



AMKSMART iSA.

Decentralized controller with power supply for automation without control cabinet.

AMK



AMKSMART iSA.

PLC, power supply and
motion control.

With the new iSA decentralized controller, AMK has established the basis for modular machines that are truly free of control cabinets.

The AMKSMART iSA has a three-phase power connection and provides both a DC bus supply for servo drives and an integrated 24 V supply and control intelligence. As a high-performance motion controller with real-time Linux operating system, iSA ensures decentralized intelligence. EtherCat is used for the cross-communication in master-slave operation and for general gateway functions. In addition, there are optional connection possibilities for CAN, Profibus, and Ethernet IP.

Designed in IP65, iSA ensures design flexibility and is ideal for modular machine construction because sub-systems only have to be connected to the three-phase power and incorporated in the control system via the real-time Ethernet interface.



Everything that is needed for completely decentralized machine automation:
iSA decentralized controller, ihXT inverter-integrated servo motor and 3-phase connector. Nothing else.

Product overview.

Connections and interfaces.



Motion control

Powerful motion control and technology functions for easy programming of machines and plants, for example:

- Virtual master axis
- Electronic cam
- Print mark control
- NC motion

The internationally proven CODESYS programming platform enables programming according to IEC61131-3.

PLC properties

- High-accuracy synchronization of many axes with only one controller
- Cross-communication in real-time across several levels synchronized with high accuracy

- EtherCAT master and slave (option)
- Data exchange with other programs via OPC server, interface to ERP system
- Real-time Linux
- Non-volatile process data memory without battery
- No UPS required

DC supply

- Power supply 3 x 230...480VAC
- Output DC link
Rated current 10 A
- Line filter
- Integrated braking chopper and braking resistor

24 V power supply

The integrated power supply generates the 24V/3A for other modules.

Gateway

Gateway functionality for

- Profibus
- Ethernet/IP
- CAN, EtherCAT

I/Os

4 digital inputs and output

BENEFITS

- Powerful motion controller
- DC supply 5 kW
- 24V/3A power supply
- Optional gateway functions
- PLC programming according to IEC 61131-3

Technical data

	iSA
Processor	ARM11 with 500MHz
RAM	256MB
Flash memory	256MB
Non-volatile memory	32KB
Ethernet	1 x 10/100 Mbps
Fieldbus master	EtherCAT
Fieldbus slave, optional	ACC (CAN), EtherCAT, Profibus, Ethernet/IP
I/Os	4 digital I/Os
Programming	IEC 61131-3, CODESYS, optional PLCopen
Performance	50.000 instructions/ms
Visualization	iSA-VIS for WebVisu or Qt
Degree of protection	IP65
Ambient temperature	0 - 50°C
Power supply	Integrated
Input voltage of power supply system	3 x 230...480 VAC ± 10%, 47...63 Hz
DC Bus output (daisy chain)	300 - 650VDC
DC bus shutdown threshold	850VDC
Rated current on DC bus	10A
Dimensions (L x W x H)	293x100x75.6 mm
Weight	2.2kg



AMK Arnold Müller GmbH & Co. KG
Drives & Controls

PO Box 1355
73221 Kirchheim/Teck, Germany

Gaußstraße 37-39
73230 Kirchheim/Teck, Germany

Phone: +49 (0)7021/5005-0

info@amk-group.com
www.amk-group.com

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