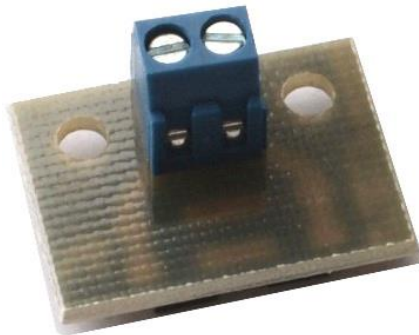




Brake Module

User Manual
- version 0.0.1 -





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Subject to technical modification



Please read this manual carefully before carrying out the installation!!! Although our products are very robust, incorrect wiring may destroy the module!

During the operation of the device the specified technical parameters shall always be met. At the installation the environment shall be fully taken into consideration. The device must not be exposed to moisture and direct sunshine.

A soldering tool may be necessary for the installation and/or mounting of the devices, which requires special care.

During the installation it shall be ensured that the bottom of the device should not contact with a conductive (e.g. metal) surface!

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1. Features

- usable in DCC systems with mobile decoders that support the ABC
- exact stopping in front of signals
- free passage in the opposite direction
- exact stopping in front of signals

ordercode tOm 02060401

2. Package Content

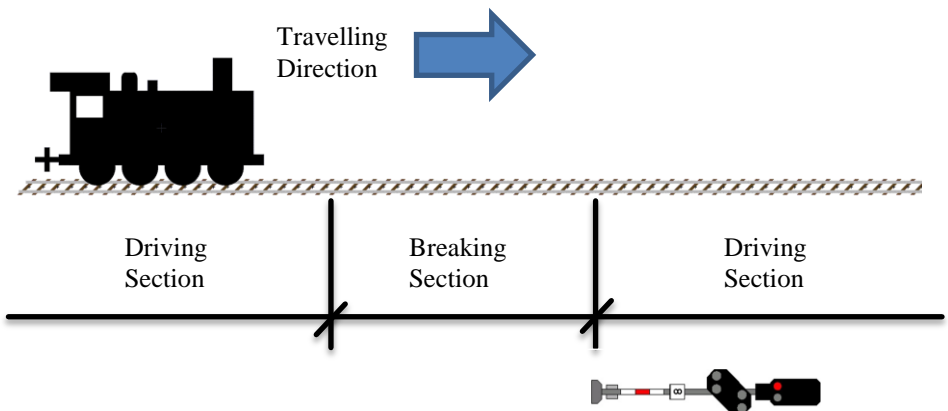
The tOm Brake Modules are supplied in transparent plastic bags or blister packs. Check when unpacking the product if the following parts are present: 1 x tOm Brake Module, 2x screws, 2x plastic spacers.

3. Tehnical parameters

- maximum current carrying capacity 1A continuous
- Size LxWxH: mm x mm x mm

4. How it works

The Brake module creates an asymmetry in the symmetrical DCC track voltage. Digital mobile decoders capable for ABC operation, detects this status information, and brake the engine till complete stop. The braking distance can be controlled with the use of the brake delay, or constant breaking distance settings of the mobile decoder. Trains coming from the opposite direction will pass thru the section. If the train doesn't have to stop in the section, or the waiting time has elapsed, the Brake Module can be short circuited with a switch or with the contacts of a relay, and the train will continue to run.



The operation of the breaking section can be synchronized with the operation of the light signals. The outputs of an accessory decoder or the signal decoder itself can drive a relay and the breaking section can be activated in case of red signal (train stops), or deactivated in the case of green signal (train passes thru, or start to run). Some signals have auxiliary contacts which can be used for the same purpose. The breaking section has to be dimensioned in such a way, that the fastest train should be able to stop within this length.

i Opening the switch will activate the breaking section, while closing it will disable it. Using the Brake Module with a signal, connect the normally open (NO) contact of a relay synchronized with the green light of the signal. As the signal will turn to green, the relay will be activated, and closing its contacts will disable the breaking.

Installing the Brake Module on the layout is done with the supplied screws and spacers. For positioning and mounting see figure below:



The diodes inside the Brake Modul supports a nominal current of 1A in continuous mode but can withstand to peaks of 30A for a period of 8 miliseconds. In case of short circuit on the line, the protection of digital command stations or boosters cuts the output voltage faster than 8 milliseconds, thus performing as a circuit protection for the Brake Modules.

6. Recommendation

The tOm Brake Modules should be installed as close as possible to the track sections; the electrical connections should be made with multi-conductor wire with appropriate section. Cut the conductors strictly to the required length. We recommend using 0.25 mm² diameter copper wire.



7. Notes



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