AMK

AMKASYN

VARIABLE SPEED DRIVES

AMKASYN

Digital inverters in modular construction

Additional card for central module AZ
Programmable controller AZ-PS3
(with INTERBUS-S interface)

Important advice:

Touching of the electrical connections on the plug-in card must be avoided, otherwise electronic components could be destroyed through static discharge.

Take plug-in card directly out of packing and insert into option slot in the AZ module without using force. Then secure with screws below the card grip.

0598.1E

Part No.: 26577

AMK

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Programmable controller AZ-PS3

The option card AZ-PS3 normally is plugged into slot 4 of central module AZ. It is secured in the front panel by a captive screw below the card grip against inadverted loosening.

The option card AZ-PS3 must be assigned to slot 4 in ID 32882 „Slot assignment“ in the basic system with code “81“.

ID 32882: xx xx xx 81 hex.
00 00 00 instead of xx xx if slot 1, 2 and 3 are free.
If additional option cards are used in slot 1/2/3 the corresponding card codes must be entered instead of xx xx xx.

The AZ-PS3 card is used as a programmable drive interface to solve tasks closely related to the drive. Data communication with the drive system takes place through the internal bus.

Binary and analog inputs/outputs, the AMK panel AB 202L and the INTERBUS-S interface can be used for process and user level communication.

The AZ-PS3 is programmed in statement list (STL). Programming unit is a standard PC with the AMK programming software APROS. The instruction set contains statements for logic operations, counters and timers. Drive setpoint values (torque, speed, position) and parameter changes are commanded via AMK specific function blocks.

Among other things coordinated axis movements can be generated through Fast Functions with table interpolation.

The user PS program (max. 16 kB) is stored in the EEPROM.

Description of the display and operator elements at the AZ-PS3 front panel:

LEDs:

ER: Error LED
During a malfunction (PS state „ERROR“) this LED is blinking with a flashing rate of 1 second.

ST: Stop LED
In PS state STOP this LED is on.

RN: Run LED
In normal operation (PS state „RUN“) this LED is reset after the process image „INPUTS“ is formed and set again before the process image „OUTPUTS“ is transmitted, i.e. the LED brightness is decreasing with increasing PS cycle time.
In “STOP“ status the “RN“ LED is off.

LO: Not used, without meaning.

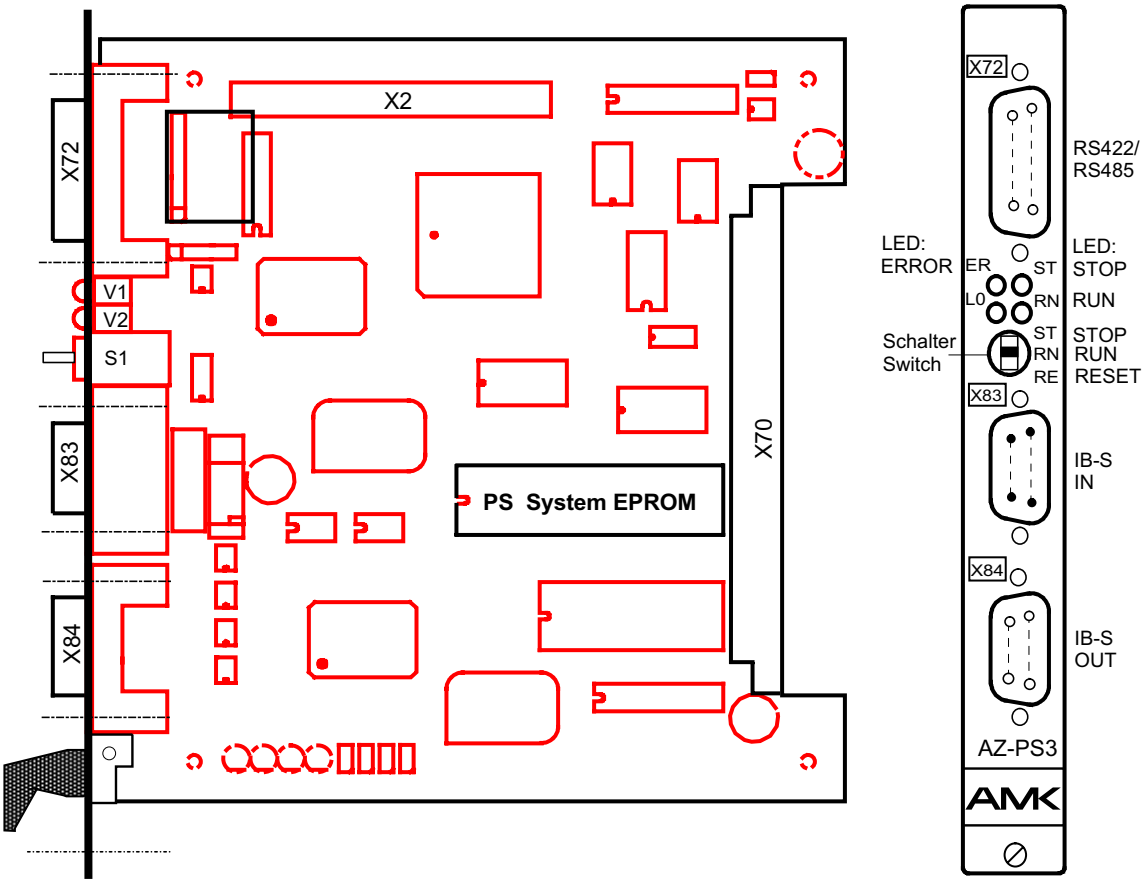
Switch positions:

ST: Stop (notched position)
The cyclic program execution is interrupted.

RN: Run (notched position), **switch position for normal operation**.
Normal cyclic PS program execution.

RE: Reset (momentary contact)
PS RESET is initiated. Automatic PS START (state RUN) if switch changes back to RN position.

AZ-PS3 component mounting diagram



Connector pin assignment AZ-PS3:

Serial interface for PS:

X72:	RS 422 / RS 485
Pin	Signal
1	PE
2	TXD-
3	RXD-
4	RTS
5	CTS
6	TXD-
7	GND
8	TXD
9	GND
10	5 P
11	5 P
12	TXD
13	RXD
14	RTS-
15	CTS-

INTERBUS-S Interface

X83:	RS 485 - Remote IN
Pin	Signal
1	DOUT1
2	DIN1
3	GND1
4	NC
5	NC
6	DOUT1-
7	DIN1-
8	NC
9	NC

X83:	RS 485 - Remote IN
Pin	Signal
1	DOUT2
2	DIN2
3	GND
4	NC
5	NC
6	DOUT2-
7	DIN2-
8	NC
9	NC

INTERBUS-S is used as a remote bus SLAVE interface without or with PCP (Peripherals Communication Protocol). The INTERBUS-S data are imaged in the I/O address space of the PS. Through PCP mode data blocks can be written and read. Maximum 8 INPUT bytes and 8 OUTPUT bytes of the AZ-PS3 I/O process image can be used for INTERBUS-S data.

Factory setting for INTERBUS-S:
AZ-PS3 is assigned to slot 4.
INTERBUS-S data bus width: 8 INPUT / 8 OUTPUT bytes.

The PS documentation “PS Instruction Set“, section “System data block functions“/ “INTERBUS-S configuration“ contains a detailled description for INTERBUS-S configuration.

AZ-PS3 ESD-PROTECTION / INSTALLATION:

Please do not touch the electrical connections or the exposed contacts on the front or backside of the plug-in circuit boards. Static-electricity due to handling of the boards can destroy the boardlevel components. Please make sure the person handling the boards has proper PE-ground connection to reduce static-electricity.

Please insert the plug-in board directly from the packaging into slot 3 in the AZ-module without using force and secure the board with the captive screws underneath the card-holder.

Sequence for exchange procedure of the AZ-PS3 card:

1. Make sure the AMKASYN-system is without power.
2. Remove front cover on AZ-module.
3. Remove external connections to the to be exchanged AZ-PS3 card if existing.
4. Unscrew the captive screw of the AZ-PS3 card.
5. Remove the AZ-PS3 card by the card holder and lay on a nonconductive surface (bubble wrap etc.).
6. Take the new AZ-PS3 card out of the packaging. Only handle it by the front card holder or by the front cover.
7. Insert this new AZ-PS3 card into slot 4 in the AZ-module and secure it with the captive screw.
8. Connect all external connections removed under 3. again and secure the cables.
9. Download user PS program to AZ-PS3 via programming software APROS (only if new card was inserted without PS program).