



AX5101, AX5103, AX5106, AX5112



AX5118, AX5125, AX5140

## AX51xx | Digital Compact Servo Drives (1-channel)

### Performance class up to 28 kW

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 AX51xx 1-channel Servo Drives are designed for rated currents up to 40 A.

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: 1.5 A, 3 A, 6 A, 12 A, 18 A, 25 A, 40 A
- wide voltage range: 1 x 100...240 V AC  $\pm 10\%$  and 3 x 100...480 V AC  $\pm 10\%$
- 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

Servo Drives with rated output currents > 40 A see page **780**

Technical data	AX5101	AX5103	AX5106	AX5112	AX5118	AX5125	AX5140
Rated output current at 50 °C (1-phase connection)	1 x 1.5 A	1 x 3 A	1 x 4.5 A	–	–	–	–
Rated output current at 50 °C (3-phase connection)	1 x 1.5 A	1 x 3 A	1 x 6 A	1 x 12 A	1 x 18 A	1 x 25 A	1 x 40 A
Minimum rated motor current at full current resolution	0.35 A	1 A	1 A	6 A	12 A	12 A	18 A
Rated supply voltage	3 x 100...480 V AC ±10 % 1 x 100...240 V AC ±10 %			3 x 100...480 V AC ±10 %			
DC-Link voltage	max. 890 V DC						
Peak output current <sup>(1)</sup>	4.5 A	7.5 A	13 A	26 A	36 A	50 A	80 A
Rated apparent power for S1 operation (selection)							
120 V (1-/3-phase connection)	0.3 kVA	0.6 kVA	1.2 kVA	2.5 kVA	3.4 kVA	4.8 kVA	8.3 kVA
230 V (1-/3-phase connection)	0.6 kVA	1.2 kVA	2.4 kVA	4.8 kVA	7.2 kVA	10.0 kVA	16.0 kVA
400 V (only 3-phase connection)	1.0 kVA	2.1 kVA	4.2 kVA	8.3 kVA	12.5 kVA	17.3 kVA	28.0 kVA
480 V (only 3-phase connection)	1.2 kVA	2.5 kVA	5.0 kVA	10.0 kVA	15.0 kVA	20.8 kVA	33.0 kVA
Continuous braking power <sup>(2)</sup>	50 W	50 W	150 W	90 W	200 W	200 W	200 W
Max. braking power <sup>(2)</sup>	14 kW	14 kW	14 kW	14 kW	27 kW	27 kW	27 kW
Power loss <sup>(3)</sup>	35 W	50 W	85 W	160 W	255 W	340 W	550 W
System bus	EtherCAT						
Weight	4.0 kg	4.0 kg	5.0 kg	5.0 kg	11.0 kg	11.0 kg	14.0 kg
Further information	www.beckhoff.com/AX51xx						

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

Dimensions	AX5101	AX5103	AX5106	AX5112	AX5118	AX5125	AX5140
Height without connectors	274 mm						
Width	92 mm	92 mm	92 mm	92 mm	185 mm	185 mm	185 mm
Depth without connectors	232 mm						

Ordering information	AX51xx-0000-0200
AX5101-0000-0200	Digital Compact Servo Drive, 1-axis module, 100...480 V AC, rated output current 1.5 A, EtherCAT interface, OCT
AX5103-0000-0200	Digital Compact Servo Drive, 1-axis module, 100...480 V AC, rated output current 3 A, EtherCAT interface, OCT
AX5106-0000-0200	Digital Compact Servo Drive, 1-axis module, 100...480 V AC, rated output current 6 A, EtherCAT interface, OCT
AX5112-0000-0200	Digital Compact Servo Drive, 1-axis module, 100...480 V AC, rated output current 12 A, EtherCAT interface, OCT
AX5118-0000-0200	Digital Compact Servo Drive, 1-axis module, 100...480 V AC, rated output current 18 A, EtherCAT interface, OCT
AX5125-0000-0200	Digital Compact Servo Drive, 1-axis module, 100...480 V AC, rated output current 25 A, EtherCAT interface, OCT
AX5140-0000-0200	Digital Compact Servo Drive, 1-axis module, 100...480 V AC, rated output current 40 A, EtherCAT interface, OCT

Compatible with AX5021, AX57xx, AX5801-0200 and AX5805

Options, pre-assembled cables and accessories see page **782**