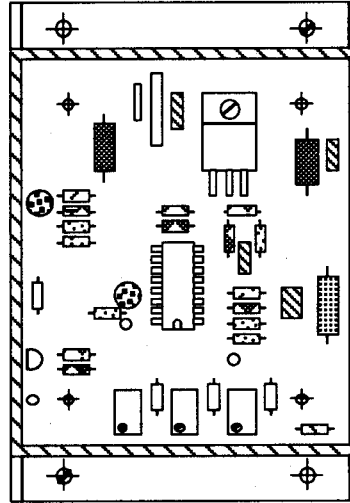


DESCRIPTION

The SAUER-SUNDSTRAND Proportional Amplifier MCE127A.... is used for powering fan drives equipped with proportional actuators.

The current to the valve depends on a measured temperature.



FEATURES

- Current source
- Reverse polarity and short circuit protected
- Fail Save Cut-Off when sensor leads are broken
- Withstands vibration and shock

ORDERING INFORMATION

Device Name	Supply voltage	Id. No.
MCE127A....	24V _{DC}	504 051

TECHNICAL DATA

SUPPLY VOLTAGE
 18V_{DC} to 35V_{DC}, reverse polarity protected

I_{MAX} ADJUSTED TO 1,6A
 protected by multifuse

POWER LOAD
 MIN: app. 10mA
 MAX: 1,6A

SWITCHING FREQUENCY
 app. 200Hz

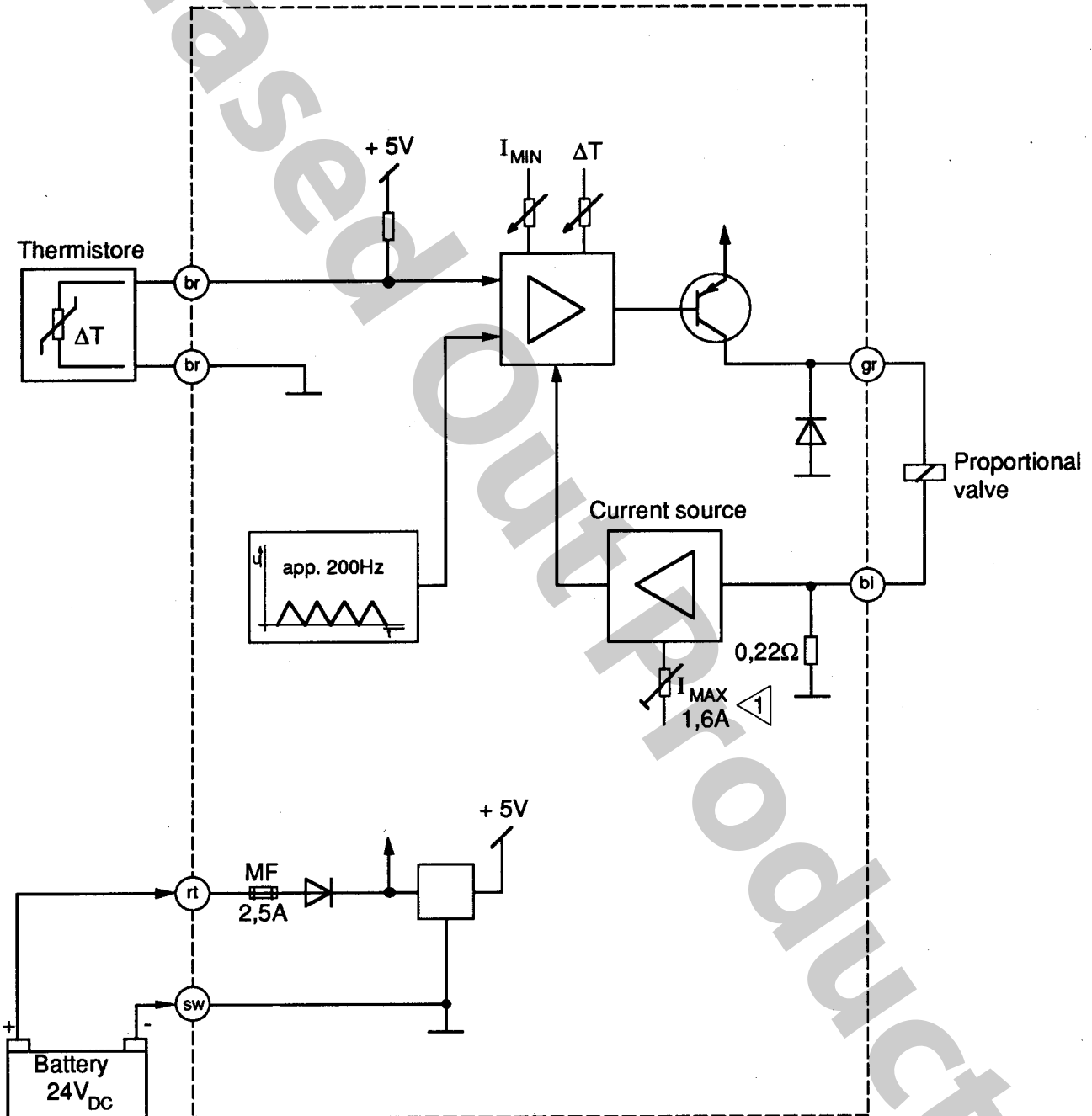
I_{MIN} TEMPERATURE
 adjustable 50°C - 90°C

POWER OUTPUT
 Current source
 Temperature compensated

TEMPERATURE MODULATION
 adjustable ΔT_{MAX} at 50°C app. 9°C
 ΔT_{MIN} at 90°C app. 5°C

BLOCK DIAGRAM

1 I_{MAX} 1,6A fix adjusted



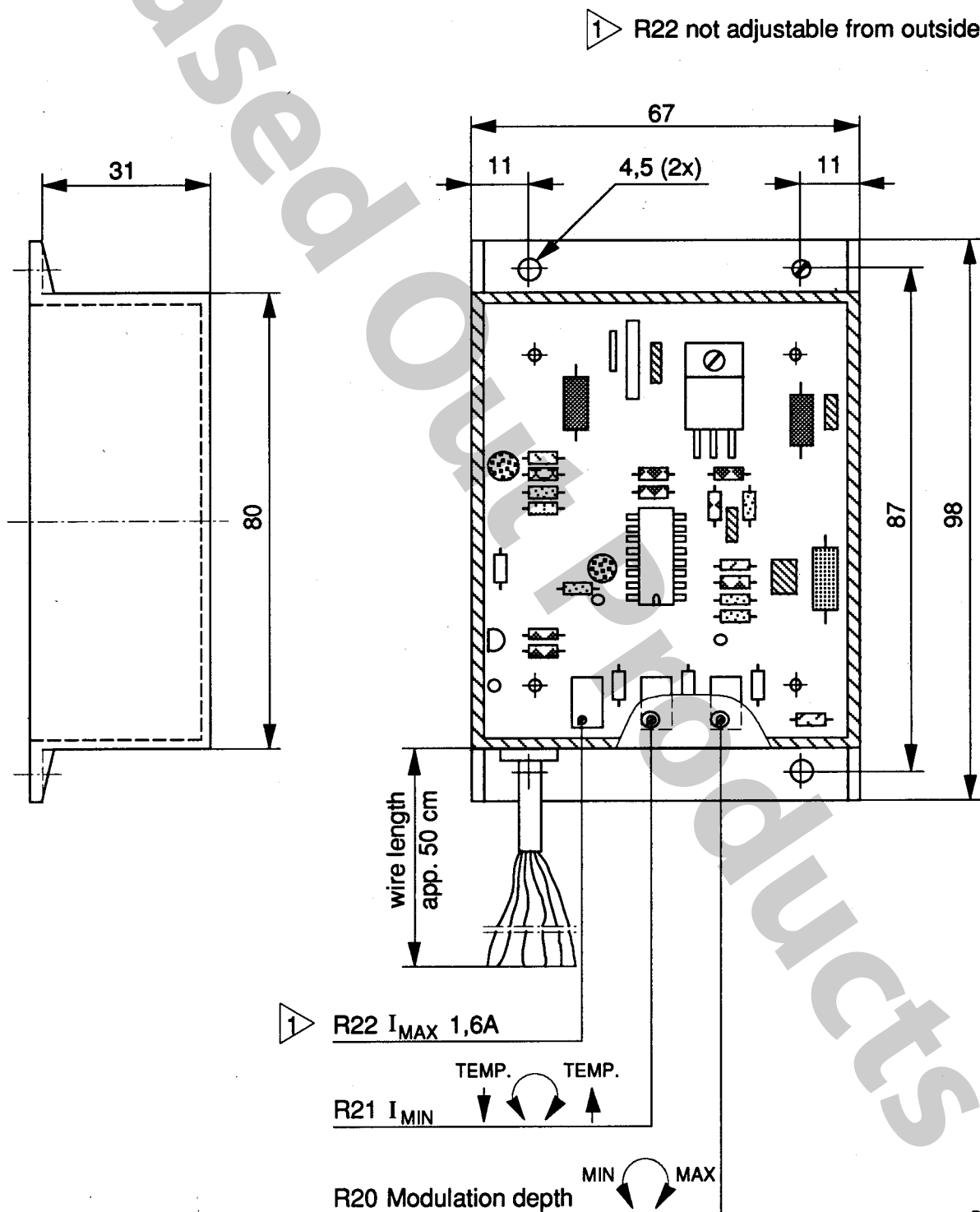
S00824

THEORY OF OPERATION

The Proportional Amplifier MCE127A... produces a current to a proportional value to a measured temperature (air or water). The temperature is measured by a thermistore which reduces it's resistance with raising temperature.

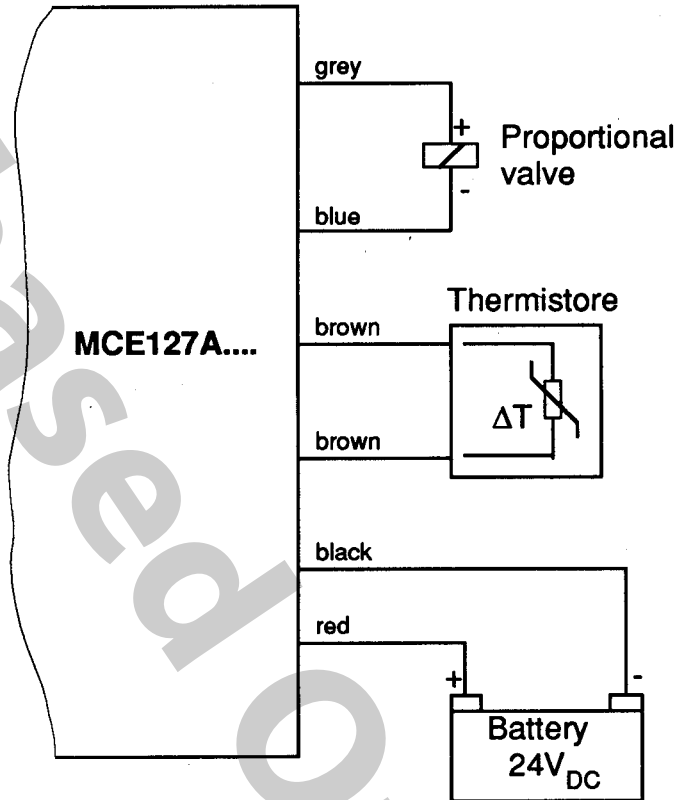
The outut current is reduced with raising temperature and increased with falling temperature. The current is limited to 1.6A and is cut off to 0A when a sensor lead is broken.

DIMENSIONS



S00825

CONNECTION DIAGRAM



S00826

ADJUSTMENT PROCEDURE

Chose temperature with resistor instead of thermistore (see table).

In air applications turn R20 fully cw for maximum modulation depth.

In water applications turn R20 fully ccw.

Adjust the minimum current with R21.

When adjusting the modulation depth with R20 the minimum current needs to be readjusted.

Table:

90°C	=	206,15Ω
88°C	=	219,29Ω
86°C	=	233,42Ω
84°C	=	248,62Ω
82°C	=	264,99Ω
80°C	=	282,57Ω
50°C	=	811,24Ω
48°C	=	875,74Ω
46°C	=	946,13Ω
44°C	=	1023,10Ω
42°C	=	1107,30Ω
40°C	=	1199,50Ω
$I_{NOM MAX}$	=	1,2A

Figure 1

