

5 IDX CABLING GUIDE

CABLES FOR MAXON IDX DRIVES WITH INTEGRATED POSITIONING AND SPEED CONTROLLER

	Power IDX 56	Power IDX 56	Power IDX 70	IO	IO	EtherCAT	EtherCAT
							
Connector 1	M12 female, 5 poles, L-coded straight	M12 female, 5 poles, L-coded 90°	M23 female, 6 poles, N-coded, straight	M12 female, 12 poles, A-coded, straight	M12 female, 12 poles, A-coded, 90°	M8 male, 4 poles, A-coded, straight	M8 male, 4 poles, A-coded, straight
Connector 2	no connector	no connector	no connector	no connector	no connector	no connector	M8, male, 4 poles, A-coded, straight
Part No. L= 1.5 m	662958	662953	—	662957	662952	662961	—
Part No. L= 3.0 m	662955	662945	711319	662954	662948	662941	662960

	EtherCAT	CANopen	CANopen	CANopen	CANopen	CANopen	CANopen
							
Connector 1	M8 male, 4 poles, A-coded, straight	M8 female, 5 poles, B-coded, straight	M8 male, 5 poles, B-coded, straight	M8 male, 5 poles, B-coded, straight	M12 male, 5 poles, A-coded, straight	M12 female, 5 poles, A-coded, straight	M8 male, 5 poles, B-coded, straight
Connector 2	RJ45	no connector	no connector	M8, female, 5 poles, B-coded, straight	M8 female, 5 poles, B-coded, straight	M8 male, 5 poles, B-coded, straight	—
Part No. L= 1.5 m	662956	662951	662950	—	L = 0.15 m: 662946	L = 0.15 m: 662947	662933
Part No. L= 3.0 m	662942	662935	662934	662959			

CABLES FOR MAXON IDX MOTORS WITHOUT INTEGRATED POSITIONING AND SPEED CONTROLLER

	Power IDX 56	Power IDX 56	Power IDX 70	Sensor	Sensor
					
Connector 1	M12 female, 5 poles, L-coded straight	M12 female, 5 poles, L-coded 90°	M23 female, 6 poles, N-coded, straight	M12 female, 17 poles, A-coded, straight	M12 female, 17 poles, A-coded, 90°
Connector 2	no connector	no connector	no connector	no connector	no connector
Part No. L= 1.5 m	684644	684647	—	—	—
Part No. L= 3.0 m	684646	684648	711319	684650	684651

Note: All IDX 56 are powered by cables with M12 connector, all IDX 70 are powered by cables with M23 connector. All other connectors (IO, EtherCAT, CANopen and Sensor) are the same on both IDX motor and drive sizes.

CABLES FOR MAXON IDX DRIVES WITH INTEGRATED POSITIONING AND SPEED CONTROLLER [a]

	Power IDX 56	Power IDX 70	IO	CANopen	EtherCAT
					
Cable Manufacturer	Phoenix Contact	Helukabel	Phoenix Contact	Phoenix Contact	Phoenix Contact
Manufacturer Part-No.	1379710	707231	1405789	1408543	1408538
Outer sheath, material	PUR	PUR	PUR	PUR	PUR
Wire 1	+V _{CC} , brown	+V _{CC} · L1	AnIN1+, brown	CAN_V+, red	TX+, yellow
Wire 2	+V _C , white	GND · L3	GND, blue	CAN_SHLD · Drain	RX+, white
Wire 3	GND, blue	FE, green-yellow	AnIN1-, white	CAN_H, white	RX-, blue
Wire 4	—, black	+V _C , brown	AnIN2+, green	CAN_L, blue	TX-, orange
Wire 5	FE, pink [b]	+VI/O, white	DigIN1, pink	CAN_GND, black	—
Wire 6	—	—, L2	AnIN2-, yellow	—	—
Wire 7	—	—	DigOUT1, black	—	—
Wire 8	—	—	DigIN2, grey	—	—
Wire 9	—	—	DigIN3, red	—	—
Wire 10	—	—	DigOUT2, violet	—	—
Wire 11	—	—	DigIN4, grey-pink	—	—
Wire 12	—	—	+VI/O, red-blue	—	—

CABLES FOR MAXON IDX MOTORS WITHOUT INTEGRATED POSITIONING AND SPEED CONTROLLER [a]

	Power IDX 56	Power IDX 70	Sensor
			
Cable Manufacturer	Phoenix Contact	Helukabel	Phoenix Contact
Manufacturer Part-No.	1435446	707231	1435447
Outer sheath, material	PUR	PUR	PUR
Wire 1	W1, brown	W1 · L1	GND, brown
Wire 2	W2, white	W3 · L3	NTC, blue
Wire 3	W3, blue	FE, green-yellow	V _{CC} , white
Wire 4	U _{Brake} +, black	U _{Brake} +, brown	A, green
Wire 5	U _{Brake} GND, pink [b]	U _{Brake} GND, white	I/, pink
Wire 6	—	W2 · L2	A/, yellow
Wire 7	—	—	B/, black
Wire 8	—	—	I, grey
Wire 9	—	—	NTC, red
Wire 10	—	—	B, violet
Wire 11	—	—	DATA/, grey-pink
Wire 12	—	—	DATA, red-blue
Wire 13	—	—	CLK, white-green
Wire 14	—	—	CLK/, brown-green
Wire 15	—	—	HS3, white-yellow
Wire 16	—	—	HS1, yellow-brown
Wire 17	—	—	HS2, white-grey

[a] maxon IDX cables connected to a maxon IDX Motor (without integrated controller) or maxon IDX Drive (with integrated controller) have the color-signal assignment as indicated in this table.

[b] maxon power cables with production year until 2021 have the wire 5 color grey, cables with production year 2022 and newer have the wire color pink; the production month and year are marked on the cable.