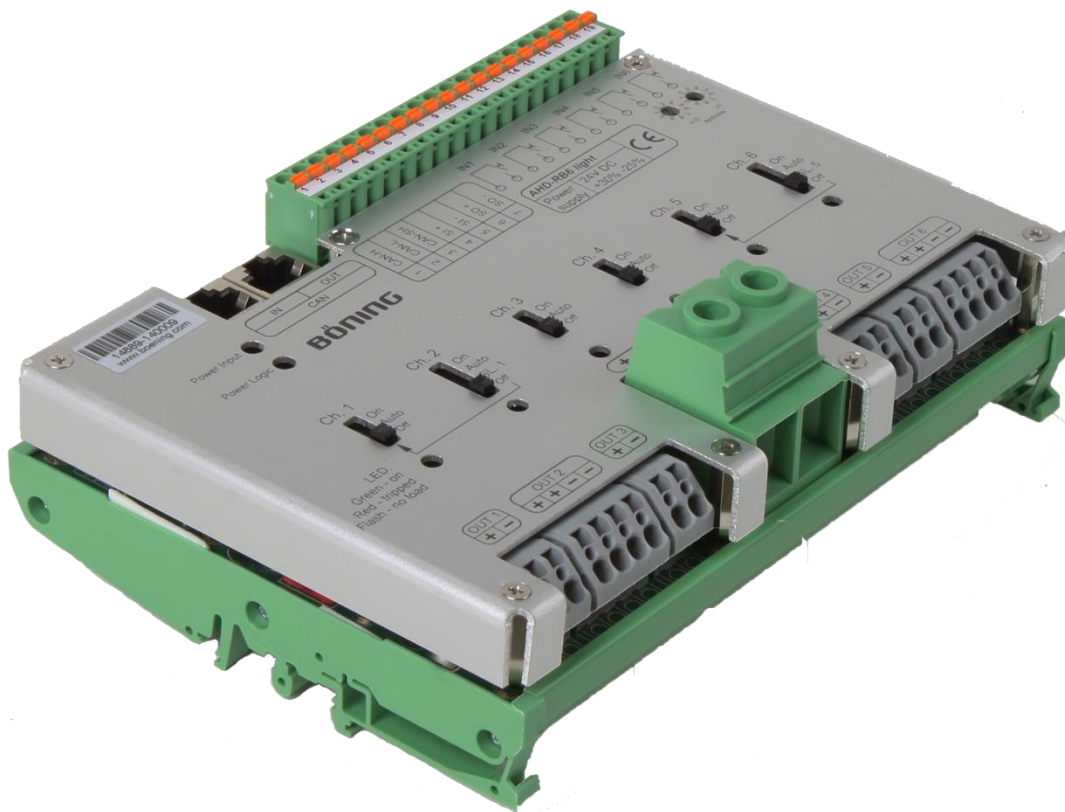


AHD-RB6 Light Electronic Circuit Breaker (ECB) Type C



- **Rated current 6.3 A per channel or 11 A with interconnected channels**
- **2-pole switching of all channels**
- **Supply voltage 24 V DC (+30%/-25%)**
- **6 outputs, 6 inputs, e.g. for light switches, level switches or other contacts, independently configurable**
- **Freely configurable with the Böning DeviceConfig tool**
- **Visualization of all relevant data possible on our displays, for example**
- **Dimmer function for lighting control**
- **Soft switch-on of lamps for longer service life (PWM)**
- **Status LEDs for each channel**
- **Monitoring via hardware watchdog**
- **Protection against overvoltage, overload and overheating**
- **Grouping of channels, e.g. for lighting control**
- **Programmable run-on time of the outputs**
- **Can be used throughout the entire ship due to appropriate operating temperature range also in the engine room**
- **Significant reduction in cabling effort and costs thanks to decentralized arrangement**
- **Can also be operated as a stand-alone device with buttons/switches possible**
- **Optional NMEA 2000 connectivity via AHD-DPU or an alternative Böning gateway available (upon request)**
- **Type C tripping characteristic**

Introduction

AHD-RB6 is an electronic circuit breaker (ECB) for six channels for connecting, controlling and monitoring of electrical loads of up to 6,3 A / 24 V DC per channel. Remote control and monitoring are possible over the CAN bus. The device switches all load circuits bipolar.

If required, two channel pairs can be combined per device so that the rated current increases to 11 A for each of the two resulting double channels.

The current of each channel is measured separately, making it possible to use AHD-RB6 for example as a power management device. The measured current values are available in the CAN bus and can be visualized for example on our displays and panel PCs.

If the CAN system or the processor fail each channel can be controlled manually with the built-in switches without affecting the circuit breaker function.

The switches for the channel status of each channel (Item 6 in the "Device Overview" below) can be set to the following positions:

Position 1: On (Channels 1...6):

Override function, remote control is disabled. The output is switched on in the hardware; the function as circuit breaker is available even if the electronics fail.

Position 2: Auto (Channel 1...6):

Remote control is enabled; the output is switched and monitored over the CAN bus.

Position 3: Off (Only channels 1, 3...5):

Override function, remote control is disabled. The output is switched off and cannot be switched on again over the CAN bus.

Position 3: Out 1+2 (Only channel 2):

Switches channel 2 in a special mode to increase the permissible output current at output 1.

Position 3: Out 5+6 (Only channel 6):

Switches channel 6 to a special mode to increase the permissible output current at output 5.

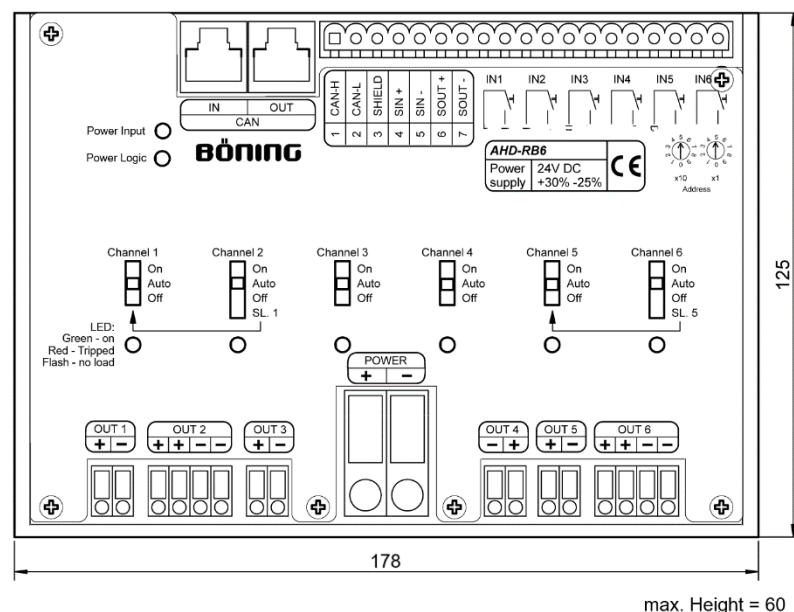
Position 4: Off (Only channels 2 and 6):

Override function, remote control is disabled. The output is switched off and cannot be switched on again over the CAN bus.

Each channel can be configured individually for the dimming of lighting. It is possible to assign an individual dimming value to each channel over the CAN bus (from a display) or with pushbuttons.

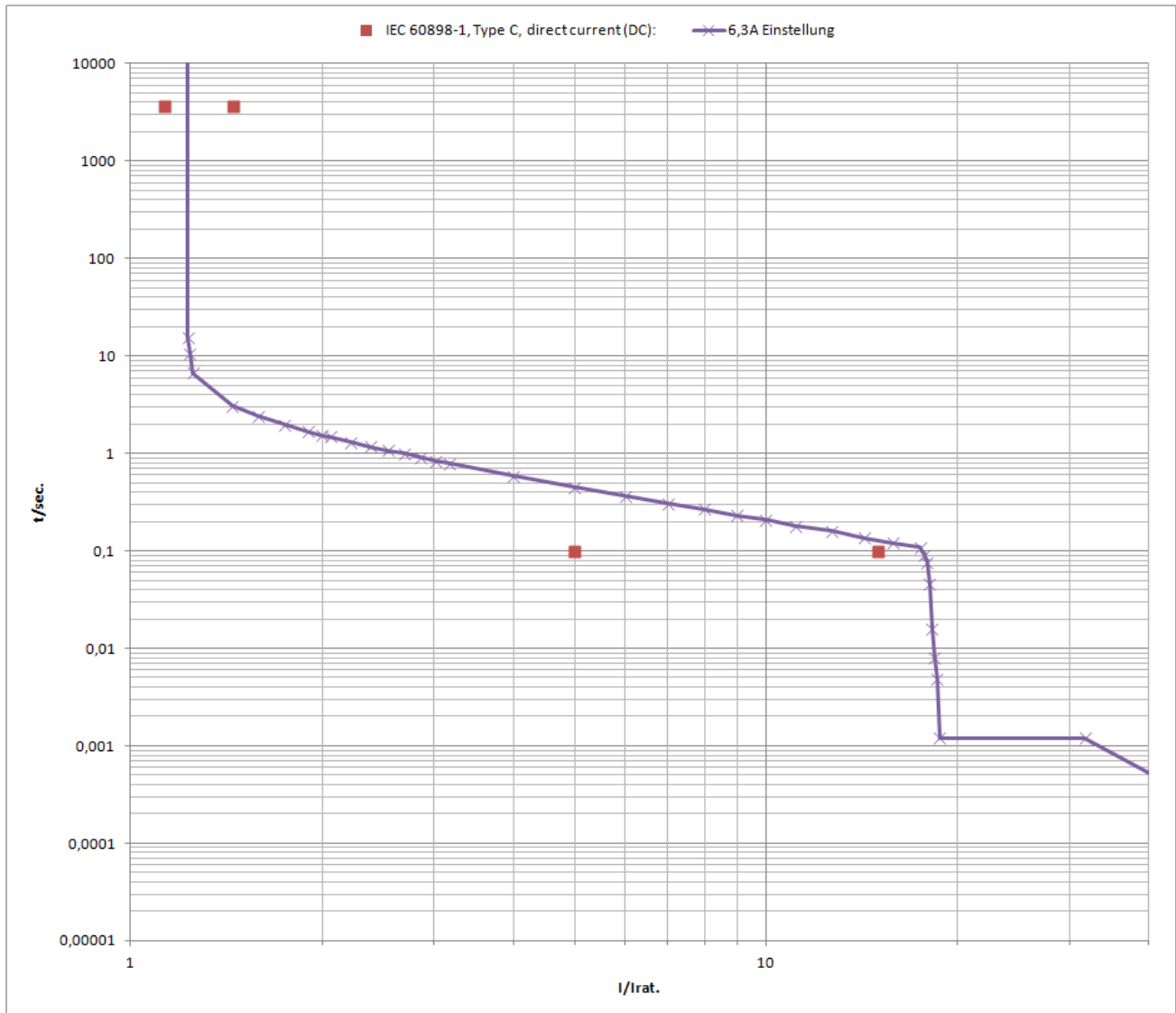
If a pushbutton is used for dimming, a short press of the button switches the lighting on or off, while pressing and holding the button activates the dimming function (dimming from bright to dark or from dark to bright, respectively).

Dimensions



max. Height = 60

Tripping Characteristics of the AHD-RB6 – Type C



X axis: multiples of nominal current.

Y axis: Tripping time without prior charge, that is the current was 0.0 Ampere.

The limit values according to IEC 60898-1 for type C circuit breakers are marked with red spots.

According to IEC 60898-1 the AHD-RB6 shows the characteristics C for direct current voltage (DC).

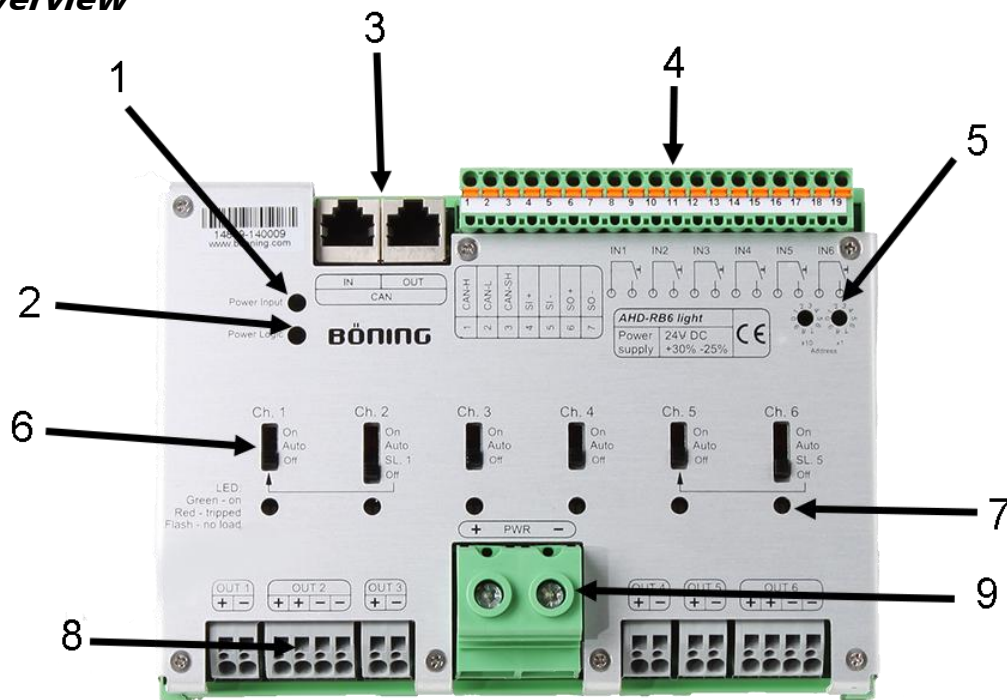
The AHD-RB6 limits the short-circuit current to a maximum value of 90A for each channel (typically 60A) with a release time of 1.4 milliseconds.

Fuses in the incoming circuit therefore will never have to handle a load of more than 90A.

Please note!

Check the permissible supply voltage and polarity of the connected devices. Incorrect voltage or reversed polarity can cause damage to the AHD-RB6 or the connected devices!

Device Overview



1	Power LED Mains
2	Power LED Logic
3	RJ45-Interface (CAN)
4	Terminal block (pluggable)
5	Rotary switch device address
6	Function Selector
7	Status LED (separately for each channel)
8	Terminal block output
9	Power supply input terminal block

Technical Data

Operation voltage	24VDC (+30% / -25%)	Inputs	8 x switching contact (optocoupler)
Current consumption (Device electronics)	max. 220mA	Installation:	Module housing, installation directly on mounting rail TS 35
Dimensions W x H x D:	178 x 125 x 60mm	Switching voltage	= power supply
Weight:	0,56 kg	Nominal current	6.3A per channel
Operating temperature:	-30°C ... +60°C	Maximum load	6 x 6,3A = 37,8A / 24VDC
Storage temperature:	-50°C ... +85°C	Cable cross section	4mm ²
Protection class:	IP 20	Terminal block	
Interface:	CAN on RJ45 (In/Out) and terminal strips 2 x serial In/Out (optocoupler)	Cable cross section main power supply	35mm ²
		Article No.	14889