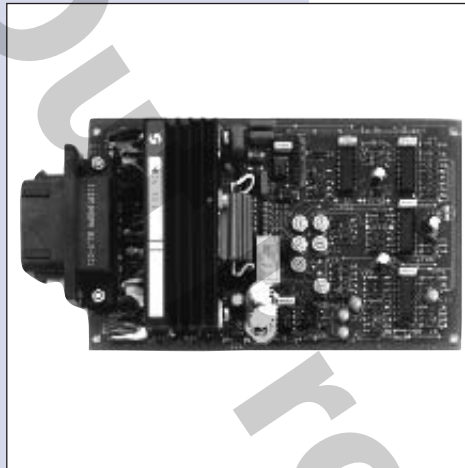




MCE121A  
Load Controller

Technical  
Information



#### DESCRIPTION

The Sauer-Danfoss MCE121A Load Controller is used in applications requiring constant engine RPM under dynamic load conditions. Shedding load upon encountering obstacles avoids engine stall, prolongs engine life and maximizes fuel efficiency.

#### FEATURES

- Adjustable output current.
- Antistall function.
- Nearly constant PTO speed.
- 12V<sub>DC</sub> or 24V<sub>DC</sub> supply voltage.
- Reverse polarity and short circuit protected.
- Moisture and corrosion resistant.
- Withstands vibration and shock.

#### ORDERING INFORMATION

| Controller  | Supply voltage<br>[V <sub>DC</sub> ] | Frequency range<br>[Hz] | Id. No. |
|-------------|--------------------------------------|-------------------------|---------|
| MCE121A1001 | 12 or 24                             | 500 - 2000              | 791566  |
| MCE121A1002 | 12 or 24                             | 1500 - 6000             | 791574  |

#### TECHNICAL DATA

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

Ripple: ≤ 10 %

Max. output voltage: 6V<sub>DC</sub>

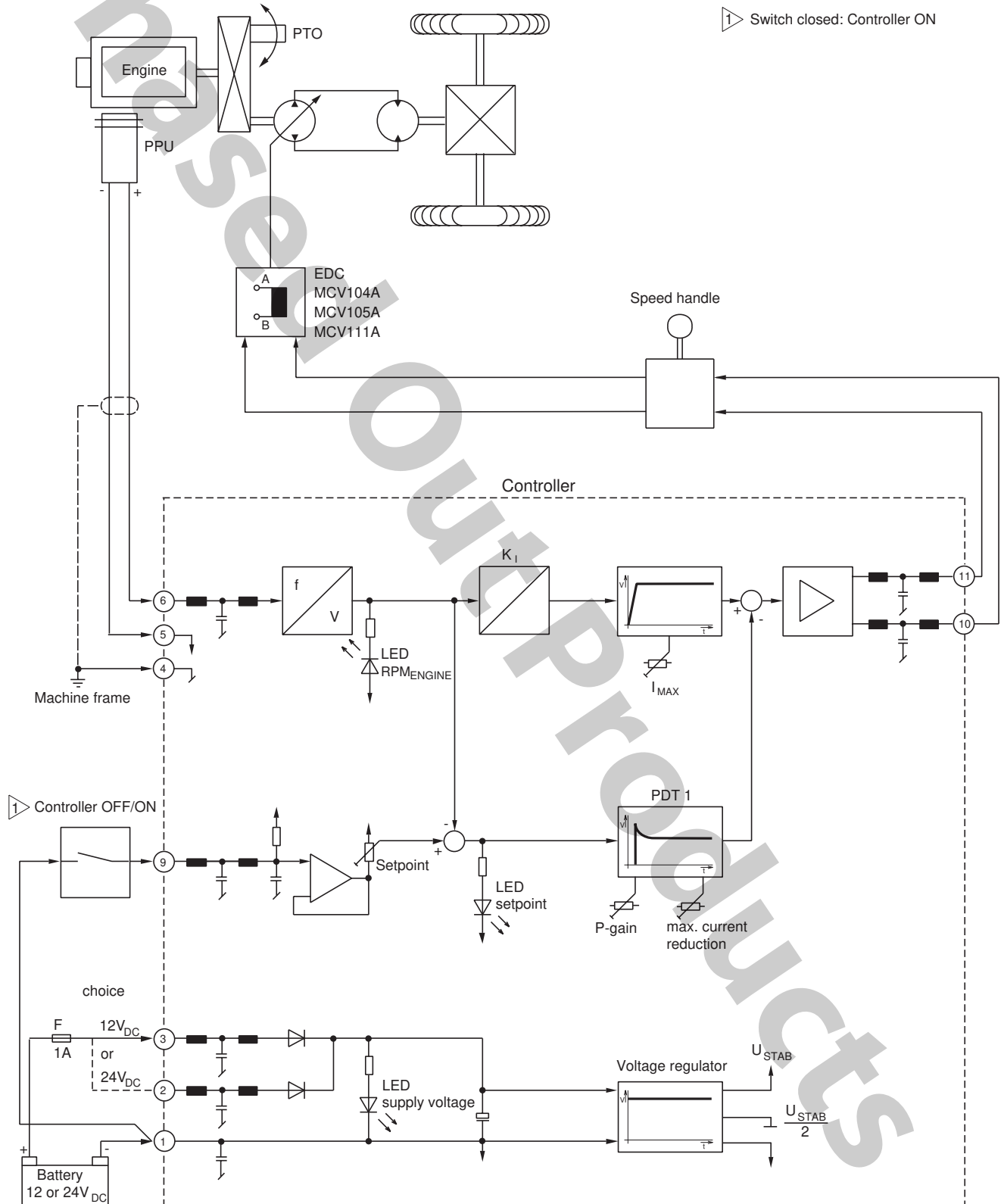
Power load: 4,2W or 8,4W

Frequency range: see ordering information

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**BLOCK DIAGRAM**



1 Switch closed: Controller ON

1 Controller OFF/OFF

**THEORY OF OPERATION**

The Load Controller MCE121A is used to reduce the power requested from the propel transmission under conditions which would otherwise overload the engine.

If the engine speed droops due to heavy loading, the resulting measured speed is compared to a desired engine speed setpoint. If this setpoint is exceeded, the Controller reduces the output current.

The adjustable control parameters are shown in figure 1.

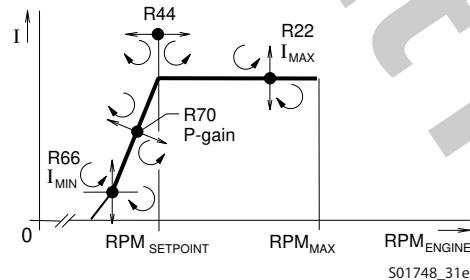
The reduction of the output current (see figure 2) to the EDC, causes a reduced power request from the propel transmission. That means the engine speed for the PTO is nearly constant.

The step response of the Load Controller after a load jump is shown in figure 3.

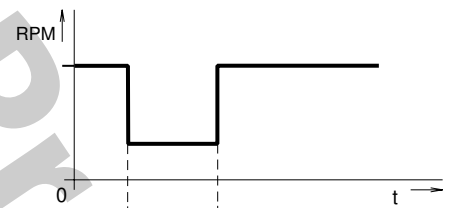
Generally the propel speed is set with a control handle in series to the Controller output (see block diagram).

**OPERATION DIAGRAMS**

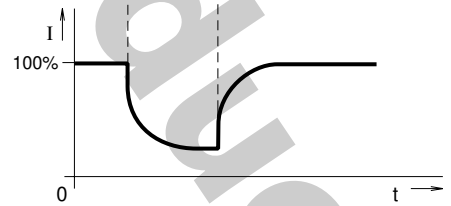
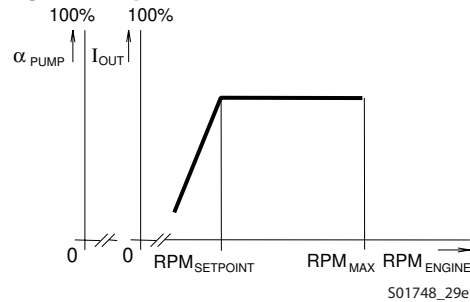
**Figure 1: Adjustable control parameters**



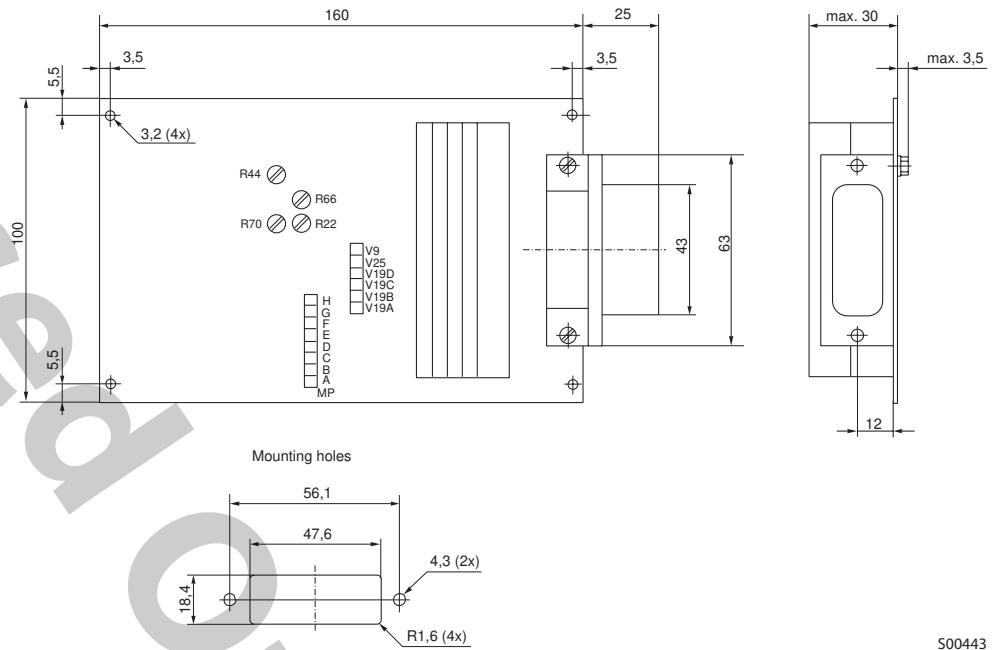
**Figure 3: Step response of the Load Controller**



**Figure 2: output current reduction**

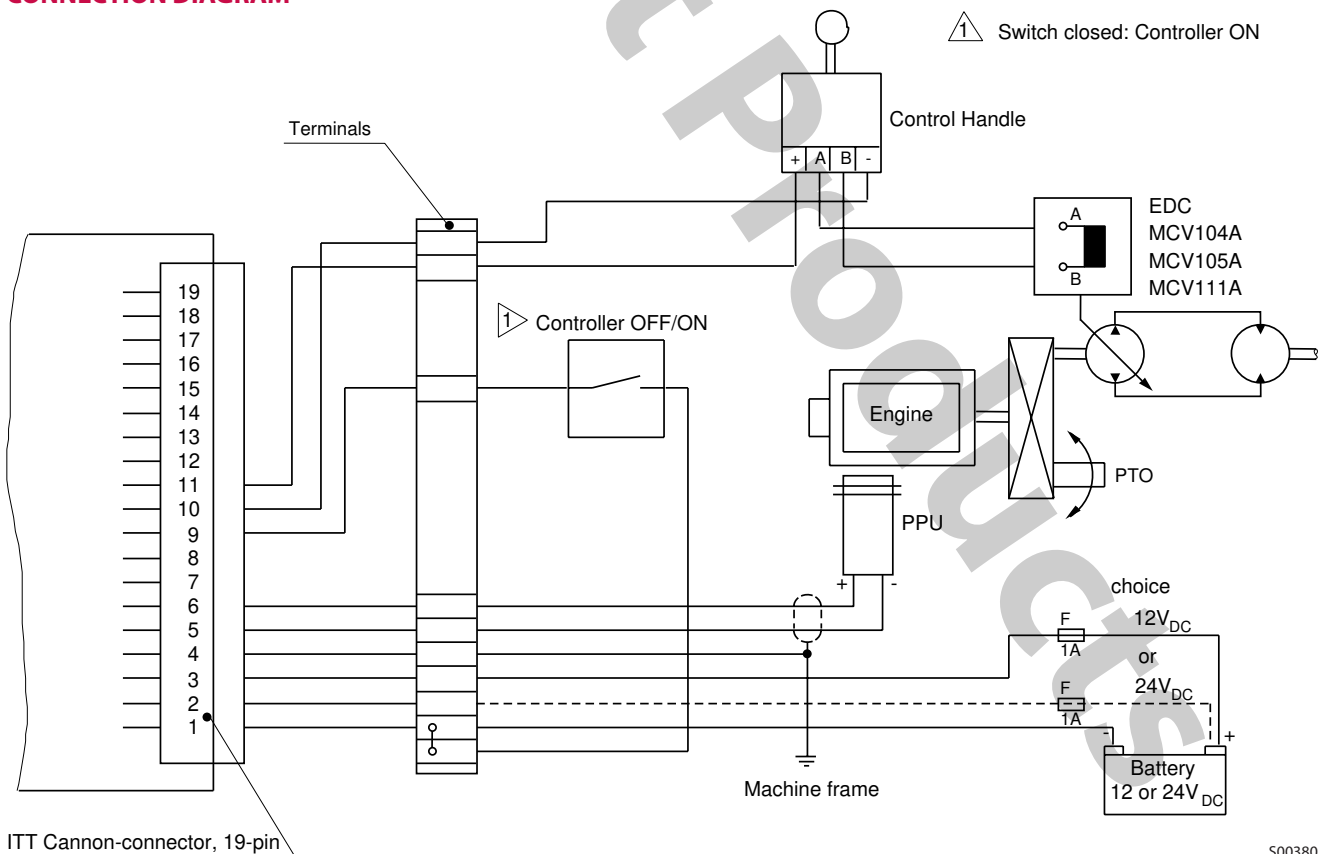


**DIMENSIONS**



S00443

**CONNECTION DIAGRAM**



S00380

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