MC 100
Intelligent CAN BUS Servo Controllers

MC100-1
1 brushless DC motor with hall and/or resolver interface
Output 300 Watts

MC100-2
2 brushed DC motors
Output 2 x 300 Watts
Motor voltage up to 75 V DC

PROFILE
The MC 100-1, MC 100-1R and MC 100-2 modules from the Berghof CANtral series are intelligent servo controllers. The MC 100-1 with Hall interface and the MC 100-1R with resolver interface each control a brushless DC motor with up to 300 Watts.

The MC 100-2 controls two brushed DC motors up to 300 Watts per motor.

The module technology is based on a digital signal processor (DSP) specially designed for driving tasks. With CANbus capability, slimline construction and a snap-on assembly facility, the intelligent CANbus servo controllers are excellently suited to distributed drive concepts.

DESCRIPTION
The MC 100-1, MC 100-1R and MC 100-2 servo controllers are designed for voltages of up to 75 VDC with a peak current of 12 A and a constant current of 6 A.

Messages are reported for target position reached, status modifications, contouring errors, digital I/O status and limit violations.

The cyclically transmitted dynamic data concerning position and speed permit user-friendly axis control and optimisation. They make possible on-the-fly switching between different target trajectories and ramps between positioning and speed modes, automatic ramping up/down and/or running reversal, according to target position and ramp.

Features
- CAN Bus interface
- Firmware loadable via CAN or serial interface
- Overtemperature protection
- Watchdog function
- 6 digital inputs
- 2 digital outputs
- 3 analog inputs
- 10 programmable ramps (trapezoidal, triangular, slide, S-curve)
- Programmable failure functions
- Programmable event messages (limit violations, final position reached, change of status, ...)  
- Programmable markers (position events, messages, functions, ...)  
- Cyclic transmission of axis data (optimisation, performance tests, statistics)
Configuration, parameterisation, operation
Via PC and P-open software tools using CAN, SIO or Ethernet (with CEDIO 16/16-0,5).

Current Supply and Connectors
The module’s supply voltage is 24 VDC. The motor power supply (<75 VDC) is isolated from the module supply. The I/O connectors are designed for 3 wire front connection.

There is a choice of three connector types: screwing, crimping and cage-clamp connectors.

LEDs on the front panel provide information on the I/O status and module operating state. I/O channels can be clearly identified using insertable labelling strips.

**TECHNICAL DATA**

**DIMENSIONS, WEIGHT, ETC.**

LxHxD measurements (mm)
124x170x85,5
(butt dimensions B 113/118,5)

Weight
ca. 1000 g

Working temperature range
5 °C bis 40 °C; no condensation

Protective system
IP 20

Assembly
Mounting rail NS 35/7,5 (EN 50022)

**VOLTAGE, CURRENT**

Module supply
24 VDC; approx. 0,5 A

Motor voltage
<75 VDC; 6 A

Electrical isolation
Between CANbus, digital I/O and motor supply

**DIGITAL INPUTS AND OUTPUTS**

6 x digital IN
24 VDC polarised, limited voltage

2 x digital OUT
24 VDC max. 0,5 A; short-circuit proof, voltage-limited

Connectors
3-conductor technology; connectors with threaded terminal end, elastic force terminal or crimp terminal

**OPERATION DISPLAY COMPONENTS**

4 module-status LED
Module functions

8 status LED
Status of I/O channels

**PARAMETERISATION**

VIA CANbus
with Tools CNW/ E-Tool for MC 100

**INTERFACES**

CANbus
9-pin MIN-D (plug/socket)

Serial
9-pin MIN-D (socket) for configuration tools

E-Bus
for local expansion via P-open modules

**ORDERING DATA**

<table>
<thead>
<tr>
<th>Type</th>
<th>Order-No.</th>
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<tbody>
<tr>
<td>MC 100-1</td>
<td>9407 704 00001</td>
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<tr>
<td>for connection of 1 brushless DC-motor, max. 300 W</td>
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<tr>
<td>MC 100-1R</td>
<td>9407 704 00011</td>
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<tr>
<td>for connection of 1 brushless DC-motor, max. 300 W CAN CAL/CANopen-Protocol Program memory: FLASH on board</td>
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<tr>
<td>MC 100-2</td>
<td>9407 704 00021</td>
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<tr>
<td>for connection of 2 brushed DC-motors, max. 300 W</td>
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</tbody>
</table>

**ACCESSORIES**

<table>
<thead>
<tr>
<th>Description</th>
<th>Order-No.</th>
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<tbody>
<tr>
<td>18-pole screw terminal strip</td>
<td>9407 799 00001</td>
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<tr>
<td>Phoenix type FRONT-MSTB 2.5/10 ST-5.08</td>
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<tr>
<td>10-pole screw terminal strip</td>
<td>9407 799 00021</td>
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<tr>
<td>Phoenix type FRONT-MSTB 2.5/10 ST-5.08</td>
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<tr>
<td>CANbus cable</td>
<td>9407 800 90041</td>
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<tr>
<td>for connecting CANbus modules, standard length 5 m</td>
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</tr>
<tr>
<td>CANbus termination resistor with plug</td>
<td>9407 800 90021</td>
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