

Overview

DESCRIPTION

The Sauer-Danfoss Automotive Controller MCE124A allows a vehicle to be driven like a car. The Controller outputs a current to the hydrostatic transmission EDC proportional to the engine speed.

The Controller also provides an all range anti stall function.

FEATURES

- Propel speed control proportional to the acceleration pedal potentiometer.
- Anti stall function.
- Available with enclosure.
- Reverse polarity and short circuit protected.
- Withstands vibration and shock.

ORDERING INFORMATION

Controller	Supply voltage [V _{DC}]	Type	Id. No.
MCE124A1001	24	2 x Control Handle	314104

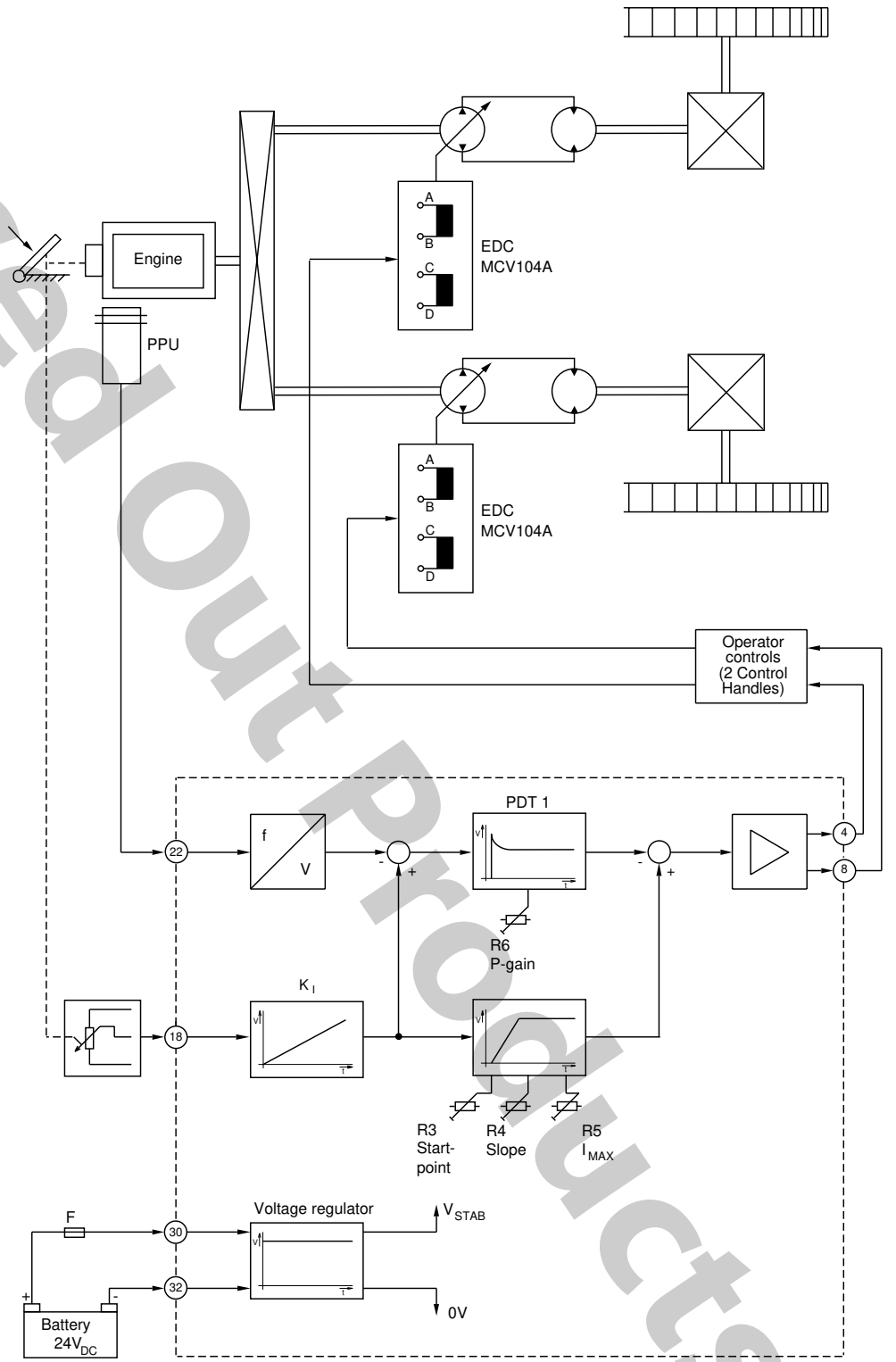
TECHNICAL DATA

Supply voltage:	24V _{DC}
Ripple:	≤ 10 %
Power load:	750 mA ± 10 mA
Frequency range startpoint:	1200 Hz - 2800 Hz
Max. input frequency:	6500 Hz

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BLOCK DIAGRAM



S00412

THEORY OF OPERATION

General

The Automotive Controller MCE124A does in conjunction with a hydrostatic transmission two major functions:

1. Automotive control of the hydrostatic transmission.
2. Anti stall features.

Automotive Function

The Automotive Controller generates depending on the voltage signal of the acceleration pedal potentiometer an output current (see figure 1), which controls the vehicle speed.

Anti Stall Function

The mechanical coupling between the acceleration pedal potentiometer and the pedal or the injection pump lever creates a fixed proportion between the RPM increase of the engine and voltage increase of the acceleration pedal potentiometer.

The desired value of the Controller is the acceleration voltage and the converted engine RPM is the actual value.

In reference to the adjustable anti stall control parameter, the Controller will reduce the voltage signal of the automotive curve, if the actual value is less than the desired value (see figure 2).

The anti stall function works over the entire automotive range. The control characteristic of the anti stall function is shown in figure 3.

OPERATION DIAGRAMS

Figure 1: Automotive control parameters

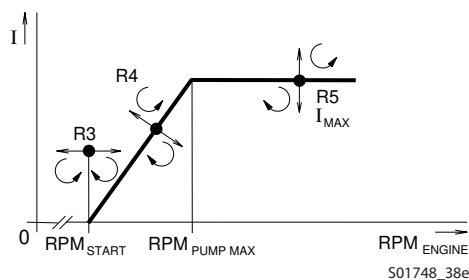


Figure 3: Step response of the anti stall controller

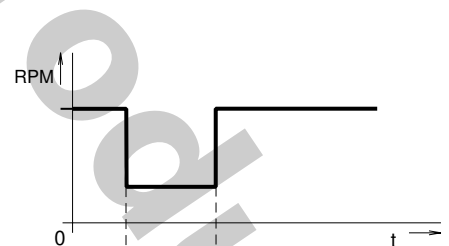
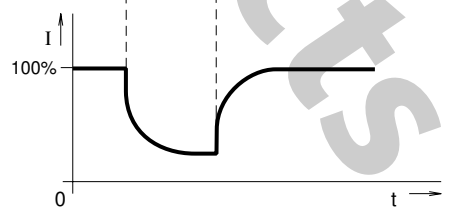
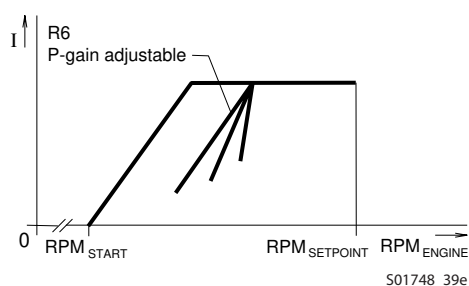
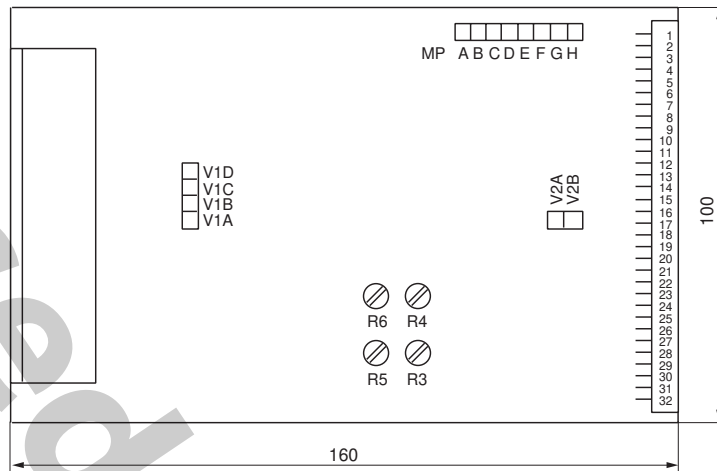


Figure 2: Output current reduction

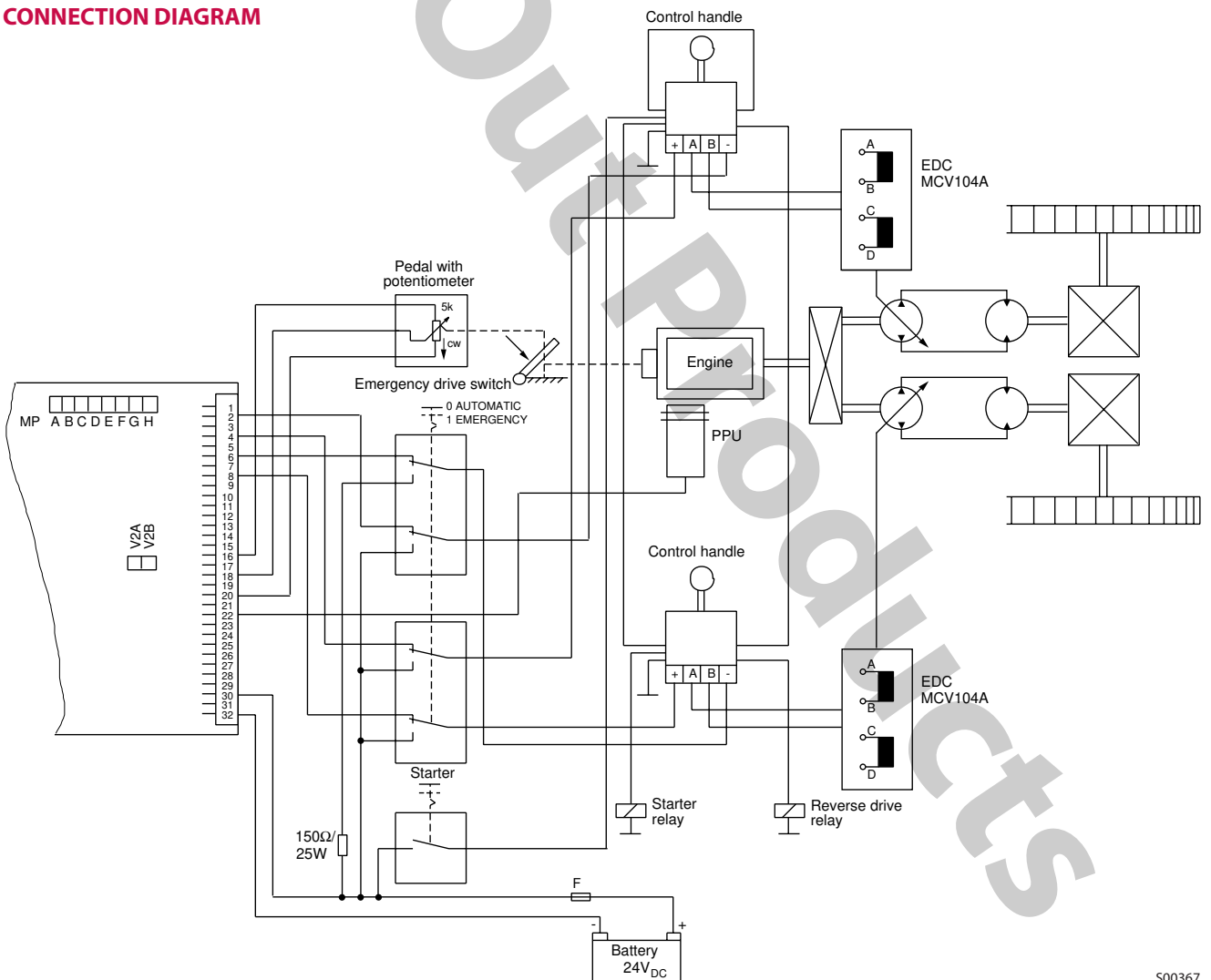


DIMENSIONS



S00250

CONNECTION DIAGRAM



S00367

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