AX52xx | Digital Compact Servo Drives (2-channel)

The AX5000 Servo Drive series is available in single- or multi-channel form and is optimised in terms of function and cost-effectiveness. Integrated control technology supports fast and highly dynamic positioning tasks. EtherCAT as a high-performance communication system enables ideal interfacing with PC-based control technology.

The AX52xx 2-channel Servo Drive enables operation of two motors with identical or even with different power, up to a total current of 12 A. The multi-axis drives with variable motor output allocation offer optimised packaging density and costs per drive channel.

The AX5000 system enables simple and fast connection of several AX5000 devices to form a multi-axis system through the AX-Bridge quick connection system. The pluggable supply and connection module combines power supply, DC-Link and 24 V DC control and braking voltage.

A wide range of motor types can be connected to the AX5000. Motors of different size and type can be connected without additional measures. Examples include synchronous, linear, torque and asynchronous motors. The multi-feedback interface supports all common standards.

The AX5000 was developed specifically for use with EtherCAT. The outstanding features of EtherCAT are particularly beneficial for Drive Technology. They include short cycle time, synchronicity and simultaneity. EtherCAT enables very short cycle times, even in networks containing a large number of devices.

Features

- high-speed EtherCAT system communication
- rated current: 2 x 1.5 A, 2 x 3 A, 2 x 6 A
- wide voltage range: 1 x 100…240 V AC ±10 % and 3 x 100…480 V AC ±10 %
- active DC-Link and brake energy management
- multi-feedback interface
- flexible motor type selection
- scalable, wide range motor current measurement
- high-speed capture inputs
- diagnostic and parameter display
- integrated mains filter Cat. C3, according to EN 61800-3
- optional safety functions: restart lock, intelligent TwinSAFE safety functions
- compact design for simple control cabinet installation
- AX-Bridge – the quick connection system for power supply, DC-Link and control voltage
- optimised cooling concept

Technical data	AX5201	AX5203	AX5206
Rated output current at 50 °C	2 x 1.5 A	2 x 3 A	2 x 6 A
Minimum rated channel current at full current resolution	0.35 A	1 A	1 A
Max. rated channel current at full current resolution (1-phase connection)	3 A	4.5 A	9 A
Max. rated channel current at full current resolution (3-phase connection)	3 A	6 A	9 A
Rated supply voltage	3 x 100…480 V AC ±10 % 1 x 100…240 V AC ±10 %		
DC-Link voltage	max. 890 V DC		

Peak output current (1)	2 x 5 A	2 x 10 A	2 x 13 A
Peak output current as total device current (1)	10 A	20 A	26 A
Rated apparent power for S1 operation (selection)			
120 V (1-/3-phase connection)	0.6 kVA	1.2 kVA	2.5 kVA
230 V (1-/3-phase connection)	1.2 kVA	2.4 kVA	4.8 kVA
400 V (only 3-phase connection)	2.1 kVA	4.2 kVA	8.3 kVA
480 V (only 3-phase connection)	2.5 kVA	5.0 kVA	10.0 kVA
Continuous braking power (2)	50 W	150 W	90 W
Max. braking power (2)	14 kW		
Power loss (3)	55 W	85 W	160 W
System bus	EtherCAT		
Weight	5.0 kg	6.0 kg	6.0 kg

(1)RMS for max. 7 seconds, (2)internal brake resistor, (3)S1 operation, incl. power supply, without brake chopper

Dimensions	AX5201	AX5203	AX5206
Height without connectors	274 mm		
Width	92 mm		
Depth without connectors	232 mm		

Ordering information	AX520x-0000-0x00
AX5201-0000-0x00	Digital Compact Servo Drive, 2-axis module, 100…480 V AC, rated output current 2 x 1.5 A, EtherCAT interface
AX5203-0000-0x00	Digital Compact Servo Drive, 2-axis module, 100…480 V AC, rated output current 2 x 3 A, EtherCAT interface
AX5206-0000-0x00	Digital Compact Servo Drive, 2-axis module, 100…480 V AC, rated output current 2 x 6 A, EtherCAT interface

x = 0: HW version 1.0 (compatible with AX5801-0000)

x = 2: HW version 2.0 (compatible with AX5805, AX57xx, AX5021 and AX5801-0200)

Ordering information	AX5xxx | Options
AX5021-0000	ballast unit with internal braking resistor and connection option for an external ballast resistor (up to 6 kW) as well as an additional DC link expansion capacity for storing of brake energy 2)