## **Execution CANopen-Master Interfaces**

### 1. Standard CANopen Master Interface

Type designation: BM4-O-CAN-04-00-00 Part No.:350443 Function: CANopen-Master Interfaces Presuppositions: BM44XX-XX-XXXXX-XX and BM4-O-PLC-XX-XX-XX

Information of nameplate: BM4-O-CAN-04 - 00			- ууу	- ZZZ			
LP 3.0107.01.Xxx							
D2000: D4020: D6030:	6.1302.xxxx 6.1307.xxxx 6.1303.xxxx				Firmware	Mach SW	FPGA-SW
20000.	0.1000.000	LP-Version	1		6.1307	6.1303.	6.1302
	3.0107.01	B01	000	000	0101	0201	0101
		B02	001	000	0101	0201	0101
		B03	002	000	0101	0201	0101
		B03	002	001	0106	0201	0101
		B03	002	002	0107	0201	0101
		B03	002	003	0110	0201	0106
		B04	003	003	0110	0201	0106
		B04	003	004	0110	0201	0108
		B04	003	005	0113	0201	0108
		B05	004	005	0113	0201	0108
		B06	104	005	0113	0201	0108
		C02	005	005	0113	0201	0108
		C03	006	005	0113	0201	0108
		C03	006	006	0121	0201	0110
		C04	106	006	0121	0201	0110
		D01	007	005	0121	0201	0108
		D01	007	006	0121	0201	0110
		D02	008	006	0121	0201	0110

#### Hardware history

The printed circuit board 3.0107.01.B01 is the first official version.

The printed circuit board 3.0107.01.B02 is introduced with AT161\_03 from March 31, 2003.

- Adaptation of the parts list to the series production
- The printed circuit board 3.0107.01.B03 is introduced with AT441\_03 from October 01, 2003.
  - Internal change of the plug (solder instead of press)

The printed circuit board 3.0107.01.B04 is introduced with AT076\_05 from April 04, 2005.

- Optimized boot behavior (Reset level at the option modules)
- The printed circuit board 3.0107.01.B05 is introduced with AT434\_05 from December 16, 2005.
  Optimized for internal test equipment (additional resistors)

The printed circuit board 3.0107.01.C02 is introduced with AT434\_05 from December 16, 2005.
Optimized for the procedure of production

The printed circuit board 3.0107.01.C03 is introduced with AT196\_06 from June 27, 2006. • Optimized assembly

The printed circuit board 3.0107.01.D01 is introduced with AT196\_06 from June 27, 2006. • Optimized Layout

- The printed circuit board 3.0107.01.D02 / C04/ B06 is introduced with AT215\_07 from July 24, 2007.
  - Correction for error pattern ,Prozessor Abort During Data Access'

The changes are for the software uncritically. New software also runs on old hardware version.

#### FPGA software history

The FPGA-software 1.01 is the first official version.

The FPGA-software 1.06 is introduced with AT076\_05 from November 17, 2003.

- Synchronization behavior improves with restart of the synchronization
- Improvement of the BACI-Timing
- The FPGA-software 1.08 is introduced with AT194\_05 from June 17, 2005.
  - Improvement of the signal quality (influence of the temperature)
- The FPGA-software 1.10 is introduced with AT073\_07 from March 2, 2007.
  - Standardization of software

#### Firmware history

The Firmware-software 1.01 is the first official version.

- The Firmware-software 1.06 is introduced with AT489\_03 from November 17, 2003.
  - Extension of the functionality on Multi Axis Motion Control
- The Firmware-software 1.07 is introduced with AT111\_04 from February 26, 2004.
  - Adaptation of the identification of new flash types
- The Firmware-software 1.10 is introduced with AT076\_05 from April 04, 2005.
  - Synchronization behavior improves with restart of the synchronization
    - Improvement of the BACI-Timing

The Firmware-software 1.13 is introduced with AT367\_04 from June 22, 2005.

Qualities of all Firmware-versions (standard and cross communication) combines on a single firmware

The Firmware-software 01.21 is introduced with AT073\_07 from March 02, 2007.

- Configurable with ProMaster
- Support of MotionControl
- Automatically net work management
- Synchronization of process communication in IEC for 256RxPDOs and 256TxPDOs
- Communication profile DS301, DSP 302 and application profile DS405

#### Indication

The modules CAN-04-00-00 and ETH-01-00-00, ETH-02-00-00 are identical software-technically.

#### For support of ProMaster the software firmware 1.21 or higher must be implemented.

The functional character CANopen Master or Ethernet interface or both is fixed by the assembly of the hardware.

# The basic devices with LC-SW01 or LC-SW03 can be served with Motion Control from firmware 1.06.

#### **Update-Indication**

Firmware and FPGA-SW always together update at last version.