



AX5901 | Power supply module



AX5911, AX5912 | Power distribution module

## Options and accessories for AX5000 Servo Drives

### Regenerative energy

In dynamic multi-axis applications, excessive DC-Link voltages may occur due to alternate acceleration and deceleration of the drive axes. This brake energy can either be dissipated or converted. For the AX5000, a brake module with additional capacity is available for dealing with this task.

### AX-Bridge quick connection system

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

### AX57xx | Encoder option cards

Encoder option cards for AX51xx

- AX5701: one additional encoder input 1 V<sub>pp</sub>, BiSS B, Hiperface, EnDat
- AX5721: one additional encoder input EnDat 2.2, BiSS C or SSI
- AX5731: one additional encoder input HTL

Encoder option cards for AX52xx

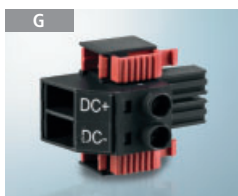
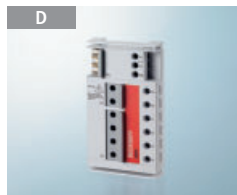
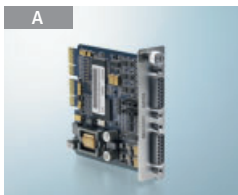
- AX5702: two additional encoder inputs 1 V<sub>pp</sub>, BiSS B, Hiperface, EnDat
- AX5722: two additional encoder inputs EnDat 2.2, BiSS C or SSI
- AX5732: two additional encoder inputs HTL

### AX5901/AX5902 | Power supply module

- supply module with snap-on connection for the AX5000
- connection of supply voltage and 24 V DC for control and brake energy

### AX5911/AX5912 | Power distribution module

- clip-on quick connection system for power supply, DC-Link and control voltage
- connection module for multi-axis system with integrated power rails
- current carrying capacity of the power rails up to 85 A
- simple, wireless connection of several Servo Drives
- fast installation and commissioning



Ordering information	AX5xxx   Options and accessories	Pict.
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 <sup>2)</sup>	
AX5701-0000	encoder option card: one additional encoder input 1 V <sub>PP</sub> , BiSS B, Hiperface, EnDAT <sup>2)</sup>	
AX5702-0000	encoder option card: two additional encoder inputs 1 V <sub>PP</sub> , BiSS B, Hiperface, EnDAT <sup>2)</sup>	A
AX5721-0000	encoder option card: one additional encoder input EnDat 2.2, Hiperface DSL, BiSS C, SSI <sup>2)</sup>	
AX5722-0000	encoder option card: two additional encoder inputs EnDat 2.2, Hiperface DSL, BiSS C, SSI <sup>2)</sup>	
AX5731-0000	encoder option card: one additional encoder input HTL <sup>2)</sup>	
AX5732-0000	encoder option card: two additional encoder inputs HTL <sup>2)</sup>	
AX5801-0000	TwinSAFE drive option card for AX5000: safe restart lock, STO, SS1 <sup>1)</sup> , further information see page 933	B
<b>AX5801-0200</b>	TwinSAFE drive option card for AX5000: safe restart lock, STO, SS1 <sup>1)</sup> , further information see page 933	<b>B</b>
AX5805-0000	TwinSAFE drive option card: STO, SS1, SS2, SOS, SLS, SDI <sup>2)</sup> , further information see page 933	
AX5901-000x	AX-Bridge power supply module for connection of supply voltage and 24 V DC for control and brake energy (pluggable), for AX5x01...AX5125, 85 A <sup>3)</sup>	C
AX5902-000x	AX-Bridge power supply module for connection of supply voltage and 24 V DC for control and brake energy (pluggable), AX5140, 85 A <sup>3)</sup>	
AX5911-000x	AX-Bridge power distribution module, quick connection system for power supply, DC-Link and control voltage (pluggable), for AX5x01...AX5112, 85 A <sup>3)</sup>	D
AX5912-000x	AX-Bridge power distribution module, quick connection system for power supply, DC-Link and control voltage (pluggable), for AX5118 and AX5125, 85 A <sup>3)</sup>	E

<sup>1)</sup> only compatible with drives of the HW version 1.0 (AX5xx-0000-0000), <sup>2)</sup> only compatible with drives of the HW version 2.0 (AX5xxx-0000-0200),

<sup>3)</sup> option x = 0: CE version, x = 1: UL version with additional fuse

**i** For availability status see Beckhoff website at: [www.beckhoff.com/AX5000](http://www.beckhoff.com/AX5000)

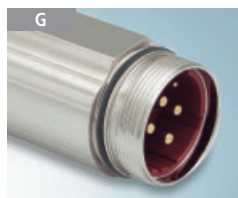
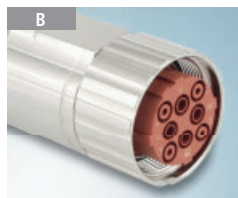
## Connectors for AX5000 Servo Drives

Ordering information	ZS4500-20xx   Connectors	Pict.
ZS4500-2001	X01 mains input connector, 4-pin socket, AX5101-AX5125 (included in the scope of the AX5000 supply), max. 6 mm <sup>2</sup>	F
ZS4500-2002	X02 DC-Link connector, 2-pin socket (included in the scope of the AX5000 supply), max. 6 mm <sup>2</sup>	G
ZS4500-2003	X03 24 V DC supply connector, 3-pin socket (included in the scope of the AX5000 supply), max. 6 mm <sup>2</sup>	H
ZS4500-2006	X06 BLFZ connector, single row without LED (included in the scope of the AX5000 supply), max. 1.5 mm <sup>2</sup>	I
ZS4500-2007	X06 BLIO connector, single row with LED, max. 1.5 mm <sup>2</sup>	J
ZS4500-2008	X06 BLIO connector, triple-row with LED, max. 1.5 mm <sup>2</sup>	K
ZS4500-2010	plug kit: X01, X02, X03, X06 (included in the scope of the AX5000 supply)	
ZS4500-2011	encoder connector X11/X21, D-Sub, 15-pin with enclosure	L
ZS4500-2012	resolver socket X12/X22, D-Sub, 15-pin with enclosure	M
ZS4500-2013	motor connector plug X13/X23, 4-pin, 4 mm <sup>2</sup> , with shroud, up to 25 A	N
ZS4500-2014	connector X14/X24, 5-pin, motor brake and thermal protection contact, max. 1.5 mm <sup>2</sup>	O
ZS4500-2020	connector set for AX5801 (spare part), 4-pin socket, 6-pin socket	
ZS4500-2021	connector set for AX5021, consisting of 3-pin socket (X51) and 5-pin socket (X52)	
ZS4500-2043	motor connector plug X13, 4-pin, 16 mm <sup>2</sup> with shroud (for AX5140)	



## Connectors for Servomotors AMxxxx, ALxxxx and cables

Ordering information	ZS4000-2yyy   Connectors	Pict.
ZS4000-2010	EMC power connector (socket) for servo cable (counterpart for motor box), BG1, up to winding code P (18 A) for AM3xxx	A
ZS4000-2011	EMC power connector (socket) for servo cable (counterpart for motor box), BG1.5, for winding code Q (25 A) for AM3xxx	B
ZS4000-2020	EMC resolver (socket) connector for resolver cable (counterpart for motor box) for AM3xxx	C
ZS4000-2021	EMC encoder connector (socket) for encoder cable (counterpart for motor box) for AM3xxx	D
ZS4000-2030	EMC thermo-protective connector (socket), counterpart for thermo-protective wire, D-sub, 9-pin, with housing, straight	E
ZS4000-2040	EMC power coupling (pins), counterpart for motor cable, BG1 for AM3xxx	F
ZS4000-2041	EMC power coupling (pins), counterpart for motor cable, BG1.5 for AM3xxx	G
ZS4000-2050	EMC resolver coupling (pins), counterpart for resolver cable for AM3xxx	H
ZS4000-2051	EMC encoder coupling (pins) for servomotors, counterpart for encoder cable for AM3xxx	I
ZS4000-2062	resolver socket (pins), rotatable, angled 90°, for AM3000/AM3500	J
ZS4000-2063	encoder socket (pins), rotatable, angled 90°, for AM3000/AM3500	K
ZS4000-2071	power socket (pins), rotatable, angled 90°, for AM3000, BG1, up to winding code P (18 A)	L
ZS4000-2072	power socket (pins), rotatable, angled 90°, for AM3000, BG1.5, for winding code Q (25 A)	M
ZS4000-2100	metal flange for motor cable to adjust the connector, two parts with sealing	N
ZS4000-2101	metal flange for feedback cable to adjust the connector, two parts with sealing	O
ZS4000-2102	EMC power connector (female, 9-pin) for motor cable ZK4704-0411-xxxx/ZK4500-8022-xxxx for AM31xx/AM802x/AM803x/AM81xx	
ZS4000-2103	EMC power coupling (male, 9-pin) for servomotor (counterpart for motor cable) for i-Tec AM31xx	
ZS4000-2104	power socket (pins) for AM804x...AM806x, rotatable, 90° angled (M23 speedtec®, 9-pin), counterpart to motor cable ZK4500-80x3/ZK4500-80x4	
ZS4000-2105	EMC resolver connector (female, 12-pin) for resolver cable ZK4724-0410-xxxx/ZK4530-8110-xxxx for AM31xx/AM802x/AM803x/AM81xx	



## EtherCAT patch cables

Ordering information	ZK1090-9191-0xxx   EtherCAT patch cables
ZK1090-9191-0001	EtherCAT bridge AX5x01 to AX5112, length 0.17 m
ZK1090-9191-0002	EtherCAT bridge AX5118 to AX5140, length 0.26 m
ZK1090-9191-0005	EtherCAT patch cable, length 0.5 m
ZK1090-9191-0010	EtherCAT patch cable, length 1.0 m
ZK1090-9191-0020	EtherCAT patch cable, length 2.0 m
ZK1090-9191-0030	EtherCAT patch cable, length 3.0 m
ZK1090-9191-0050	EtherCAT patch cable, length 5.0 m
ZK1090-9191-0100	EtherCAT patch cable, length 10.0 m

## AX5000 mains filters

Ordering information	AX2090-NF50-0xxx   Mains filters	Pict.
AX2090-NF50-0014	mains filter C2 for AX5000 Servo Drives up to 14.6 A, 46.4 x 231 x 70 mm (W x H x D), 0.9 kg	P
AX2090-NF50-0032	mains filter C2 for AX5000 Servo Drives up to 32.8 A, 58 x 265 x 90 mm (W x H x D), 1.75 kg	
AX2090-NF50-0063*	mains filter C2/C3 for AX5160 Servo Drives up to 63 A, 62 x 305 x 180 mm (W x H x D), 5 kg	
AX2090-NF50-0100*	mains filter C2/C3 for AX5172/AX5190 Servo Drives up to 100 A, 75 x 336 x 200 mm (W x H x D), 6 kg	
AX2090-NF50-0150	mains filter C2/C3 for AX5191/AX5192 Servo Drives up to 150 A, 90 x 380 x 220 mm (W x H x D), 6.8 kg	
AX2090-NF50-0180	mains filter C2/C3 for AX5193 Servo Drives up to 180 A, 200 x 410 x 120 mm (W x H x D), 7 kg	

\* AX5160/AX5172: additional mains filters for C2 and C3 are only required if the line lengths exceed 10 m (C2) and 25 m (C3).  
For line lengths shorter than indicated the appropriate mains filter is already integrated.

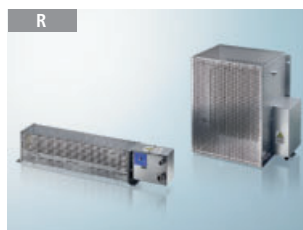
## AX5000 mains chokes

Ordering information	AX2090-ND50-00xx   Mains chokes	Pict.
AX2090-ND50-0060	mains choke for AX5160 Servo Drive, 60 A, 0.25 mH, $U_k$ 2 %, 190 x 200 x 120 mm (W x H x D), 7 kg	Q
AX2090-ND50-0072	mains choke for AX5172 Servo Drive, 72 A, 0.20 mH, $U_k$ 2 %, 190 x 240 x 110 mm (W x H x D), 10 kg	
AX2090-ND50-0090	mains choke for AX5190 Servo Drive, 90 A, 0.16 mH, $U_k$ 2 %, 230 x 300 x 160 mm (W x H x D), 13 kg	
AX2090-ND50-0110	mains choke for AX5191 Servo Drive, 110 A, 0.13 mH, $U_k$ 2 %, 230 x 300 x 180 mm (W x H x D), 15 kg	
AX2090-ND50-0143	mains choke for AX5192 Servo Drive, 143 A, 0.10 mH, $U_k$ 2 %, 240 x 330 x 200 mm (W x H x D), 25 kg	
AX2090-ND50-0170	mains choke for AX5193 Servo Drive, 170 A, 0.09 mH, $U_k$ 2 %, 240 x 330 x 200 mm (W x H x D), 25 kg	

## AX5000 ballast resistors

Ordering information	AX2090-BW5x-xx00   Ballast resistors	Pict.
AX2090-BW50-0300	external ballast resistor for AX5x01 to AX5112 (stand-alone), 300 W/47 $\Omega$ , 92 x 120 x 349 mm (W x H x D), 2 kg	R
AX2090-BW50-0600	external ballast resistor for AX5x01 to AX5112 (stand-alone), 600 W/47 $\Omega$ , 92 x 120 x 549 mm (W x H x D), 3 kg	
AX2090-BW50-1600	external ballast resistor for AX5x01 to AX5112 (stand-alone), 1600 W/47 $\Omega$ , 185 x 120 x 649 mm (W x H x D), 5.8 kg	
AX2090-BW51-1000	external ballast resistor for AX5118 to AX5193 (stand-alone) and AX5021, 1000 W/23 $\Omega$ , 92 x 120 x 749 mm (W x H x D), 4 kg	
AX2090-BW51-3000	external ballast resistor for AX5118 to AX5193 (stand-alone) and AX5021, 3000 W/23 $\Omega$ , 355 x 255 x 490 mm (W x H x D), 8 kg	
AX2090-BW51-6000	external ballast resistor for AX5118 to AX5193 (stand-alone) and AX5021, 6000 W/23 $\Omega$ , 455 x 255 x 490 mm (W x H x D), 12 kg	

Recommended interface cables: for AX2090-BW50-xxxx = ZK4000-2101-2xxx (1.5 mm<sup>2</sup>), for AX2090-BW51-xxxx = ZK4000-2102-2xxx (2.5 mm<sup>2</sup>)



## AX5000 motor chokes

Ordering information	AX2090-MD50-00xx   Motor chokes	Pict.
AX2090-MD50-0012	motor choke for AX5000, motor cable $\geq$ 25 m, up to 12 A rated current, max. 100 m, with integrated connection cable (150 mm)	A
AX2090-MD50-0025	motor choke for AX5000, motor cable $\geq$ 25 m, up to 25 A rated current, max. 50 m, with integrated connection cable (150 mm)	B



## Motor cables 1 mm<sup>2</sup> with iTec plug for AM802x, AM803x and AM301x (with yTec plug) at AX5000

Ordering information	Motor cable with 1 mm <sup>2</sup> wire gauge, highly dynamic
ZK4500-8022-xxxx	motor cable with yTec/iTec plug, assembled at both ends, 4 x 1 + (2 x 0.75) + (2 x 22AWG) mm <sup>2</sup> , highly dynamic, suitable as trailing cable (5 million bending cycles), max. 240 m/min, max. 30 m/s <sup>2</sup> , min. bending radius = 85 mm (7 x OD), max. trailing length horizontal 20 m, vertical 5 m.
ZK4500-8022-0050	example for 5 m length
ZK4501-8022-xxxx	extension cable

## Motor cables 1.5 mm<sup>2</sup> with M23 speedtec<sup>®</sup> plug for AM804x up to AM806x at AX5x01 to AX5112 (1.5 A to 12 A)

Ordering information	Motor cable with 1.5 mm <sup>2</sup> wire gauge, fixed installation
ZK4500-8003-xxxx	cables for fixed installation with 50,000 bending cycles, max. 180 m/min, max. 5 m/s <sup>2</sup> , min. bending radius = 205 mm (18 x OD), 4 x 1.5 + (2 x 0.75) + (2 x 22AWG) mm <sup>2</sup> , max. length 100 m
ZK4500-8003-0050	example for 5 m length
ZK4501-8003-xxxx	extension cable

Ordering information	Motor cable with 1.5 mm <sup>2</sup> wire gauge, highly flexible, suitable as trailing cable
ZK4500-8023-xxxx	highly dynamic, suitable as trailing cable (5 million bending cycles), max. 240 m/min, max. 30 m/s <sup>2</sup> , min. bending radius = 90 mm (7 x OD), max. chain length horizontal 20 m, vertical 5 m, 4 x 1.5 + (2 x 0.75) + (2 x 22AWG) mm <sup>2</sup> , max. length 100 m
ZK4500-8023-0050	example for 5 m length
ZK4501-8023-xxxx	extension cable

## Motor cables 2.5 mm<sup>2</sup> with M23 speedtec<sup>®</sup> plug for AM804x up to AM806x at AX5118 to AX5125 (18 A to 25 A)

Ordering information	Motor cable with 2.5 mm <sup>2</sup> wire gauge, fixed installation
ZK4500-8004-xxxx	cables for fixed installation with 50,000 bending cycles, max. 180 m/min, max. 5 m/s <sup>2</sup> , min. bending radius = 250 mm (18 x OD), 4 x 2.5 + (2 x 1.0) + (2 x 22AWG) mm <sup>2</sup> , max. length 100 m
ZK4500-8004-0050	example for 5 m length
ZK4501-8004-xxxx	extension cable

Ordering information	Motor cable with 2.5 mm <sup>2</sup> wire gauge, highly flexible, suitable as trailing cable
ZK4500-8024-xxxx	highly dynamic, suitable as trailing cable (5 million bending cycles), max. 240 m/min, max. 30 m/s <sup>2</sup> , min. bending radius = 105 mm (7 x OD), max. chain length horizontal 20 m, vertical 5 m, 4 x 2.5 + (2 x 1.0) + (2 x 22AWG) mm <sup>2</sup> , max. length 100 m
ZK4500-8024-0050	example for 5 m length
ZK4501-8024-xxxx	extension cable

## Motor cables 4 mm<sup>2</sup> with M40 speedtec<sup>®</sup> plug for AM807x at AX5125 (25 A)

Ordering information	Motor cable with 4 mm <sup>2</sup> wire gauge, flexible, suitable as trailing cable
ZK4500-8015-xxxx	flexible, suitable as trailing cable (5 million bending cycles), max. 180 m/min, max. 5 m/s <sup>2</sup> , min. bending radius = 165 mm (10 x OD), max. chain length horizontal 20 m, vertical 5 m, 4 x 4.0 + (2 x 1.0) + (2 x 22AWG) mm <sup>2</sup> , max. length 100 m
ZK4500-8015-0050	example for 5 m length
ZK4501-8015-xxxx	extension cable

## Motor cables 10 mm<sup>2</sup> with M40 speedtec<sup>®</sup> plug for AM807x at AX5140 (40 A)

Ordering information	Motor cable with 10 mm <sup>2</sup> wire gauge, flexible, suitable as trailing cable
ZK4500-8017-xxxx	flexible, suitable as trailing cable (5 million bending cycles), max. 180 m/min, max. 5 m/s <sup>2</sup> , min. bending radius = 225 mm (10 x OD), max. chain length horizontal 20 m, vertical 5 m, 4 x 10.0 + (2 x 1.5) + (2 x 22AWG) mm <sup>2</sup> , max. length 50 m
ZK4500-8017-0050	example for 5 m length
ZK4501-8017-xxxx	extension cable

## Resolver cables with iTec plug for AM802x, AM803x and AM301x at AX5000

Ordering information	Resolver cable with 0.25 mm <sup>2</sup> wire gauge, flexible, suitable as trailing cable
ZK4530-8110-xxxx	flexible, suitable as trailing cable (5 million bending cycles), max. 120 m/min, max. 4 m/s <sup>2</sup> , min. bending radius = 75 mm (10 x OD), max. chain length horizontal 20 m, vertical 5 m, 4 x 2 x 0.25 mm <sup>2</sup> , max. length 100 m
ZK4530-8110-0050	example for 5 m length
ZK4531-8110-xxxx	extension cable

## Resolver cables with M23 speedtec® plug for AM804x to AM806x at AX5000

Ordering information	Resolver cable with 0.25 mm <sup>2</sup> wire gauge, flexible, suitable as trailing cable
ZK4530-8010-xxxx	flexible, suitable as trailing cable (5 million bending cycles), max. 120 m/min, max. 4 m/s <sup>2</sup> , min. bending radius = 75 mm (10 x OD), max. chain length horizontal 20 m, vertical 5 m, 4 x 2 x 0.25 mm <sup>2</sup> , max. length 100 m
ZK4530-8010-0050	example for 5 m length
ZK4531-8010-xxxx	extension cable

## Motor cables 1.5 mm<sup>2</sup> for ALxxxx/AM3000 (up to winding code "L")/ AM3500 at AX5x01 to AX5112 (1.5 A to 12 A)

Ordering information	Motor cable with 1.5 mm <sup>2</sup> wire gauge, fixed installation
ZK4500-0003-xxxx	cables for fixed installation with 50,000 bending cycles, max. 180 m/min, max. 5 m/s <sup>2</sup> , min. bending radius = 200 mm (18 x OD), length < 25 m, 4 x 1.5 + (2 x 0.75) mm <sup>2</sup>
ZK4500-0003-0050	example for 5 m length
ZK4502-0003-xxxx	length ≥ 25 m
ZK4509-0003-xxxx	not assembled
ZK4501-0003-xxxx	extension cable

Ordering information	Motor cable with 1.5 mm <sup>2</sup> wire gauge, highly flexible, suitable as trailing cable	Pict.
ZK4500-0023-xxxx	highly dynamic, suitable as trailing cable (5 million bending cycles), max. 240 m/min, max. 30 m/s <sup>2</sup> , min. bending radius = 90 mm (7 x OD), max. chain length horizontal 20 m, vertical 5 m, length < 25 m, 4 x 1.5 + (2 x 0.75) mm <sup>2</sup>	A
ZK4500-0023-0050	example for 5 m length	
ZK4502-0023-xxxx	length ≥ 25 m	
ZK4509-0023-xxxx	not assembled	
ZK4501-0023-xxxx	extension cable	B

## Motor cables 2.5 mm<sup>2</sup> for ALxxxx/AM3000 (up to winding code "P")/ AM3500 at AX5118/AX5125

Ordering information	Motor cable with 2.5 mm <sup>2</sup> wire gauge, fixed installation	Pict.
ZK4500-0004-xxxx	cables for fixed installation with 50,000 bending cycles, max. 180 m/min, max. 5 m/s <sup>2</sup> , min. bending radius = 240 mm (18 x OD), length < 25 m, 4 x 2.5 + (2 x 1) mm <sup>2</sup>	A
ZK4500-0004-0050	example for 5 m length	
ZK4502-0004-xxxx	length ≥ 25 m	
ZK4509-0004-xxxx	not assembled	
ZK4501-0004-xxxx	extension cable	B

Ordering information	Motor cable with 2.5 mm <sup>2</sup> wire gauge, highly flexible, suitable as trailing cable	Pict.
ZK4500-0024-xxxx	highly dynamic, suitable as trailing cable (5 million bending cycles), max. 240 m/min, max. 30 m/s <sup>2</sup> , bending radius = 105 mm (7 x OD), max. chain length horizontal 20 m, vertical 5 m, length < 25 m, 4 x 2.5 + (2 x 1) mm <sup>2</sup>	A
ZK4500-0024-0050	example for 5 m length	
ZK4502-0024-xxxx	length ≥ 25 m	
ZK4509-0024-xxxx	not assembled	
ZK4501-0024-xxxx	extension cable	B



## Motor cables 4 mm<sup>2</sup> for AM3000 (winding code "Q") at AX5125

Ordering information	Motor cable with 4 mm <sup>2</sup> wire gauge, flexible, suitable as trailing cable	Pict.
ZK4500-0015-xxxx	dynamic, suitable as trailing cable (5 million bending cycles), max. 180 m/min, max. 5 m/s <sup>2</sup> , min. bending radius = 150 mm (10 x OD), 4 x 4 + 2 x 1 + (2 x 1.5 mm <sup>2</sup> ), length < 25 m	C
ZK4500-0015-0050	example for 5 m length	
ZK4502-0015-xxxx	length ≥ 25 m	
ZK4509-0015-xxxx	not assembled	
ZK4501-0015-xxxx	extension cable	D



## Motor cables 10 mm<sup>2</sup> for AM3000 (winding code "Q") at AX5140

Ordering information	Motor cable with 10 mm <sup>2</sup> wire gauge, flexible, suitable as trailing cable
ZK4500-0017-xxxx	dynamic, suitable as trailing cable (5 million bending cycles), max. 180 m/min, max. 5 m/s <sup>2</sup> , min. bending radius = 225 mm (10 x OD), 4 x 10 + 2 x 1 + 2 x 1.5 mm <sup>2</sup> , assembled at both ends
ZK4500-0017-0050	example for 5 m length
ZK4509-0017-xxxx	not assembled
ZK4501-0017-xxxx	extension cable



## Motor cables 10 mm<sup>2</sup> for AM308x at AX5140

Ordering information	Motor cable with 10 mm <sup>2</sup> wire gauge, flexible, suitable as trailing cable
ZK4505-0017-xxxx	dynamic, suitable as trailing cable (5 million bending cycles), max. 180 m/min, max. 5 m/s <sup>2</sup> , min. bending radius = 225 mm (10 x OD), 4 x 10 + 2 x 1 + 2 x 1.5 mm <sup>2</sup> , assembled at one end (controller end)
ZK4505-0017-0050	example for 5 m length

## Motor cables, not assembled, for higher performance

Ordering information	Motor cable for Servo Drives from AX5125
ZK4509-0016-0xxx	6 mm <sup>2</sup> , for AX5125, flexible, suitable as trailing cable with 5 million bending cycles, 4 x 6 + (2 x 1 + 2 x 1.5 mm <sup>2</sup> )
ZK4509-0017-0xxx	10 mm <sup>2</sup> , for AX5140, flexible, suitable as trailing cable with 5 million bending cycles, 4 x 10 + (2 x 1 + 2 x 1.5 mm <sup>2</sup> )
ZK4509-0018-0xxx	16 mm <sup>2</sup> , for AX5160, flexible, suitable as trailing cable with 5 million bending cycles, 4 x 16 + 2 x (2 x 1.5 mm <sup>2</sup> )
ZK4509-0019-0xxx	25 mm <sup>2</sup> , for AX5172, flexible, suitable as trailing cable with 5 million bending cycles, 4 x 25 + 2 x (2 x 1.5 mm <sup>2</sup> )
ZK4509-0019-1xxx	35 mm <sup>2</sup> , for AX5190, flexible, suitable as trailing cable with 5 million bending cycles, 4 x 35 + 2 x (2 x 1.5 mm <sup>2</sup> )
ZK4509-0019-2xxx	50 mm <sup>2</sup> , for AX5191/AX5192, flexible, suitable as trailing cable with 5 million bending cycles, 4 x 50 + 2 x (2 x 2.5 mm <sup>2</sup> )

## Encoder cables with yTec plug for AM301x at AX5000

Ordering information	Encoder cable with 0.5 mm <sup>2</sup> wire gauge, flexible, suitable as trailing cable
ZK4510-8110-xxxx	flexible, suitable as trailing cable (5 million bending cycles), max. 120 m/min, max. 4 m/s <sup>2</sup> , min. bending radius = 75 mm (10 x OD), max. chain length horizontal 20 m, vertical 5 m, 4 x 2 x 0.25 mm <sup>2</sup> , max. length 100 m
ZK4510-8110-0050	example for 5 m length
ZK4511-8110-xxxx	extension cable

## Absolute encoder cables ALxxxx/AM3xxx and AL2250 to AX5000

Ordering information	Encoder cable with 7 x 2 x 0.14 mm <sup>2</sup> + 2 x 0.5 mm <sup>2</sup> wire gauge	Pict.
ZK4510-0000-xxxx	cables for fixed installation with 50,000 bending cycles, max. 180 m/min, max. 5 m/s <sup>2</sup> , min. bending radius = 140 mm (18 x OD)	A
ZK4510-0000-0050	example for 5 m length	
ZK4511-0000-xxxx	extension cable for fixed installation	B
ZK4519-0000-xxxx	not assembled	
ZK4510-0020-xxxx	highly flexible, suitable as trailing cable (5 million bending cycles), max. 240 m/min, max. 30 m/s <sup>2</sup> , min. bending radius = 55 mm (7 x OD), max. chain length: horizontal = 20 m, vertical = 5 m	A
ZK4510-0020-0050	example for 5 m length	
ZK4511-0020-xxxx	extension cable, highly dynamic, suitable as trailing cable	B
ZK4519-0020-xxxx	not assembled	
ZK4510-0210-xxxx	dynamic encoder cable with yTec plug (4 x 2 x 0.25 mm <sup>2</sup> )	



## Resolver cable AM3000/AM3500/AM8000 to AX5000

Ordering information	Resolver cable with 4 x 2 x 0.25 mm <sup>2</sup> wire gauge	Pict.
ZK4530-0010-xxxx	dynamic, suitable as trailing cable (5 million bending cycles), max. 120 m/min, max. 4 m/s <sup>2</sup> , bending radius = 75 mm (10 x OD)	<b>C</b>
ZK4530-0010-0050	example for 5 m length	
ZK4531-0010-xxxx	extension cable	<b>D</b>
ZK4539-0010-xxxx	not assembled	
ZK4530-0210-xxxx	resolver cable with yTec plug for AM301x-xxxx-0005	



## Special connector box encoder cables AL2250 (for SinCos encoder with zero pulse) to AX5000

Ordering information	Encoder cable with 7 x 2 x 0.14 mm <sup>2</sup> + 2 x 0.5 mm <sup>2</sup> wire gauge
ZK4520-0020-xxxx	highly flexible, suitable as trailing cable (5 million bending cycles), max. 240 m/min, max. 30 m/s <sup>2</sup> , min. bending radius 55 mm (7 x OD), max. chain length: horizontal = 20 m, vertical = 5 m, for connection of the connector box AL2250-0001 to AX5000 for encoder with zero pulse

## Thermal protection cables ALxxxx to AX5000

Ordering information	Thermal protection cables with 4 x 0.14 mm <sup>2</sup> wire gauge	Pict.
ZK4540-0020-xxxx	thermal protection cable, highly flexible, suitable as trailing cable, assembled at both ends, 4 x 0.14 mm <sup>2</sup> , 5 million bending cycles, max. 240 m/min, max. 30 m/s <sup>2</sup> , min. bending radius = 55 mm (7 x OD)	<b>E</b>

Note: required if no connector box is used.



## Documentation

Ordering information	TDmlAX-5000-0000-0200   Documentation
TDmlAX-5000-0000-0200	AX5000 commissioning and installation manual