Overview software releases
iSA

Version: 2019/15
Part no.:
Translation of the "Original Dokumentation"

Imprint

Name: PDK_Freigaben_iSA

Version:

Version	Change	Initials
2019/15	Release added: iSA V4.23 2018/37 (207252) iSA V4.22 2017/37 (207073) iSA V4.21 2016/39 A35 (206636)	KoJ

Previous version: 2016/04

Product version:

Product	Firmware version (AMK part no.)	Hardware version (AMK part no.)
iSA-MC0-4E0-05 (E1203) iSA-MC0-4P0-05 (E1204) iSA-MC0-4C0-05 (E1205) iSA-M0E-400-05 (E1206)	V4.23 2018/37 (207252)	-
iSA-MC0-4E0-05-S1 (E1239)	V4.21 2016/39 (206636) A35 Sondersoftware	-

Purpose: Overview of released software versions of the entered products

Reservation: We reserve the right to modify the content of the documentation as well as the delivery options for the product.

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For fast and reliable troubleshooting, you can help us by informing our Customer Service about the following:

- Type plate data for each unit
- Software version
- Device configuration and application
- Type of fault/problem and suspected cause
- Diagnostic messages (error messages)

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Display conventions

Display	Meaning
0x	0x followed by a hexadecimal number, e.g. 0x500A
'Name' 'Parameter' 'Diagnostic messages'	e.g.: Calling up the 'Delete PLC programme' function. ID1234 'Parameter text' 1234 'Diagnostic message'
→	Task procedure / operating sequence, e.g. 'Start' → 'All programs' → 'Accessories' → 'Editor'

Content

Software release: iSA

Release version	Note	Release date	Part number	Overview of changes
V4.23 2018/37		2018/37	207252	Based on firmware V4.22 2017/48 (207073) New: • Display of an application-specific software version at Profinet in the "Identification & Maintenance" (I & M) data. With CODESYS a separate version number can be displayed. The application software can transfer a version number to the Profinet Stack with ID34019. • TCP ports 4711 and 4712 have been reserved to perform additional TCP transfers through Profinet. For example, a TCP server program can run in the PLC application that exchanges its information with a client via the Profinet connection. Corrections: • Bug fixed during initial load Notes: • -

Release version	Note	Release date	Part number	Overview of changes

V4.22 2017/48		2017/48	207073	Based on firmware V4.21 2017/06 (206756)
				
				New:
				• New CODESYS version V3.5.10.40
				• Floating-Point Exceptions
				  • The PLC behavior for floating point arithmetic errors (stop PLC or ignore errors) can be set via ID32901 'Global service bits'.
				• The compatibility with the CANopen interface (compare the KW-R03 with PLC2) has been extended to include compatibility with an AZ system with CAN master.
				Corrections:
				• CODESYS V3
				  • In the event of an exception (e.g. division by zero) in the block initialization (FB_Init method), the entire runtime system was terminated. Now an error message with reference to the error location is generated.
				• If trace recordings were made in real-time tasks (especially in the PGT task), the task system time was exceeded. This behavior has been corrected.
				• The display of the cycle time of the PGT task in the CODESYS task monitor has been corrected.
				• The CODESYS explorer can now load data (e.g. NC programs) to the controller. That was not possible until now.
				Notes:
				• To use OPC UA, AIPEX PRO 3.04 or higher is required
				• No changes to V4.20 2015/26 (205729)

Release version	Note	Release date	Part number	Overview of changes
V4.21 2017/06		2017/06	206756	Based on firmware V4.20 2015/51 (206067) New: • PLC function block CAM_PROF_1 with additional output of the 1st derivative (e.g. speed), the 2nd derivative (e.g. acceleration) in addition to the output value (e.g. position setpoint) - usable from AIPEX PRO 3.04! • Adjustable number of interpolation points (MAX_PROF_XY_IND) for the table types PROF_Y-Tab_NL and PROF_XYTAB_NL (NL: not limited) • ID34263 'BUS system name'; For each instance (each bus) a specific name can be defined • Option Profinet IO Device Slave (A-SPN, O876) AIPEX PRO from V3.03 with SP02 required • Ethernet communication possible through the Profinet connection • FTP, CODESYS V2, V3, AMK AMSG protocol • LED H0 can be used for device detection via CODESYS V3 or Profinet controller tools for flashing • Writing a parameter file to a drive via File over EtherCAT (FoE) The functionality firmware update with command file has been extended, so that parameter files can also be written to a converter and the inverter is newly parameterized. • CODESYS V3/Qt visualization: VNC server can be activated with ID34175 bit 16 = 1 • EtherCAT master: It is possible to switch between the bus states from the PLC program • Product code evaluation: ID34026 Instance 5 (EtherCAT) = 1. Functionally similar devices can be interchanged without having to re-adapt the bus configuration. • ID34025 'BUS mode' bit 0 = 1 Prevents the automatic bus start at 24VDC ON • ID32798 'User list 1' • ID33732 'System reset' • ID34071 'System name', maximum list length now 64 characters • ID182 'Diagnosis manufacturer status': Extension by bit 15 'System Ready' (SBM), bit 14 'Error' and bit 13 'Warning'. • Support SFTP (Secure File Transfer Protocol) • When the PLC function FiFileConnect was cyclically called, the diagnostic message 2595 Info 1 = 3 sporadically occurred • Introduction compatibility bit: The controller behaves like a CAN slave like a KW-R03 with option KW-PLC2. If ID34025, instance 2, bit 15 = 1, when exchanging for an A4, the 'CAN configuration' of KW-R03 with option KW-PLC2 can be used. • The local I / O of the controller is updated in the PGT task

Release version	Note	Release date	Part number	Overview of changes
				Corrections: • CODESYS V3 • System adaptation so that FB SysRtcSetTime () works • EtherCAT master: Lost mailbox telegrams have not been repeated so far and an error occurred during parameter access • EtherCAT Master: Transmission of CoE data larger than the mailbox length • ADB file with length 0 is deleted • Write data file with PLC program (for CODESYS V3) to an controller with factory setting (active factory setting is CODESYS V2) Notes: • A maximum of 106 kbytes of retain data of physically 128 kbytes can be used by the user because CODESYS V3 internally reserves 20% more data. • No changes to V4.20 2015/26 (205729)

Release version	Note	Release date	Part number	Overview of changes
V4.21 2016/39	A35 Special software only for device E1239	2016/39	206636	Based on firmware V4.20 2015/51 (206067) New: • PLC function block CAM_PROF_1 with additional output of the 1st derivative (e.g. speed), the 2nd derivative (e.g. acceleration) in addition to the output value (e.g. position setpoint) - usable from AIPEX PRO 3.04! • Adjustable number of interpolation points (MAX_PROF_XY_IND) for the table types PROF_Y-Tab_NL and PROF_XYTAB_NL (NL: not limited) • ID34263 'BUS system name'; For each instance (each bus) a specific name can be defined • Option Profinet IO Device Slave (A-SPN, O876) AIPEX PRO from V3.03 with SP02 required • Ethernet communication possible through the Profinet connection • FTP, CODESYS V2, V3, AMK AMSG protocol • LED H0 can be used for device detection via CODESYS V3 or Profinet controller tools for flashing • Writing a parameter file to a drive via File over EtherCAT (FoE) The functionality firmware update with command file has been extended, so that parameter files can also be written to a converter and the inverter is newly parameterized. • CODESYS V3/Qt visualization: VNC server can be activated with ID34175 bit 16 = 1 • EtherCAT master: It is possible to switch between the bus states from the PLC program • Product code evaluation: ID34026 Instance 5 (EtherCAT) = 1. Functionally similar devices can be interchanged without having to re-adapt the bus configuration. • ID34025 'BUS mode' bit 0 = 1 Prevents the automatic bus start at 24VDC ON • ID32798 'User list 1' • ID34071 'System name', maximum list length now 64 characters • ID182 'Diagnosis manufacturer status': Extension by bit 15 'System Ready' (SBM), bit 14 'Error' and bit 13 'Warning'. • Support SFTP (Secure File Transfer Protocol) • When the PLC function FiFileConnect was cyclically called, the diagnostic message 2595 Info 1 = 3 sporadically occurred

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V4.20 2015/51		2015/51 (50)	206067	New:
				• EtherNet/IP (option A SIP O875)
				• CAN bus (CANopen CiA 301 V4.01) (option A-SCN)
				• ID34071 can be up to 64 characters long, instead of the 16
				Corrections:
				• When you call the trigonometric functions (CODESYS V3) the run time task has been exceeded
				• A file is missing to access with Qt on PLC program data
				Notes:
				• AIPEX PRO version V3.3 required
				• For the Ethernet connection the following firewall settings are required:
				  • TCP Port 700
				  • UDP Port 40.000
				  • Broadcast on
				  • Port 50.001 for iSA controllers
				• CODESYS V2: The current CODESYS V2 targets are:
				  • iSA (C16384D16384R32) V3.01/1443 iSA
				  • iSA PlcOpen (C16384D16384R32) V03.01/1443 iSA with option PLCopen
				• CODESYS V3: The current CODESYS V3 targets are:
				  • ArmControl V3 ARM based contoller (e.g. iSA)
				  • ArmControlWithVisu V3 ARM based. controller with display and option VIS (e.g. iSA)
				  • ArmPLCopenControl V3 ARM based. controller (iSA) with option PCO (PLCopen)
				  • ArmPLCopenControlWithVisu V3 ARM based. controller with display or option VIS (e.g. iSA) und option PCO PLCopen
				  • ArmPLCopenCncControl V3 ARM based. controller (e.g. iSA) with option PNC (PLCopen CNC)
				  • ArmPLCopenCncControlWithVisu V3 ARM based. controller (e.g. iSA) with display or option VIS und option PNC (PLCopen CNC)

Release version	Note	Release date	Part number	Overview of changes

V4.20 2015/26		2015/26	205729	First edition
				New:
				• iSA is programmable according IEC 61131-3 with CODESYS (PLC version 2.11). The functionality is based on the operating system V4.12 2015/11 of the A series controller.
				• iSA supports CODESYS version V2 and V3 (V3 is default setting)
				• The various basic devices differ in the communication interface (defined by the type code)
				  • Real-time Ethernet (EtherCAT SoE, EtherNet/IP *))
				  • Profibus DP
				  • CAN Bus *) (CANopen CiA 301 V4.01)
				  • Local I/O (can not be combined with other communication interfaces)
				* not implemented in this version
				• Options can be added to the basic devices:
				  • Web visualization (iSA-VIS)
				  • Numerical control motion (iSA-PNC), exclusive for CODESYS V3
				  • PLCopen (iSA-PCO)
				• New / extended parameters:
				  • ID11 'Status class 1-errors'
				Bit 1 'Error temperature device (inner room and heat sink)'
				Bit 8 'Overvoltage DC bus
				  • ID182 'Diagnosis manufacturer status'
				Bit 12 'Acknowledgment inverter on (QUE)'
				Bit 13 'Warning message active'
				Bit 14 'Error message active'
				Bit 15 'System ready message'

Release version	Note	Release date	Part number	Overview of changes
				• ID34175 'Controller settings' Bit 0..3: visualization settings Bit 4..7: CODESYS settings V2 / V3 Bit 8: CODESYS V3 deactivate option iSA-VIS Bit 9: CODESYS V3 deactivate option 'iSA-PCO' Bit 10: CODESYS V3 deactivate option 'iSA-PNC' • Parameter for applications with local I/Os: ID32100, ID34101, ID34120, ID34121, ID32865, ID32866, ID32867, ID32868 With the code 33942 the inputs (default setting) can be used as outputs. • ID32810 'Inner room temperature' • ID32836 'DC bus voltage' • ID33116 'Temperature internal' • ID34063 'Time meter power' • PLC function block FB CAM_CONT_1 cam shaft controller Together with the function block FB SET_TS_OUTPUTS (timestamp) the CAM_CONT_TS is programmed in IEC to control binary outputs in high precision. • PLC function blocks to access on iSA status and control data, e.g. QUE, SBM, FL, DC bus voltage, heat sink temperature, inner room temperature • New / extended diagnosis message: 1059, 1061, 4346, 3860, 3868, 3871

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