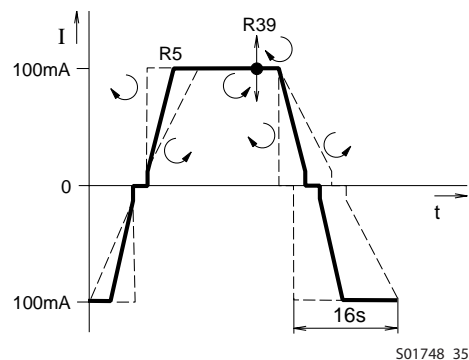
**Figure 1: unidirectional**



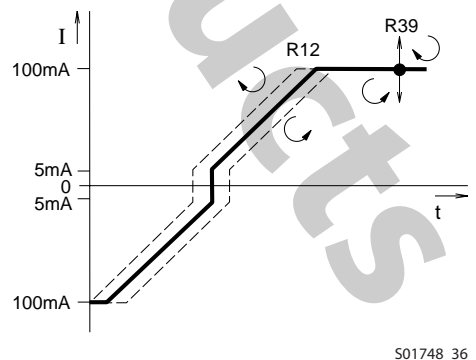
**Figure 2: unidirectional**



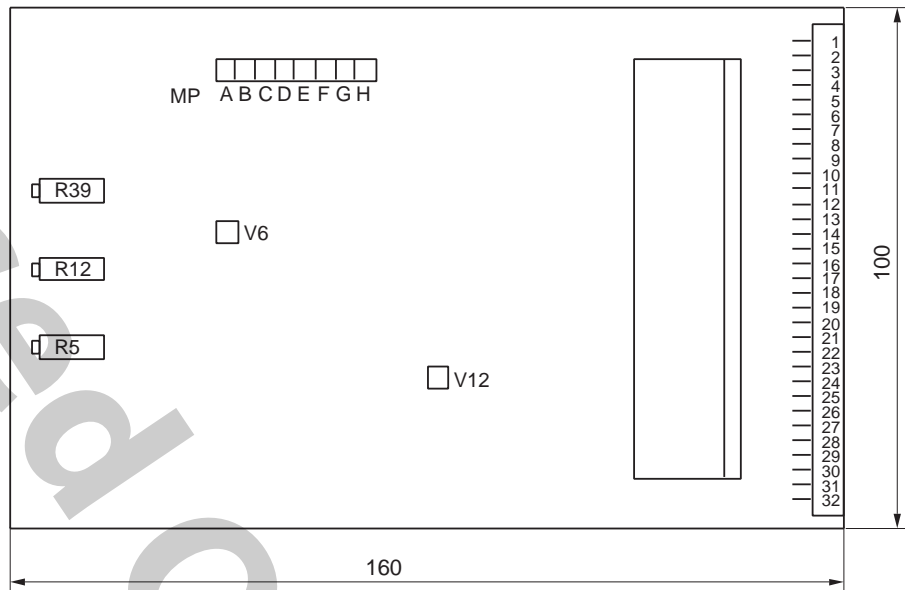
**Figure 3: bidirectional**



**Figure 4: bidirectional**

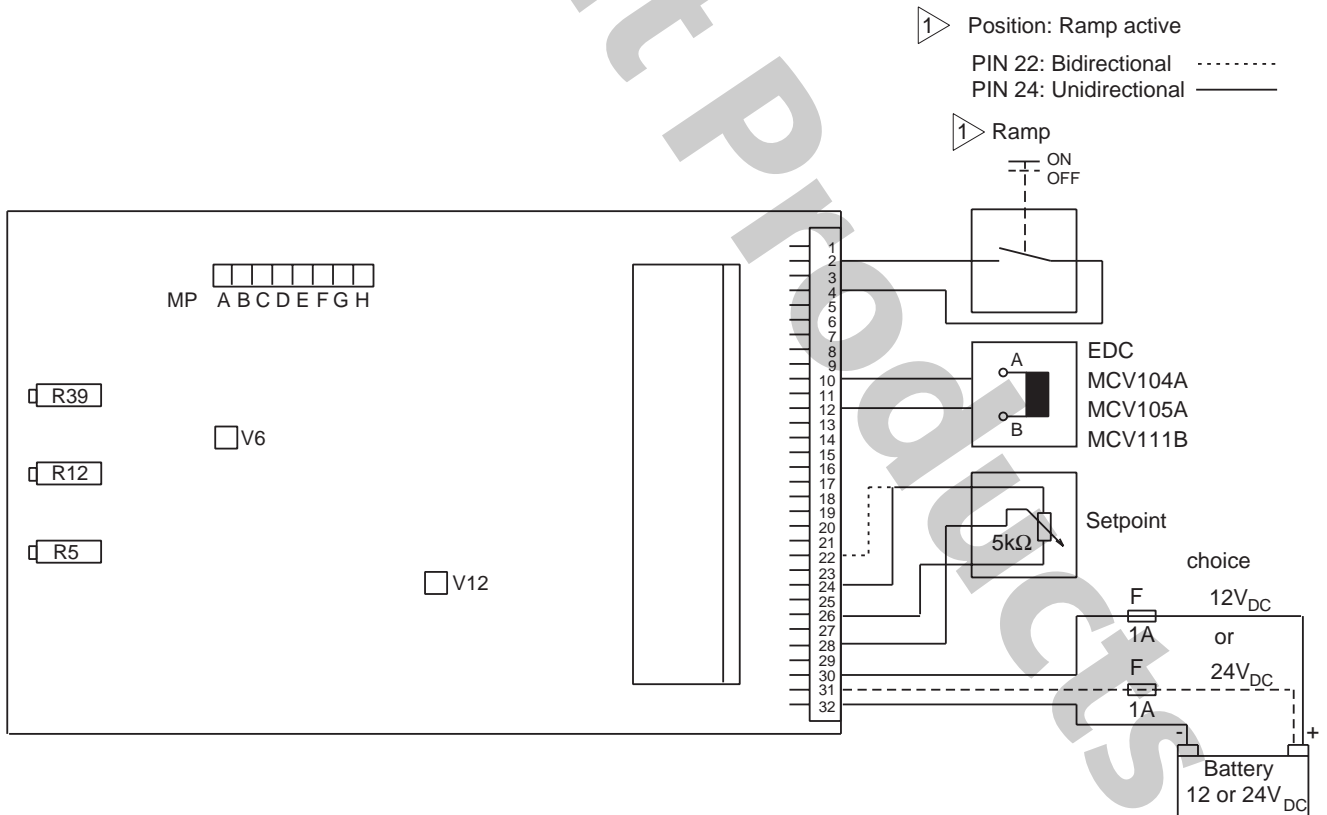


**DIMENSIONS**



S00293

**CONNECTION DIAGRAM**



S00384a

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