

Accessories



for VFDs and servo drives

Accessories – helpful in the application

Brake resistors



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If the machine has to be braked or brought to a standstill in a short time, the motor at the drive runs in regenerative mode. The resulting energy can be dissipated with a brake resistor.

Brake switches



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Electronic brake switches enable the control of an electromagnetic motor holding brake.

Mains chokes



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By using a mains choke, harmonics at the mains input of a drive are smoothed. For large powers, the use of a mains choke is mandatory.

Mounting



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The shield plates and the multipoint connectors for the drives are used for secure connection.

The multipoint connectors are included as standard in the scope of delivery.

Operation and diagnostics



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Keypads and other modules for diagnostics and operation enable access to parameters and error messages.

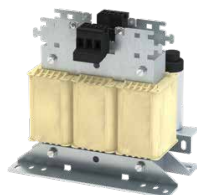
RFI and mains filters



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These filters are used to comply with EMC requirements in accordance with European Standard EN 61800-3 and are easy to use for categories C1 – C3.

Sine filters



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For long motor cables, the use of a sine filter ensures proper operation.

Electrical protection devices and busbars



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Fuses are protective devices that automatically shut off a circuit in the event of a short circuit or overload.

Busbars can be used for simple installation.

Power supply units



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Power supply units for 24 V or 48 V DC supply.

System cables



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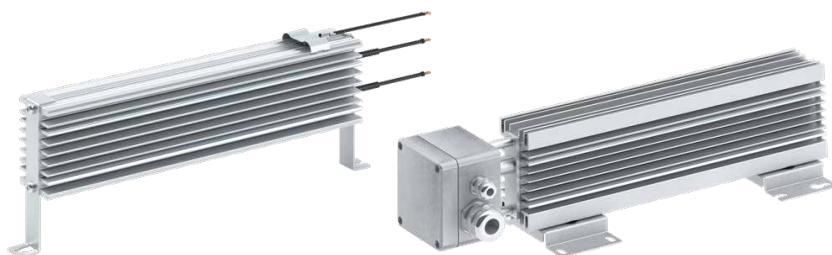
Pre-assembled system cables are the ideal solution for easily connecting or interconnecting Lenze products.

Brake resistors

For regenerative operation over a longer period of time or if large moments of inertia have to be braked, an external brake resistor is required in many applications. This converts the excess braking energy into heat.

The brake resistor is switched on when the DC-bus voltage of the drive exceeds the switching threshold. This prevents the drive from setting pulse inhibit through the "overvoltage" fault and the drive from coasting down. The external brake resistor serves to control the braking process at any time.

Lenze offers you a wide range of brake resistors for optimum system design.



Product overview

	ERBU	ERBM	ERBP	ERBG	ERBS
					
Design/mounting	On the drive	Control cabinet Wall	Control cabinet	Control cabinet	Wall
Degree of protection	IP20 IP65 IP66	IP20 IP23 IP54	IP20	IP20	IP66
Protection class/power range					
IP20	35 W	20 ... 150 W	-	-	-
IP23	-	86 ... 135 W	200 ... 300 W	1900 ... 34000 W	-
IP54	-	50 ... 120 W	-	-	-
IP65	20 W	-	-	-	-
IP66	15 W	-	-	-	150 ... 6300 W
Market approvals					
CE (2014/35/EU)	✓	✓	✓	✓	✓
UKCA (2016 No. 1101)	✓	✓	✓	✓	✓
UL (UL508)	✓	✓	✓	✓	✓
CSA (UL508)	✓	✓	✓	✓	✓
RoHS (2011/65/EU)	✓	✓	✓	✓	✓
Ambient conditions					
Vibration resistance during operation	Up to 0.7 g	Up to 0.7 g	Up to 0.7 g	Up to 0.7 g	Up to 0.7 g
Operation (EN 60721-3-3)	3K3 (-10 ... +55 °C)	3K3 (-10 ... +55 °C)	3K3 (-10 ... +55 °C)	3K3 (-10 ... +55 °C)	3K3 (-10 ... +55 °C)
Derating	2.5 % / °C above +45 °C	2.5 % / °C above +45 °C	2.5 % / °C above +45 °C	2.5 % / °C above +40 °C	2.5 % / °C above +45 °C
Storage (EN 60721-3-1)	1K3 (-25 ... +60 °C)	1K3 (-25 ... +60 °C)	1K3 (-25 ... +60 °C)	1K3 (-25 ... +60 °C)	1K3 (-25 ... +60 °C)
Transport (EN 60721-3-2)	2K3 (-25 ... +70 °C)	2K3 (-25 ... +70 °C)	2K3 (-25 ... +70 °C)	2K3 (-25 ... +70 °C)	2K3 (-25 ... +70 °C)
Installation altitude	0 ... 4000 m amsl	0 ... 4000 m amsl	0 ... 4000 m amsl	0 ... 4000 m amsl	0 ... 4000 m amsl
Derating	1000 ... 4000 m amsl: Derating 5 % / 1000 m				
Mounting position	Vertical	Vertical	Vertical or horizontal (30 % current reduction)	Vertical up to 10 kW or horizontal	Vertical or horizontal (20 % current reduction)
Functions					
Housing	Metal cartridge	Aluminum profile	Aluminum profile	Steel grid	Aluminum profile
Mounting	Mounting	Side mounting	Side mounting	Side mounting	Side mounting
Connection	with cable	with cable	with cable	Bolt	Terminal box
Thermal monitoring	Intrinsically safe	Thermal contact	Thermal contact	Thermal contact	Thermal contact

Products

Mounting inside the control cabinet

Type	R _B	P _D	Q _B	V _{max}	Degree of protection	m	H x W x D			ID
	[Ω]	[W]	[kW]	[V DC]		[kg]	[mm]			
ERBU150R035WUQN000	150	35	0.418	800	IP20	0.38	278 x 60 x 27.5			13619027
ERBU390R035WUQN000	390	35	0.418	800	IP20	0.38	278 x 60 x 27.5			13619024
ERBM047R135W	47	135	6.3	800	IP23	0.67	216 x 80 x 28			13554431
ERBM082R150W	82	150	22.5	800	IP20	0.70	238 x 80 x 59			13556675
ERBM100R086W	100	86	3.4	800	IP23	0.49	110 x 80 x 28			13554432
ERBM100R150W	100	150	22.5	800	IP20	0.54	238 x 80 x 59			13556673
ERBM470R020W	470	20	3	800	IP20	0.34	160 x 40 x 36			13557874
ERBP018R300W	18	300	45	800	IP23	1.4	320 x 42 x 122			13565500
ERBP027R200W	27	200	30	800	IP23	1	240 x 42 x 122			13565501
ERBP033R200W	33	200	30	800	IP23	1	240 x 42 x 122			13565504
ERBP033R300W	33	300	45	800	IP23	1.4	320 x 42 x 122			13565505
ERBP047R200W	47	200	30	800	IP23	1	240 x 42 x 122			13565502
ERBP082R200W	82	200	30	800	IP23	1	240 x 42 x 122			13565503
ERBP180R200W	180	200	30	800	IP23	1	240 x 42 x 122			13565506
ERBP180R300W	180	300	45	800	IP23	1.4	320 x 42 x 122			13565507
ERBG023D05K6	2.3	5600	840	1000	IP20	15.9	302 x 486 x 426			13598296
ERBG028D04K1	2.8	4100	615	1000	IP20	12.8	302 x 486 x 426			13598297
ERBG028D11K0WBN000	2.8	11000	1650	1000	IP20	28	302 x 486 x 736			13598315
ERBG028D34K0WBN000	2.8	34000	5100	1000	IP20	90	1020 x 486 x 736			13598316
ERBG035D03K3	3.5	3300	495	1000	IP20	12.6	302 x 486 x 326			13598298
ERBG005R02K6	5	2600	390	1000	IP20	11	302 x 486 x 326			13598148
ERBG005R10K0WBN000	5	10000	1500	1000	IP20	26.7	302 x 486 x 736			13598312
ERBG005R22K0WBN000	5	22000	3300	1000	IP20	54	600 x 486 x 736			13598313
ERBG005R27K0WBN000	5	27000	4050	1000	IP20	68	1020 x 486 x 636			13598314
ERBG075D01K9	7.5	1900	285	1000	IP20	9.5	302 x 486 x 236			13598301
ERBG075D04K5WBN000	7.5	4500	675	1000	IP20	15	1020 x 486 x 636			13598317
ERBG075D15K0WBN000	7.5	15000	2250	1000	IP20	38	600 x 486 x 526			13598318
ERBG012R01K9	12	1900	285	1000	IP20	9.5	302 x 486 x 236			13598270
ERBG012R05K2	12	5200	780	1000	IP20	15.1	302 x 486 x 426			13598271
ERBG015R03K3	15	3300	495	1000	IP20	12.6	302 x 486 x 326			13598292
ERBG015R06K2	15	6200	930	1000	IP20	17	302 x 486 x 526			13598293
ERBG015R10K0	15	10000	1500	1000	IP20	22	302 x 486 x 736			13598294
ERBG018R04K3	18	4300	645	1000	IP20	13.5	302 x 486 x 426			13598295



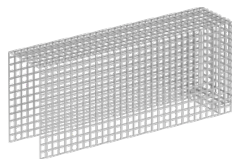
Mounting outside the control cabinet

Type	R _B	P _D	Q _B	V _{max}	Degree of protection	m	H x W x D			ID
	[Ω]	[W]	[kW]	[V DC]		[kg]	[mm]			
ERBU150R015WAQN000	150	15	0.3	800	IP66	0.2	83 x 24 x 24			13596343
ERBU390R015WAQN000	390	15	0.3	800	IP66	0.2	83 x 24 x 24			13596344
ERBU390R020W	390	20	0.25	800	IP65	0.17	42 x 24 x 173			13476442
ERBM039R120W	39	120	18	850	IP54	1	265 x 31 x 60			13565484
ERBM100R100W	100	100	15	850	IP54	0.37	235 x 20.6 x 40			13565461
ERBM180R050W	180	50	7.5	850	IP54	0.28	175 x 20.6 x 40			13565460
ERBM390R100W	390	100	15	850	IP54	0.37	235 x 20.6 x 40			13565482
ERBS005R02K0WQN000	5	2000	300	800	IP66	9	105 x 204 x 865			13654919
ERBS075D01K2WQN000	7.5	1200	180	800	IP66	5.6	105 x 114 x 1020			13625930
ERBS075D04K0WQN000	7.5	4000	600	800	IP66	18.2	105 x 279 x 1100			13625931
ERBS012R02K0WQN000	12	2000	300	800	IP66	9.8	865 x 200 x 105			13599742
ERBS012R05K0WQN000	12	5000	750	850	IP66	35.5	995 x 300 x 280			13599743
ERBS015R01K2	15	1200	180	800	IP66	5.6	1020 x 114 x 105			13566413
ERBS015R02K4	15	2400	360	800	IP66	10	1020 x 204 x 105			13566414
ERBS015R06K3WQN000	15	6300	945	850	IP66	39	1095 x 300 x 280			13599744
ERBS015R800W	15	800	120	800	IP66	4	710 x 114 x 105			13566412
ERBS018R01K2	18	1200	180	800	IP66	5.6	1020 x 114 x 105			13566411
ERBS018R01K4	18	1400	210	800	IP66	6.3	1110 x 114 x 105			13566409
ERBS018R01K9	18	1900	285	800	IP66	8.7	825 x 204 x 105			13566408
ERBS018R02K8	18	2800	420	800	IP66	12	1110 x 204 x 105			13566410
ERBS018R04K5WQN000	18	4500	675	850	IP66	30.5	895 x 300 x 280			13599745
ERBS018R800W	18	800	120	800	IP66	4	710 x 114 x 105			13566407
ERBS027R01K2	27	1200	180	800	IP66	5.6	1020 x 114 x 105			13566402
ERBS027R01K4	27	1400	210	800	IP66	6.3	1110 x 114 x 105			13566406
ERBS027R600W	27	600	90	800	IP66	3.1	550 x 114 x 105			13566405
ERBS039R01K6NQN000	39	1600	246	850	IP66	7.8	748 x 200 x 122			13549460
ERBS047R400W	47	400	60	800	IP66	2.3	400 x 114 x 105			13566403
ERBS047R800W	47	800	120	800	IP66	4	710 x 114 x 105			13566404
ERBS082R780WQN000	82	780	117	850	IP66	3.6	666 x 124 x 122			13549459
ERBS100R625WQN000	100	625	94	850	IP66	3.1	566 x 124 x 122			13549458
ERBS180R350WQN000	180	350	53	850	IP66	2.1	382 x 124 x 122			13549457
ERBS180R350WQN600	180	350	52.5	850	IP66	2.1	382 x 124 x 122			13655356
ERBS470R150WQN000	470	150	22.5	850	IP66	1.3	222 x 124 x 122			13549455
ERBS470R150WQN600	470	150	22.5	850	IP66	1.3	222 x 124 x 122			13655355

Product extensions

Protective screen for brake resistors

The brake resistors can become very hot during braking operation of the drive. The following ERBS brake resistors can be equipped with a protective screen as protection against contact.



Mounting kit

Type				ID
Brake resistor	Mounting kit			
ERBS047R400W	ERZ0020			13592259
ERBS015R800W	ERZ0021			13592260
ERBS018R800W	ERZ0021			13592260
ERBS047R800W	ERZ0021			13592260
ERBS180R350WNQN000	ERZ0022			13592261

Protective screen mounted

The ERBS047R400W, ERBS047R800W, and ERBS180R350WNQN000 brake resistors can be ordered with a protective screen installed. In the following assignment tables, these resistors are assigned without protective screens; the same assignment applies with protective screens.

Type	Description			ID
ERBS047R400WGQN000	Brake resistor with protective screen installed			13599422
ERBS047R800WGQN000	Brake resistor with protective screen installed			13599423
ERBS180R350WGQN000	Brake resistor with protective screen installed			13599424

Project planning

Lenze provides selection tables for easy and quick selection of a brake resistor.

Application classes

	Meaning	Examples
Dynamic load	Compensation of low, sporadic voltage peaks	Overshoot due to backlash-affected mechanics at the end of the acceleration phase Transfer of conveyed material to downstream conveyor line
Emergency stop	Compensation of regenerative energy during emergency stop	Braking after pressing the emergency stop button
Passive load	Compensation of regenerative energy during horizontal movement	Braking of slides on machine tools or rotary tables
Active load	Compensation of regenerative energy during vertical movement	Braking hoists

The assignment via the mains voltage and the rated power of the drive is a non-binding recommendation. This recommended assignment of the brake resistors is electrically protected via the assigned mains fuses of the drives. For other assignments, the assignment of the mains fuses to the brake resistors must be checked.

Sizing of the brake resistors

When sizing your own brake resistor, please note the following:

- Mean value of regenerative power < permanent power of the brake resistor.
- Regenerative power during braking time < thermal capacity of the brake resistor.
- At any time, the following must apply:
Cumulative braking times within the cycle time < maximum braking time.

Operating conditions

- The mounting location must guarantee the operating conditions and mechanical connections specified in the technical data.
- The installation clearances specified in the technical data must be observed to ensure unobstructed air circulation for dissipating the heat.
- Protect the mounting location by suitable fire prevention and protection against contact.
- Flammable materials or substances may not be placed in the vicinity of the brake resistor.
- Always connect the thermal contact and integrate it into the system monitoring so that the voltage supply to the drive is disconnected when the thermal contact responds.
- In the case of intrinsically safe brake resistors that also have a thermal contact installed, this can be connected as an early warning system.

Assignment – drive in the control cabinet

Mains connection 1 x AC 120 V

P _{rated} [kW]	V _{mains} [V]	Drive			Brake resistor			
		i550-C	i750-C	i950-C	Dynamic load	Emergency stop	Passive load	Active load
0.25	1 AC 120 V	✓	-	-	ERBU390R035WUQN000	ERBM180R050W	ERBM180R050W	ERBP180R200W
0.37	1 AC 120 V	✓	-	-	ERBU390R035WUQN000	ERBM180R050W	ERBM180R050W	ERBP180R200W
0.75	1 AC 120 V	✓	-	-	ERBU150R035WUQN000	ERBM047R135W	ERBM047R135W	ERBP047R200W
1.1	1 AC 120 V	✓	-	-	ERBU150R035WUQN000	ERBM047R135W	ERBM047R135W	ERBP047R400W

Mains connection 1 x AC 230 V

P _{rated} [kW]	V _{mains} [V]	Drive			Brake resistor			
		i550-C	i750-C	i950-C	Dynamic load	Emergency stop	Passive load	Active load
0.25	1 AC 230 V	✓	-	-	ERBM180R050W	ERBM180R050W	ERBM180R050W	ERBP180R200W
0.37	1 AC 230 V	✓	-	-	ERBM180R050W	ERBM180R050W	ERBM180R050W	ERBP180R200W
0.37	1 AC 230 V		-	✓	ERBU150R035WUQN000	ERBM100R086W	ERBM100R086W	ERBM100R100W
0.55	1 AC 230 V	✓	-	✓	ERBU150R035WUQN000	ERBM100R086W	ERBM100R086W	ERBM100R150W
0.75	1 AC 230 V	✓	-	✓	ERBM100R086W	ERBM100R086W	ERBM100R086W	ERBM100R150W
1.1	1 AC 230 V	✓	-	-	ERBP033R200W	ERBP033R200W	ERBP033R200W	ERBP033R300W
1.5	1 AC 230 V	✓	-	✓	ERBP033R200W	ERBP033R200W	ERBP033R200W	ERBP033R300W
2.2	1 AC 230 V	✓	-	-	ERBP033R200W	ERBP033R200W	ERBP033R200W	ERBP033R300W

Mains connection 3 x AC 230 V

P _{rated} [kW]	V _{mains} [V]	Drive			Brake resistor			
		i550-C	i750-C	i950-C	Dynamic load	Emergency stop	Passive load	Active load
0.25	3 AC 230 V	✓	-	-	ERBM180R050W	ERBM180R050W	ERBM180R050W	ERBP180R200W
0.37	3 AC 230 V	✓	-	-	ERBM180R050W	ERBM180R050W	ERBM180R050W	ERBP180R200W
0.37	1 AC 230 V		-	✓	ERBU150R035WUQN000	ERBM100R086W	ERBM100R086W	ERBM100R100W
0.55	3 AC 230 V	✓	-	✓	ERBU150R035WUQN000	ERBM100R086W	ERBM100R086W	ERBM100R150W
0.75	3 AC 230 V	✓	-	✓	ERBM100R086W	ERBM100R086W	ERBM100R086W	ERBM100R150W
1.1	3 AC 230 V	✓	-	-	ERBP033R200W	ERBP033R200W	ERBP033R200W	ERBP033R300W
1.5	3 AC 230 V	✓	-	✓	ERBP033R200W	ERBP033R200W	ERBP033R200W	ERBP033R300W
2.2	3 AC 230 V	✓	-	✓	ERBP033R200W	ERBP033R200W	ERBP033R200W	ERBP033R300W
4	3 AC 230 V	✓	-	✓	ERBP018R300W	ERBS015R800W	ERBS015R800W	ERBS015R01K2
5.5	3 AC 230 V	✓	-	✓	ERBS015R800W	ERBS015R800W	ERBS015R800W	ERBS015R01K2



Mains connection 3 x AC 400 V

P _{rated} [kW]	V _{mains} [V]	Drive			Brake resistor			
		i550-C	i750-C	i950-C	Dynamic load	Emergency stop	Passive load	Active load
0.37	3 AC 400 V	✓	-	-	ERBU390R035WUQN000	ERBU390R035WUQN000	ERBM390R100W	ERBM390R100W
0.55	3 AC 400 V	✓	-	✓	ERBU390R035WUQN000	ERBU390R035WUQN000	ERBM390R100W	ERBM390R100W
0.75	3 AC 400 V	✓	-	✓	ERBU390R035WUQN000	ERBU390R035WUQN000	ERBM390R100W	ERBM390R100W
1.1	3 AC 400 V	✓	-	-	ERBU150R035WUQN000	ERBU150R035WUQN000	ERBP180R200W	ERBP180R300W
1.5	3 AC 400 V	✓	-	-	ERBU150R035WUQN000	ERBP180R200W	ERBP180R200W	ERBS180R350WNQN000
2.2	3 AC 400 V	✓	-	✓	ERBU150R035WUQN000	ERBP180R200W	ERBP180R300W	ERBS180R350WNQN000
3	3 AC 400 V	✓	-	-	ERBM082R150W	ERBM082R150W	ERBP082R200W	ERBS082R780WNQN000
4	3 AC 400 V	✓	-	✓	ERBM047R135W	ERBM047R135W	ERBS047R400W	ERBS047R800W
5.5	3 AC 400 V	✓	-	-	ERBP047R200W	ERBP047R200W	ERBS047R400W	ERBS047R800W
7.5	3 AC 400 V	✓	-	✓	ERBP027R200W	ERBP027R200W	ERBS027R600W	ERBS027R01K4
10.3	3 AC 400 V	-	✓	-	ERBP018R300W	ERBP018R300W	ERBS018R01K9	ERBG018R04K3
11	3 AC 400 V	✓	-	✓	ERBP027R200W	ERBS027R600W	ERBS027R01K2	ERBS027R01K4
15	3 AC 400 V	✓	-	✓	ERBP018R300W	ERBP018R300W	ERBS018R01K4	ERBG018R04K3
18.5	3 AC 400 V	✓	-	-	ERBS015R800W	ERBS015R800W	ERBS015R02K4	ERBG015R06K2
20.6	3 AC 400 V	-	✓	-	ERBG012R01K9	ERBG012R01K9	ERBG012R01K9	ERBG012R05K2
22	3 AC 400 V	✓	-	✓	ERBS015R800W	ERBS015R800W	ERBS015R02K4	ERBG015R06K2
30	3 AC 400 V	✓	-	✓	ERBG075D01K9	ERBG075D01K9	ERBG075D04K5WBN000	ERBG075D15K0WBN000
37	3 AC 400 V	✓	-	-	ERBG075D01K9	ERBG075D01K9	ERBG075D04K5WBN000	ERBG075D04K5WBN000
45	3 AC 400 V	✓	-	✓	ERBG075D01K9	ERBG075D01K9	ERBG075D04K5WBN000	ERBG075D15K0WBN000
55	3 AC 400 V	✓	-	✓	ERBG005R02K6	ERBG005R02K6	ERBG005R10K0WBN000	ERBG005R22K0WBN000
75	3 AC 400 V	✓	-	✓	ERBG005R02K6	ERBG005R02K6	ERBG005R10K0WBN000	ERBG005R22K0WBN000
90	3 AC 400 V	✓	-	✓	ERBG028D04K1	ERBG028D04K1	ERBG028D11K0WBN000	ERBG028D34K0WBN000
110	3 AC 400 V	✓	-	✓	ERBG028D04K1	ERBG028D04K1	ERBG028D11K0WBN000	ERBG028D34K0WBN000
132	3 AC 400 V	✓	-	-	ERBG028D04K1	ERBG028D04K1	ERBG028D11K0WBN000	ERBG028D34K0WBN000

Mains connection 3 x AC 480 V

P _{rated} [kW]	V _{mains} [V]	Drive			Brake resistor			
		i550-C	i750-C	i950-C	Dynamic load	Emergency stop	Passive load	Active load
0.37	3 AC 480 V	✓	-	-	ERBU390R035WUQN000	ERBU390R035WUQN000	ERBU390R035WUQN000	ERBM390R100W
0.55	3 AC 480 V	✓	-	✓	ERBU390R035WUQN000	ERBU390R035WUQN000	ERBM390R100W	ERBM390R100W
0.75	3 AC 480 V	✓	-	✓	ERBU390R035WUQN000	ERBU390R035WUQN000	ERBM390R100W	ERBM390R100W
1.1	3 AC 480 V	✓	-	-	ERBU150R035WUQN000	ERBU390R035WUQN000	ERBP180R200W	ERBP180R300W
1.5	3 AC 480 V	✓	-	-	ERBU150R035WUQN000	ERBP180R200W	ERBP180R200W	ERBS180R350WNQN000
2.2	3 AC 480 V	✓	-	✓	ERBU150R035WUQN000	ERBP180R200W	ERBP180R300W	ERBS180R350WNQN000
3	3 AC 480 V	✓	-	-	ERBM082R150W	ERBM082R150W	ERBP082R200W	ERBS082R780WNQN000
4	3 AC 480 V	✓	-	✓	ERBM047R135W	ERBM047R135W	ERBS047R400W	ERBS047R800W
5.5	3 AC 480 V	✓	-	-	ERBP047R200W	ERBP047R200W	ERBS047R400W	ERBS047R800W
7.5	3 AC 480 V	✓	-	✓	ERBP027R200W	ERBP027R200W	ERBS027R600W	ERBS027R01K4
11	3 AC 480 V	✓	-	✓	ERBP027R200W	ERBS027R600W	ERBS027R01K2	ERBS027R01K4
12.3	3 AC 480 V	-	✓	-	ERBP018R300W	ERBP018R300W	ERBS018R01K9	ERBG018R04K3
15	3 AC 480 V	✓	-	✓	ERBP018R300W	ERBP018R300W	ERBS018R01K4	ERBG018R04K3
18.5	3 AC 480 V	✓	-	-	ERBS015R800W	ERBS015R800W	ERBS015R02K4	ERBG015R06K2
22	3 AC 480 V	✓	-	✓	ERBS015R800W	ERBS015R800W	ERBS015R02K4	ERBG015R06K2
24.7	3 AC 480 V	-	✓	-	ERBG012R01K9	ERBG012R01K9	ERBG012R01K9	ERBG012R05K2
30	3 AC 480 V	✓	-	✓	ERBG075D01K9	ERBG075D01K9	ERBG075D04K5WBN000	ERBG075D15K0WBN000
37	3 AC 480 V	✓	-	-	ERBG075D01K9	ERBG075D01K9	ERBG075D04K5WBN000	ERBG075D04K5WBN000
45	3 AC 480 V	✓	-	✓	ERBG075D01K9	ERBG075D01K9	ERBG075D04K5WBN000	ERBG075D15K0WBN000
55	3 AC 480 V	✓	-	✓	ERBG005R02K6	ERBG005R02K6	ERBG005R10K0WBN000	ERBG005R22K0WBN000
75	3 AC 480 V	✓	-	✓	ERBG005R02K6	ERBG005R02K6	ERBG005R10K0WBN000	ERBG005R22K0WBN000
90	3 AC 480 V	✓	-	✓	ERBG028D04K1	ERBG028D04K1	ERBG028D11K0WBN000	ERBG028D34K0WBN000
110	3 AC 480 V	✓	-	✓	ERBG028D04K1	ERBG028D04K1	ERBG028D11K0WBN000	ERBG028D34K0WBN000
132	3 AC 480 V	✓	-	-	ERBG028D04K1	ERBG028D04K1	ERBG028D11K0WBN000	ERBG028D34K0WBN000

Smaller brake resistors can be used in the partial load range for the i750 cabinet power supply modules. See the project planning document for the i750 cabinet.

Assignment – drive on the wall

Mains connection 1 x AC 120 V

P_{rated} [kW]	V_{mains} [V]	Drive	Brake resistor			
		i550 protec	Dynamic load	Emergency stop	Passive load	Active load
0.37	1 AC 120 V	✓	ERBU390R015WAQN000	ERBS180R350WNQN000	ERBS180R350WNQN000	ERBS180R350WNQN000
0.75	1 AC 120 V	✓	ERBU150R015WAQN000	ERBS100R625WNQN000	ERBS100R625WNQN000	ERBS100R625WNQN000
1.1	1 AC 120 V	✓	ERBU150R015WAQN000	ERBS100R625WNQN000	ERBS100R625WNQN000	ERBS100R625WNQN000

Mains connection 1 x AC 230 V

P_{rated} [kW]	V_{mains} [V]	Drive	Brake resistor			
		i550 protec	Dynamic load	Emergency stop	Passive load	Active load
0.37	1 AC 230 V	✓	ERBU150R015WAQN000	ERBS100R625WNQN000	ERBS100R625WNQN000	ERBS100R625WNQN000
0.55	1 AC 230 V	✓	ERBU150R015WAQN000	ERBS100R625WNQN000	ERBS100R625WNQN000	ERBS100R625WNQN000
0.75	1 AC 230 V	✓	ERBU150R015WAQN000	ERBS100R625WNQN000	ERBS100R625WNQN000	ERBS100R625WNQN000
1.1	1 AC 230 V	✓	ERBU150R015WAQN000	ERBS039R01K6NQN000	ERBS039R01K6NQN000	ERBS039R01K6NQN000
1.5	1 AC 230 V	✓	ERBU150R015WAQN000	ERBS039R01K6NQN000	ERBS039R01K6NQN000	ERBS039R01K6NQN000
2.2	1 AC 230 V	✓	ERBU150R015WAQN000	ERBS039R01K6NQN000	ERBS039R01K6NQN000	ERBS039R01K6NQN000

Mains connection 3 x AC 230 V

P_{rated} [kW]	V_{mains} [V]	Drive	Brake resistor			
		i550 protec	Dynamic load	Emergency stop	Passive load	Active load
0.37	3 AC 230 V	✓	ERBU150R015WAQN000	ERBS100R625WNQN000	ERBS100R625WNQN000	ERBS100R625WNQN000
0.55	3 AC 230 V	✓	ERBU150R015WAQN000	ERBS100R625WNQN000	ERBS100R625WNQN000	ERBS100R625WNQN000
0.75	3 AC 230 V	✓	ERBU150R015WAQN000	ERBS100R625WNQN000	ERBS100R625WNQN000	ERBS100R625WNQN000
1.1	3 AC 230 V	✓	ERBU150R015WAQN000	ERBS039R01K6NQN000	ERBS039R01K6NQN000	ERBS039R01K6NQN000
1.5	3 AC 230 V	✓	ERBU150R015WAQN000	ERBS039R01K6NQN000	ERBS039R01K6NQN000	ERBS039R01K6NQN000
2.2	3 AC 230 V	✓	ERBU150R015WAQN000	ERBS039R01K6NQN000	ERBS039R01K6NQN000	ERBS039R01K6NQN000
3	3 AC 230 V	✓	ERBU150R015WAQN000	ERBS015R800W	ERBS015R800W	ERBS015R01K2
4	3 AC 230 V	✓	ERBU150R015WAQN000	ERBS015R800W	ERBS015R800W	ERBS015R01K2
5.5	3 AC 230 V	✓	ERBU150R015WAQN000	ERBS015R800W	ERBS015R800W	ERBS015R01K2
7.5	3 AC 230 V	✓	ERBS015R800W	ERBS015R800W	ERBS015R800W	ERBS015R02K4
11	3 AC 230 V	✓	ERBS015R800W	ERBS015R800W	ERBS015R01K2	ERBS015R02K4
15	3 AC 230 V	✓	ERBS012R02K0WQN000	ERBS012R02K0WQN000	ERBS012R02K0WQN000	ERBS012R05K0WQN000
18.5	3 AC 230 V	✓	ERBS012R02K0WQN000	ERBS012R02K0WQN000	ERBS012R02K0WQN000	ERBS012R05K0WQN000
30	3 AC 230 V	✓	ERBS075D01K2WQN000	ERBS075D01K2WQN000	ERBS075D04K0WQN000	on request
45	3 AC 230 V	✓	ERBS075D01K2WQN000	ERBS075D01K2WQN000	ERBS075D04K0WQN000	on request



Mains connection 3 x AC 400 V

P _{rated} [kW]	V _{mains} [V]	Drive	Brake resistor			
		i550 protec	Dynamic load	Emergency stop	Passive load	Active load
0.37	3 AC 400 V	✓	ERBU390R015WAQN000	ERBS470R150WNQN000	ERBS470R150WNQN000	ERBS470R150WNQN000
0.55	3 AC 400 V	✓	ERBU390R015WAQN000	ERBS470R150WNQN000	ERBS470R150WNQN000	ERBS470R150WNQN000
0.75	3 AC 400 V	✓	ERBU390R015WAQN000	ERBS470R150WNQN000	ERBS470R150WNQN000	ERBS470R150WNQN000
1.1	3 AC 400 V	✓	ERBU150R015WAQN000	ERBS180R350WNQN000	ERBS180R350WNQN000	ERBS180R350WNQN000
1.5	3 AC 400 V	✓	ERBU150R015WAQN000	ERBS180R350WNQN000	ERBS180R350WNQN000	ERBS180R350WNQN000
2.2	3 AC 400 V	✓	ERBU150R015WAQN000	ERBS180R350WNQN000	ERBS180R350WNQN000	ERBS180R350WNQN000
3	3 AC 400 V	✓	ERBU150R015WAQN000	ERBS082R780WNQN000	ERBS082R780WNQN000	ERBS082R780WNQN000
4	3 AC 400 V	✓	ERBU150R015WAQN000	ERBS047R400W	ERBS047R400W	ERBS047R800W
5.5	3 AC 400 V	✓	ERBU150R015WAQN000	ERBS047R400W	ERBS047R400W	ERBS047R800W
7.5	3 AC 400 V	✓	ERBS027R600W	ERBS027R600W	ERBS027R01K2	ERBS027R01K4
11	3 AC 400 V	✓	ERBS027R600W	ERBS027R600W	ERBS027R01K2	ERBS027R01K4
15	3 AC 400 V	✓	ERBS018R800W	ERBS018R800W	ERBS018R01K4	ERBS018R04K5WQN000
18.5	3 AC 400 V	✓	ERBS015R800W	ERBS015R800W	ERBS015R02K4	ERBS015R06K3WQN000
22	3 AC 400 V	✓	ERBS015R800W	ERBS015R800W	ERBS015R02K4	ERBS015R06K3WQN000
30	3 AC 400 V	✓	ERBS075D01K2WQN000	ERBS075D01K2WQN000	ERBS075D04K0WQN000	on request
37	3 AC 400 V	✓	ERBS075D01K2WQN000	ERBS075D01K2WQN000	ERBS075D04K0WQN000	on request
45	3 AC 400 V	✓	ERBS075D01K2WQN000	ERBS075D01K2WQN000	ERBS075D04K0WQN000	on request
55	3 AC 400 V	✓	ERBS005R02K0WQN000	ERBS005R02K0WQN000	on request	on request
75	3 AC 400 V	✓	ERBS005R02K0WQN000	ERBS005R02K0WQN000	on request	on request

Mains connection 3 x AC 480 V

P _{rated} [kW]	V _{mains} [V]	Drive	Brake resistor			
		i550 protec	Dynamic load	Emergency stop	Passive load	Active load
0.37	3 AC 480 V	✓	ERBU390R015WAQN000	ERBS470R150WNQN000	ERBS470R150WNQN000	ERBS470R150WNQN000
0.55	3 AC 480 V	✓	ERBU390R015WAQN000	ERBS470R150WNQN000	ERBS470R150WNQN000	ERBS470R150WNQN000
0.75	3 AC 480 V	✓	ERBU390R015WAQN000	ERBS470R150WNQN000	ERBS470R150WNQN000	ERBS470R150WNQN000
1.1	3 AC 480 V	✓	ERBU150R015WAQN000	ERBS180R350WNQN000	ERBS180R350WNQN000	ERBS180R350WNQN000
1.5	3 AC 480 V	✓	ERBU150R015WAQN000	ERBS180R350WNQN000	ERBS180R350WNQN000	ERBS180R350WNQN000
2.2	3 AC 480 V	✓	ERBU150R015WAQN000	ERBS180R350WNQN000	ERBS180R350WNQN000	ERBS180R350WNQN000
3	3 AC 480 V	✓	ERBU150R015WAQN000	ERBS082R780WNQN000	ERBS082R780WNQN000	ERBS082R780WNQN000
4	3 AC 480 V	✓	ERBU150R015WAQN000	ERBS047R400W	ERBS047R400W	ERBS047R800W
5.5	3 AC 480 V	✓	ERBU150R015WAQN000	ERBS047R400W	ERBS047R400W	ERBS047R800W
7.5	3 AC 480 V	✓	ERBS027R600W	ERBS027R600W	ERBS027R01K2	ERBS027R01K4
11	3 AC 480 V	✓	ERBS027R600W	ERBS027R600W	ERBS027R01K2	ERBS027R01K4
15	3 AC 480 V	✓	ERBS018R800W	ERBS018R800W	ERBS018R01K4	ERBS018R04K5WQN000
18.5	3 AC 480 V	✓	ERBS015R800W	ERBS015R800W	ERBS015R02K4	ERBS015R06K3WQN000
22	3 AC 480 V	✓	ERBS015R800W	ERBS015R800W	ERBS015R02K4	ERBS015R06K3WQN000
30	3 AC 480 V	✓	ERBS075D01K2WQN000	ERBS075D01K2WQN000	ERBS075D04K0WQN000	on request
37	3 AC 480 V	✓	ERBS075D01K2WQN000	ERBS075D01K2WQN000	ERBS075D04K0WQN000	on request
45	3 AC 480 V	✓	ERBS075D01K2WQN000	ERBS075D01K2WQN000	ERBS075D04K0WQN000	on request
55	3 AC 480 V	✓	ERBS005R02K0WQN000	ERBS005R02K0WQN000	on request	on request
75	3 AC 480 V	✓	ERBS005R02K0WQN000	ERBS005R02K0WQN000	on request	on request

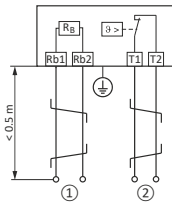
Mains connection 3 x AC 600 V

P _{rated} [kW]	V _{mains} [V]	Drive	Brake resistor			
		i550 protec	Dynamic load	Emergency stop	Passive load	Active load
0.75	3 AC 600 V	✓	ERBS470R150WNQN600	ERBS470R150WNQN600	ERBS470R150WNQN600	ERBS470R150WNQN600
1.5	3 AC 600 V	✓	ERBS180R350WNQN600	ERBS180R350WNQN600	ERBS180R350WNQN600	ERBS180R350WNQN600
2.2	3 AC 600 V	✓	ERBS180R350WNQN600	ERBS180R350WNQN600	ERBS180R350WNQN600	ERBS180R350WNQN600
4	3 AC 600 V	✓	ERBS047R400W	ERBS047R400W	ERBS047R400W	ERBS047R800W
5.5	3 AC 600 V	✓	ERBS047R400W	ERBS047R400W	ERBS047R400W	ERBS047R800W
7.5	3 AC 600 V	✓	ERBS027R600W	ERBS027R600W	ERBS027R01K2	ERBS027R01K4
11	3 AC 600 V	✓	ERBS027R600W	ERBS027R600W	ERBS027R01K2	ERBS027R01K4
15	3 AC 600 V	✓	ERBS018R800W	ERBS018R800W	ERBS018R01K4	ERBS018R04K5WQN000
18.5	3 AC 600 V	✓	ERBS015R800W	ERBS015R800W	ERBS015R02K4	ERBS015R06K3WQN000
22	3 AC 600 V	✓	ERBS015R800W	ERBS015R800W	ERBS015R02K4	ERBS015R06K3WQN000





Electrical installation



Connection diagrams

Short connection cables up to 0.5 m

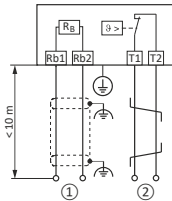
Up to a cable length of 0.5 m, the brake resistor cable and the temperature monitoring cable can be twisted. This procedure reduces problems caused by EMC interference.

Long connection cables up to max. 10 m

The cable of the brake resistor must be shielded

The maximum length is 10 m.

Twisting is sufficient for the temperature monitoring cable.



- ① Wiring to the "brake resistor" connection on the drive or another component with brake chopper.
- ② Wiring to a control contact that is set to monitor the thermal contact. If the thermal contact responds, the voltage supply to the drive must be disconnected (e.g. switch off the control of the mains contactor).

Assembled connection cables

For ERBM and ERBP brake resistors with assembled connection cables, the cables can be extended to max. 10 m. To do this, shorten the pre-assembled connection cables to a maximum length of 10 cm and place them on external clamping units. Lay shielded or twisted cables from there.

Intrinsically safe brake resistors

Temperature monitoring is not required for intrinsically safe brake resistors. If available, the thermal contact can be integrated as an additional early warning system.

Brake switches

Brakes can be triggered via the holding brake control of the drive and the brake switch.

The brake switch provides output voltages of 180 or 205 VDC. It is triggered via a digital output on the drive. Releasing the brake during setup: No cumbersome release by manual release lever, but simply by pushbutton on the drive.



Product overview

	ERZ0051		ERZ0052	
				
Design/mounting	Control cabinet		Control cabinet	
Degree of protection	IP00		IP00	
Mains connection/current range				
1 x AC 230 V	AC 0.1 ... 0.54 A	DC 205 V / 0.54 A	-	
3 x AC 400 V	-		AC 0.1 ... 0.61 A	DC 180 V / 0.61 A
Market approvals				
CE (2014/35/EU)	✓		✓	
UKCA (2016 No. 1101)	✓		✓	
UL (UL506)	✓		✓	
CSA (CSA 22.2)	✓		✓	
RoHS (2011/65/EU)	✓		✓	
RoHS (2012/ No. 3032)	✓		✓	
Ambient conditions				
Vibration resistance during operation	Up to 2 g		Up to 2 g	
Operation (EN 60721-3-3)	3K3 (-10 ... +55 °C)		3K3 (-10 ... +55 °C)	
Storage (EN 60721-3-1)	1K3 (-25 ... +60 °C)		1K3 (-25 ... +60 °C)	
Transport (EN 60721-3-2)	2K3 (-25 ... +70 °C)		2K3 (-25 ... +70 °C)	
Degree of pollution	2		2	
Installation altitude	4000 m amsl		4000 m amsl	
Mounting position	Horizontally hanging		Horizontally hanging	
Functions				
Mounting	Control cabinet		Control cabinet	
Connection	Screw terminal		Screw terminal	

Products

Type	Mains voltage	Output voltage	Rated current		ID
ERZ0051	1 x 230 V	DC 205 V	0.54 A		13679116
ERZ0052	3 x 400 V	DC 180 V	0.61 A		13679117

Project planning

Assignment – drive

Type	Mains voltage	Drive					
		i510 cabinet	i550 cabinet	i510 protec	i550 protec	i750 cabinet	i950 cabinet
ERZ0051	1 x 230 V	✓	✓	✓	✓	✓	✓
ERZ0052	3 x 400 V	✓	✓	✓	✓	✓	✓

Permissible switching rate of holding and application brakes

Brake		DC 205-V coil		DC 180-V coil		Switching rate per minute
	Power	Static braking torque	Rated current	Static braking torque	Rated current	
HBR06	20 W	4 Nm	0.10 A	4 Nm	0.11 A	60
ABR06		2.5, 4 Nm		2.5, 4 Nm		
HBR08	25 W	8 Nm	0.12 A	8 Nm	0.14 A	60
ABR08		3.5, 8 Nm		3.5, 8 Nm		
HBR10	30 W	16, 23 Nm	0.15 A	16, 23 Nm	0.17 A	60
ABR10		16, 23 Nm		16, 23 Nm		
HBR12	40 W	32 Nm	0.20 A	32 Nm	0.22 A	40
ABR12		14, 32, 46 Nm		14, 32, 46 Nm		
HBR14	50 W	60 Nm	0.24 A	60 Nm	0.28 A	30
ABR14		35, 60 Nm		35, 60 Nm		
HBR16	55 W	80 Nm	0.27 A	80 Nm	0.31 A	20
ABR16		60, 80, 100 Nm		60, 80, 100 Nm		
HBR18	85 W	150 Nm	0.41 A	150 Nm	0.47 A	10
ABR18		80, 150, 200 Nm		80, 150, 200 Nm		
ABR20	100 W	260, 315 Nm	0.49 A	260, 315 Nm	0.56 A	8

For further brake data, see the project planning document for three-phase motors.

Mains chokes

A mains choke is an inductance that is connected into the mains cable upstream of the drive. The use in the plant has the following advantages:

- Reduced system perturbation

The waveform of the mains current is smoothed and is thus more sinusoidal
- this saves energy.

- Reduced effective mains current.

In many cases, the use of a mains choke will reduce the cable load and fuse load.

Lenze offers you the optimally matched mains choke for every drive.





Product overview

	ELN1	EZAELN3
		
Design/mounting	Control cabinet	Control cabinet
Degree of protection	IP00	IP00
Mains connection/current range		
1 x AC 230 V	5 ... 18 A	-
3 x AC 400 V	-	1.5 ... 250 A
Market approvals		
CE (2014/35/EU)	✓	✓
UKCA (2016 No. 1101)	✓	✓
UL (UL506)	✓	✓
CSA (CSA 22.2)	✓	✓
RoHS (2011/65/EU)	✓	✓
Ambient conditions		
Vibration resistance during operation	Up to 1 g	Up to 1 g
Operation (EN 60721-3-3)	3K3 (-10 ... +55 °C)	3K3 (-10 ... +55 °C)
Derating	2.5 % / °C above +40 °C	2.5 % / °C above +40 °C
Storage (EN 60721-3-1)	1K3 (-25 ... +60 °C)	1K3 (-25 ... +60 °C)
Transport (EN 60721-3-2)	2K3 (-25 ... +70 °C)	2K3 (-25 ... +70 °C)
Installation altitude	0 ... 4000 m amsl	0 ... 4000 m amsl
Derating	1000 ... 4000 m amsl: Derating 5 % / 1000 m	1000 ... 4000 m amsl: Derating 5 % / 1000 m
Mounting position	horizontally hanging or standing	horizontally hanging or standing
Functions		
Mounting	Wall, base	Wall, base
Connection	Screw terminal	Screw terminal from 90 A with flat copper

Products

Mains connection 1 AC 230 V

Type	L _{rated}	I _{rated}	P _v	V _{mains}	Degree of protection	m	H x W x D			ID
	[mH]	[A]	[W]	[V]		[kg]	[mm]			
ELN1-0900H005	9	5	15	1 AC 230/240 V	IP00	1.1	82 x 66 x 75			13553593
ELN1-0500H009	5	9	25	1 AC 230/240 V	IP00	1.1	82 x 66 x 75			13553611
ELN1-0250H018	2.5	18	50	1 AC 230/240 V	IP00	2.1	90 x 96 x 96			13553732

Mains connection 3 AC 400/480 V

Type	L _{rated}	I _{rated}	P _v	V _{mains}	Degree of protection	m	H x W x D			ID
	[mH]	[A]	[W]	[V]		[kg]	[mm]			
EZAELN3002B203	19.6	1.5	3.8	3 AC 400/480 V	IP00	0.52	56 x 77 x 116			13553734
EZAELN3002B153	14.7	2	5.8	3 AC 400/480 V	IP00	0.53	56 x 77 x 116			13553735
EZAELN3004B742	7.35	4	11.5	3 AC 400/480 V	IP00	1.3	60 x 95 x 116			13553736
EZAELN3006B492	4.9	6	17.3	3 AC 400/480 V	IP00	1.45	69 x 95 x 117			13553737
EZAELN3008B372	3.68	8	23.1	3 AC 400/480 V	IP00	1.9	85 x 120 x 135			13553738
EZAELN3010B292	2.94	10	28.9	3 AC 400/480 V	IP00	2	85 x 120 x 135			13553739
EZAELN3016B182	1.84	16	46.1	3 AC 400/480 V	IP00	2.7	95 x 120 x 135			13553740
EZAELN3020B152	1.47	20	57.6	3 AC 400/480 V	IP00	3.8	95 x 155 x 162			13553741
EZAELN3025B122	1.18	25	72	3 AC 400/480 V	IP00	5.8	110 x 155 x 167			13553752
EZAELN3030B981	0.98	30	86.4	3 AC 400/480 V	IP00	5.85	110 x 155 x 167			13553753
EZAELN3035B841	0.84	35	101	3 AC 400/480 V	IP00	5.95	110 x 155 x 170			13553754
EZAELN3040B741	0.74	40	116	3 AC 400/480 V	IP00	6.8	102 x 185 x 195			13553755
EZAELN3045B651	0.65	45	130	3 AC 400/480 V	IP00	8.25	112 x 185 x 196			13553756
EZAELN3050B591	0.59	50	144	3 AC 400/480 V	IP00	8.35	112 x 185 x 207			13553757
EZAELN3063B471	0.47	63	181	3 AC 400/480 V	IP00	9.65	117 x 185 x 241			13553758
EZAELN3080B371	0.37	80	230	3 AC 400/480 V	IP00	12.5	125 x 210 x 238			13553759
EZAELN3090B331	0.33	90	273	3 AC 400/480 V	IP00	10.95	149 x 267 x 200			13553760
EZAELN3100B301	0.3	100	303	3 AC 400/480 V	IP00	16.3	173 x 267 x 200			13553761
EZAELN3125B241	0.24	125	378	3 AC 400/480 V	IP00	17.1	179 x 291 x 210			13553763
EZAELN3160B191	0.19	160	500	3 AC 400/480 V	IP00	22.1	189 x 291 x 210			13553764
EZAELN3180B171	0.17	180	570	3 AC 400/480 V	IP00	25	164 x 316 x 235			13553765
EZAELN3200B151	0.15	200	605	3 AC 400/480 V	IP00	25	194 x 352 x 260			13553766
EZAELN3250B121	0.12	250	758	3 AC 400/480 V	IP00	31	158 x 352 x 265			13426784

Project planning

Dimensioning conditions

- The mounting location must always ensure the operating conditions mentioned in the technical data; if required, additional measures must be taken.
- The mounting location and material must ensure a durable mechanical connection.
- The installation clearances specified in the technical data must be observed to ensure unobstructed air circulation for dissipating the heat.

Assignment – drive

As a rule, mains chokes are required for drives from 30 kW (i510 cabinet/i550 cabinet) and from 15 kW (i950 cabinet).

- Mains chokes reduce the effects of the drive on the supplying mains by smoothing the harmonics.
- The effective mains current is reduced which saves energy.
- Mains chokes can be used without restrictions in conjunction with RFI filters.

Assignment – drive

Mains connection 1 x AC 120 V

P _{rated}	V _{mains}	Drive						Mains choke
		i510 cabinet		i550 cabinet		i750 cabinet	i950 cabinet	
		Heavy Duty	Light Duty	Heavy Duty	Light Duty			
[kW]	[V]							
0.25	1 AC 120 V	-	-	✓	-	-	-	ELN1-0500H009
0.37	1 AC 120 V	-	-	✓	-	-	-	ELN1-0500H009
0.75	1 AC 120 V	-	-	✓	-	-	-	ELN1-0250H018
1.1	1 AC 120 V	-	-	✓	-	-	-	ELN1-0250H018

Mains connection 1 x AC 230 V

P _{rated}	V _{mains}	Drive						Mains choke
		i510 cabinet		i550 cabinet		i750 cabinet	i950 cabinet	
		Heavy Duty	Light Duty	Heavy Duty	Light Duty			
[kW]	[V]							
0.25	1 AC 230 V	✓	-	✓	-	-	-	ELN1-0900H005
0.37	1 AC 230 V	✓	-	✓	-	-	✓	ELN1-0900H005
0.55	1 AC 230 V	✓	-	✓	-	-	✓	ELN1-0500H009
0.75	1 AC 230 V	✓	-	✓	-	-	✓	ELN1-0500H009
1.1	1 AC 230 V	✓	-	✓	-	-	-	ELN1-0250H018
1.5	1 AC 230 V	✓	-	✓	-	-	✓	ELN1-0250H018
2.2	1 AC 230 V	✓	-	✓	-	-	-	ELN1-0250H018

Mains connection 3 x AC 230 V

P _{rated}	V _{mains}	Drive						Mains choke
		i510 cabinet		i550 cabinet		i750 cabinet	i950 cabinet	
		Heavy Duty	Light Duty	Heavy Duty	Light Duty			
[kW]	[V]							
0.25	3 AC 230 V	✓	-	✓	-	-	-	EZAELN3002B153
0.37	3 AC 230 V	✓	-	✓	-	-	✓	EZAELN3004B742
0.55	3 AC 230 V	✓	-	✓	-	-	✓	EZAELN3004B742
0.75	3 AC 230 V	✓	-	✓	-	-	✓	EZAELN3006B492
1.1	3 AC 230 V	✓	-	✓	-	-	-	EZAELN3006B492
1.5	3 AC 230 V	✓	-	✓	-	-	✓	EZAELN3008B372
2.2	3 AC 230 V	✓	-	✓	-	-	✓	EZAELN3010B292
4	3 AC 230 V	✓	-	✓	-	-	✓	EZAELN3016B182
5.5	3 AC 230 V	-	✓	-	✓	-	-	EZAELN3016B182
5.5	3 AC 230 V	✓	-	✓	-	-	✓	EZAELN3025B122
7.5	3 AC 230 V	-	✓	-	✓	-	-	EZAELN3025B122



Mains connection 3 x AC 400 V

P _{rated}	V _{mains}	Drive						Mains choke
		i510 cabinet		i550 cabinet		i750 cabinet	i950 cabinet	
		Heavy Duty	Light Duty	Heavy Duty	Light Duty			
[kW]	[V]							
0.37	3 AC 400 V	✓	-	✓	-	-	-	EZAELN3002B203
0.55	3 AC 400 V	✓	-	✓	-	-	✓	EZAELN3002B153
0.75	3 AC 400 V	✓	-	✓	-	-	✓	EZAELN3004B742
1.1	3 AC 400 V	✓	-	✓	-	-	-	EZAELN3004B742
1.5	3 AC 400 V	✓	-	✓	-	-	-	EZAELN3004B742
2.2	3 AC 400 V	✓	-	✓	-	-	✓	EZAELN3006B492
3.0	3 AC 400 V	✓	-	✓	-	-	-	EZAELN3008B372
4	3 AC 400 V	✓	✓	✓	✓	-	✓	EZAELN3010B292
5.5	3 AC 400 V	✓	✓	✓	✓	-	-	EZAELN3016B182
7.5	3 AC 400 V	✓	✓	✓	✓	-	✓	EZAELN3016B182
11	3 AC 400 V	✓	✓	✓	✓	-	✓	EZAELN3025B122
15	3 AC 400 V	-	-	-	-	✓	-	EZAELN3025B122
15	3 AC 400 V	-	✓	✓	✓	-	✓	EZAELN3030B981
18.5	3 AC 400 V	-	-	✓	✓	-	-	EZAELN3040B741
22	3 AC 400 V	-	-	✓	✓	-	✓	EZAELN3045B651
30	3 AC 400 V	-	-	-	-	✓	-	EZAELN3050B591
30	3 AC 400 V	-	-	✓	✓	-	✓	EZAELN3063B471
37	3 AC 400 V	-	-	✓	✓	-	-	EZAELN3080B371
45	3 AC 400 V	-	-	-	✓	-	-	EZAELN3090B331
45	3 AC 400 V	-	-	✓	-	-	✓	EZAELN3080B371
55	3 AC 400 V	-	-	✓	✓	-	✓	EZAELN3100B301
75	3 AC 400 V	-	-	-	✓	-	-	EZAELN3125B241
75	3 AC 400 V	-	-	✓	-	-	✓	EZAELN3160B191
90	3 AC 400 V	-	-	✓	✓	-	✓	EZAELN3180B171
110	3 AC 400 V	-	-	✓	✓	-	✓	EZAELN3200B151
132	3 AC 400 V	-	-	-	✓	-	-	EZAELN3250B121

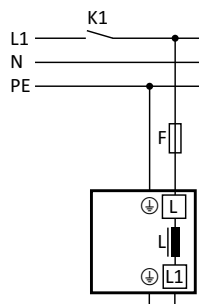
Mains connection 3 x AC 480 V

P _{rated}	V _{mains}	Drive						Mains choke
		i510 cabinet		i550 cabinet		i750 cabinet	i950 cabinet	
		Heavy Duty	Light Duty	Heavy Duty	Light Duty			
[kW]	[V]							
0.37	3 AC 480 V	✓	-	✓	-	-	-	EZAELN3002B203
0.55	3 AC 480 V	✓	-	✓	-	-	✓	EZAELN3002B153
0.75	3 AC 480 V	✓	-	✓	-	-	✓	EZAELN3004B742
1.1	3 AC 480 V	✓	-	✓	-	-	-	EZAELN3004B742
1.5	3 AC 480 V	✓	-	✓	-	-	-	EZAELN3004B742
2.2	3 AC 480 V	✓	-	✓	-	-	✓	EZAELN3006B492
3.0	3 AC 480 V	✓	-	✓	-	-	-	EZAELN3006B492
4	3 AC 480 V	✓	✓	✓	✓	-	✓	EZAELN3008B372
5.5	3 AC 480 V	-	✓	-	✓	-	-	EZAELN3010B292
5.5	3 AC 480 V	✓	-	✓	-	-	-	EZAELN3016B182
7.5	3 AC 480 V	✓	✓	✓	✓	-	✓	EZAELN3016B182
11	3 AC 480 V	✓	✓	✓	✓	-	✓	EZAELN3020B152
15	3 AC 480 V	-	✓	✓	✓	-	-	EZAELN3025B122
18.5	3 AC 480 V	-	-	-	-	✓	-	EZAELN3025B122
18.5	3 AC 480 V	-	-	✓	✓	-	✓	EZAELN3030B981
22	3 AC 480 V	-	-	✓	✓	-	✓	EZAELN3040B741
30	3 AC 480 V	-	-	✓	✓	-	✓	EZAELN3050B591
37	3 AC 480 V	-	-	-	-	✓	-	EZAELN3050B591
37	3 AC 480 V	-	-	✓	✓	-	-	EZAELN3063B471
45	3 AC 480 V	-	-	✓	✓	-	✓	EZAELN3080B371
55	3 AC 480 V	-	-	✓	✓	-	✓	EZAELN3090B331
75	3 AC 480 V	-	-	✓	✓	-	✓	EZAELN3125B241
90	3 AC 480 V	-	-	✓	✓	-	✓	EZAELN3160B191
110	3 AC 480 V	-	-	✓	✓	-	✓	EZAELN3180B171
132	3 AC 480 V	-	-	-	✓	-	-	EZAELN3200B151





Electrical installation



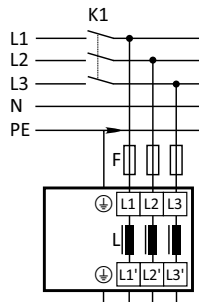
Connection diagrams

1-phase mains choke

The mains choke is connected to the mains phase directly upstream of the drive.

3-phase mains choke

The mains choke is connected to the three mains phases directly upstream of the drive.



RFI and mains filters

RFI and mains filters are used to comply with EMC requirements in accordance with European standard EN 61800-3. This standard defines the EMC requirements for electrical drive systems in various categories.

- Category C1 is applicable in public networks (residential areas).
- Category C2 is applicable in public networks (residential and commercial areas) at the discretion of the competent, responsible user.
- Category C3 is applicable in industrial networks.
- A choke is also integrated into the mains filter.



Product overview

	IOFAE	E94AZ
		
Design/mounting	Control cabinet	Control cabinet
Degree of protection	IP20	IP20
Mains connection/current range		
1 x AC 230 V	6 ... 22.5 A	-
1 x AC 400 V	3.3 ... 234 A	8 ... 200 A
Market approvals		
CE (2011/65/EU)	✓	✓
UKCA (2016 No. 1101)	✓	✓
UL (UL508)	✓	✓
CSA (CSA 22.2)	✓	✓
RoHS (2011/65/EU)	✓	✓
Ambient conditions		
Vibration resistance during operation	Up to 1 g	Up to 1 g
Operation (EN 60721-3-3)	3K3 (-10 ... +55 °C)	3K3 (-10 ... +55 °C)
Derating	2.5 % / °C above +40 °C	2.5 % / °C above +40 °C
Storage (EN 60721-3-1)	1K3 (-25 ... +60 °C)	1K3 (-25 ... +60 °C)
Transport (EN 60721-3-2)	2K3 (-25 ... +70 °C)	2K3 (-25 ... +70 °C)
Installation altitude	0 ... 4000 m amsl	0 ... 4000 m amsl
Derating	1000 ... 4000 m amsl: Derating 5 % / 1000 m	1000 ... 4000 m amsl: Derating 5 % / 1000 m
Mounting position	Under or next to the drive	next to the drive
Functions		
Mounting	Wall, base	Wall, base
Connection	Screw terminal	Screw terminal

Products

RFI and mains filters IOFAE

Mains connection 1 x AC 230/240 V, Short Distance

Type	I _{rated}	P _v	V _{mains}	Degree of protection	m	H x W x D			ID
	[A]	[W]	[V]		[kg]	[mm]			
IOFAE175B100S0000S	10	5.4	1 AC 230/240 V	IP20	0.77	276 x 60 x 50			13517324
IOFAE222B100S0000S	22.5	9.4	1 AC 230/240 V	IP20	12	346 x 60 x 50			13517329

Mains connection 1 x AC 230/240 V, Long Distance

Type	I _{rated}	P _v	V _{mains}	Degree of protection	m	H x W x D			ID
	[A]	[W]	[V]		[kg]	[mm]			
IOFAE175B100D0000S	10	5.4	1 AC 230/240 V	IP20	0.82	276 x 60 x 50			13517322
IOFAE222B100D0000S	22.5	9.4	1 AC 230/240 V	IP20	19	346 x 60 x 50			13517327

Mains connection 1 x AC 230/240 V, Low Leakage

Type	I _{rated}	P _v	V _{mains}	Degree of protection	m	H x W x D			ID
	[A]	[W]	[V]		[kg]	[mm]			
IOFAE137B100L0000S	6	5.7	1 AC 230/240 V	IP20	0.85	226 x 60 x 50			13540532
IOFAE175B100L0000S	10	9.9	1 AC 230/240 V	IP20	1	276 x 60 x 50			13517323
IOFAE222B100L0000S	22.5	25	1 AC 230/240 V	IP20	1.35	346 x 60 x 50			13517328

Mains connection 3 x AC 400/480 V, Short Distance

Type	I _{rated}	P _v	V _{mains}	Degree of protection	m	H x W x D			ID
	[A]	[W]	[V]		[kg]	[mm]			
IOFAE175F100S0000S	3.3	2.8	3 AC 400/480 V	IP20	0.82	276 x 60 x 50			13517326
IOFAE222F100S0000S	7.8	5.8	3 AC 400/480 V	IP20	11	346 x 60 x 50			13517331
IOFAE240F100S0001S	14	13.8	3 AC 400/480 V	IP20	1.42	346 x 60 x 50			13619205
IOFAE255F100S0001S	18.3	20	3 AC 400/480 V	IP20	2.05	346 x 90 x 60			13545501
IOFAE311F100S0000S	29	29	3 AC 400/480 V	IP20	2.35	371 x 120 x 60			13517335
IOFAE318F100S0001S	43	58	3 AC 400/480 V	IP20	9.4	465 x 180 x 106			13626454
IOFAE330F100S0001S	69	81.4	3 AC 400/480 V	IP20	9.4	465 x 180 x 106			13626455

Mains connection 3 x AC 400/480 V, Long Distance

Type	I _{rated}	P _v	V _{mains}	Degree of protection	m	H x W x D			ID
	[A]	[W]	[V]		[kg]	[mm]			
IOFAE175F100D0000S	3.3	2.8	3 AC 400/480 V	IP20	0.86	276 x 60 x 50			13517325
IOFAE222F100D0000S	7.8	5.8	3 AC 400/480 V	IP20	13	346 x 60 x 50			13517330
IOFAE240F100D0000S	12.5		3 AC 400/480 V	IP20	1.25	346 x 60 x 50			13540504
IOFAE240F100D0001S	14	13.8	3 AC 400/480 V	IP20	1.42	346 x 60 x 50			13619206
IOFAE255F100D0001S	18.3	13.6	3 AC 400/480 V	IP20	1.65	346 x 90 x 60			13545500
IOFAE311F100D0000S	29	21.9	3 AC 400/480 V	IP20	2.05	371 x 120 x 60			13517334
IOFAE318F100D0000S	50.4	32	3 AC 400/480 V	IP20	7.1	436 x 202 x 90			13550326
IOFAE322F100D0000S	43	57	3 AC 400/480 V	IP20	14	436 x 205 x 90			13543998
IOFAE322F100D0001S	55	80	3 AC 400/480 V	IP20	18.5	436 x 202 x 90			13543999
IOFAE330F100D0000S	55	85	3 AC 400/480 V	IP20	23	590 x 250 x 105			13550327
IOFAE330F100D0001S	69	32.7	3 AC 400/480 V	IP20	9.4	465 x 180 x 106			13619207
IOFAE337F100D0000S	69	89	3 AC 400/480 V	IP20	25	590 x 250 x 105			13544000
IOFAE345F100D0001S	100	125	3 AC 400/480 V	IP20	32	590 x 250 x 105			13544001
IOFAE355F100D0001S	120	147	3 AC 400/480 V	IP20	36	700 x 250 x 105			13540505
IOFAE375F100D0001S	162	245	3 AC 400/480 V	IP20	41.5	700 x 250 x 105			13540508
IOFAE411F100D0001S	234	350	3 AC 400/480 V	IP20	63	855 x 250 x 130			13540511



RFI and mains filters E94AZ

Mains connection 3 x AC 400 V

Type	I _{rated}	P _v	V _{mains}	Degree of protection	m	H x W x D			ID
	[A]	[W]	[V]		[kg]	[mm]			
E94AZRP0084	8	20	3 AC 400/500 V	IP20	4.2	485 x 60 x 261			13439275
E94AZRP0294	29	50	3 AC 400/500 V	IP20	4.5	485 x 60 x 261			13430919
E94AZRP0824	82	80	3 AC 400/500 V	IP20	18.5	490 x 209 x 272			13430920
E94AZRP2004	200	150	3 AC 400/500 V	IP20	29	490 x 209 x 272			13279797
E94AZMP0084	8	50	3 AC 400/500 V	IP20	8.6	485 x 90 x 261			13219375
E94AZMP0294	29	110	3 AC 400/500 V	IP20	16	485 x 120 x 261			13430921
E94AZMP0494	49	86	3 AC 400/500 V	IP20	25.5	485 x 150 x 264			13551351
E94AZMP0824	82	200	3 AC 400/500 V	IP20	29	490 x 270 x 272			13430982
E94AZMP2004	200	350	3 AC 400/500 V	IP20	51.5	490 x 270 x 272			13279795

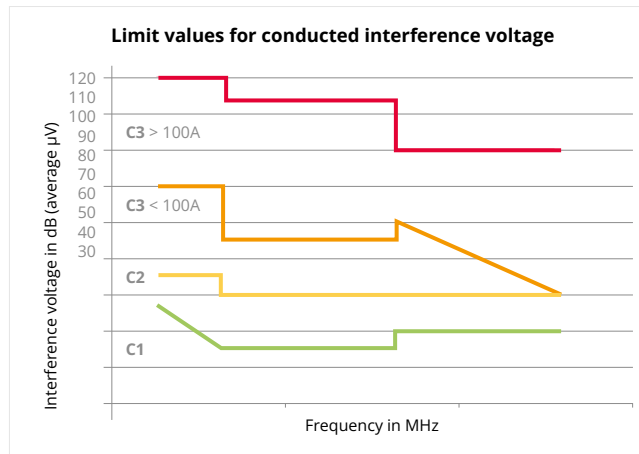




Project planning

Dimensioning conditions

- RFI and mains filters are used to ensure compliance with the EMC requirements of European Standard EN 61800-3. The requirements are distinguished in the following categories:
 - Category C1: Residential areas, very low interference voltage permitted.
 - Category C2: Residential and commercial areas, higher interference voltages permitted.
 - Category C3: Only industrial network, higher interference voltage permitted than for C1, C2



Assignment – drive

Permanently assigned filters for categories C1 and C2 can be connected directly to the drive as "sub-mounted" filters. This results in a compact unit in the machine. There are three different filters that can be connected upstream of the drive:

- Filter Short Distance
 - Applicable for category C1 up to 25 m and C2 up to 50 m
 - Operation on 30 mA residual current device (RCD) possible
- Filter Long Distance
 - Applicable for category C1 up to 50 m and C2 up to 100 m
 - Operation on 300-mA residual current device (RCD) possible
- Filter Low Leakage
 - Applicable for category C1 up to 5 m
 - Operation on 10-mA residual current device (RCD) is possible

Assignment – drive

Mains connection 1 x AC 230 V

P _{rated}	V _{mains}	Drive				RFI filter		
		i510 cabinet i550 cabinet		i750 cab- inet	i950 cab- inet	Short Distance	Long Distance	Low Leakage
		Light Duty	Heavy Duty					
[kW]	[V]							
0.25	1 AC 230 V	-	✓	-	-	I0FAE175B100S0000S	I0FAE175B100D0000S	I0FAE137B100L0000S
0.37	1 AC 230 V	-	✓	-	-	I0FAE175B100S0000S	I0FAE175B100D0000S	I0FAE137B100L0000S
0.55	1 AC 230 V	-	✓	-	-	I0FAE175B100S0000S	I0FAE175B100D0000S	I0FAE175B100L0000S
0.75	1 AC 230 V	-	✓	-	-	I0FAE175B100S0000S	I0FAE175B100D0000S	I0FAE175B100L0000S
1.1	1 AC 230 V	-	✓	-	-	I0FAE222B100S0000S	I0FAE222B100D0000S	I0FAE222B100L0000S
1.5	1 AC 230 V	-	✓	-	-	I0FAE222B100S0000S	I0FAE222B100D0000S	I0FAE222B100L0000S
2.2	1 AC 230 V	-	✓	-	-	I0FAE222B100S0000S	I0FAE222B100D0000S	I0FAE222B100L0000S

Mains connection 3 x AC 400 V

P _{rated}	V _{mains}	Drive				RFI filter		
		i510 cabinet i550 cabinet		i750 cab- inet	i950 cab- inet	Short Distance	Long Distance	Low Leakage
		Light Duty	Heavy Duty					
[kW]	[V]							
0.37	3 AC 400 V	✓	-	-	-	I0FAE175F100S0000S	I0FAE175F100D0000S	-
0.55	3 AC 400 V	✓	-	-	-	I0FAE175F100S0000S	I0FAE175F100D0000S	-
0.55	3 AC 400 V	-	-	-	✓	I0FAE222F100S0000S	I0FAE222F100D0000S	-
0.75	3 AC 400 V	✓	-	-	-	I0FAE175F100S0000S	I0FAE175F100D0000S	-
0.75	3 AC 400 V	-	-	-	✓	I0FAE222F100S0000S	I0FAE222F100D0000S	-
1.1	3 AC 400 V	✓	-	-	-	I0FAE222F100S0000S	I0FAE222F100D0000S	-
1.5	3 AC 400 V	✓	-	-	-	I0FAE222F100S0000S	I0FAE222F100D0000S	-
2.2	3 AC 400 V	✓	-	-	✓	I0FAE222F100S0000S	I0FAE222F100D0000S	-
3.0	3 AC 400 V	✓	-	-	-	I0FAE240F100S0001S	I0FAE240F100D0001S	-
4	3 AC 400 V	✓	✓	-	✓	I0FAE240F100S0001S	I0FAE240F100D0001S	-
5.5	3 AC 400 V	-	✓	-	-	I0FAE240F100D0001S	I0FAE240F100D0001S	-
5.5	3 AC 400 V	✓	-	-	-	I0FAE255F100S0001S	I0FAE255F100D0001S	-
7.5	3 AC 400 V	-	✓	-	-	I0FAE255F100S0001S	I0FAE255F100D0001S	-
7.5	3 AC 400 V	✓	-	-	✓	I0FAE311F100S0000S	I0FAE311F100D0000S	-
11	3 AC 400 V	✓	✓	-	✓	I0FAE311F100S0000S	I0FAE311F100D0000S	-
15	3 AC 400 V	-	✓	-	✓	I0FAE311F100S0000S EZAELN3030B981	I0FAE311F100D0000S EZAELN3030B981	-
15	3 AC 400 V	✓	-	-	-	I0FAE318F100S0001S	I0FAE330F100D0001S	-
18.5	3 AC 400 V	✓	✓	-	-	I0FAE318F100S0001S	I0FAE330F100D0001S	-
22	3 AC 400 V	-	✓	-	-	I0FAE318F100S0001S	I0FAE330F100D0001S	-
22	3 AC 400 V	✓	-	-	-	I0FAE330F100S0001S	I0FAE330F100D0001S	-
22	3 AC 400 V	-	-	-	✓	-	I0FAE322F100D0000S	-
30	3 AC 400 V	-	✓	-	-	I0FAE330F100S0001S	I0FAE330F100D0001S	-
30	3 AC 400 V	✓	-	-	-	I0FAE330F100S0001S	I0FAE330F100D0001S EZAELN3063B471	-
30	3 AC 400 V	-	-	-	✓	-	I0FAE330F100D0000S	-
37	3 AC 400 V	-	✓	-	-	-	I0FAE330F100D0001S EZAELN3080B371	-
37	3 AC 400 V	✓	-	-	-	-	I0FAE337F100D0000S	-
45	3 AC 400 V	✓	✓	-	✓	-	I0FAE345F100D0001S	-
55	3 AC 400 V	-	✓	-	-	-	I0FAE345F100D0001S	-
55	3 AC 400 V	✓	-	-	✓	-	I0FAE355F100D0001S	-
75	3 AC 400 V	-	✓	-	-	-	I0FAE355F100D0001S	-
75	3 AC 400 V	✓	-	-	✓	-	I0FAE375F100D0001S	-
90	3 AC 400 V	-	✓	-	-	-	I0FAE375F100D0001S	-
90	3 AC 400 V	✓	-	-	✓	-	I0FAE411F100D0001S	-
110	3 AC 400 V	✓	✓	-	✓	-	I0FAE411F100D0001S	-
132	3 AC 400 V	-	✓	-	-	-	I0FAE411F100D0001S	-



Mains connection 3 x AC 400 V

$I_{N\ DC}$	P_{DC}	V_{mains}	Drive				RFI filter	Mains filter
			i510 cabinet i550 cabinet		i750 cabinet	i950 cabinet		
			Light Duty	Heavy Duty				
[A]	[kW]	[V]						
30	3.4	3 AC 400 V	-	-	✓	-	E94AZRP0084	-
30	5.1	3 AC 400 V	-	-	✓	-	-	E94AZMP0084
30	10.3	3 AC 400 V	-	-	✓	-	E94AZRP0294	-
30	15.4	3 AC 400 V	-	-	✓	-	-	E94AZMP0294
60	20.6	3 AC 400 V	-	-	✓	-	E94AZRP0824	-
60	30.9	3 AC 400 V	-	-	✓	-	-	E94AZMP0494

These filters are suitable for the i700 cabinet power supply modules.

Mains connection 3 x AC 480 V

P _{rated}	V _{mains}	Drive				RFI filter		
		i510 cabinet i550 cabinet		i750 cabinet	i950 cabinet	Short Distance	Long Distance	Low Leakage
		Light Duty	Heavy Duty					
[kW]	[V]							
0.37	3 AC 480 V	✓	-	-	-	I0FAE175F100S0000S	I0FAE175F100D0000S	-
0.55	3 AC 480 V	✓	-	-	-	I0FAE175F100S0000S	I0FAE175F100D0000S	-
0.55	3 AC 480 V	-	-	-	✓	I0FAE222F100S0000S	I0FAE222F100D0000S	-
0.75	3 AC 480 V	✓	-	-	-	I0FAE175F100S0000S	I0FAE175F100D0000S	-
0.75	3 AC 480 V	-	-	-	✓	I0FAE222F100S0000S	I0FAE222F100D0000S	-
1.1	3 AC 480 V	✓	-	-	-	I0FAE222F100S0000S	I0FAE222F100D0000S	-
1.5	3 AC 480 V	✓	-	-	-	I0FAE222F100S0000S	I0FAE222F100D0000S	-
2.2	3 AC 480 V	✓	-	-	✓	I0FAE222F100S0000S	I0FAE222F100D0000S	-
3.0	3 AC 480 V	✓	-	-	-	I0FAE240F100S0001S	I0FAE240F100D0001S	-
4	3 AC 480 V	✓	✓	-	✓	I0FAE240F100S0001S	I0FAE240F100D0001S	-
5.5	3 AC 480 V	-	✓	-	-	I0FAE240F100D0001S	I0FAE240F100D0001S	-
5.5	3 AC 480 V	✓	-	-	-	I0FAE255F100S0001S	I0FAE255F100D0001S	-
7.5	3 AC 480 V	-	✓	-	-	I0FAE255F100S0001S	I0FAE255F100D0001S	-
7.5	3 AC 480 V	✓		-	✓	I0FAE311F100S0000S	I0FAE311F100D0000S	-
11	3 AC 480 V	✓	✓	-	✓	I0FAE311F100S0000S	I0FAE311F100D0000S	-
15	3 AC 480 V	-	✓	-	✓	I0FAE311F100S0000S EZAELN3025B122	I0FAE311F100D0000S EZAELN3025B122	-
15	3 AC 480 V	✓	-	-	-	I0FAE318F100S0001S	I0FAE330F100D0001S	-
18.5	3 AC 480 V	✓	✓	-	-	I0FAE318F100S0001S	I0FAE330F100D0001S	-
22	3 AC 480 V	-	✓	-	-	I0FAE318F100S0001S	I0FAE330F100D0001S	-
22	3 AC 480 V	✓	-	-	-	I0FAE330F100S0001S	I0FAE330F100D0001S	-
22	3 AC 480 V	-	-	-	✓	-	I0FAE322F100D0000S	-
30	3 AC 480 V	-	✓	-	-	I0FAE330F100S0001S	I0FAE330F100D0001S	-
30	3 AC 480 V	✓	-	-	-	I0FAE330F100S0001S	I0FAE330F100D0001S EZAELN3050B591	-
30	3 AC 480 V	-	-	-	✓	-	I0FAE330F100D0000S	-
37	3 AC 480 V	-	✓	-	-	-	I0FAE330F100D0001S EZAELN3063B471	-
37	3 AC 480 V	✓	-	-	-	-	I0FAE337F100D0000S	-
45	3 AC 480 V	✓	✓	-	✓	-	I0FAE345F100D0001S	-
55	3 AC 480 V	-	✓	-	-	-	I0FAE345F100D0001S	-
55	3 AC 480 V	✓	-	-	✓	-	I0FAE355F100D0001S	-
75	3 AC 480 V	-	✓	-	-	-	I0FAE355F100D0001S	-
75	3 AC 480 V	✓	-	-	✓	-	I0FAE375F100D0001S	-
90	3 AC 480 V	-	✓	-	-	-	I0FAE375F100D0001S	-
90	3 AC 480 V	✓	-	-	✓	-	I0FAE411F100D0001S	-
110	3 AC 480 V	✓	✓	-	✓	-	I0FAE411F100D0001S	-
132	3 AC 480 V	-	✓	-	-	-	I0FAE411F100D0001S	-

Mains connection 3 x AC 480 V

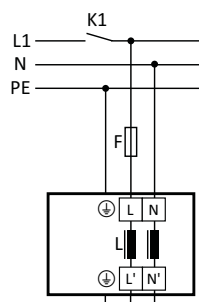
I _{N DC}	P _{DC}	V _{mains}	Drive				RFI filter	Mains filter
			i510 cabinet 550 cabinet		i750 cabinet	i950 cabinet		
			Light Duty	Heavy Duty				
[A]	[kW]	[V]						
30	4.1	3 AC 480 V	-	-	✓	-	E94AZRP0084	-
30	6.2	3 AC 480 V	-	-	✓	-	-	E94AZMP0084
30	12.3	3 AC 480 V	-	-	✓	-	E94AZRP0294	-
30	18.5	3 AC 480 V	-	-	✓	-	-	E94AZMP0294
60	24.7	3 AC 480 V	-	-	✓	-	E94AZRP0824	-
60	37	3 AC 480 V	-	-	✓	-	-	E94AZMP0494

These filters are suitable for the i700 cabinet power supply modules.





Electrical installation



Connection diagrams

1-phase RFI and mains filter

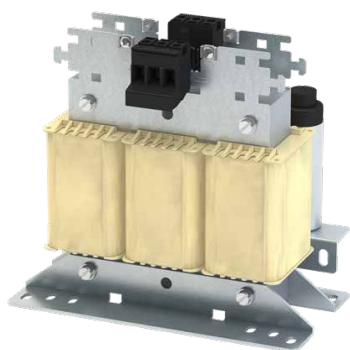
The filter is connected directly upstream of the drive in the mains phase and the neutral conductor.

3-phase RFI and mains filter

The filter is connected directly upstream of the drive in the three mains phases.

Sine filters

A sine filter in the motor cable limits the rate of rise of the voltage ($du/dt < 500 \text{ V/s}$) and the capacitive recharging currents that occur during drive operation. This allows for significantly longer motor cables and increases the service life of the motor.





Product overview

EZS3	
	
Design/mounting	Control cabinet
Degree of protection	IP00 ... IP20
Connection/current range	
3 x AC 400 V	4 ... 480 A
Market approvals	
CE (2011/65/EU)	✓
UKCA (2016 No. 1101)	✓
UL (UL508)	✓
CSA (CSA 22.2)	✓
RoHS (2011/65/EU)	✓
Environmental conditions	
Vibration resistance during operation	Up to 1 g
Operation (EN 60721-3-3)	3K3 (-10 ... +55 °C)
Derating	2.5 % / °C above +40 °C
Storage (EN 60721-3-1)	1K3 (-25 ... +60 °C)
Transport (EN 60721-3-2)	2K3 (-25 ... +70 °C)
Installation altitude	0 ... 4000 m amsl
Derating	1000 ... 4000 m amsl: Derating 5 % / 1000 m
Mounting position	Under or next to the drive
Functions	
Mounting	Wall, base
Connection	Screw terminal

Products

EZS3 sine filter

Connection 3 x AC 400/480 V

Type	I _{rated}	P _v	U _{Motor}	Degree of protection	m	H x W x D			ID
	[A]	[W]	[V]		[kg]	[mm]			
EZS3-004A200	4	50	3 AC 0 ... 480 V	IP00	4	111 x 178 x 171			13013035
EZS3-010A200	10	80	3 AC 0 ... 480 V	IP00	5.5	126 x 178 x 171			13013036
EZS3-017A200	16.5	130	3 AC 0 ... 480 V	IP00	8.5	162 x 219 x 198			13013037
EZS3-024A200	23.5	160	3 AC 0 ... 480 V	IP20	14.5	190 x 275 x 280			13013038
EZS3-032A200	32	180	3 AC 0 ... 480 V	IP20	19	200 x 275 x 280			13046683
EZS3-037A200	37	190	3 AC 0 ... 480 V	IP20	21	210 x 275 x 280			13046684
EZS3-048A200	48	200	3 AC 0 ... 480 V	IP20	25.5	245 x 275 x 290			13046685
EZS3-061A200	61	230	3 AC 0 ... 480 V	IP20	33.5	240 x 340 x 315			13046686
EZS3-072A200	72	260	3 AC 0 ... 480 V	IP20	37	265 x 340 x 325			13046687
EZS3-090A200	90	300	3 AC 0 ... 480 V	IP20	53	292 x 340 x 325			13046688
EZS3-115A200	115	360	3 AC 0 ... 480 V	IP20	66	235 x 420 x 444			13046689
EZS3-150A200	150	400	3 AC 0 ... 480 V	IP20	69	235 x 420 x 444			13046690
EZS3-180A200	180	580	3 AC 0 ... 480 V	IP00	97	324 x 600 x 270			13125032
EZS3-250A200	250	810	3 AC 0 ... 480 V	IP00	152	373 x 665 x 330			13125033
EZS3-350A200	350	1100	3 AC 0 ... 480 V	IP00	172	431 x 730 x 320			13130167
EZS3-480A200	480	1550	3 AC 0 ... 480 V	IP00	244	426 x 730 x 370			13125034

Project planning

Dimensioning conditions

Sine filters ensure safe operation for motor cables > 50 m.

The following conditions must be observed:

- Only use sine filters in conjunction with three-phase asynchronous motors 0 ... 480 V.
- Permissible operating conditions:
 - With V/f characteristic control motor control mode.
 - Rated current ≤ 90 A: Switching frequency 4 kHz
 - Rated current > 90 A: Switching frequency 2 kHz or 4 kHz
- The sine filter overheats when operated at a switching frequency < 2 kHz.
- Ensure that the automatic switching frequency reduction is deactivated (see documentation for the basic device).



Assignment – drive

Mains connection 3 x AC 400 V

P _{rated}	V _{mains}	Drive				Sine filter
		i510 cabinet		i550 cabinet		
		Heavy Duty	Light Duty	Heavy Duty	Light Duty	
[kW]	[V]					
0.37	3 AC 400 V	✓	-	✓	-	EZS3-004A200
0.55	3 AC 400 V	✓	-	✓	-	EZS3-004A200
0.75	3 AC 400 V	✓	-	✓	-	EZS3-004A200
1.1	3 AC 400 V	✓	-	✓	-	EZS3-004A200
1.5	3 AC 400 V	✓	-	✓	-	EZS3-004A200
2.2	3 AC 400 V	✓	-	✓	-	EZS3-010A200
3.0	3 AC 400 V	✓	-	✓	-	EZS3-010A200
4.0	3 AC 400 V	✓	-	✓	-	EZS3-010A200
4.0	3 AC 400 V	-	✓	-	✓	EZS3-010A200
5.5	3 AC 400 V	✓	-	✓	-	EZS3-017A200
5.5	3 AC 400 V	-	✓	-	✓	EZS3-017A200
7.5	3 AC 400 V	✓	-	✓	-	EZS3-017A200
7.5	3 AC 400 V	-	✓	-	✓	EZS3-017A200
11	3 AC 400 V	✓	-	✓	-	EZS3-024A200
11	3 AC 400 V	-	✓	-	✓	EZS3-024A200
15	3 AC 400 V	-	✓	✓	✓	EZS3-032A200
18	3 AC 400 V	-	-	✓	✓	EZS3-048A200
22	3 AC 400 V	-	-	✓	✓	EZS3-048A200
30	3 AC 400 V	-	-	✓	✓	EZS3-061A200
37	3 AC 400 V	-	-	✓	✓	EZS3-090A200
45	3 AC 400 V	-	-	✓	-	EZS3-090A200
45	3 AC 400 V	-	-	-	✓	EZS3-115A200
55	3 AC 400 V	-	-	✓	✓	EZS3-115A200
75	3 AC 400 V	-	-	✓	✓	EZS3-150A200
90	3 AC 400 V	-	-	✓	✓	EZS3-180A200
110	3 AC 400 V	-	-	✓	✓	EZS3-250A200
132	3 AC 400 V	-	-	-	✓	EZS3-350A200

Mains connection 3 x AC 480 V

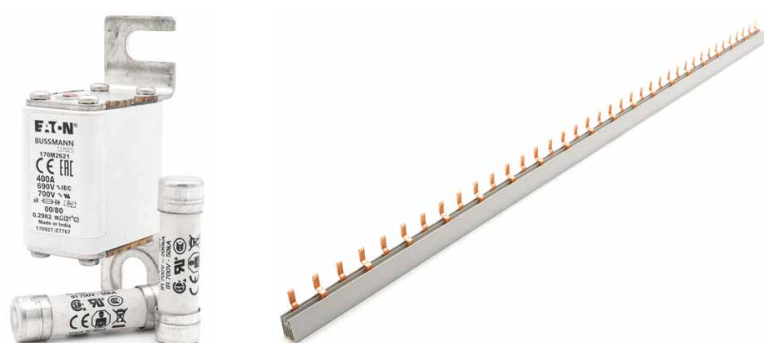
P _{rated}	V _{mains}	Drive				Sine filter
		i510 cabinet		i550 cabinet		
		Heavy Duty	Light Duty	Heavy Duty	Light Duty	
[kW]	[V]					
0.37	3 AC 480 V	✓	-	✓	-	EZS3-004A200
0.55	3 AC 480 V	✓	-	✓	-	EZS3-004A200
0.75	3 AC 480 V	✓	-	✓	-	EZS3-004A200
1.1	3 AC 480 V	✓	-	✓	-	EZS3-004A200
1.5	3 AC 480 V	✓	-	✓	-	EZS3-004A200
2.2	3 AC 480 V	✓	-	✓	-	EZS3-010A200
3.0	3 AC 480 V	✓	-	✓	-	EZS3-010A200
4.0	3 AC 480 V	✓	-	✓	-	EZS3-010A200
4.0	3 AC 480 V	-	✓	-	✓	EZS3-010A200
5.5	3 AC 480 V	✓	-	✓	-	EZS3-017A200
5.5	3 AC 480 V	-	✓	-	✓	EZS3-010A200
7.5	3 AC 480 V	✓	✓	✓	✓	EZS3-017A200
11	3 AC 480 V	✓	✓	✓	✓	EZS3-024A200
15	3 AC 480 V	-	✓	✓	✓	EZS3-032A200
18	3 AC 480 V	-	-	✓	✓	EZS3-037A200
22	3 AC 480 V	-	-	✓	✓	EZS3-048A200
30	3 AC 480 V	-	-	✓	✓	EZS3-061A200
37	3 AC 480 V	-	-	✓	✓	EZS3-072A200
45	3 AC 480 V	-	-	✓	✓	EZS3-090A200
55	3 AC 480 V	-	-	✓	✓	EZS3-115A200
75	3 AC 480 V	-	-	✓	-	EZS3-150A200
75	3 AC 480 V	-	-	-	✓	EZS3-115A200
90	3 AC 480 V	-	-	✓	-	EZS3-180A200
90	3 AC 480 V	-	-	-	✓	EZS3-150A200
110	3 AC 480 V	-	-	✓	-	EZS3-180A200
110	3 AC 480 V	-	-	-	✓	EZS3-250A200
132	3 AC 480 V	-	-	-	✓	EZS3-250A200

Electrical protection devices and busbars

These electrical protection devices can be used for fusing in the mains connection or in the DC-bus connection of the drives.

In the drive's mains connection, these protective devices can be connected upstream of the drive in accordance with the connection diagram.

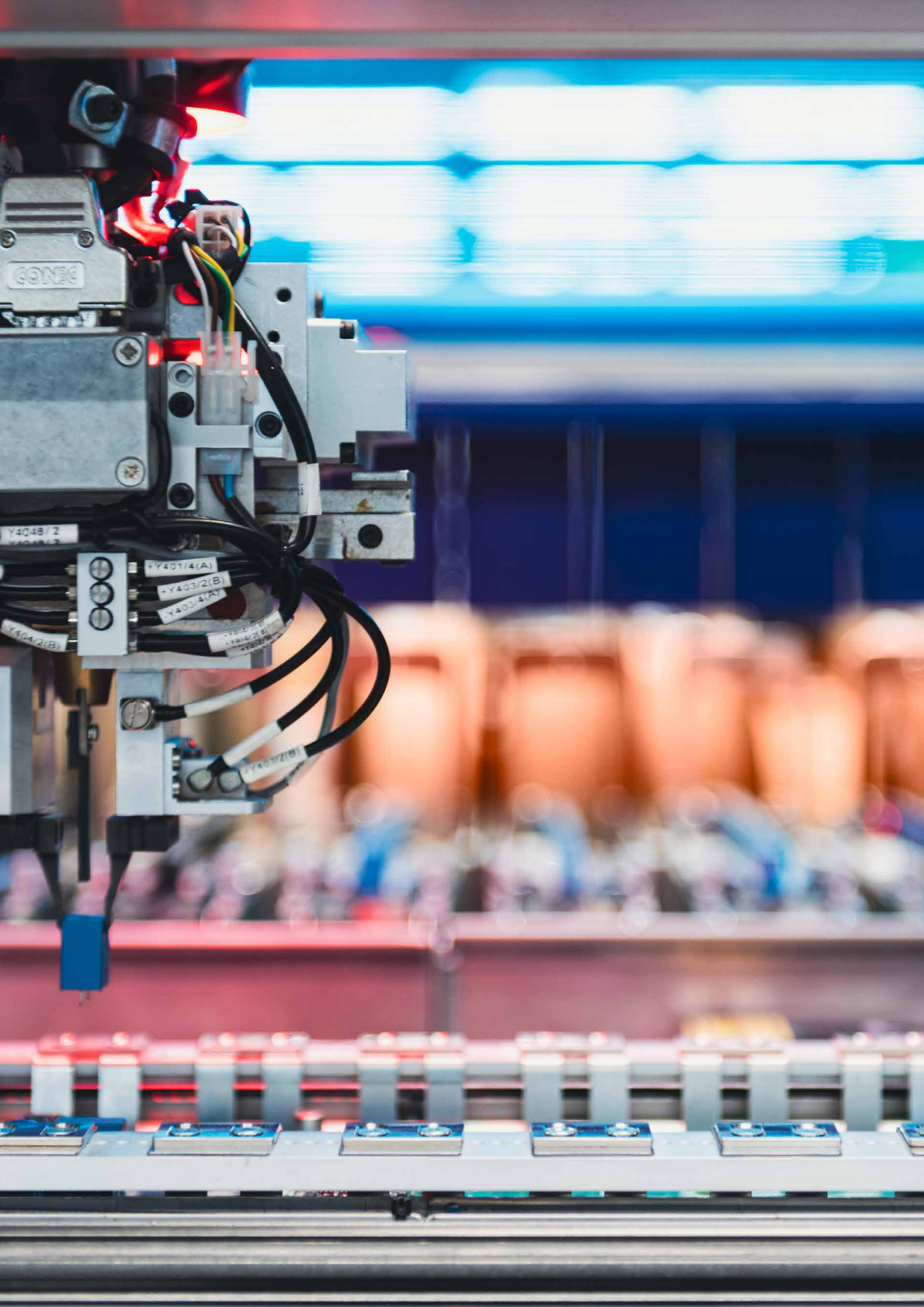
If the drives are operated in a DC-bus connection, a DC network can be set up with these protective devices and the associated busbars. The 400 V drives have a direct DC connection for this purpose.





Product overview

	DC fuses	Fuse holders	Busbars
			
Design/mounting	Control cabinet	Control cabinet	Control cabinet
Size/current range			
14 x 51	5 ... 50 A	2-pole	100 A
22 x 58	20 ... 100 A	2-pole	100 A
NH000	10 ... 315 A	1-pole	-
Market approvals			
CE (2011/65/EU)	✓	✓	✓
UKCA (2016 No. 1101)	✓	✓	✓
UL (UL248-13:2000)	✓	✓	-
CSA (UL/CSA/ANCE 248-1: 2011)	✓	✓	-
RoHS (2011/65/EU)	✓	✓	✓
Functions			
Mounting	Control cabinet	Control cabinet	Control cabinet





Products

DC fuses 14 x 51

Type	I _{rated}	P _v	V _{mains}	V _{DC}	Character- istic	m	H x B			ID
	[A]	[W]	[V]	[V]		[g]	[mm]			
EFNNAR0005WYA00000	5	1.5	600	700	aR	21.2	14 x 51			13573406
EFNNAR0010WYA00000	10	4	600	700	aR	21.2	14 x 51			13573408
EFNNAR0015WYA00000	15	5.5	600	700	aR	20.4	14 x 51			13573438
EFNNAR0020WYA00000	20	6.5	600	700	aR	20.2	14 x 51			13573439
EFNNAR0025WYA00000	25	7.0	600	700	aR	20.3	14 x 51			13573440
EFNNAR0032WYA00000	32	8.0	600	700	aR	20.5	14 x 51			13573441
EFNNAR0040WYA00000	40	8.0	600	700	aR	20.2	14 x 51			13574142
EFNNAR0050WYA00000	50	9.0	600	700	aR	21.2	14 x 51			13612406

DC fuses 22 x 58

Type	I _{rated}	P _v	V _{mains}	V _{DC}	Character- istic	m	H x B			ID
	[A]	[W]	[V]	[V]		[g]	[mm]			
EFNNAR0020WYB00000	20	5.0	600	700	aR	55.7	22 x 58			13574145
EFNNAR0025WYB00000	25	6	600	700	aR	62.6	22 x 58			13574146
EFNNAR0032WYB00000	32	8.0	600	700	aR	63.1	22 x 58			13574147
EFNNAR0040WYB00000	40	12.0	600	700	aR	59.9	22 x 58			13574148
EFNNAR0050WYB00000	50	12.5	600	700	aR	62.6	22 x 58			13574149
EFNNAR0063WYB00000	63	15.0	600	700	aR	62.6	22 x 58			13574150
EFNNAR0080WYB00000	80	15.0	600	700	aR	61.3	22 x 58			13574151
EFNNAR0100WYB00000	100	16.5	600	700	aR	62.0	22 x 58			13574152

DC fuses NH000

Type	I _{rated}	P _v	V _{mains}	V _{DC}	Character- istic	m	H x B			ID
	[A]	[W]	[V]	[V]		[g]	[mm]			
EFNNGR0010WYE00000	10	3.0	600	700	gR	136.4	NH000			13612455
EFNNGR0016WYE00000	16	5.5	600	700	gR	146	NH000			13612454
EFNNGR0020WYE00000	20	7.0	600	700	gR	146	NH000			13612453
EFNNGR0025WYE00000	25	9.0	600	700	gR	140.7	NH000			13612452
EFNNGR0032WYE00000	32	10.0	600	700	gR	145.8	NH000			13612411
EFNNGR0040WYE00000	40	12.0	600	700	gR	147.3	NH000			13612410
EFNNGR0050WYE00000	50	15.0	600	700	gR	146.1	NH000			13612409
EFNNGR0063WYE00000	63	16	600	700	gR	133.6	NH000			13612408
EFNNAR0080WYE00000	80	19.0	600	700	aR	134.5	NH000			13612407
EFNNAR0100WYE00000	100	24	600	700	aR	134.5	NH000			13574153
EFNNAR0125WYE00000	125	28.0	600	700	aR	136	NH000			13574154
EFNNAR0200WYE00000	200	37.0	600	700	aR	136.1	NH000			13574155
EFNNAR0250WYE00000	250	42.0	600	700	aR	136.4	NH000			13574156
EFNNAR0315WYE00000	315	52.0	600	700	aR	135.8	NH000			13574157

Accessories for protective devices

Fuse holders

Type	Description	I _{rated}	P _v	Con- nection	Degree of protection	m	H x W x D			ID
		[A]	[W]	[mm²]		[g]	[mm]			
EFNH20050WYA000000	2-pole fuse holder for fuses 14 x 51	50	2 x 6.2	1.5 ... 10	IP20	90	102.6 x 53 x 100			13612650
EFNH20125WYB000000	2-pole fuse holder for fuses 22 x 58	100	2 x 9.5	2.5 ... 35	IP20	310	120.6 x 71.2 x 102			13612651
EFNH10400WYE000000	1-pole fuse holder for NH000 fuses	400	-	-	IP00	315	43 x 146 x 51			13612712

Microswitch

Type	Description			ID
EFNI10002TXE200000	Microswitch for NH000 fuse holder			13612713

Busbar

Type	Description			ID
EWZ0071	1 m busbar (Ø 25 mm²) for operation with 14 x 51 fuses, 2-pole			13368656
EWZ0037	1 m busbar (Ø 25 mm²) for operation with 22 x 58 fuses, 2-pole			13368657
EWZ0038	End caps to protect the busbars			13467645
EWZ0039	Terminals for DC supply to the drive			424554

Project planning

Dimensioning conditions

A DC-bus connection can be used to balance the energy between the individual devices. This type of operation is particularly useful when several devices are operating in cyclic mode. The dimensioning of a DC-bus connection requires a very exact dimensioning of the energy requirements of the devices among each other.

Assignment – drive

To dimension a DC-bus connection, the energy exchange between the connected drives must be calculated. Feeding tasks, for example, often require greater power than clock drives.

The following must be observed:

- Two DC fuses are always required.
- The fuse holders EFNH20050WYA000000 (DC fuse 14 x 51) and EFNH20125WYB000000 (DC fuse 22 x 58) are 2-pole fuse holders.
- The fuse holders EFNH10400WYE000000 (fuses NH000) are 1-pole fuse holders.
- The fuses are UL approved for 600 VAC and 700 VDC.
- From 80 A, the fuses provide short-circuit protection, but no cable protection.



Assignment – drive

Mains connection 3 x AC 400 / 480 V

P _{rated}	V _{mains}	Drive			DC fuse		
		i550 cabinet		i950 cabinet	14 x 51	22 x 58	NH000
		Heavy Duty	Light Duty				
[kW]	[V]						
0.37	3 AC 400 V	✓	-	-	EFNNAR0015WYA00000	-	EFNNGR0016WYE00000
0.55	3 AC 400 V	✓	-	-	EFNNAR0015WYA00000	-	EFNNGR0016WYE00000
0.55	3 AC 400 V	-	-	✓	EFNNAR0050WYA00000	EFNNAR0050WYB00000	EFNNGR0050WYE00000
0.75	3 AC 400 V	✓	-	-	EFNNAR0015WYA00000	-	EFNNGR0016WYE00000
0.75	3 AC 400 V	-	-	✓	EFNNAR0050WYA00000	EFNNAR0050WYB00000	EFNNGR0050WYE00000
1.1	3 AC 400 V	✓	-	-	EFNNAR0050WYA00000	EFNNAR0050WYB00000	EFNNGR0050WYE00000
1.5	3 AC 400 V	✓	-	-	EFNNAR0050WYA00000	EFNNAR0050WYB00000	EFNNGR0050WYE00000
2.2	3 AC 400 V	✓	-	✓	EFNNAR0050WYA00000	EFNNAR0050WYB00000	EFNNGR0050WYE00000
3.0	3 AC 400 V	✓	-	-	EFNNAR0050WYA00000	EFNNAR0050WYB00000	EFNNGR0050WYE00000
4	3 AC 400 V	-	✓	-	EFNNAR0050WYA00000	EFNNAR0050WYB00000	EFNNGR0050WYE00000
4	3 AC 400 V	✓	-	✓	EFNNAR0050WYA00000	EFNNAR0050WYB00000	EFNNGR0050WYE00000
5.5	3 AC 400 V	-	✓	-	EFNNAR0050WYA00000	EFNNAR0050WYB00000	EFNNGR0050WYE00000
5.5	3 AC 400 V	✓	-	-	-	EFNNAR0080WYB00000	EFNNAR0080WYE00000
7.5	3 AC 400 V	-	✓	-	-	EFNNAR0080WYB00000	EFNNAR0080WYE00000
7.5	3 AC 400 V	✓	-	✓	-	EFNNAR0100WYB00000	EFNNAR0100WYE00000
11	3 AC 400 V	-	✓	-	-	EFNNAR0100WYB00000	EFNNAR0100WYE00000
11	3 AC 400 V	✓	-	✓	-	EFNNAR0100WYB00000	EFNNAR0100WYE00000
15	3 AC 400 V	-	✓	-	-	EFNNAR0100WYB00000	EFNNAR0100WYE00000
15	3 AC 400 V	-	-	✓	-	EFNNAR0100WYB00000	EFNNAR0100WYE00000
15	3 AC 400 V	✓	-	-	-	-	EFNNAR0200WYE00000
18.5	3 AC 400 V	-	✓	-	-	-	EFNNAR0200WYE00000
18.5	3 AC 400 V	✓	-	-	-	-	EFNNAR0200WYE00000
22	3 AC 400 V	-	✓	-	-	-	EFNNAR0200WYE00000
22	3 AC 400 V	✓	-	✓	-	-	EFNNAR0200WYE00000
30	3 AC 400 V	-	✓	-	-	-	EFNNAR0200WYE00000
30	3 AC 400 V	✓	-	✓	-	-	EFNNAR0250WYE00000
37	3 AC 400 V	-	✓	-	-	-	EFNNAR0250WYE00000
37	3 AC 400 V	✓	-	✓	-	-	EFNNAR0250WYE00000
45	3 AC 400 V	-	✓	-	-	-	EFNNAR0250WYE00000
45	3 AC 400 V	✓	-	✓	-	-	EFNNAR0250WYE00000
55	3 AC 400 V	-	✓	-	-	-	EFNNAR0250WYE00000
55	3 AC 400 V	✓	-	✓	-	-	EFNNAR0315WYE00000
75	3 AC 400 V	-	✓	-	-	-	EFNNAR0315WYE00000
75	3 AC 400 V	✓	-	✓	-	-	EFNNAR0315WYE00000
90	3 AC 400 V	-	✓	-	-	-	EFNNAR0315WYE00000
90	3 AC 400 V	✓	-	✓	-	-	350 A fuse
110	3 AC 400 V	-	✓	-	-	-	350 A fuse
110	3 AC 400 V	✓	-	✓	-	-	350 A fuse
132	3 AC 400 V	-	✓	-	-	-	350 A fuse

Mounting

A shield mounting consisting of a shield plate and fixing clips or wire clamps can be used to attach the shielding of the motor cable directly to the drive.

In standard cases, the shielding of the control cables can be attached to the mounted shield plate using commercially available plastic cable ties or fixing clips.

Some drive connections are equipped with multipoint connectors. These are available individually, e.g., for service purposes or for the separate production of cable harnesses.

Certain drives can be mounted on a 35 mm x 7.5 mm DIN rail in accordance with EN 60175. A mounting kit is available for this purpose.



Products

Shield mounting

Shield mounting kit for motor cable

Type	Component	Description			ID
EZAMBHXM018/S	Shield mounting kit	1 x motor shield plate, 1 x fixing clip, 1 x wire clamp Ø 10 ... 20 mm			13560530
EZAMBHXM018/M	Shield mounting kit	5 x motor shield plate, 5 x fixing clip, 5 x wire clamp Ø 10 ... 20 mm			13560529
EZAMBHXM015/S	Shield mounting kit	1 x motor shield plate, 1 x fixing clip, 1 x wire clamp Ø 15 ... 28 mm 1 x screw M4 x 12			13481481
EZAMBHXM015/M	Shield mounting kit	5 x motor shield plate, 5 x fixing clip, 5 x wire clamp Ø 15 ... 28 mm, 5 x screw M4 x 12			13481482
EZAMBHXMB16/S	Shield mounting kit	1 x motor shield plate, 1 x fixing clip, 1 x wire clamp Ø 20 ... 37 mm, 1 x screw M4 x 12			13611213
EZAMBHXMB16/M	Shield mounting kit	5 x motor shield plate, 5 x fixing clip, 5 x wire clamp Ø 20 ... 37 mm, 5 x screw M4 x 12			13611214

Individual components for shield mounting

Type	Component	Description			ID
EZAMBKBM	Metal cable tie	50 x metal cable tie			13432597
EZAMBHXM007/M	Fixing clip	20 x fixing clip			13433064
EZAMBHXM003/M	Wire clamp for shield mounting	10 x wire clamp Ø 10 ... 20 mm			13433060
EZAMBHXM004/M	Wire clamp for shield mounting	10 x wire clamp Ø 15 ... 28 mm			13433061
EZAMBHXM005/M	Wire clamp for shield mounting	10 x wire clamp Ø 20 ... 37 mm			13433062

Assignment – drive

Mains connection 1 x AC 120 V

P_{rated}	V_{mains}	Drive				Shield mounting kit		Fixing clip
		i510 cabinet, i550 cabinet		i750 cabinet	i950 cabinet	Motor cable	Motor cable	Control cable
		Light Duty	Heavy Duty					
[kW]	[V]							
0.25	1 AC 120 V	-	✓	-	-	EZAMBHXM018/S	EZAMBHXM018/M	EZAMBHXM007/M
0.37	1 AC 120 V	-	✓	-	-	EZAMBHXM018/S	EZAMBHXM018/M	EZAMBHXM007/M
0.75	1 AC 120 V	-	✓	-	-	EZAMBHXM018/S	EZAMBHXM018/M	EZAMBHXM007/M
1.1	1 AC 230 V	-	✓	-	-	EZAMBHXM018/S	EZAMBHXM018/M	EZAMBHXM007/M

Mains connection 1 x AC 230 V

P_{rated}	V_{mains}	Drive				Shield mounting kit		Fixing clip
		i510 cabinet, i550 cabinet		i750 cabinet	i950 cabinet	Motor cable	Motor cable	Control cable
		Light Duty	Heavy Duty					
[kW]	[V]							
0.25	1 AC 230 V	-	✓	-	-	EZAMBHXM018/S	EZAMBHXM018/M	EZAMBHXM007/M
0.37	1 AC 230 V	-	✓	-	✓	EZAMBHXM018/S	EZAMBHXM018/M	EZAMBHXM007/M
0.55	1 AC 230 V	-	✓	-	✓	EZAMBHXM018/S	EZAMBHXM018/M	EZAMBHXM007/M
0.75	1 AC 230 V	-	✓	-	✓	EZAMBHXM018/S	EZAMBHXM018/M	EZAMBHXM007/M
1.1	1 AC 230 V	-	✓	-	--	EZAMBHXM018/S	EZAMBHXM018/M	EZAMBHXM007/M
1.5	1 AC 230 V	-	✓	-	✓	EZAMBHXM018/S	EZAMBHXM018/M	EZAMBHXM007/M
2.2	1 AC 230 V	-	✓	-		EZAMBHXM018/S	EZAMBHXM018/M	EZAMBHXM007/M

Mains connection 3 x AC 230 V

P_{rated}	V_{mains}	Drive				Shield mounting kit		Fixing clip
		i510 cabinet, i550 cabinet		i750 cabinet	i950 cabinet	Motor cable	Motor cable	Control cable
		Light Duty	Heavy Duty					
[kW]	[V]							
0.25	3 AC 230 V	-	✓	-	-	EZAMBHXM018/S	EZAMBHXM018/M	EZAMBHXM007/M
0.37	3 AC 230 V	-	✓	-	✓	EZAMBHXM018/S	EZAMBHXM018/M	EZAMBHXM007/M
0.55	3 AC 230 V	-	✓	-	✓	EZAMBHXM018/S	EZAMBHXM018/M	EZAMBHXM007/M
0.75	3 AC 230 V	-	✓	-	✓	EZAMBHXM018/S	EZAMBHXM018/M	EZAMBHXM007/M
1.1	3 AC 230 V	-	✓	-	-	EZAMBHXM018/S	EZAMBHXM018/M	EZAMBHXM007/M
1.5	3 AC 230 V	-	✓	-	✓	EZAMBHXM018/S	EZAMBHXM018/M	EZAMBHXM007/M
2.2	3 AC 230 V	-	✓	-	✓	EZAMBHXM018/S	EZAMBHXM018/M	EZAMBHXM007/M
4	3 AC 230 V	-	✓	-	-	EZAMBHXM015/S	EZAMBHXM015/M	EZAMBHXM007/M
4	3 AC 230 V	-	-	-	✓	EZAMBHXM016/S	EZAMBHXM016/M	EZAMBHXM007/M
5.5	3 AC 230 V	✓	-	-	-	EZAMBHXM015/S	EZAMBHXM015/M	EZAMBHXM007/M
5.5	3 AC 230 V	-	✓	-	-	EZAMBHXM015/S	EZAMBHXM015/M	EZAMBHXM007/M
5.5	3 AC 230 V	-	-	-	✓	EZAMBHXM016/S	EZAMBHXM016/M	EZAMBHXM007/M
7.5	3 AC 230 V	✓	-	-	-	EZAMBHXM015/S	EZAMBHXM015/M	EZAMBHXM007/M



Mains connection 3 x AC 400 V

P _{rated}	V _{mains}	Drive				Shield mounting kit		Fixing clip
		i510 cabinet	i550 cabinet	i750 cabinet	i950 cabinet	Motor cable	Motor cable	Control cable
		Light Duty	Heavy Duty					
[kW]	[V]							
0.37	3 AC 400 V	-	✓	-	-	EZAMBHXM018/S	EZAMBHXM018/M	EZAMBHXM007/M
0.55	3 AC 400 V	-	✓	-	✓	EZAMBHXM018/S	EZAMBHXM018/M	EZAMBHXM007/M
0.75	3 AC 400 V	-	✓	-	✓	EZAMBHXM018/S	EZAMBHXM018/M	EZAMBHXM007/M
1.1	3 AC 400 V	-	✓	-	-	EZAMBHXM018/S	EZAMBHXM018/M	EZAMBHXM007/M
1.5	3 AC 400 V	-	✓	-	-	EZAMBHXM018/S	EZAMBHXM018/M	EZAMBHXM007/M
2.2	3 AC 400 V	-	✓	-	✓	EZAMBHXM018/S	EZAMBHXM018/M	EZAMBHXM007/M
3.0	3 AC 400 V	-	✓	-	-	EZAMBHXM018/S	EZAMBHXM018/M	EZAMBHXM007/M
4	3 AC 400 V	✓	-	-	✓	EZAMBHXM018/S	EZAMBHXM018/M	EZAMBHXM007/M
4	3 AC 400 V	-	✓	-	-	EZAMBHXM018/S	EZAMBHXM018/M	EZAMBHXM007/M
5.5	3 AC 400 V	✓	-	-	-	EZAMBHXM018/S	EZAMBHXM018/M	EZAMBHXM007/M
5.5	3 AC 400 V	-	✓	-	-	EZAMBHXM015/S	EZAMBHXM015/M	EZAMBHXM007/M
7.5	3 AC 400 V	✓	-	-	-	EZAMBHXM015/S	EZAMBHXM015/M	EZAMBHXM007/M
7.5	3 AC 400 V	-	✓	-	✓	EZAMBHXM016/S	EZAMBHXM016/M	EZAMBHXM007/M
11	3 AC 400 V	✓	-	-	-	EZAMBHXM016/S	EZAMBHXM016/M	EZAMBHXM007/M
11	3 AC 400 V	-	✓	-	✓	EZAMBHXM016/S	EZAMBHXM016/M	EZAMBHXM007/M
15	3 AC 400 V	✓	-	-	-	EZAMBHXM016/S	EZAMBHXM016/M	EZAMBHXM007/M
15	3 AC 400 V	-	✓	-	-	EZAMBHXM003/M	EZAMBHXM004/M	EZAMBHXM007/M
15	3 AC 400 V	-	-	-	✓	EZAMBHXM016/S	EZAMBHXM016/M	EZAMBHXM007/M
18.5	3 AC 400 V	✓	-	-	-	EZAMBHXM003/M	EZAMBHXM004/M	EZAMBHXM007/M
18.5	3 AC 400 V	-	✓	-	-	EZAMBHXM003/M	EZAMBHXM004/M	EZAMBHXM007/M
22	3 AC 400 V	✓	-	-	-	EZAMBHXM003/M	EZAMBHXM004/M	EZAMBHXM007/M
22	3 AC 400 V	-	✓	-	✓	EZAMBHXM003/M	EZAMBHXM004/M	EZAMBHXM007/M
30	3 AC 400 V	✓	-	-	-	EZAMBHXM003/M	EZAMBHXM004/M	EZAMBHXM007/M
30	3 AC 400 V	-	✓	-	✓	EZAMBHXM004/M	EZAMBHXM005/M	EZAMBHXM007/M
37	3 AC 400 V	✓	-	-	-	EZAMBHXM004/M	EZAMBHXM005/M	EZAMBHXM007/M
37	3 AC 400 V	-	✓	-	-	EZAMBHXM004/M	EZAMBHXM005/M	EZAMBHXM007/M
45	3 AC 400 V	✓	-	-	-	EZAMBHXM004/M	EZAMBHXM005/M	EZAMBHXM007/M
45	3 AC 400 V	-	✓	-	✓	EZAMBHXM004/M	EZAMBHXM005/M	EZAMBHXM007/M
55	3 AC 400 V	✓	-	-	-	EZAMBHXM004/M	EZAMBHXM005/M	EZAMBHXM007/M
55	3 AC 400 V	-	✓	-	✓	EZAMBHXM004/M	EZAMBHXM005/M	EZAMBHXM007/M
75	3 AC 400 V	✓	-	-	-	EZAMBHXM004/M	EZAMBHXM005/M	EZAMBHXM007/M
75	3 AC 400 V	-	✓	-	✓	EZAMBHXM004/M	EZAMBHXM005/M	EZAMBHXM007/M
90	3 AC 400 V	✓	-	-	-	EZAMBHXM004/M	EZAMBHXM005/M	EZAMBHXM007/M
90	3 AC 400 V	-	✓	-	-	-	-	EZAMBHXM007/M
110	3 AC 400 V	✓	-	-	-	-	-	EZAMBHXM007/M
110	3 AC 400 V	-	✓	-	-	-	-	EZAMBHXM007/M
132	3 AC 400 V	✓	-	-	-	-	-	EZAMBHXM007/M

Multipoint connectors

Multipoint connectors for i510 and i550 cabinet VFDs

Type	Component	Description	i510-C	i550-C			ID
EZAEVE032/M	Multipoint connector	10 x multipoint connector for X100 (mains connection) 1 x 230 V 0.25 ... 0.75 kW	✓	✓			13481418
EZAEVE033/M	Multipoint connector	10 x multipoint connector for X100 (mains connection) 1 x 230 V 1.1 ... 2.2 kW	✓	✓			13481419
EZAEVE034/M	Multipoint connector	10 x multipoint connector for X100 (mains connection) 1/3 x 230 V 0.25 ... 0.75 kW	✓	✓			13481420
EZAEVE035/M	Multipoint connector	10 x multipoint connector for X100 (mains connection) 1/3 x 230 V 1.1 ... 2.2 kW	✓	✓			13481421
EZAEVE036/M	Multipoint connector	10 x multipoint connector for X100 (mains connection) 3 x 400/480 V 0.37 ... 2.2 kW	✓	-			13481472
EZAEVE037/M	Multipoint connector	5 x multipoint connector for X100 (mains connection) 3 x 400/480 V 3 ... 4 kW	✓	-			13564004
	Multipoint connector	5 x multipoint connector for X100 (mains connection) 3 x 400/480 V 0.37 ... 4 kW	-	✓			13564004
EZAEVE038/M	Multipoint connector	5 x multipoint connector for X105 (motor) 0.25 ... 2.2 kW	✓	-			13481474
EZAEVE039/M	Multipoint connector	5 x multipoint connector for X105 (motor) 3 x 400/480 V 3 ... 4 kW	✓	-			13481475
	Multipoint connector	5 x multipoint connector for X105 (motor/brake resistor) 0.37 ... 4 kW	-	✓			13481475
EZAEVE029/M	Multipoint connector	10 x multipoint connector for X1 (Basic Safety - STO)	-	✓			13480948
EZAEVE030/M	Multipoint connector	10 x multipoint connector for X9 (relay)	✓	✓			13481415
EZAEVE031/M	Multipoint connector	10 x multipoint connector for X109 (PTC, bridged)	-	✓			13481416
EZAEVE040/M	Multipoint connector	5 x multipoint connector for X3 (Standard-I/O)	-	✓			13481476
EZAEVE041/M	Multipoint connector	5 x multipoint connector for X3 (Application-I/O)	-	✓			13481477
EZAEVE042/M	Multipoint connector	10 x multipoint connector for X216 (CANopen/Modbus)	✓	✓			13481478

Multipoint connectors for i700 and i750 cabinet servo drives - power supply module

Type	Component	Description	i700-C	i750-C			ID
EZAEVE008/M	Multipoint connector	50 x multipoint connector for X100 (mains connection)	✓	✓			13433002
EZAEVE009/M	Multipoint connector	50 x multipoint connector for X20 A (digital inputs)	✓	✓			13433003
EZAEVE010/M	Multipoint connector	50 x multipoint connector for X20 B (digital outputs)	✓	✓			13433004
EZAEVE003/M	Multipoint connector	50 x multipoint connector for X5/X21 (DC 24 V)	✓	✓			13432987
EZAEVE011/M	Multipoint connector	50 x multipoint connector for X103 (brake resistor)	✓	✓			13433005

Multipoint connectors for i700 and i750 cabinet servo drives - axes

Type	Component	Description	i700-C	i750-C			ID
EZAEVE005/M	Multipoint connector	50 x multipoint connector for X107/X108 (motor) Single axis 1.1 ... 4 kW, double axis 1.1 ... 2.2 kW	✓	-			13432989
	Multipoint connector	50 x multipoint connector for X105 (motor) Single axis 1.1 ... 4 kW, double axis 1.1 ... 2.2 kW	-	✓			13432989
EZAEVE006/M	Multipoint connector	50 x multipoint connector for X107/X108 (motor) Single axis 7.5 ... 15 kW, double axis 4 ... 7.5 kW	✓	-			13432990
	Multipoint connector	50 x multipoint connector for X105 (motor) Single axis 7.5 ... 15 kW, double axis 4 ... 7.5 kW	-	✓			13432990
EZAEVE004/M	Multipoint connector	50 x multipoint connector for X106 (motor holding brake)	✓	-			13432988
EZAEVE051/M	Multipoint connector	50 x multipoint connector for X106 (motor holding brake)	-	✓			13628144
EZAEVE053/M	Multipoint connector	50 x multipoint connector for X106 (motor holding brake) from 22 kW	-	✓			
EZAEVE050/M	Multipoint connector	50 x multipoint connector for X107 (DC 24 V for motor holding brake)	-	✓			13628143
EZAEVE001/M	Multipoint connector	50 x multipoint connector for X1 (Basic Safety - STO)	✓	-			13432985
EZAEVE002/M	Multipoint connector	50 x multipoint connector for X3, X21, X105 (DC 24 V)	✓	-			13432986
EZAEVE048/M	Multipoint connector	50 x multipoint connector for X1 (Basic Safety - STO)	-	✓			13628031
EZAEVE049/M	Multipoint connector	50 x multipoint connector for X3 (digital inputs)	-	✓			13628142
EZAEVE052/M	Multipoint connector	50 x multipoint connector for X109 (OCT/PTC)	-	✓			13628145

Multipoint connectors for i950 cabinet servo drives

Type	Component	Description				ID
I9ZAA0013M	Multipoint connector	5 x DC bus				13544387
I9ZAA0012M	Multipoint connector	5 x DC bus, daisy chain				13544386



Mounting kits

Mounting kits for i550 protec VFDs

Type	Component	Description			ID
EZAMBHXX034	Mounting kit	DIN rail set for i550 protec with extension box			13598645
EZAMBHXX043	Mounting kit	Terminal block set for i550 protec with extension box			13621161

Mounting kits for i700 and i750 cabinet servo drives

Type	Component	Description	i700-C	i750-C			ID
E70AZEVK005	Mounting kit	Power supply module 30 A	✓	✓			13402984
E70AZEVK006	Mounting kit	Power supply module 60 A	✓	✓			13402985
E70AZEVK007	Mounting kit	Power supply module +/-UG	✓	✓			13402986
E70AZEVK001	Mounting kit	Single axis 5 ... 20 A	✓	-			13402768
E70AZEVK003	Mounting kit	Single axis 32 ... 64 A	✓	-			13402960
E70AZEVK002	Mounting kit	Double axis 5 ... 10 A	✓	-			13402959
E70AZEVK004	Mounting kit	Double axis 20 ... 32 A	✓	-			13402961
E75AZEVK001	Mounting kit	Single axis 5 ... 20 A	-	✓			13621168
E75AZEVK003	Mounting kit	Single axis 30 ... 60 A	-	✓			13621212
E75AZEVK005	Mounting kit	Single axis 90 ... 115 A	-	✓			13660099
E75AZEVK002	Mounting kit	Double axis 9 ... 20 A	-	✓			13621170
E75AZEVK004	Mounting kit	Double axis 37 ... 60 A	-	✓			13621214

Mounting kits for i950 cabinet servo drives

Type	Component	Description			ID
I9ZAA0014S	Mounting kit	Devices 0.55 ... 4 kW with Basic Safety - STO			13530589
I9ZAA0015S	Mounting kit	Devices 7.5 ... 15 kW with Basic Safety - STO			13530591
I9ZAA0016S	Mounting kit	Devices 22 ... 110 kW with Basic Safety - STO			13530613
I9ZAA0017S	Mounting kit	Devices 0.55 ... 4 kW with Extended Safety			13530590
I9ZAA0018S	Mounting kit	Devices 7.5 ... 15 kW with Extended Safety			13530612
I9ZAA0019S	Mounting kit	Devices 22 ... 110 kW with Extended Safety			13530614



DIN rail mounting

DIN rail mounting for i510 and i550 cabinet VFDs

Type	Component	Description			ID
I5ZAB0DR1S	DIN rail mounting	Mounting kit for drives 0.25 ... 0.75 kW			13566907
I5ZAB0DR2S	DIN rail mounting	Mounting kit for drives 1.1 ... 5.5 kW			13566908

Connectors and distributors

QUICKON connectors and distributors

Type designation	Plug-in system	Component	Description	Diameter	Cross-section			ID
				[mm]	[mm²]			
EZAMBHXX027	QUICKON	Connector	Connector set 1 x wall bushing, 1 x nut for connector, 1 x connection cable l = 0.5 m, 1 x adapter M20/M25, 1 x adapter M25/M32		1 ... 2.5			13591613
EWS0103/M	QUICKON	Connector	Nut for connector	6 ... 10 mm	1 ... 2.5			13556422
EWS0104/M	QUICKON	Connector	Nut for connector	9 ... 14 mm	1 ... 2.5			13556423
EWS0117	QUICKON	Connector	Nut for connector	9 ... 14 mm	2.5 ... 6			13566826
EWS0116	QUICKON	Connector	Nut for connector	12 ... 20 mm	2.5 ... 6			13566825
EWS0105/M	QUICKON	Connector	Connector with nut		1 ... 2.5			13556424
EWS0106/M	QUICKON	Connector	Connector with nut		2.5 ... 6			13556425
EWS0102	QUICKON	Connector	Wall bushing, female		1 ... 2.5			13551668
EWS0112	QUICKON	Connector	Socket wrench for QUICKON nut					13566791
EWS0111	QUICKON	Distributor	T distributor		1 ... 2.5			13566790
EWS0115	QUICKON	Distributor	T distributor		2.5 ... 6			13566824
EWS0110	QUICKON	Distributor	H distributor		1 ... 2.5			13566789
EWS0114	QUICKON	Distributor	H distributor		2.5 ... 6			13566823
EWS0113	QUICKON	Distributor	Protective cap for H and T distributors		1 ... 2.5			13566822
EWS0118	QUICKON	Distributor	Protective cap for H and T distributors		2.5 ... 6			13566827

M15 - connectors and distributors

Type designation	Plug-in system	Component	Description	Diameter	Cross-section			ID
				[mm]	[mm²]			
EWS0109/M	M15	Connector	Connector, female		1 ... 2.5			13551745
EWS0107	M15	Connector	Wall bushing, male		1 ... 2.5			13551743

Preassembled mains cables with M15 connectors, see [page 68](#)

RJ45 connector

Type designation	Plug-in system	Component	Description			ID
EZAMBHXX033	RJ45	Connector	Angled connector for simplified connection to EtherCAT, EtherNet/IP, Modbus TCP, and PROFINET networks			13598644





Cable gland sets

Cable gland sets for i510 and i550 protec VFDs

Type designation	Component	Description			ID
EZAMBHXX025	Cable gland set	1 x RJ45 cable gland for easy network connection			13584560
EZAMBHXX022	Cable gland set	5-fold cable gland set for devices 0.37 ... 2.2 kW			13584557
EZAMBHXX023	Cable gland set	5-fold cable gland set for devices 3 ... 11 kW			13584558
EZAMBHXX024	Cable gland set	5-fold cable gland set for devices 15 ... 22 kW			13584559
EZAMBHXX026	Cable gland set	Membrane set, 5 x M12 cable glands to avoid condensation water			13584561

Cable gland sets for i550 motec and i650 motec VFDs

Type designation	Component	Description			ID
EZAMBHXX026	Cable gland set	Membrane set, 5 x M12 cable glands to avoid condensation water			13584561
EWS0120	Cable gland set	Han Q4/2 connector set with screw lock, 4 x 2.5 ... 6 mm ² + 2 x 1.5 mm ² , male Can be assembled without special tools			13648784
EWS0121	Cable gland set	Han Q4/2 connector set with screw connection, 4 x 2.5 ... 6 mm ² + 2 x 1.5 mm ² , female Can be assembled without special tools			13648785

Preassembled mains cables with Han Q4/2 connectors, see [page 66](#)

Operation and diagnostics

Thanks to the intuitive operating structure, you can use the keypad to access the most important parameters of the drive quickly and easily, either to configure functions or to query current values. Parameters and actual values are shown on the easy-to-read display.

You can use the USB module to establish a cable connection between the drive and the PC with the Lenze Engineering Tool »EASY Starter«

The WLAN module allows you to communicate wirelessly with the drive, either via a PC using the Lenze engineering tool "EASY Starter" or using the Lenze "SMART Keypad App" for Android and iOS smartphones.





Products

Operation

Type	Component	Description			ID
ERPD0010K0001W	Operation	Potentiometer, wirewound resistor 10 kOhm, 10%, 1 W			322194
ERZ0001	Operation	Rotary knob for potentiometer 6 mm shaft with disc 36 mm			308272
ERZ0002	Operation	Dial for potentiometer 62 mm 0 ... 100%			308274

Operating elements for the extension box

The following operating elements can be retrofitted to the i550 protec VFD with extension box:

Type	Component	Description			ID
EZAMBHXX028	Operating element	1 x selector switch and labeling field, 1 x potentiometer 10 kOhm			13592391
EZAMBHXX029	Operating element	5 x DIN rail, 7-pole terminal block incl. PE			13593846
EZAMBHXX035	Operating element	10 x black pushbutton with labeling field			13604711
EZAMBHXX036	Operating element	10 x red pushbutton with labeling field			13604742
EZAMBHXX037	Operating element	10 x selector switch and labeling field			13604743
EZAMBHXX038	Operating element	5 x potentiometer 10 kOhm			13604744
EZAMBHXX039	Operating element	10 x blue signal lamp			13606251
EZAMBHXX040	Operating element	10 x red signal lamp			13606442
EZAMBHXX041	Operating element	10 x green signal lamp			13606443

Depending on the configuration, the operating elements are integrated into the i550 motec and i650 motec VFDs with extension box.

Diagnostics

Type	Component	Description			ID
I5MADK0000000S	Keypad	Parameterization and diagnostics of the drive Parameters and actual values are shown on the easy-to-read display			13549150
I5MBDW0000000S	WLAN module	Parameterization and diagnostics of the drive Commissioning via WLAN connection with engineering tools			13648699
I5MADU0000000S	USB module	Parameterization and diagnostics of the drive Commissioning via USB connection with engineering tools			13516238
I5ZAA0000M	Protective cover	Protective cover when no diagnostic module is plugged on			13502341
I5MADR0000000S	External keypad	Keypad holder for mounting in the control cabinet door			13550210
I5MADR0000001S	External keypad	Keypad holder with 3 m connection cable			13550222
I5MADR0000002S	External keypad	Keypad holder with 5 m connection cable			13550223
I0MAPA0000000M	Memory module	12 replacement modules for the drive, directly pluggable			13481882
EZAEDE1001	Memory module copier	Duplication of the data of the memory module			13559235





Project planning

Assignment – drive

Accessories	Drive				
	i510 cabinet	i550 cabinet	i510 protec	i550 protec	i550 protec
	IP20	IP20	IP20	IP31	IP55 / IP66
Wirewound resistor 10 kOhm, 10%, 1 W	✓	✓	✓	-	-
Rotary knob 6 mm shaft with disc 36 mm	✓	✓	✓	-	-
Dial 62 mm 0 ... 100%	✓	✓	✓	-	-
1 x selector switch and labeling field, 1 x potentiometer 10 kOhm	-	-	-	✓	✓
5 x DIN rail, 7-pole terminal block incl. PE	-	-	-	✓	✓
10 x black pushbutton with labeling field	-	-	-	✓	✓
10 x red pushbutton with labeling field	-	-	-	✓	✓
10 x selector switch and labeling field	-	-	-	✓	✓
5 x potentiometer 10 kOhm	-	-	-	✓	✓
10 x blue signal lamp	-	-	-	✓	✓
10 x red signal lamp	-	-	-	✓	✓
10 x green signal lamp	-	-	-	✓	✓
Keypad	✓	✓	✓	✓	-
WLAN module	✓	✓	✓	✓	-
USB module	✓	✓	✓	✓	-
Protective cover	✓	✓	-	-	-
External keypad	✓	✓	-	-	-
Memory module	✓	✓	✓	✓	✓

Power supply units

The power supply units can generally be used as a DC supply or as external supply for the control electronics of VFDs and servo drives.

Through their use, parameterization and diagnostics can be carried out without mains supply. In addition, communication via networks can be maintained. This is helpful during commissioning and when servicing the drive.





Product overview

	24 V power supply units	48 V power supply units
		
Design/mounting	Control cabinet	Control cabinet
Protection class (EN 60529)	IP20	IP20
Mains connection/current range		
24 V DC	5 ... 20 A	-
48 V DC	-	10 A
Market approvals		
CE (2011/65/EU)	✓	✓
UKCA (2016 No. 1101)	✓	✓
UL (UL508)	✓	✓
CSA (CSA 22.2)	✓	✓
RoHS (2011/65/EU)	✓	✓
Ambient conditions		
Operation (EN 60721-3-3)	3K3 (-10 ... +55 °C)	3K3 (-10 ... +55 °C)
Derating	2.5 % / °C above +40 °C	2.5 % / °C above +40 °C
Storage (EN 60721-3-1)	1K3 (-25 ... +60 °C)	1K3 (-25 ... +60 °C)
Transport (EN 60721-3-2)	2K3 (-25 ... +70 °C)	2K3 (-25 ... +70 °C)
Functions		
Mounting	Wall, base	Wall, base
Connection	Screw terminal	Screw terminal

Products

Mains connection 1 x AC 230/240 V

Type	I _{rated}	U _{Out}	V _{mains}	Degree of protection	m	H x W x D			ID
	[A]	[V]	[V]		[kg]	[mm]			
EZVA024005BB000000	5	24	1 AC 230/240 V	IP20	0.86	130 x 40 x 125			13613136
EZVA024010BB000000	10	24	1 AC 230/240 V	IP20	15	130 x 60 x 125			13613137
EZVA048010BB000000	10	48	1 AC 230/240 V	IP20	2	130 x 90 x 150			13613141

Mains connection 3 x AC 400/480 V

Type	I _{rated}	U _{Out}	V _{mains}	Degree of protection	m	H x W x D			ID
	[A]	[V]	[V]		[kg]	[mm]			
EZVA024005FB000000	5	24	3 AC 400/480 V	IP20	0.78	130 x 40 x 125			13613138
EZVA024010FB000000	10	24	3 AC 400/480 V	IP20	1.32	130 x 60 x 125			13613139
EZVA024020FB000000	20	24	3 AC 400/480 V	IP20	1.6	130 x 70 x 150			13613140

Project planning

Assignment – drive

	Drive								
	i510 cabinet	i550 cabinet	i510 protec	i550 protec	i550 motec	i650 motec	i700 cabinet	i750 cabinet	i950 cabinet
24 V power supply units	✓	✓	✓	✓	✓	✓	✓	✓	✓
48 V power supply units	-	-	-	-	✓	✓	-	-	-

System cables

Pre-assembled system cables are the ideal solution for easily connecting or interconnecting Lenze products. Wiring errors are thus reliably prevented.

Mains, motor, feedback, fan, and communication cables are available. Depending on the application, the cables are equipped with standard connectors, making integration into the machine's peripherals very easy.



Product overview

	Mains cables	OCT motor cables	Motor cables	Feedback cables	Blower cables	Communication cables
						
Cross-section	2.5 ... 6 mm ²	1.5 ... 6 mm ²	1 ... 16 mm ²	-	1 mm ²	-
Protection class (EN 60529)	IP65	IP69	IP69	IP69	IP66	-
Rated voltage	600 V	600 V	600 V	300 V	-	-
Bend radius Ø	5 x	7.5 x	7.5 x	7.5 x	5 x	-
Drag chain cycles	5 million	5 million	5 million	5 million	5 million	-
Market approval						
CE (2014/35/EU)	✓	✓	✓	✓	✓	✓
UKCA (2016 No. 1101)	✓	✓	✓	✓	✓	✓
Wiring Harness	✓	✓	✓	✓	✓	✓
RoHS (2011/65/EU)	✓	✓	✓	✓	✓	✓
Ambient conditions						
Operation (EN 60721-3-3)	3K3 (-30 ... +80 °C)	3K3 (-30 ... +80 °C)	3K3 (-30 ... +80 °C)	3K3 (-30 ... +80 °C)	3K3 (-30 ... +80 °C)	3K3 (-30 ... +80 °C)
Storage (EN 60721-3-1)	3K3 (-30 ... +80 °C)	3K3 (-30 ... +80 °C)	3K3 (-30 ... +80 °C)	3K3 (-30 ... +80 °C)	3K3 (-30 ... +80 °C)	3K3 (-30 ... +80 °C)
Transport (EN 60721-3-2)	3K3 (-30 ... +80 °C)	3K3 (-30 ... +80 °C)	3K3 (-30 ... +80 °C)	3K3 (-30 ... +80 °C)	3K3 (-30 ... +80 °C)	3K3 (-30 ... +80 °C)



	Mains cables	OCT motor cables	Motor cables	Feedback cables	Blower cables	Communication cables
Functions						
Connection	Mains - drive	Drive - motor	Drive - motor	Drive - feedback	Mains - motor	Drive - fieldbus
Laying system	Fixed Drain chain	Fixed Drain chain	Fixed Drain chain	Fixed Drain chain	Fixed Drain chain	Fixed Drain chain
Connector	Han Q4/2, M15	M23, M40	M23, M40, Han Q8	Sub-D, M23	M17	Sub-D, USB or RJ45
Locking type	Plug-in lock, screw lock	Screw lock, bayonet lock	Screw lock, bayonet lock	Screw lock, bayonet lock	Screw lock, bayonet lock	Plug-in lock
Weight/m, fixed laying						
1 mm ²	-	-	0.15 kg	-	0.098 kg	-
1.5 mm ²	-	-	0.191 kg	-	-	-
2.5 mm ²	0.185 kg	-	0.26 kg	-	-	-
2.5 mm ² + 2.5 mm ²	0.250 kg	-	-	-	-	-
4 mm ²	0.298 kg	-	0.31 kg	-	-	-
4 mm ² + 2.5 mm ²	0.360 kg	-	-	-	-	-
6 mm ²	0.402 kg	-	0.428 kg	-	-	-
6 mm ² + 2.5 mm ²	0.450 kg	-	-	-	-	-
10 mm ²	-	-	0.65 kg	-	-	-
16 mm ²	-	-	0.964 kg	-	-	-
Resolver	-	-	-	0.099 kg	-	-
Encoder	-	-	-	0.134 kg	-	-
EnDat	-	-	-	0.166 kg	-	-
Digital frequency	-	-	-	-	-	0.099 kg
Weight/m, drag chain						
1 mm ²	-	-	0,157 kg	-	0.098 kg	-
1.5 mm ²	-	0.25 kg	0.193 kg	-	-	-
2.5 mm ²	0.196 kg	0.31 kg	0.269 kg	-	-	-
2.5 mm ² + 2.5 mm ²	0.248 kg	-	-	-	-	-
4 mm ²	0,238 kg	0.42 kg	0.404 kg	-	-	-
4 mm ² + 2.5 mm ²	0.317 kg	-	-	-	-	-
6 mm ²	0.432 kg	0.54 kg	0.542 kg	-	-	-
6 mm ² + 2.5 mm ²	0.413 kg	-	-	-	-	-
10 mm ²	-	-	0.85 kg	-	-	-
16 mm ²	-	-	1,032 kg	-	-	-
Resolver	-	-	-	0.104 kg	-	-
Encoder	-	-	-	0.134 kg	-	-
EnDat	-	-	-	0.178 kg	-	-
Cable diameter, fixed laying						
1 mm ²	-	-	10.3 mm	-	7.9 mm	-
1.5 mm ²	-	-	11.6 mm	-	-	-
2.5 mm ²	9 mm	-	13.2 mm	-	-	-
2.5 mm ² + 2.5 mm ²	11.7 mm	-	-	-	-	-
4 mm ²	10.6 mm	-	13.3 mm	-	-	-
4 mm ² + 2.5 mm ²	12.7 mm	-	-	-	-	-
6 mm ²	13 mm	-	15.3 mm	-	-	-
6 mm ² + 2.5 mm ²	15.7 mm	-	-	-	-	-
10 mm ²	-	-	18.2 mm	-	-	-
16 mm ²	-	-	22 mm	-	-	-
Resolver	-	-	-	9.4 mm	-	-
Encoder	-	-	-	10.7 mm	-	-
EnDat	-	-	-	12 mm	-	-
Digital frequency	-	-	-	-	-	9.4 mm
Cable diameter, drag chain						
1 mm ²	-	-	10.2 mm	-	7.7 mm	-
1.5 mm ²	-	12.7 mm	11.3 mm	-	-	-
2.5 mm ²	10 mm	13.9 mm	13.4 mm	-	-	-
2.5 mm ² + 2.5 mm ²	12.5 mm	-	-	-	-	-
4 mm ²	11.4 mm	15.9 mm	15.8 mm	-	-	-
4 mm ² + 2.5 mm ²	13.4 mm	-	-	-	-	-
6 mm ²	12.9 mm	18 mm	17.9 mm	-	-	-
6 mm ² + 2.5 mm ²	15 mm	-	-	-	-	-
10 mm ²	-	-	22 mm	-	-	-
16 mm ²	-	-	23.1 mm	-	-	-
Resolver	-	-	-	9.3 mm	-	-
Encoder	-	-	-	10.8 mm	-	-
EnDat	-	-	-	12.6 mm	-	-

Products

Mains cables

Connection cable, 2.5 ... 6 mm², with Han Q4/2 connector: Mains - drive

Type	Cable structure	Laying system	Locking type	Connection		Minimum length			ID
			A side	A side	B side				
	[mm ²]					[m]			
EYB0096	4x2.5	Fixed	Plug-in lock	Han Q4/2 (H23)	Open (A00)	1			
EYB0105	4x2.5	Drain chain	Plug-in lock	Han Q4/2 (H23)	Open (A00)	1			
EYB0096	4x2.5	Fixed	Plug-in lock 45°	Han Q4/2 (H24)	Open (A00)	1			
EYB0105	4x2.5	Drain chain	Plug-in lock 45°	Han Q4/2 (H24)	Open (A00)	1			
EYB0097	4x2.5 +2x2.5	Fixed	Plug-in lock	Han Q4/2 (H23)	Open (A00)	1			
EYB0108	4x2.5 +2x2.5	Drain chain	Plug-in lock	Han Q4/2 (H23)	Open (A00)	1			
EYB0097	4x2.5 +2x2.5	Fixed	Plug-in lock 45°	Han Q4/2 (H24)	Open (A00)	1			
EYB0108	4x2.5 +2x2.5	Drain chain	Plug-in lock 45°	Han Q4/2 (H24)	Open (A00)	1			
EYB0098	4x4	Fixed	Plug-in lock	Han Q4/2 (H23)	Open (A00)	1			
EYB0106	4x4	Drain chain	Plug-in lock	Han Q4/2 (H23)	Open (A00)	1			
EYB0098	4x4	Fixed	Plug-in lock 45°	Han Q4/2 (H24)	Open (A00)	1			
EYB0106	4x4	Drain chain	Plug-in lock 45°	Han Q4/2 (H24)	Open (A00)	1			
EYB0099	4x4 +2x2.5	Fixed	Plug-in lock	Han Q4/2 (H23)	Open (A00)	1			
EYB0109	4x4 +2x2.5	Drain chain	Plug-in lock	Han Q4/2 (H23)	Open (A00)	1			
EYB0099	4x4 +2x2.5	Fixed	Plug-in lock 45°	Han Q4/2 (H24)	Open (A00)	1			
EYB0109	4x4 +2x2.5	Drain chain	Plug-in lock 45°	Han Q4/2 (H24)	Open (A00)	1			
EYB0100	4x6	Fixed	Plug-in lock	Han Q4/2 (H23)	Open (A00)	1			
EYB0107	4x6	Drain chain	Plug-in lock	Han Q4/2 (H23)	Open (A00)	1			
EYB0100	4x6	Fixed	Plug-in lock 45°	Han Q4/2 (H24)	Open (A00)	1			
EYB0107	4x6	Drain chain	Plug-in lock 45°	Han Q4/2 (H24)	Open (A00)	1			
EYB0101	4x6 +2x2.5	Fixed	Plug-in lock	Han Q4/2 (H23)	Open (A00)	1			
EYB0110	4x6 +2x2.5	Drain chain	Plug-in lock	Han Q4/2 (H23)	Open (A00)	1			
EYB0101	4x6 +2x2.5	Fixed	Plug-in lock 45°	Han Q4/2 (H24)	Open (A00)	1			
EYB0110	4x6 +2x2.5	Drain chain	Plug-in lock 45°	Han Q4/2 (H24)	Open (A00)	1			



Extension, 2.5 ... 6 mm², with Han Q4/2 connector: Drive - drive

Type	Cable structure	Laying system	Locking type		Connection		Minimum length				ID
	[mm ²]		A side	B side	A side	B side	[m]				
EYB0096	4x2.5	Fixed	Plug-in lock	Plug-in lock	Han Q4/2 (H23)	Han Q4/2 (Q14)	1				
EYB0105	4x2.5	Drain chain	Plug-in lock	Plug-in lock	Han Q4/2 (H23)	Han Q4/2 (Q14)	1				
EYB0096	4x2.5	Fixed	Plug-in lock 45°	Plug-in lock 45°	Han Q4/2 (H24)	Han Q4/2 (Q15)	1				
EYB0105	4x2.5	Drain chain	Plug-in lock 45°	Plug-in lock 45°	Han Q4/2 (H24)	Han Q4/2 (Q15)	1				
EYB0097	4x2.5 +2x2.5	Fixed	Plug-in lock	Plug-in lock	Han Q4/2 (H23)	Han Q4/2 (Q14)	1				
EYB0108	4x2.5 +2x2.5	Drain chain	Plug-in lock	Plug-in lock	Han Q4/2 (H23)	Han Q4/2 (Q14)	1				
EYB0097	4x2.5 +2x2.5	Fixed	Plug-in lock 45°	Plug-in lock 45°	Han Q4/2 (H24)	Han Q4/2 (Q15)	1				
EYB0108	4x2.5 +2x2.5	Drain chain	Plug-in lock 45°	Plug-in lock 45°	Han Q4/2 (H24)	Han Q4/2 (Q15)	1				
EYB0098	4x4	Fixed	Plug-in lock	Plug-in lock	Han Q4/2 (H23)	Han Q4/2 (Q14)	1				
EYB0106	4x4	Drain chain	Plug-in lock	Plug-in lock	Han Q4/2 (H23)	Han Q4/2 (Q14)	1				
EYB0098	4x4	Fixed	Plug-in lock 45°	Plug-in lock 45°	Han Q4/2 (H24)	Han Q4/2 (Q15)	1				
EYB0106	4x4	Drain chain	Plug-in lock 45°	Plug-in lock 45°	Han Q4/2 (H24)	Han Q4/2 (Q15)	1				
EYB0099	4x4 +2x2.5	Fixed	Plug-in lock	Plug-in lock	Han Q4/2 (H23)	Han Q4/2 (Q14)	1				
EYB0109	4x4 +2x2.5	Drain chain	Plug-in lock	Plug-in lock	Han Q4/2 (H23)	Han Q4/2 (Q14)	1				
EYB0099	4x4 +2x2.5	Fixed	Plug-in lock 45°	Plug-in lock 45°	Han Q4/2 (H24)	Han Q4/2 (Q15)	1				
EYB0109	4x4 +2x2.5	Drain chain	Plug-in lock 45°	Plug-in lock 45°	Han Q4/2 (H24)	Han Q4/2 (Q15)	1				
EYB0100	4x6	Fixed	Plug-in lock	Plug-in lock	Han Q4/2 (H23)	Han Q4/2 (Q14)	1				
EYB0107	4x6	Drain chain	Plug-in lock	Plug-in lock	Han Q4/2 (H23)	Han Q4/2 (Q14)	1				
EYB0100	4x6	Fixed	Plug-in lock 45°	Plug-in lock 45°	Han Q4/2 (H24)	Han Q4/2 (Q15)	1				
EYB0107	4x6	Drain chain	Plug-in lock 45°	Plug-in lock 45°	Han Q4/2 (H24)	Han Q4/2 (Q15)	1				
EYB0101	4x6 +2x2.5	Fixed	Plug-in lock	Plug-in lock	Han Q4/2 (H23)	Han Q4/2 (Q14)	1				
EYB0110	4x6 +2x2.5	Drain chain	Plug-in lock	Plug-in lock	Han Q4/2 (H23)	Han Q4/2 (Q14)	1				
EYB0101	4x6 +2x2.5	Fixed	Plug-in lock 45°	Plug-in lock 45°	Han Q4/2 (H24)	Han Q4/2 (Q15)	1				
EYB0110	4x6 +2x2.5	Drain chain	Plug-in lock 45°	Plug-in lock 45°	Han Q4/2 (H24)	Han Q4/2 (Q15)	1				

Options

Type	Additional cable lengths, fixed laying
EYB0096	1.5 m, 2 m, 2.5 m, 3 m, 4 m, 5 m, 6 m, 7.5 m, 8 m, 10 m, 15 m, 20 m, 25 m, 30 m, 35 m, 40 m, 50 m
EYB0097	1.5 m, 2 m, 2.5 m, 3 m, 4 m, 5 m, 6 m, 7.5 m, 8 m, 10 m, 15 m, 20 m, 25 m, 30 m, 35 m, 40 m, 50 m
EYB0098	1.5 m, 2 m, 2.5 m, 3 m, 4 m, 5 m, 6 m, 7.5 m, 8 m, 10 m, 15 m, 20 m, 25 m, 30 m, 35 m, 40 m, 50 m
EYB0099	1.5 m, 2 m, 2.5 m, 3 m, 4 m, 5 m, 6 m, 7.5 m, 8 m, 10 m, 15 m, 20 m, 25 m, 30 m, 35 m, 40 m, 50 m
EYB0100	1.5 m, 2 m, 2.5 m, 3 m, 4 m, 5 m, 6 m, 7.5 m, 8 m, 10 m, 15 m, 20 m, 25 m, 30 m, 35 m, 40 m, 50 m
EYB0101	1.5 m, 2 m, 2.5 m, 3 m, 4 m, 5 m, 6 m, 7.5 m, 8 m, 10 m, 15 m, 20 m, 25 m, 30 m, 35 m, 40 m, 50 m
EYB0105	1.5 m, 2 m, 2.5 m, 3 m, 4 m, 5 m, 6 m, 7.5 m, 8 m, 10 m, 15 m, 20 m, 25 m, 30 m, 35 m, 40 m, 50 m
EYB0106	1.5 m, 2 m, 2.5 m, 3 m, 4 m, 5 m, 6 m, 7.5 m, 8 m, 10 m, 15 m, 20 m, 25 m, 30 m, 35 m, 40 m, 50 m
EYB0107	1.5 m, 2 m, 2.5 m, 3 m, 4 m, 5 m, 6 m, 7.5 m, 8 m, 10 m, 15 m, 20 m, 25 m, 30 m, 35 m, 40 m, 50 m
EYB0108	1.5 m, 2 m, 2.5 m, 3 m, 4 m, 5 m, 6 m, 7.5 m, 8 m, 10 m, 15 m, 20 m, 25 m, 30 m, 35 m, 40 m, 50 m
EYB0109	1.5 m, 2 m, 2.5 m, 3 m, 4 m, 5 m, 6 m, 7.5 m, 8 m, 10 m, 15 m, 20 m, 25 m, 30 m, 35 m, 40 m, 50 m
EYB0110	1.5 m, 2 m, 2.5 m, 3 m, 4 m, 5 m, 6 m, 7.5 m, 8 m, 10 m, 15 m, 20 m, 25 m, 30 m, 35 m, 40 m, 50 m

Connection cable, 2.5 mm², with M15 connector: Mains - Lenze Smart Motor, mains - drive

Type	Cable structure	Laying system	Locking type	Connection		Minimum length			ID
			A side	A side	B side				
	[mm ²]					[m]			
EYB0096	4x2.5	Fixed	Screw lock	M15 (D03)	Open (A00)	1			
EYB0096	4x2.5	Fixed	Screw lock 90° l	M15 (D04)	Open (A00)	1			
EYB0096	4x2.5	Fixed	Screw lock 90° r	M15 (D05)	Open (A00)	1			

Extension, 2.5 mm², with M15 connector: Drive - drive

Type	Cable structure	Laying system	Locking type		Connection		Minimum length			ID
			A side	B side	A side	B side				
	[mm ²]						[m]			
EYB0096	4x2.5	Fixed	Screw lock	Screw lock	M15 (D03)	M15 (B05)	1			
EYB0096	4x2.5	Fixed	Screw lock	Screw lock 90° l	M15 (D03)	M15 (B06)	1			
EYB0096	4x2.5	Fixed	Screw lock	Screw lock 90° r	M15 (D03)	M15 (B07)	1			
EYB0096	4x2.5	Fixed	Screw lock 90° l	Screw lock	M15 (D04)	M15 (B05)	1			
EYB0096	4x2.5	Fixed	Screw lock 90° l	Screw lock 90° l	M15 (D04)	M15 (B06)	1			
EYB0096	4x2.5	Fixed	Screw lock 90° l	Screw lock 90° r	M15 (D04)	M15 (B07)	1			
EYB0096	4x2.5	Fixed	Screw lock 90° r	Screw lock	M15 (D05)	M15 (B05)	1			
EYB0096	4x2.5	Fixed	Screw lock 90° r	Screw lock 90° l	M15 (D05)	M15 (B06)	1			
EYB0096	4x2.5	Fixed	Screw lock 90° r	Screw lock 90° r	M15 (D05)	M15 (B07)	1			

Options

Type	Additional cable lengths, fixed laying
EYB0096	1.5 m, 2 m, 2.5 m, 3 m, 4 m, 5 m, 6 m, 7.5 m, 8 m, 10 m, 15 m, 20 m, 25 m, 30 m, 35 m, 40 m, 50 m



OCT motor cables – One Cable Technology

Connection cable, 1.5 ... 6 mm², with M23 and M40 connector: Drive - motor

Type	Cable structure	Laying system	Locking type	Connection		Minimum length			ID
			A side	A side	B side				
	[mm ²]					[m]			
EYP0102	4x1.5 + (2x0.75) + (2x0.32)	Fixed	Bayonet lock	M23 (M13)	Open (A00)	1			
EYP0080	4x1.5 + (2x0.75) + (2x0.32)	Drain chain	Bayonet lock	M23 (M13)	Open (A00)	1			
EYP0103	4x2.5 + (2x1) + (2x0.32)	Fixed	Bayonet lock	M23 (M13)	Open (A00)	1			
EYP0081	4x2.5 + (2x1) + (2x0.32)	Drain chain	Bayonet lock	M23 (M13)	Open (A00)	1			
EYP0087	4x4 + (2x1) + (2x0.32)	Fixed	Bayonet lock	M40 (M12)	Open (A00)	1			
EYP0085	4x4 + (2x1) + (2x0.32)	Drain chain	Bayonet lock	M40 (M12)	Open (A00)	1			
EYP0088	4x6 + (2x1) + (2x0.32)	Fixed	Bayonet lock	M40 (M12)	Open (A00)	1			
EYP0086	4x6 + (2x1) + (2x0.32)	Drain chain	Bayonet lock	M40 (M12)	Open (A00)	1			

Extension, 1.5 ... 6 mm², with M23 and M40 connector: Connector - motor

Type	Cable structure	Laying system	Locking type	Connection		Minimum length			ID
			A side	B side	A side	B side			
	[mm ²]						[m]		
EYP0102	4x1.5 + (2x0.75) + (2x0.32)	Fixed	Bayonet lock		M23 (M13)	M23 (P13)	1		
EYP0080	4x1.5 + (2x0.75) + (2x0.32)	Drain chain	Bayonet lock		M23 (M13)	M23 (P13)	1		
EYP0103	4x2.5 + (2x1) + (2x0.32)	Fixed	Bayonet lock		M23 (M13)	M23 (P13)	1		
EYP0081	4x2.5 + (2x1) + (2x0.32)	Drain chain	Bayonet lock		M23 (M13)	M23 (P13)	1		
EYP0087	4x4 + (2x1) + (2x0.32)	Fixed	Bayonet lock		M40 (M12)	M40 (P12)	1		
EYP0085	4x4 + (2x1) + (2x0.32)	Drain chain	Bayonet lock		M40 (M12)	M40 (P12)	1		
EYP0088	4x6 + (2x1) + (2x0.32)	Fixed	Bayonet lock		M40 (M12)	M40 (P12)	1		
EYP0086	4x6 + (2x1) + (2x0.32)	Drain chain	Bayonet lock		M40 (M12)	M40 (P12)	1		

Options

Type	Additional cable lengths, fixed laying
EYP0080	1.5 m, 2 m, 2.5 m, 3 m, 4 m, 5 m, 6 m, 7.5 m, 8 m, 10 m, 15 m, 20 m, 25 m, 30 m, 35 m, 40 m, 50 m
EYP0081	1.5 m, 2 m, 2.5 m, 3 m, 4 m, 5 m, 6 m, 7.5 m, 8 m, 10 m, 15 m, 20 m, 25 m, 30 m, 35 m, 40 m, 50 m
EYP0085	1.5 m, 2 m, 2.5 m, 3 m, 4 m, 5 m, 6 m, 7.5 m, 8 m, 10 m, 15 m, 20 m, 25 m, 30 m, 35 m, 40 m, 50 m
EYP0086	1.5 m, 2 m, 2.5 m, 3 m, 4 m, 5 m, 6 m, 7.5 m, 8 m, 10 m, 15 m, 20 m, 25 m, 30 m, 35 m, 40 m, 50 m
EYP0087	1.5 m, 2 m, 2.5 m, 3 m, 4 m, 5 m, 6 m, 7.5 m, 8 m, 10 m, 15 m, 20 m, 25 m, 30 m, 35 m, 40 m, 50 m
EYP0088	1.5 m, 2 m, 2.5 m, 3 m, 4 m, 5 m, 6 m, 7.5 m, 8 m, 10 m, 15 m, 20 m, 25 m, 30 m, 35 m, 40 m, 50 m
EYP0102	1.5 m, 2 m, 2.5 m, 3 m, 4 m, 5 m, 6 m, 7.5 m, 8 m, 10 m, 15 m, 20 m, 25 m, 30 m, 35 m, 40 m, 50 m
EYP0103	1.5 m, 2 m, 2.5 m, 3 m, 4 m, 5 m, 6 m, 7.5 m, 8 m, 10 m, 15 m, 20 m, 25 m, 30 m, 35 m, 40 m, 50 m

Motor cables, 6-pole

Connection cable, 1 ... 16 mm², with M23 and M40 connector: Drive - motor

Type	Cable structure	Laying system	Locking type	Connection		Minimum length			ID
			A side	A side	B side				
	[mm ²]					[m]			
EYP0003	4x1 + (2x0.5)	Fixed	Screw lock	M23 (M01)	Open (A00)	1			
EYP0003	4x1 + (2x0.5)	Fixed	Bayonet lock	M23 (M04)	Open (A00)	1			
EYP0010	4x1 + (2x0.5)	Drain chain	Screw lock	M23 (M01)	Open (A00)	1			
EYP0010	4x1 + (2x0.5)	Drain chain	Bayonet lock	M23 (M04)	Open (A00)	1			
EYP0004	4x1.5 + (2x0.5)	Fixed	Screw lock	M23 (M01)	Open (A00)	1			
EYP0004	4x1.5 + (2x0.5)	Fixed	Bayonet lock	M23 (M04)	Open (A00)	1			
EYP0011	4x1.5 + (2x0.5)	Drain chain	Screw lock	M23 (M01)	Open (A00)	1			
EYP0011	4x1.5 + (2x0.5)	Drain chain	Bayonet lock	M23 (M04)	Open (A00)	1			
EYP0005	4x2.5 + (2x0.5)	Fixed	Screw lock	M23 (M01)	Open (A00)	1			
EYP0005	4x2.5 + (2x0.5)	Fixed	Bayonet lock	M23 (M04)	Open (A00)	1			
EYP0012	4x2.5 + (2x0.5)	Drain chain	Screw lock	M23 (M01)	Open (A00)	1			
EYP0012	4x2.5 + (2x0.5)	Drain chain	Bayonet lock	M23 (M04)	Open (A00)	1			
EYP0006	4x4 + (2x1)	Fixed	Screw lock	M40 (M02)	Open (A00)	1			
EYP0006	4x4 + (2x1)	Fixed	Bayonet lock	M40 (M05)	Open (A00)	1			
EYP0053	4x4+ (2x0.24) + (2x1)	Drain chain	Screw lock	M40 (M02)	Open (A00)	1			
EYP0053	4x4 + (2x0.24) + (2x1)	Drain chain	Bayonet lock	M40 (M05)	Open (A00)	1			
EYP0007	4x6 + (2x1)	Fixed	Screw lock	M40 (M02)	Open (A00)	1			
EYP0007	4x6 + (2x1)	Fixed	Bayonet lock	M40 (M05)	Open (A00)	1			
EYP0054	4x6 + (2x0.24) + (2x1)	Drain chain	Screw lock	M40 (M02)	Open (A00)	1			
EYP0054	4x6 + (2x0.24) + (2x1)	Drain chain	Bayonet lock	M40 (M05)	Open (A00)	1			
EYP0008	4x10 + (2x1)	Fixed	Screw lock	M40 (M02)	Open (A00)	1			
EYP0008	4x10 + (2x1)	Fixed	Bayonet lock	M40 (M05)	Open (A00)	1			
EYP0055	4x10 + (2x1) + (4x1)	Drain chain	Screw lock	M40 (M02)	Open (A00)	1			
EYP0055	4x10 + (2x1) + (4x1)	Drain chain	Bayonet lock	M40 (M05)	Open (A00)	1			
EYP0009	4x16 + (2x1)	Fixed	Screw lock	M40 (M02)	Open (A00)	1			
EYP0009	4x16 + (2x1)	Fixed	Bayonet lock	M40 (M05)	Open (A00)	1			
EYP0016	4x16 + (2x1.5)	Drain chain	Screw lock	M40 (M02)	Open (A00)	1			
EYP0016	4x16 + (2x1.5)	Drain chain	Bayonet lock	M40 (M05)	Open (A00)	1			



Extension, 1 ... 16 mm², with M23 and M40 connector: Connector - motor

Type	Cable structure	Laying system	Locking type		Connection		Minimum length			ID
			A side	B side	A side	B side				
	[mm ²]						[m]			
EYP0003	4x1 + (2x0.5)	Fixed	Screw lock		M23 (M01)	M23 (P01)	1			
EYP0003	4x1 + (2x0.5)	Fixed	Bayonet lock		M23 (M04)	M23 (P04)	1			
EYP0010	4x1 + (2x0.5)	Drain chain	Screw lock		M23 (M01)	M23 (P01)	1			
EYP0010	4x1 + (2x0.5)	Drain chain	Bayonet lock		M23 (M04)	M23 (P04)	1			
EYP0004	4x1.5 + (2x0.5)	Fixed	Screw lock		M23 (M01)	M23 (P01)	1			
EYP0004	4x1.5 + (2x0.5)	Fixed	Bayonet lock		M23 (M04)	M23 (P04)	1			
EYP0011	4x1.5 + (2x0.5)	Drain chain	Screw lock		M23 (M01)	M23 (P01)	1			
EYP0011	4x1.5 + (2x0.5)	Drain chain	Bayonet lock		M23 (M04)	M23 (P04)	1			
EYP0005	4x2.5 + (2x0.5)	Fixed	Screw lock		M23 (M01)	M23 (P01)	1			
EYP0005	4x2.5 + (2x0.5)	Fixed	Bayonet lock		M23 (M04)	M23 (P04)	1			
EYP0012	4x2.5 + (2x0.5)	Drain chain	Screw lock		M23 (M01)	M23 (P01)	1			
EYP0012	4x2.5 + (2x0.5)	Drain chain	Bayonet lock		M23 (M04)	M23 (P04)	1			
EYP0006	4x4 + (2x1)	Fixed	Screw lock		M40 (M02)	M40 (P02)	1			
EYP0006	4x4 + (2x1)	Fixed	Bayonet lock		M40 (M05)	M40 (P05)	1			
EYP0053	4x4+ (2x0.24) + (2x1)	Drain chain	Screw lock		M40 (M02)	M40 (P02)	1			
EYP0053	4x4 + (2x0.24) + (2x1)	Drain chain	Bayonet lock		M40 (M05)	M40 (P05)	1			
EYP0007	4x6 + (2x1)	Fixed	Screw lock		M40 (M02)	M40 (P02)	1			
EYP0007	4x6 + (2x1)	Fixed	Bayonet lock		M40 (M05)	M40 (P05)	1			
EYP0054	4x6 + (2x0.24) + (2x1)	Drain chain	Screw lock		M40 (M02)	M40 (P02)	1			
EYP0054	4x6 + (2x0.24) + (2x1)	Drain chain	Bayonet lock		M40 (M05)	M40 (P05)	1			
EYP0008	4x10 + (2x1)	Fixed	Screw lock		M40 (M02)	M40 (P02)	1			
EYP0008	4x10 + (2x1)	Fixed	Bayonet lock		M40 (M05)	M40 (P05)	1			
EYP0055	4x10 + (2x1) + (4x1)	Drain chain	Screw lock		M40 (M02)	M40 (P02)	1			
EYP0055	4x10 + (2x1) + (4x1)	Drain chain	Bayonet lock		M40 (M05)	M40 (P05)	1			
EYP0009	4x16 + (2x1)	Fixed	Screw lock		M40 (M02)	M40 (P02)	1			
EYP0009	4x16 + (2x1)	Fixed	Bayonet lock		M40 (M05)	M40 (P05)	1			
EYP0016	4x16 + (2x1.5)	Drain chain	Screw lock		M40 (M02)	M40 (P02)	1			
EYP0016	4x16 + (2x1.5)	Drain chain	Bayonet lock		M40 (M05)	M40 (P05)	1			

Options

Type	Additional cable lengths, fixed laying
EYP0003	1.5 m, 2 m, 2.5 m, 3 m, 4 m, 5 m, 6 m, 7.5 m, 8 m, 10 m, 15 m, 20 m, 25 m, 30 m, 35 m, 40 m, 50 m
EYP0004	1.5 m, 2 m, 2.5 m, 3 m, 4 m, 5 m, 6 m, 7.5 m, 8 m, 10 m, 15 m, 20 m, 25 m, 30 m, 35 m, 40 m, 50 m
EYP0005	1.5 m, 2 m, 2.5 m, 3 m, 4 m, 5 m, 6 m, 7.5 m, 8 m, 10 m, 15 m, 20 m, 25 m, 30 m, 35 m, 40 m, 50 m
EYP0006	1.5 m, 2 m, 2.5 m, 3 m, 4 m, 5 m, 6 m, 7.5 m, 8 m, 10 m, 15 m, 20 m, 25 m, 30 m, 35 m, 40 m, 50 m
EYP0007	1.5 m, 2 m, 2.5 m, 3 m, 4 m, 5 m, 6 m, 7.5 m, 8 m, 10 m, 15 m, 20 m, 25 m, 30 m, 35 m, 40 m, 50 m
EYP0008	1.5 m, 2 m, 2.5 m, 3 m, 4 m, 5 m, 6 m, 7.5 m, 8 m, 10 m, 15 m, 20 m, 25 m, 30 m, 35 m, 40 m, 50 m
EYP0009	1.5 m, 2 m, 2.5 m, 3 m, 4 m, 5 m, 6 m, 7.5 m, 8 m, 10 m, 15 m, 20 m, 25 m, 30 m, 35 m, 40 m, 50 m
EYP0010	1.5 m, 2 m, 2.5 m, 3 m, 4 m, 5 m, 6 m, 7.5 m, 8 m, 10 m, 15 m, 20 m, 25 m, 30 m, 35 m, 40 m, 50 m
EYP0011	1.5 m, 2 m, 2.5 m, 3 m, 4 m, 5 m, 6 m, 7.5 m, 8 m, 10 m, 15 m, 20 m, 25 m, 30 m, 35 m, 40 m, 50 m
EYP0012	1.5 m, 2 m, 2.5 m, 3 m, 4 m, 5 m, 6 m, 7.5 m, 8 m, 10 m, 15 m, 20 m, 25 m, 30 m, 35 m, 40 m, 50 m
EYP0016	1.5 m, 2 m, 2.5 m, 3 m, 4 m, 5 m, 6 m, 7.5 m, 8 m, 10 m, 15 m, 20 m, 25 m, 30 m, 35 m, 40 m, 50 m
EYP0053	1.5 m, 2 m, 2.5 m, 3 m, 4 m, 5 m, 6 m, 7.5 m, 8 m, 10 m, 15 m, 20 m, 25 m, 30 m, 35 m, 40 m, 50 m
EYP0054	1.5 m, 2 m, 2.5 m, 3 m, 4 m, 5 m, 6 m, 7.5 m, 8 m, 10 m, 15 m, 20 m, 25 m, 30 m, 35 m, 40 m, 50 m
EYP0055	1.5 m, 2 m, 2.5 m, 3 m, 4 m, 5 m, 6 m, 7.5 m, 8 m, 10 m, 15 m, 20 m, 25 m, 30 m, 35 m, 40 m, 50 m





Motor cables, 8-pole

Connection cable, 1.5 ... 2.5 mm², with M23 connector: Drive - motor

Type	Cable structure	Laying system	Locking type		Connection		Minimum length			ID
			A side	B side	A side	B side				
	[mm ²]						[m]			
EYP0037	4x1.5 + (2x0.22) + (2x0.5)	Fixed	Screw lock		M23 (M07)	Open (A00)	1			
EYP0037	4x1.5 + (2x0.22) + (2x0.5)	Fixed	Bayonet lock		M23 (M08)	Open (A00)	1			
EYP0037	4x1.5 + (2x0.22) + (2x0.5)	Fixed	Screw lock		M23 (M07)	M23 (P07)	1			
EYP0037	4x1.5 + (2x0.22) + (2x0.5)	Fixed	Bayonet lock		M23 (M08)	M23 (P07)	1			
EYP0037	4x1.5 + (2x0.22) + (2x0.5)	Fixed	Screw lock	Plug-in lock	M23 (M07)	Han Q8 (Q10)	1			
EYP0037	4x1.5 + (2x0.22) + (2x0.5)	Fixed	Bayonet lock	Plug-in lock	M23 (M08)	Han Q8 (Q10)	1			
EYP0038	4x2.5 + (2x0.22) + (2x0.5)	Fixed	Screw lock		M23 (M07)	Open (A00)	1			
EYP0038	4x2.5 + (2x0.22) + (2x0.5)	Fixed	Bayonet lock		M23 (M08)	Open (A00)	1			
EYP0038	4x2.5 + (2x0.22) + (2x0.5)	Fixed	Screw lock		M23 (M07)	M23 (P07)	1			
EYP0038	4x2.5 + (2x0.22) + (2x0.5)	Fixed	Bayonet lock		M23 (M08)	M23 (P07)	1			
EYP0038	4x2.5 + (2x0.22) + (2x0.5)	Fixed	Screw lock	Plug-in lock	M23 (M07)	Han Q8 (Q10)	1			
EYP0038	4x2.5 + (2x0.22) + (2x0.5)	Fixed	Bayonet lock	Plug-in lock	M23 (M08)	Han Q8 (Q10)	1			

Extension, 1.5 ... 2.5 mm², with M23 connector: Connector - motor

Type	Cable structure	Laying system	Locking type		Connection		Minimum length			ID
			A side	B side	A side	B side				
	[mm ²]						[m]			
EYP0037	4x1.5 + (2x0.22) + (2x0.5)	Fixed	Screw lock		M23 (M07)	M23 (P07)	1			
EYP0037	4x1.5 + (2x0.22) + (2x0.5)	Fixed	Bayonet lock		M23 (M08)	M23 (P07)	1			
EYP0038	4x2.5 + (2x0.22) + (2x0.5)	Fixed	Screw lock		M23 (M07)	M23 (P07)	1			
EYP0038	4x2.5 + (2x0.22) + (2x0.5)	Fixed	Bayonet lock		M23 (M08)	M23 (P07)	1			

Options

Type	Additional cable lengths, fixed laying
EYP0037	1.5 m, 2 m, 2.5 m, 3 m, 4 m, 5 m, 6 m, 7.5 m, 8 m, 10 m, 15 m, 20 m, 25 m, 30 m, 35 m, 40 m, 50 m
EYP0038	1.5 m, 2 m, 2.5 m, 3 m, 4 m, 5 m, 6 m, 7.5 m, 8 m, 10 m, 15 m, 20 m, 25 m, 30 m, 35 m, 40 m, 50 m

Feedback cables

Resolver connection cable with Sub-D and M23 connector: Drive - motor

Type	Cable structure	Laying system	Locking type		Connection		Minimum length [m]			ID
	[mm²]		A side	B side	A side	B side				
EYF0017	3 (2x0.14) + (3x0.14)	Fixed	Screw lock	Screw lock	M23 (F01)	Sub-D (S01)	1			
EYF0017	3 (2x0.14) + (3x0.14)	Fixed	Bayonet lock	Locking tab	M23 (F05)	Sub-D (S02)	1			
EYF0020	3 (2x0.14) + (3x0.14)	Drain chain	Screw lock	Screw lock	M23 (F01)	Sub-D (S01)	1			
EYF0020	3 (2x0.14) + (3x0.14)	Drain chain	Bayonet lock	Locking tab	M23 (F05)	Sub-D (S02)	1			

Encoder connection cable with Sub-D and M23 connector: Drive - motor

Type	Cable structure	Laying system	Locking type		Connection		Minimum length [m]			ID
	[mm²]		A side	B side	A side	B side				
EYF0018	4 (2x0.14) + (2x1)	Fixed	Screw lock	Screw lock	M23 (F02)	Sub-D (S11)	1			
EYF0018	4 (2x0.14) + (2x1)	Fixed	Bayonet lock	Locking tab	M23 (F06)	Sub-D (S03)	1			
EYF0019	4 (2x0.14) + (2x1)	Drain chain	Screw lock	Screw lock	M23 (F02)	Sub-D (S11)	1			
EYF0019	4 (2x0.14) + (2x1)	Drain chain	Bayonet lock	Locking tab	M23 (F06)	Sub-D (S03)	1			

EnDat connection cable with Sub-D and M23 connector: Drive - motor

Type	Cable structure	Laying system	Locking type		Connection		Minimum length [m]			ID
	[mm²]		A side	B side	A side	B side				
EYF0021	3 (2x0.14) + (2x0.5) + (4x0.14)	Fixed	Screw lock	Screw lock	M23 (F03)	Sub-D (S11)	1			
EYF0021	3 (2x0.14) + (2x0.5) + (4x0.14)	Fixed	Bayonet lock	Locking tab	M23 (F07)	Sub-D (S03)	1			
EYF0024	3 (2x0.14) + (2x0.5) + (4x0.14)	Drain chain	Screw lock	Screw lock	M23 (F03)	Sub-D (S11)	1			in preparation
EYF0024	3 (2x0.14) + (2x0.5) + (4x0.14)	Drain chain	Bayonet lock	Locking tab	M23 (F07)	Sub-D (S03)	1			in preparation



Resolver extension with M23 connector: Connector - motor

Type	Cable structure	Laying system	Locking type		Connection		Minimum length			ID
			A side	B side	A side	B side				
	[mm²]						[m]			
EYF0017	3 (2x0.14) + (3x0.14)	Fixed	Screw lock		M23 (F01)	M23 (G01)	1			
EYF0017	3 (2x0.14) + (3x0.14)	Fixed	Bayonet lock		M23 (F05)	M23 (G06)	1			
EYF0020	3 (2x0.14) + (3x0.14)	Drain chain	Screw lock		M23 (F01)	M23 (G01)	1			
EYF0020	3 (2x0.14) + (3x0.14)	Drain chain	Bayonet lock		M23 (F05)	M23 (G06)	1			

Encoder extension with M23 connector: Connector - motor

Type	Cable structure	Laying system	Locking type		Connection		Minimum length			ID
			A side	B side	A side	B side				
	[mm²]						[m]			
EYF0018	4 (2x0.14) + (2x1)	Fixed	Screw lock		M23 (F02)	M23 (G02)	1			
EYF0018	4 (2x0.14) + (2x1)	Fixed	Bayonet lock		M23 (F06)	M23 (G07)	1			
EYF0019	4 (2x0.14) + (2x1)	Drain chain	Screw lock		M23 (F02)	M23 (G02)	1			
EYF0019	4 (2x0.14) + (2x1)	Drain chain	Bayonet lock		M23 (F06)	M23 (G07)	1			

Endat extension with M23 connector: Connector - motor

Type	Cable structure	Laying system	Locking type		Connection		Minimum length			ID
			A side	B side	A side	B side				
	[mm²]						[m]			
EYF0021	3 (2x0.14) + (2x0.5) + (4x0.14)	Fixed	Screw lock		M23 (F03)	M23 (G03)	1			
EYF0021	3 (2x0.14) + (2x0.5) + (4x0.14)	Fixed	Bayonet lock		M23 (F07)	M23 (G08)	1			
EYF0024	3 (2x0.14) + (2x0.5) + (4x0.14)	Drain chain	Screw lock		M23 (F03)	M23 (G03)	1			
EYF0024	3 (2x0.14) + (2x0.5) + (4x0.14)	Drain chain	Bayonet lock		M23 (F07)	M23 (G08)	1			

Options

Type	Additional cable lengths, fixed laying
EYF0017	1.5 m, 2 m, 2.5 m, 3 m, 4 m, 5 m, 6 m, 7.5 m, 8 m, 10 m, 15 m, 20 m, 25 m, 30 m, 35 m, 40 m, 50 m
EYF0018	1.5 m, 2 m, 2.5 m, 3 m, 4 m, 5 m, 6 m, 7.5 m, 8 m, 10 m, 15 m, 20 m, 25 m, 30 m, 35 m, 40 m, 50 m
EYF0019	1.5 m, 2 m, 2.5 m, 3 m, 4 m, 5 m, 6 m, 7.5 m, 8 m, 10 m, 15 m, 20 m, 25 m, 30 m, 35 m, 40 m, 50 m
EYF0020	1.5 m, 2 m, 2.5 m, 3 m, 4 m, 5 m, 6 m, 7.5 m, 8 m, 10 m, 15 m, 20 m, 25 m, 30 m, 35 m, 40 m, 50 m
EYF0021	1.5 m, 2 m, 2.5 m, 3 m, 4 m, 5 m, 6 m, 7.5 m, 8 m, 10 m, 15 m, 20 m, 25 m, 30 m, 35 m, 40 m, 50 m
EYF0024	1.5 m, 2 m, 2.5 m, 3 m, 4 m, 5 m, 6 m, 7.5 m, 8 m, 10 m, 15 m, 20 m, 25 m, 30 m, 35 m, 40 m, 50 m

Blower cables

1 x AC 230 V connection cable with M17 connector: Drive - motor

Type	Cable structure	Laying system	Locking type	Connection		Minimum length			ID
			A side	A side	B side				
	[mm²]					[m]			
EYL0001	5x1	Fixed	Screw lock	M17 (L02)	Open (A00)	1			
EYL0001	5x1	Fixed	Bayonet lock	M17 (L04)	Open (A00)	1			
EYL0002	5x1	Drain chain	Screw lock	M17 (L02)	Open (A00)	1			
EYL0002	5x1	Drain chain	Bayonet lock	M17 (L04)	Open (A00)	1			

3 x AC 400 V connection cable with M17 connector: Drive - motor

Type	Cable structure	Laying system	Locking type	Connection		Minimum length			ID
			A side	A side	B side				
	[mm²]					[m]			
EYL0001	5x1	Fixed	Screw lock	M17 (L05)	Open (A00)	1			
EYL0001	5x1	Fixed	Bayonet lock	M17 (L06)	Open (A00)	1			
EYL0002	5x1	Drain chain	Screw lock	M17 (L05)	Open (A00)	1			
EYL0002	5x1	Drain chain	Bayonet lock	M17 (L06)	Open (A00)	1			

1 x AC 230 V extension with M17 connector: Connector - motor

Type	Cable structure	Laying system	Locking type		Connection		Minimum length			ID
			A side	B side	A side	B side				
	[mm²]						[m]			
EYL0001	5x1	Fixed	Screw lock		M17 (L02)	M17 (J02)	1			
EYL0001	5x1	Fixed	Bayonet lock		M17 (L04)	M17 (J04)	1			
EYL0002	5x1	Drain chain	Screw lock		M17 (L02)	M17 (J02)	1			
EYL0002	5x1	Drain chain	Bayonet lock		M17 (L04)	M17 (J04)	1			

3 x AC 400 V extension with M17 connector: Connector - motor

Type	Cable structure	Laying system	Locking type		Connection		Minimum length			ID
			A side	B side	A side	B side				
	[mm²]						[m]			
EYL0001	5x1	Fixed	Screw lock		M17 (L05)	M17 (J05)	1			
EYL0001	5x1	Fixed	Bayonet lock		M17 (L06)	M17 (J06)	1			
EYL0002	5x1	Drain chain	Screw lock		M17 (L05)	M17 (J05)	1			
EYL0002	5x1	Drain chain	Bayonet lock		M17 (L06)	M17 (J06)	1			

Options

Type	Additional cable lengths, fixed laying
EYL0001	1.5 m, 2 m, 2.5 m, 3 m, 4 m, 5 m, 6 m, 7.5 m, 8 m, 10 m, 15 m, 20 m, 25 m, 30 m, 35 m, 40 m, 50 m
EYL0002	1.5 m, 2 m, 2.5 m, 3 m, 4 m, 5 m, 6 m, 7.5 m, 8 m, 10 m, 15 m, 20 m, 25 m, 30 m, 35 m, 40 m, 50 m



Communication cables

Ethernet cable

Type	Laying system	Locking type		Connection		Cable length			ID
		A side	B side	A side	B side				
						[m]			
EYC00001-005	Fixed	Quick lock		RJ45	RJ45	0.5			13641901
EYC00001-010	Fixed	Quick lock		RJ45	RJ45	1			13641902
EYC00001-020	Fixed	Quick lock		RJ45	RJ45	2			13641903
EYC00001-030	Fixed	Quick lock		RJ45	RJ45	3			13641904
EYC00001-050	Fixed	Quick lock		RJ45	RJ45	5			13641905

EtherCAT cable

Type	Laying system	Locking type		Connection		Cable length			ID
		A side	B side	A side	B side				
						[m]			
EYC0000A0000X001/M	Fixed	Plug-in lock		RJ45	RJ45	0.25			13426067

USB cable

Type	Laying system	Locking type		Connection		Cable length			ID
		A side	B side	A side	B side				
						[m]			
EWL0085/S	Fixed	Plug-in lock		Micro - USB	USB - A	3			13501172
EWL0086/S	Fixed	Plug-in lock		Micro - USB	USB - A	5			13501173

Digital frequency cable

Type	Cable structure	Laying system	Locking type		Connection		Minimum length			ID
			A side	B side	A side	B side				
							[m]			
EYD0017	3 (2x0.14) + (3x0.14)	Fixed	Screw lock		Sub-D (W03)	Sub-D (S02)	0.2			13675725
EYD0017	3 (2x0.14) + (3x0.14)	Fixed	Screw lock		Sub-D (W03)	Sub-D (S02)	0.4			13675726

Connector sets

For custom cable assembly

Mains cables

	Cable structure	Laying system	A side connection							
	[mm ²]		Han Q4/2 (H23)			ID	Han Q4/2, angled (H24)			ID
EYB0096	4x2.5	fixed	EWS0122			13667896	EWS0125			13667899
EYB0097	4x2.5 + 2x2.5	fixed	EWS0122			13667896	EWS0125			13667899
EYB0098	4x4	fixed	EWS0123			13667897	EWS0126			13667900
EYB0099	4x4 + 2x2.5	fixed	EWS0123			13667897	EWS0126			13667900
EYB0100	4x6	fixed	EWS0124			13667898	EWS0127			13667901
EYB0101	4x6 + 2x2.5	fixed	EWS0124			13667898	EWS0127			13667901

	Cable structure	Laying system	B side connection							
	[mm²]		Han Q4/2 (Q14)			ID	Han Q4/2, angled (Q15)			ID
EYB0096	4x2.5	fixed	EWS0128			13667922	EWS0131			13667925
EYB0097	4x2.5 + 2x2.5	fixed	EWS0128			13667922	EWS0131			13667925
EYB0098	4x4	fixed	EWS0129			13667923	EWS0132			13667926
EYB0099	4x4 + 2x2.5	fixed	EWS0129			13667923	EWS0132			13667926
EYB0100	4x6	fixed	EWS0130			13667924	EWS0133			13667927
EYB0101	4x6 + 2x2.5	fixed	EWS0130			13667924	EWS0133			13667927



Motor cables, 6-pole

	Cable structure	Laying system	A side connection					
	[mm²]		M23 screw lock (M01)		ID	M23 bayonet lock (M04)		ID
EYP0003	4x2.5	Fixed	EWS0001	 	466134	EWS1001	 	13168057
EYP0010	4x1 + (2x0.5)	Drain chain	EWS0001	 	466134	EWS1001	 	13168057
EYP0004	4x1.5 + (2x0.5)	Fixed	EWS0001	 	466134	EWS1001	 	13168057
EYP0011	4x1.5 + (2x0.5)	Drain chain	EWS0001	 	466134	EWS1001	 	13168057
EYP0005	4x2.5 + (2x0.5)	Fixed	EWS0001	 	466134	EWS1001	 	13168057
EYP0012	4x2.5 + (2x0.5)	Drain chain	EWS0001	 	466134	EWS1001	 	13168057

	Cable structure	Laying system	A side connection					
	[mm²]		M40 screw lock (M02)		ID	M40 bayonet lock (M05)		ID
EYP0006	4x2.5	Fixed	EWS0012	 	13438594	EWS1012	 	13438601
EYP0053	4x4 + (2x0.24) + (2x1)	Drain chain	EWS0012	 	13438594	EWS1012	 	13438601
EYP0007	4x6 + (2x1)	Fixed	EWS0013	 	13438596	EWS1013	 	13438622
EYP0054	4x6 + (2x0.24) + (2x1)	Drain chain	EWS0013	 	13438596	EWS1013	 	13438622
EYP0008	4x10 + (2x1)	Fixed	EWS0013	 	13438596	EWS1013	 	13438622
EYP0055	4x10 + (2x1) + (4x1)	Drain chain	EWS0013	 	13438596	EWS1013	 	13438622
EYP0009	4x16 + (2x1)	Fixed	EWS0013	 	13438596	EWS1013	 	13438622
EYP0016	4x16 + (2x1.5)	Drain chain	EWS0013	 	13438596	EWS1013	 	13438622

	Cable structure	Laying system	B side connection					
	[mm²]		M23 screw lock (P01)		ID	M23 bayonet lock (P04)		ID
EYP0003	4x1 + (2x0.5)	Fixed	EWS0016	 	466314	EWS1016	 	13168130
EYP0010	4x1 + (2x0.5)	Drain chain	EWS0016	 	466314	EWS1016	 	13168130
EYP0004	4x1.5 + (2x0.5)	Fixed	EWS0016	 	466314	EWS1016	 	13168130
EYP0011	4x1.5 + (2x0.5)	Drain chain	EWS0016	 	466314	EWS1016	 	13168130
EYP0005	4x2.5 + (2x0.5)	Fixed	EWS0016	 	466314	EWS1016	 	13168130
EYP0012	4x2.5 + (2x0.5)	Drain chain	EWS0016	 	466314	EWS1016	 	13168130

	Cable structure	Laying system	B side connection					
	[mm²]		M40 screw lock (P02)		ID	M40 bayonet lock (P05)		ID
EYP0006	4x4 + (2x1)	Fixed	EWS0014	 	466316	EWS1014	 	13168129
EYP0053	4x4 + (2x0.24) + (2x1)	Drain chain	EWS0014	 	466316	EWS1014	 	13168129
EYP0007	4x6 + (2x1)	Fixed	EWS0015	 	13438600	EWS1015	 	13249456
EYP0054	4x6 + (2x0.24) + (2x1)	Drain chain	EWS0015	 	13438600	EWS1015	 	13249456
EYP0008	4x10 + (2x1)	Fixed	EWS0015	 	13438600	EWS1015	 	13249456
EYP0055	4x10 + (2x1) + (4x1)	Drain chain	EWS0015	 	13438600	EWS1015	 	13249456
EYP0009	4x16 + (2x1)	Fixed	EWS0015	 	13438600	EWS1015	 	13249456
EYP0016	4x16 + (2x1.5)	Drain chain	EWS0015	 	13438600	EWS1015	 	13249456

Motor cables, 8-pole

	Cable structure	Laying system	A side connection					
	[mm²]		M23 screw lock (M07, M08)		ID	M23 bayonet lock (M07, M08)		ID
EYP0037	4x1.5 + (2x0.22) + (2x0.5)	Fixed	EWS0008	 	13094250	EWS1008	 	13168097
EYP0038	4x2.5 + (2x0.22) + (2x0.5)	Fixed	EWS0008	 	13094250	EWS1008	 	13168097

	Cable structure	Laying system	B side connection					
	[mm²]		M23 screw lock (P07, P08)		ID	Han Q8 (Q10)		ID
EYP0037	4x1.5 + (2x0.22) + (2x0.5)	Fixed	EWS0080	 	13441486	EWS0079	 	13324928
EYP0038	4x2.5 + (2x0.22) + (2x0.5)	Fixed	EWS0080	 	13441486	EWS0079	 	13324928

Feedback cables

	Cable structure	Laying system	A side connection							
	[mm²]		M23 screw lock (F01, F02, F03)			ID	M23 bayonet lock (F05, F06, F07)			ID
EYF0017	3 (2x0.14) + (3x0.14)	Fixed	EWS0006			466283	EWS1006			13168174
EYF0020	3 (2x0.14) + (3x0.14)	Drain chain	EWS0006			466283	EWS1006			13168174
EYF0018	4 (2x0.14) + (2x1)	Fixed	EWS0010			466281	EWS1010			13168175
EYF0019	4 (2x0.14) + (2x1)	Drain chain	EWS0010			466281	EWS1010			13168175
EYF0021	3 (2x0.14) + (2x0.5) + (4x0.14)	Fixed	EWS0017			466510	EWS1017			13168181
EYF0024	3 (2x0.14) + (2x0.5) + (4x0.14)	Drain chain	EWS0017			466510	EWS1017			13168181

	Cable structure	Laying system	B side connection							
	[mm²]		M23 screw lock (G01, G02, G03)			ID	M23 bayonet lock (G06, G07, G08)			ID
EYF0017	3 (2x0.14) + (3x0.14)	Fixed	EWS0007			466285	EWS1007			13168176
EYF0020	3 (2x0.14) + (3x0.14)	Drain chain	EWS0007			466285	EWS1007			13168176
EYF0018	4 (2x0.14) + (2x1)	Fixed	EWS0011			466282	EWS1011			13168177
EYF0019	4 (2x0.14) + (2x1)	Drain chain	EWS0011			466282	EWS1011			13168177
EYF0021	3 (2x0.14) + (2x0.5) + (4x0.14)	Fixed	EWS0018			466512	EWS1018			13168193
EYF0024	3 (2x0.14) + (2x0.5) + (4x0.14)	Drain chain	EWS0018			466512	EWS1018			13168193

	Cable structure	Laying system	B side connection							
	[mm²]		SuB-D (S01, S11, S11)			ID	Sub-D, locking tab (S02, S03, S03)			ID
EYF0017	3 (2x0.14) + (3x0.14)	Fixed	EWZ0040			472907	EWZ0047			472662
EYF0020	3 (2x0.14) + (3x0.14)	Drain chain	EWZ0040			472907	EWZ0047			472662
EYF0018	4 (2x0.14) + (2x1)	Fixed					EWZ0048			472663
EYF0019	4 (2x0.14) + (2x1)	Drain chain					EWZ0048			472663
EYF0021	3 (2x0.14) + (2x0.5) + (4x0.14)	Fixed					EWZ0048			472663



	Cable structure	Laying system	B side connection					
	[mm ²]		SuB-D (S01, S11, S11)		ID	Sub-D, locking tab (S02, S03, S03)		ID
EYF0024	3 (2x0.14) + (2x0.5) + (4x0.14)	Drain chain				EWZ0048		472663

Blower cables

	Cable structure	Laying system	A side connection - 1 x 230 V					
	[mm ²]		M17 screw lock (L02)		ID	M17 bayonet lock (L04)		ID
EYL0001	5x1	Fixed	EWS0021		13123859	EWS1021		13168131
EYL0002	5x1	Drain chain	EWS0021		13123859	EWS1021		13168131

	Cable structure	Laying system	A side connection - 3 x 400 V					
	[mm ²]		M17 screw lock (L05)		ID	M17 bayonet lock (L06)		ID
EYL0001	5x1	Fixed	EWS0021		13123859	EWS1021		13168131
EYL0002	5x1	Drain chain	EWS0021		13123859	EWS1021		13168131

	Cable structure	Laying system	B side connection - 1 x 230 V					
	[mm ²]		M17 screw lock (J02)		ID	M17 bayonet lock (J04)		ID
EYL0001	5x1	Fixed	EWS0022		484913	EWS1022		13168173
EYL0002	5x1	Drain chain	EWS0022		484913	EWS1022		13168173

	Cable structure	Laying system	B side connection - 3 x 400 V					
	[mm ²]		M17 screw lock (J05)		ID	M17 bayonet lock (J06)		ID
EYL0001	5x1	Fixed	EWS0022		484913	EWS1022		13168173
EYL0002	5x1	Drain chain	EWS0022		484913	EWS1022		13168173

Project planning

Dimensioning conditions

The system cables are assembled so that they can be connected directly to the Lenze components. Coded cables are set correctly.

Assignment – drive/motor

The following must be observed for the motor cables:

- The cross-sectional allocation of the drives is based on standard criteria, but larger cross-sections can also be used.

Combination of system cables

		Connection cable		Extension	
Mains cables					
	Connection	Mains	Drives	Drives	Drives
	2.5 ... 6 mm²	open	Han Q4/2	Han Q4/2	Han Q4/2
	2.5 mm²	Open	M15	M15	M15
OCT motor cables					
	Connection	Drives	Motor	Extension	Motor
	1.5 ... 2.5 mm²	open	M23	M23	M23
	4 ... 6 mm²	open	M40	M40	M40
Motor cables, 6-pole					
	Connection	Drives	Motor	Extension	Motor
	1 ... 2.5 mm²	open	M23	M23	M23
	4 ... 16 mm²	open	M40	M40	M40
Motor cables, 8-pole					
	Connection	Drives	Motor	Extension	Motor
	1.5 ... 2.5 mm²	open	M23	M23	M23
	1.5 ... 2.5 mm²	HAN Q8	M23	M23	M23
Feedback cables					
	Connection	Drives	Motor	Extension	Motor
	Resolver	Sub-D	M23	M23	M23
	Encoder	Sub-D	M23	M23	M23
	EnDat	Sub-D	M23	M23	M23
Blower cables					
	Connection	Mains	Motor	Extension	Motor
	1 ph AC 230 V	Open	M17	M17	M17
	3 ph AC 400 V	open	M17	M17	M17



Operating conditions

The following system cable assignments comply with European Union regulations in accordance with DIN VDE 0298-4 for installation type C1 at an ambient temperature of 40 °C. Any deviating requirements are the responsibility of the user, taking into account the following points:

- Laws, standards and national and regional regulations may impose different requirements.
- Environmental and application regulations of the industries must also be considered.
- The way the cables are laid and the number of cables can have an effect on temperatures and current loads.





Mains connection

Mains cables for i550 motec and i650 motec VFDs

Mains	Drive		Mains cable	
	Type	Cable for	Connection	Cross-section
				[mm ²]
3 ph AC 230 V	i550-M0.37/230-3 ... i550-M5.5/230-3 i650-M0.37/230-3 ... i650-M5.5/230-3	0.37 ... 5.5 kW	Han Q4/2 connector	2.5
				4
				6
				2.5 + 2 x 2.5
				4 + 2 x 2.5
3 ph AC 400 V	i550-M0.37/400-3 ... i550-M11/400-3 i650-M0.37/400-3 ... i650-M11/400-3	0.37 ... 11 kW	Han Q4/2 connector	6 + 2 x 2.5
				2.5
				4
				6
				2.5 + 2 x 2.5
				4 + 2 x 2.5
				6 + 2 x 2.5

Mains cables for M300 Lenze Smart Motor

Mains	Drive		Mains cable	
	Type	Cable for	Connection	Cross-section
				[mm ²]
3 ph AC 400 V	MSEMAxx063-42	0.476 kW / 1.75 Nm	M15 connector	2.5
	MSEMAxx080-42	1.361 kW / 5 Nm	M15 connector	2.5

Motor connection for three-phase drives

Motor cable for m550 three-phase motors on 230 V drive

Drive	Motor		Motor cable	
	Type	Cable for	Connection	Cross-section
				[mm ²]
i510 cabinet i550 cabinet i550 protec	m550-H63/S4	Power, Thermal protection	M23 connector, 6-pole	1.5
	m550-H63/M4			1.5
	m550-H63/L4			1.5
	m550-H71/M4			1.5
	m550-H71/L4			1.5
	m550-P80/M4			1.5
	m550-P90/M4			1.5
	m550-P90/L4			1.5
	m550-P100/M4			1.5
	m550-P100/L4			1.5
	m550-P112/M4			2.5
	m550-P132/M4			2.5
	m550-H63/S4	Power, brake, Thermal protection	M23 connector, 8-pole	1.5
	m550-H63/M4			1.5
	m550-H63/L4			1.5
	m550-H71/M4			1.5
	m550-H71/L4			1.5
	m550-P80/M4			1.5
	m550-P90/M4			1.5
	m550-P90/L4			1.5
	m550-P100/M4			1.5
	m550-P100/L4			1.5
	m550-P112/M4			2.5
	m550-P132/M4			2.5
i550 motec i650 motec (wall mounting)	m550-H63/S4	Power, brake, Thermal protection	Han Q8 connector or M23 connector, 8-pole	1.5
	m550-H63/M4			1.5
	m550-H63/L4			1.5
	m550-H71/M4			1.5
	m550-H71/L4			1.5
	m550-P80/M4			1.5
	m550-P90/M4			1.5
	m550-P90/L4			1.5
	m550-P100/M4			1.5
	m550-P100/L4			1.5
	m550-P112/M4			2.5
	m550-P132/M4			2.5

Feedback cable for m550 three-phase AC motors

Drive	Motor		Feedback cable	
	Type	Cable for	Connection	Cross-section
				[mm ²]
i700 cabinet i750 cabinet i950 cabinet	m550	Resolver	Sub-D connector, M23 connector	-
	m550	Encoder	Sub-D connector, M23 connector	-

Blower cable for m550 three-phase AC motors

Mains	Motor		Blower cable	
	Type	Cable for	Connection	Cross-section
				[mm ²]
1 AC 230/240 V	m550	Blower 1 x 230 V	M17 connector, 4-pole	1
3 AC 400 V	m550	Blower 3 x 400 V	M17 connector, 5-pole	1



Motor cable for m550 three-phase motors on 400 V drive

Drive	Motor					Motor cable	
	Type				Cable for	Connection	Cross-section
							[mm²]
i510 cabinet i550 cabinet i550 protec	m550-H63/S4	m550-U63/L4	m650-V63/L4	m650-V63/L4	Power, Thermal protec- tion	M23 connector, 6-pole	1.5
	m550-H63/M4	m550-U71/M4	m650-V71/M4	m650-V71/M4			1.5
	m550-H63/L4	m550-U71/L4	m650-V71/L4	m650-V71/L4			1.5
	m550-H71/M4	m550-U80/M4	m650-V80/M4	m650-V80/M4			1.5
	m550-H71/L4	m550-U90/M4	m650-V90/M4	m650-V90/M4			1.5
	m550-P80/M4	m550-U90/L4	m650-V90/L4	m650-V90/L4			1.5
	m550-P90/M4	m550-U100/M4	m650-V100/M4	m650-V100/M4			1.5
	m550-P90/L4	m550-U100/L4	m650-V100/L4				1.5
	m550-P100/M4	m550-U112/M4	m550-V112/M4				1.5
	m550-P100/L4		m550-V132/M4				1.5
	m550-P112/M4						1.5
	m550-P132/M4						1.5
	m550-P132/L4	m550-U132/M4	m550-V132/L4	m650-V100/L4			2.5
	m550-P160/M4						2.5
	m550-H63/S4	m550-U63/L4	m650-V63/L4	m650-V63/L4	Power, brake, thermal protec- tion	M23 connector, 8-pole	1.5
	m550-H63/M4	m550-U71/M4	m650-V71/M4	m650-V71/M4			1.5
	m550-H63/L4	m550-U71/L4	m650-V71/L4	m650-V71/L4			1.5
	m550-H71/M4	m550-U80/M4	m650-V80/M4	m650-V80/M4			1.5
	m550-H71/L4	m550-U90/M4	m650-V90/M4	m650-V90/M4			1.5
	m550-P80/M4	m550-U90/L4	m650-V90/L4	m650-V90/L4			1.5
	m550-P90/M4	m550-U100/M4	m650-V100/M4	m650-V100/M4			1.5
	m550-P90/L4	m550-U100/L4	m650-V100/L4				1.5
	m550-P100/M4	m550-U112/M4	m550-V112/M4				1.5
	m550-P100/L4		m550-V132/M4				1.5
	m550-P112/M4						1.5
	m550-P132/M4						1.5
	m550-P132/L4	m550-U132/M4	m550-V132/L4	m650-V100/L4			2.5
	m550-P160/M4						2.5
i550 motec i650 motec (wall mounting)	m550-H63/S4	m550-U63/L4	m650-V63/L4	m650-V63/L4	Power, brake, thermal protec- tion	Han Q8 connec- tor (motec) and M23 connector (motor), 8-pole	1.5
	m550-H63/M4	m550-U71/M4	m650-V71/M4	m650-V71/M4			1.5
	m550-H63/L4	m550-U71/L4	m650-V71/L4	m650-V71/L4			1.5
	m550-H71/M4	m550-U80/M4	m650-V80/M4	m650-V80/M4			1.5
	m550-H71/L4	m550-U90/M4	m650-V90/M4	m650-V90/M4			1.5
	m550-P80/M4	m550-U90/L4	m650-V90/L4	m650-V90/L4			1.5
	m550-P90/M4	m550-U100/M4	m650-V100/M4	m650-V100/M4			1.5
	m550-P90/L4	m550-U100/L4	m650-V100/L4				1.5
	m550-P100/M4	m550-U112/M4	m550-V112/M4				1.5
	m550-P100/L4		m550-V132/M4				1.5
	m550-P112/M4						1.5
	m550-P132/M4						1.5
	m550-P132/L4	m550-U132/M4	m550-V132/L4	m650-V100/L4			2.5

Feedback cable for m550-H/P three-phase motors

Drive	Motor		Feedback cable	
	Type	Cable for	Connection	Cross-section
				[mm²]
i700 cabinet i750 cabinet i950 cabinet	m550	Resolver	Sub-D connector, M23 connector	-
	m550	Encoder	Sub-D connector, M23 connector	-

Blower cable for m550-H/P three-phase motors

Mains	Motor		Blower cable	
	Type	Cable for	Connection	Cross-section
				[mm²]
1 AC 230/240 V	m550	Blower 1 x 230 V	M17 connector, 4-pole	1
3 AC 400 V	m550	Blower 3 x 400 V	M17 connector, 5-pole	1

Motor connection for servo drives

OCT motor cable for MCS servo motors on the drive

Drive	Motor		Motor cable	
	Type	Cable for	Connection	Cross-section
				[mm²]
i750 cabinet i950 cabinet	MCS 06C41-	Power, brake, Thermal protection, One Cable Technology (OCT)	M23 connector	1.5
	MCS 06C60-			1.5
	MCS 06F41-			1.5
	MCS 06F60-			1.5
	MCS 06I41-			1.5
	MCS 06I60-			1.5
	MCS 09D41-	Power, brake, Thermal protection, One Cable Technology (OCT)	M23 connector	1.5
	MCS 09D60-			1.5
	MCS 09F38-			1.5
	MCS 09F60-			1.5
	MCS 09H41-			1.5
	MCS 09H60-			1.5
	MCS 09L41-			1.5
	MCS 09L51-			2.5
	MCS 12D20-	Power, brake, Thermal protection, One Cable Technology (OCT)	M23 connector	1.5
	MCS 12D41-			1.5
	MCS 12H15-			1.5
	MCS 12H35-			1.5
	MCS 12L20-			1.5
	MCS 12L41-			2.5
	MCS 12D17-	Power, brake, Thermal protection, One Cable Technology (OCT)	M23 connector	1.5
	MCS 12D35-			1.5
	MCS 12H14-			1.5
	MCS 12H34-			2.5
	MCS 12L17-			2.5
	MCS 12L39-			2.5
	MCS 14D15	Power, brake, Thermal protection, One Cable Technology (OCT)	M23 connector	1.5
	MCS 14D36-		M23 connector	2.5
	MCS 14H15-		M23 connector	2.5
	MCS 14H32-		M23 connector	2.5
	MCS 14L15-		M23 connector	2.5
	MCS 14L32-		M40 connector	4
	MCS 14P14-		M23 connector	2.5
	MCS 14P32-		M40 connector	4
	MCS 14D14-	Power, brake, Thermal protection, One Cable Technology (OCT)	M23 connector	1.5
	MCS 14D30-		M23 connector	2.5
	MCS 14H12-		M23 connector	2.5
	MCS 14H28-		M40 connector	4
	MCS 14L14-		M23 connector	2.5
	MCS 14L30-		M40 connector	4
	MCS 14P11-		M23 connector	2.5
	MCS 14P26-		M40 connector	4
	MCS 19F14-	Power, brake, Thermal protection, One Cable Technology (OCT)	M23 connector	2.5
	MCS 19F30-		M40 connector	4
	MCS 19J14-		M23 connector	2.5
	MCS 19J30-		M40 connector	4
	MCS 19P14-		M40 connector	4
	MCS 19P30-		M40 connector	4
	MCS 19F12-	Power, brake, Thermal protection, One Cable Technology (OCT)	M23 connector	2.5
	MCS 19F29-		M40 connector	4
	MCS 19J12-		M40 connector	4
	MCS 19J29-		M40 connector	6
	MCS 19P12-		M40 connector	4
	MCS 19P29-		M40 connector	6

Blower cable for MCS servo motors

Mains	Motor		Blower cable	
	Type	Cable for	Connection	Cross-section
				[mm²]
1 AC 230/240 V	MCS	Blower 1 x 230 V	M17 connector, 4-pole	1



OCT motor cable for m850 servo motors on the drive

Drive	Motor		Motor cable	
	Type	Cable for	Connection	Cross-section
				[mm²]
i750 cabinet i950 cabinet	m850-S120/S3960	Power, brake, Thermal protection, One Cable Technology (OCT)	M23 connector	1.5
	m850-S120/M3960		M23 connector	1.5
	m850-S120/L3960		M23 connector	1.5
	m850-S140/S3240	Power, brake, Thermal protection, One Cable Technology (OCT)	M23 connector	1.5
	m850-S140/M3240		M23 connector	1.5
	m850-S140/L3240		M40 connector	4
	m850-S190/S3000	Power, brake, Thermal protection, One Cable Technology (OCT)	M23 connector	1.5
	m850-S190/M3000		M40 connector	4
	m850-S190/L2520		M40 connector	4

Motor cable for MCS servo motors on the drive

Drive	Motor		Motor cable	
	Type	Cable for	Connection	Cross-section [mm²]
i700 cabinet i750 cabinet i950 cabinet	MCS 06C41-	Power, brake, thermal protection	M23 connector	1
	MCS 06C60-			1
	MCS 06F41-			1
	MCS 06F60-			1
	MCS 06I41-			1
	MCS 06I60-			1.5
	MCS 09D41-	Power, brake, thermal protection	M23 connector	1
	MCS 09D60-			1.5
	MCS 09F38-			1
	MCS 09F60-			1.5
	MCS 09H41-			1.5
	MCS 09H60-			1.5
	MCS 09L41-			1.5
	MCS 09L51-			2.5
	MCS 12D20-	Power, brake, thermal protection	M23 connector	1
	MCS 12D41-			1.5
	MCS 12H15-			1.5
	MCS 12H35-			1.5
	MCS 12L20-			1.5
	MCS 12L41-			2.5
	MCS 12D17-	Power, brake, thermal protection	M23 connector	1.5
	MCS 12D35-			1.5
	MCS 12H14-			1.5
	MCS 12H34-			2.5
	MCS 12L17-			2.5
	MCS 12L39-			2.5
	MCS 14D15	Power, brake thermal protection	M23 connector	1.5
	MCS 14D36-		M23 connector	2.5
	MCS 14H15-		M23 connector	2.5
	MCS 14H32-		M23 connector	2.5
	MCS 14L15-		M23 connector	2.5
	MCS 14L32-		M40 connector	4
	MCS 14P14-	Power, brake, thermal protection	M23 connector	2.5
	MCS 14P32-		M40 connector	4
	MCS 14D14-		M23 connector	1.5
	MCS 14D30-		M23 connector	2.5
	MCS 14H12-		M23 connector	2.5
	MCS 14H28-		M40 connector	4
	MCS 14L14-	Power, brake, thermal protection	M23 connector	2.5
	MCS 14L30-		M40 connector	4
	MCS 14P11-		M23 connector	2.5
	MCS 14P26-		M40 connector	4
	MCS 19F14-	Power, brake, thermal protection	M23 connector	2.5
	MCS 19F30-		M40 connector	4
	MCS 19J14-		M23 connector	2.5
	MCS 19J30-		M40 connector	4
	MCS 19P14-		M40 connector	4
	MCS 19P30-		M40 connector	4
	MCS 19F12-	Power, brake, thermal protection	M23 connector	2.5
	MCS 19F29-		M40 connector	4
	MCS 19J12-		M40 connector	4
	MCS 19J29-		M40 connector	6
	MCS 19P12-		M40 connector	4
	MCS 19P29-		M40 connector	6

Feedback cable for MCS servo motors

Drive	Motor		Feedback cable	
	Type	Cable for	Connection	Cross-section [mm²]
i700 cabinet i750 cabinet i950 cabinet	MCS	Resolver	Sub-D connector, M23 connector	-
	MCS	Encoder	Sub-D connector, M23 connector	-
i950 cabinet	MCS	EnDat	Sub-D connector, M23 connector	-



Blower cable for MCS servo motors

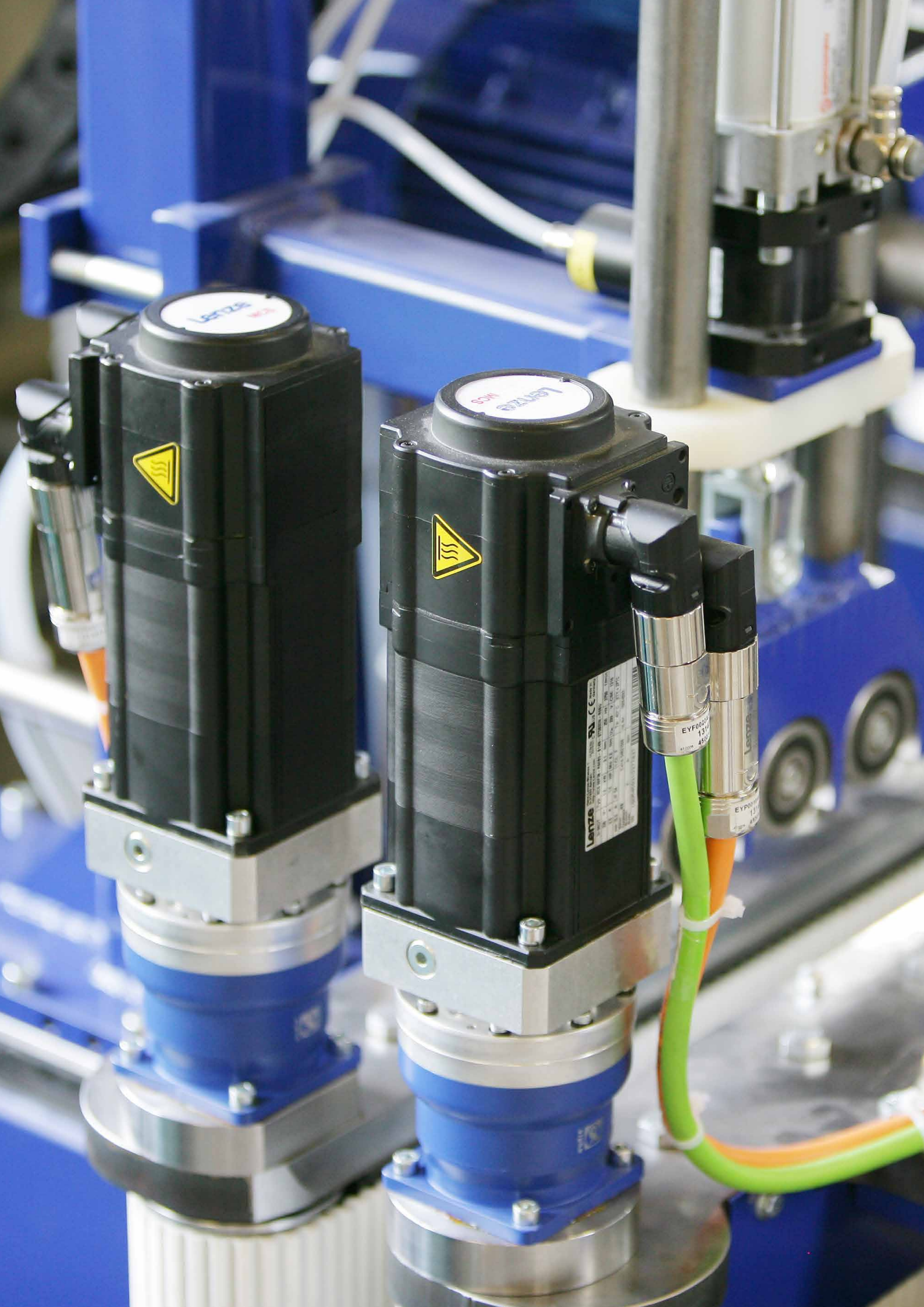
Mains	Motor		Blower cable	
	Type	Cable for	Connection	Cross-section [mm ²]
1 AC 230/240 V	MCS	Blower 1 x 230 V	M17 connector, 4-pole	1

Motor cable for m850 servo motors on the drive

Drive	Motor		Motor cable	
	Type	Cable for	Connection	Cross-section [mm ²]
i700 cabinet i750 cabinet i950 cabinet	m850-S120/S3960	Power, brake, thermal protection	M23 connector	1.5
	m850-S120/M3960		M23 connector	1.5
	m850-S120/L3960		M23 connector	1.5
	m850-S140/S3240	Power, brake, thermal protection	M23 connector	1.5
	m850-S140/M3240		M23 connector	1.5
	m850-S140/L3240		M40 connector	4
	m850-S190/S3000	Power, brake, thermal protection	M23 connector	1.5
	m850-S190/M3000		M40 connector	4
	m850-S190/L2520		M40 connector	4

Feedback cable for m850 servo motors

Drive	Motor		Feedback cable	
	Type	Cable for	Connection	Cross-section [mm ²]
i700 cabinet i750 cabinet i950 cabinet	m850	Resolver	Sub-D connector, M23 connector	-
	m850	Encoder	Sub-D connector, M23 connector	-
i950 cabinet	m850	EnDat	Sub-D connector, M23 connector	-





Motor cable for MCA servo motors on the drive

Drive	Motor		Motor cable	
	Type	Cable for	Connection	Cross-section
				[mm ²]
i700 cabinet i750 cabinet i950 cabinet	MCA 10I40-	Power, brake, thermal protection	M23 connector	1
	MCA 13I41-		M23 connector	1
	MCA 14L20-		M23 connector	1
	MCA 14L41-		M23 connector	1
	MCA 17N23-		M23 connector	1
	MCA 17N41-		M23 connector	1
	MCA 19S23-		M23 connector	1
	MCA 19S42-		M23 connector	2.5
	MCA 21X25-		M23 connector	Fixed: 2.5 Drag chain: 1.5
	MCA 21X42-		M40 connector	Fixed: 6 Drag chain: 4
	MCA 13I34-	Power, brake, thermal protection	M23 connector	1
	MCA 14L16-		M23 connector	1
	MCA 14L35-		M23 connector	1
	MCA 17N17-		M23 connector	1
	MCA 17N35-		M23 connector	Fixed: 2.5 Drag chain: 1.5
	MCA 19S17-		M23 connector	Fixed: 1.5 Drag chain: 1
	MCA 19S35-		M40 connector	Fixed: 6 Drag chain: 4
	MCA 20X14H		M40 connector M23 connector	Fixed: 4 Drag chain: 2.5
	MCA 20X29H		M40 connector	Fixed: 10.0 Drag chain: 6
	MCA 21X17-		M23 connector M23 connector	Fixed: 4 Drag chain: 2.5
	MCA 21X35-		M40 connector	Fixed: 10.0 Drag chain: 6

Feedback cable for MCA servo motors

Drive	Motor		Feedback cable	
	Type	Cable for	Connection	Cross-section
				[mm ²]
i700 cabinet i750 cabinet i950 cabinet	MCA	Resolver	Sub-D connector, M23 connector	-
	MCA	Encoder	Sub-D connector, M23 connector	-

Blower cable for MCA servo motors

Mains	Motor		Blower cable	
	Type	Cable for	Connection	Cross-section
				[mm ²]
1 AC 230/240 V	MCA	Blower 1 x 230 V	M17 connector, 4-pole	1



