

## VMC

VolksBot Motor Controller  
for up to 3 DC Motors



*VMC motorcontroller*

Developed by Fraunhofer IAIS – please contact us and ask about prices and detailed technical data

The VMC is a flexible motor controller for a maximum of three DC motors with continuous power 150 Watt each.

Combined with shaft encoders, the VMC enables speed control to an excellent level precision, especially adapted to the requirements found in mobile robotics.

The crucial part of the largely parameterizable VMC is a high-performance 16 bit microcontroller.

### Interfaces

The VMC has two alternative communication interfaces: one CAN bus interface and a RS232.

All parameters, such as controller constants, motor parameters and modes of operation can be set via the respective communication interfaces.

### Features

The following driving features can be realized by way of this motor controller:

- speed control for tasks requiring a highly synchronous speed and little torque variations by way of PID control
- operation as torque controller by adjustable current limiting
- odometric positioning system
- thermal motor protection by way of  $I^2t$  current limiting
- operating voltage monitoring

### Technical Data

Operating voltage: 12 to 30 V  
Output: 150 W per motor  
Controllable motors: 3  
Microcontroller: C167  
Connections: 10 Bit external I/O  
Size: 160 x 110 x 35 mm  
Weight: 700 g  
Interfaces: CAN bus and RS232

Load and GND short circuit protection, overheating protection and undervoltage monitoring of the power stage.

**Fraunhofer Institute for  
Intelligent Analysis and  
Information Systems IAIS**

Prof. Dr. Thomas Christaller  
Prof. Dr. Stefan Wrobel (Managing Director)

Schloss Birlinghoven  
53754 Sankt Augustin  
Germany

Contact: Dr.-Ing. Hartmut Surmann  
Phone +49 2241 14-2518  
Fax +49 2241 14-4-2518  
hartmut.surmann@iais.fraunhofer.de

www.iais.fraunhofer.de