

Overview

DESCRIPTION

The Sauer-Danfoss MCE126A Current Amplifier converts analog input signals like current or voltage into a proportional output current, that will drive Sauer-Danfoss axial piston pumps with an Electrical Displacement Control (EDC).

An anti stall profile may be superimposed for applications using an electric motor to drive the pump.

FEATURES

- Working modes are selectable externally.
- Anti stall function for electrical motor.
- The powered load may vary from 10Ω to 40Ω.
- 12V_{DC} or 24V_{DC} supply voltage.
- Reverse polarity and short circuit protected.
- Withstands vibration and shock.

ORDERING INFORMATION

Controller	Supply voltage [V _{DC}]	Id. No.
MCE126A1001	12 or 24	316372

TECHNICAL DATA

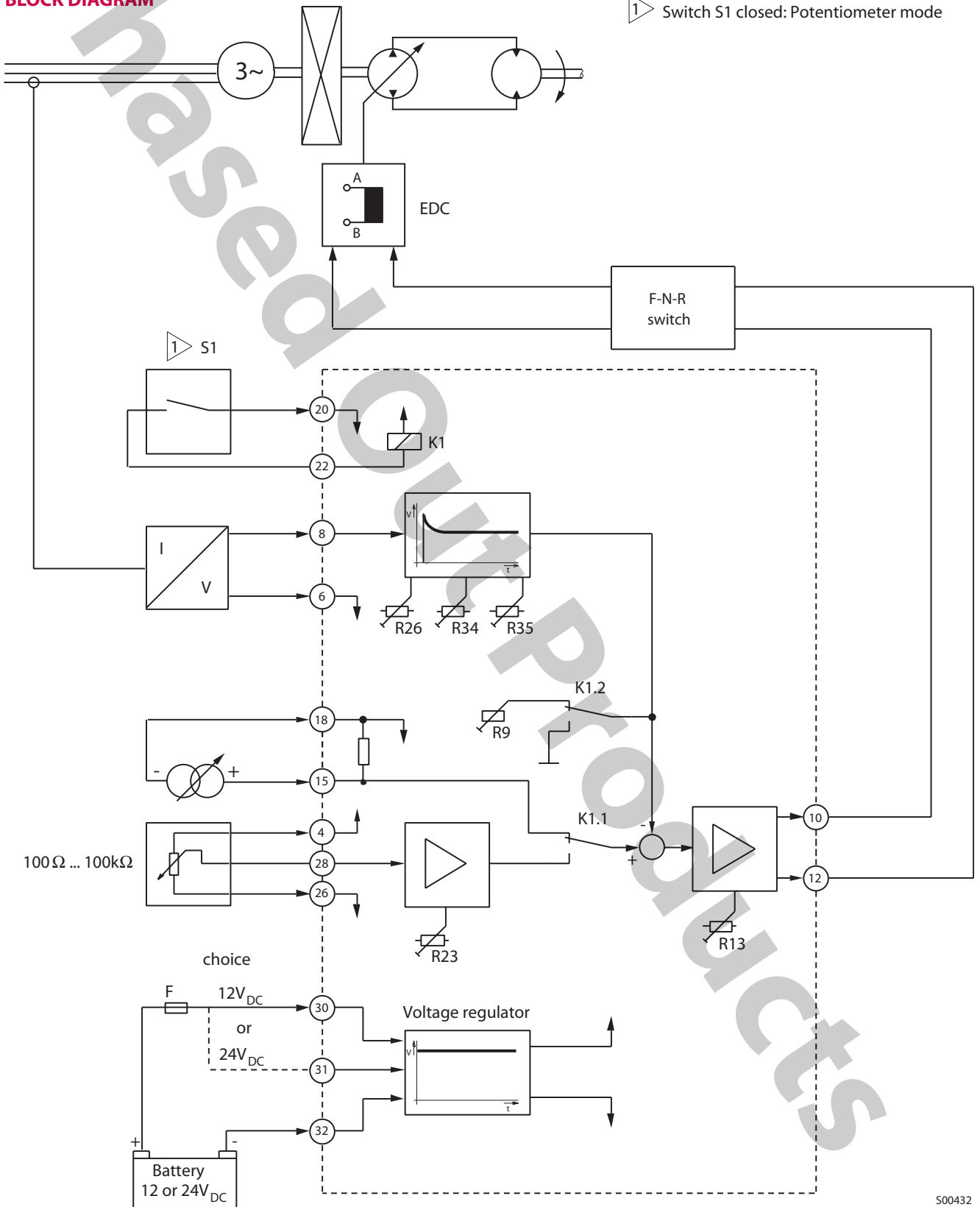
Supply voltage: 12V_{DC} or 24V_{DC}
 Ripple: ≤ 10 %
 Power load: 4,2W or 8,4W
 Maximum output current range: 60 mA to 150 mA (with loads ranging from 10Ω - 40Ω)

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BLOCK DIAGRAM

1 ▷ Switch S1 closed: Potentiometer mode



THEORY OF OPERATION

The MCE126A Current Amplifier is able to convert DC signals which may be from 0 mA to 20 mA or 4 mA to 20 mA into a current signal (0 mA - 150 mA) output. The MCE126A is a "current sourcing" device.

With external mode switch S1 it is possible to switch to a potentiometer (100 Ω to 100 kΩ) or voltage (0V_{DC} to 10V_{DC}) input.

The current output curves are adjustable according to figures 1 and 2.

To protect an electrical motor against overload, an anti stall function may be superimposed. For this mode a current/voltage converter is necessary. The maximum input current of the motor is adjustable with the setpoint potentiometer R26. Depending on the overload characteristic of the motor the control parameters are adjustable with R34 and R35 (see figure 3).

The anti stall control algorithm is shown in figure 4.

Note: Without anti stall control function potentiometers R34 and R35 must be turned ccw maximum.

OPERATION DIAGRAMS

Figure 1: Current mode

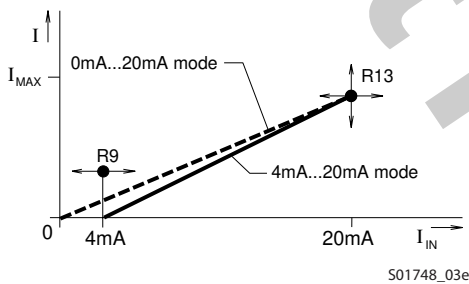


Figure 3: adjustable parameters

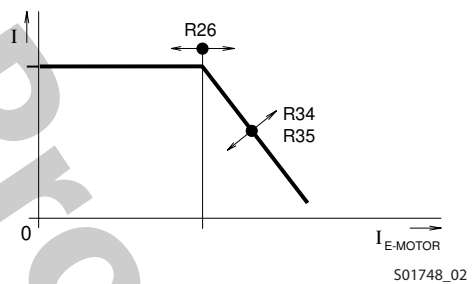


Figure 2: Potentiometer mode

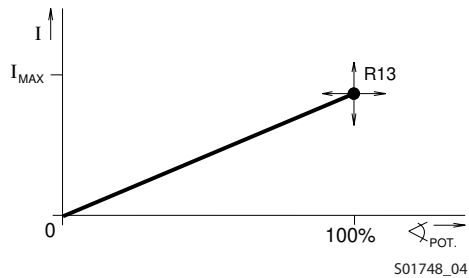
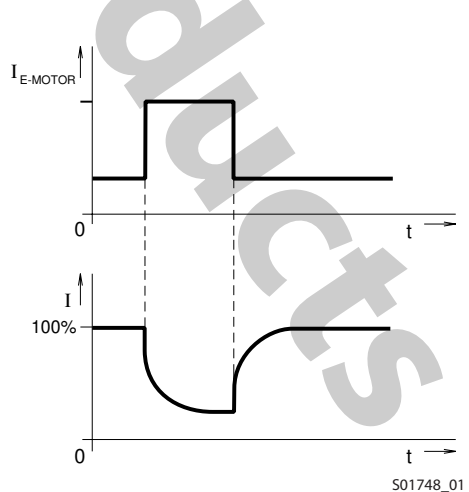
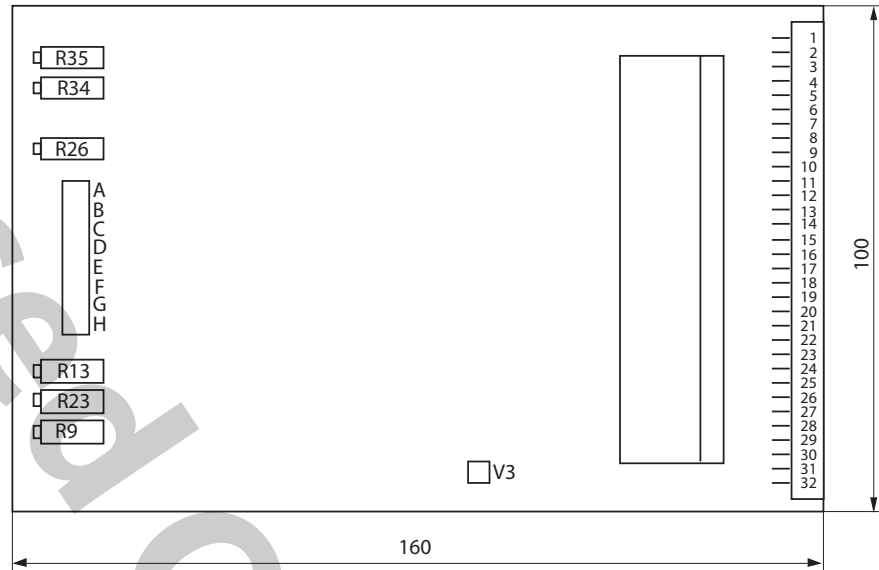


Figure 4: anti stall control algorithm

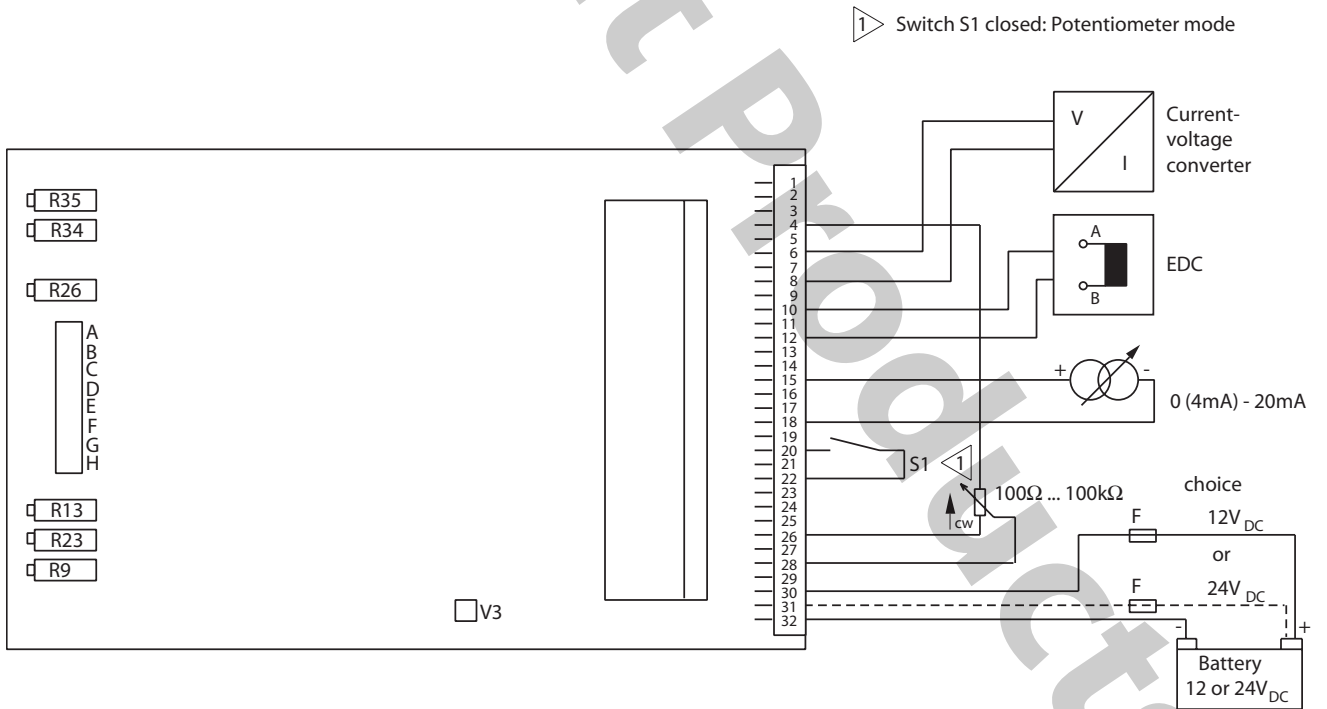


DIMENSIONS



S00295

CONNECTION DIAGRAM



S00386

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