



SEW
EURODRIVE

Revision



MOVIDRIVE® MDX60B/61B



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1 Revisions



INFORMATION

This document describes the revisions made to the "MOVIDRIVE® 60B/61B" operating instructions.

Please use the data specified in this revision. This document does not replace the detailed operating instructions.

2 Device structure

2.1 Type designation, nameplates and scope of delivery

2.1.1 System nameplate size 0

The **system nameplate** of MDX60B/61B size 0 is attached to the side of the device.

Type:MDX61B0014-5A3-4-00
S0#: 01.0123456789.0001.03


SEW
EURODRIVE
D-76646 Bruchsal
Made in Germany
Umrichter
Movidrive

Type:MDX61B0014-5A3-4-00
P/N: 08277338 S0#: 01.0123456789.0001.03

Eingang / Input	Ausgang / Output
U = 3x380...500V AC	U = 3x0V...U
f = 50...60Hz	f = 0...599Hz
I = 3,6 A AC (400V)	I = 4,0A AC (400V)
T = 0...+50°C 20	P = 1,5kW / 2,0 HP

Status:12 10 -- 12 12 10 11 -- 11 ML0000




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3 Technical data and dimension drawings

3.1 CE marking, UL approval, and C-Tick

3.1.1 UL / cUL / EAC



UL and cUL approvals (USA) have been granted for the entire MOVIDRIVE® product series. An exception is the MOVIDRIVE® MDR60A1320-503-00 device that does not have UL or cUL approval. cUL is equivalent to CSA approval.



The MOVIDRIVE® product series meets the requirements of the technical regulations of the customs union of Russia, Kazakhstan, and Belarus.

The EAC mark on the nameplate certifies compliance with the safety requirements of the customs union.

3.2 Note

INFORMATION



All parameters and setting ranges are limited to a maximum output frequency of 599 Hz.

3.3 MOVIDRIVE® MDX60/61B...-5_3 (AC 400/500 V devices)

3.3.1 MOVIDRIVE® MDX60/61B0005/0008/0011/0014 size 0 (AC 400/500 V devices)

MOVIDRIVE® MDX60/61B		0005-5A3-4-0_	0008-5A3-4-0_	0011-5A3-4-0_	0014-5A3-4-0_
Size		0S		0M	
INPUT					
Nominal line voltage (to EN 50160)	V _{line}	3 × AC 380 V – 500 V			
Line frequency	f _{line}	50 Hz – 60 Hz ±5%			
Nominal line current ¹⁾ I _{line}	100%	AC 1.8 A	AC 2.2 A	AC 2.8 A	AC 3.6 A
(at V _{line} = 3 × AC 400 V)	125%	AC 2.3 A	AC 2.7 A	AC 3.5 A	AC 4.5 A
OUTPUT					
Apparent output power ²⁾	S _N	1.4 kVA	1.6 kVA	2.1 kVA	2.8 kVA
(at V _{line} = 3 × AC 380 – 500 V)					
Nominal output current ¹⁾	I _N	AC 2 A	AC 2.4 A	AC 3.1 A	AC 4 A
(at V _{line} = 3 × AC 400 V)					
Continuous output current (= 125% I _N)	I _D	AC 2.5 A	AC 3 A	AC 3.8 A	AC 5 A
(at V _{line} = 3 × AC 400 V and f _{PWM} = 4 kHz)					
Continuous output current (= 100% I _N)	I _D	AC 2 A	AC 2.4 A	AC 3.1 A	AC 4 A
(at V _{line} = 3 × AC 400 V and f _{PWM} = 8 kHz)					
Max. output frequency	f _{max}	599 Hz			
Current limiting	I _{max}	Motor and regenerative 200% I _N , duration depending on the capacity utilization			
Internal current limitation		I _{max} = 0 – 200% adjustable			
Permitted minimum braking resistance value (4Q operation)	R _{BRmin}	68 Ω			
Output voltage	V _O	Max. V _{line}			
PWM frequency	f _{PWM}	Adjustable: 4/8/12/16 kHz			
Speed range / resolution	n _A / Δn _A	–6000 – 0 – +6000 rpm / 0.2 rpm over the entire range			
GENERAL INFORMATION					
Power loss at S _N ²⁾	P _{Vmax}	42 W	48 W	58 W	74 W
Cooling air consumption		3 m³/h		9 m³/h	
Cross section of device terminals X1, X2, X3, X4		Separable terminal strip 4 mm² conductor end sleeve DIN 46228			
Tightening torque		0.6 Nm			

1) The line and output currents must be reduced by 20% from the nominal values for $V_{line} = 3 \times 500\ V$.

2) The performance data applies to $f_{PWM} = 4\ kHz$.

MDX61B standard version	0005-5A3-4-00	0008-5A3-4-00	0011-5A3-4-00	0014-5A3-4-00
Design with coated printed circuit boards	0005-5A3-4-00/L	0008-5A3-4-00/L	0011-5A3-4-00/L	0014-5A3-4-00/L
Part number	827 722 2	827 723 0	827 724 9	827 725 7
	828 947 6	828 948 4	828 949 2	828 950 6
MDX61B Application version	0005-5A3-4-0T	0008-5A3-4-0T	0011-5A3-4-0T	0014-5A3-4-0T
Design with coated printed circuit boards	0005-5A3-4-0T/L	0008-5A3-4-0T/L	0011-5A3-4-0T/L	0014-5A3-4-0T/L
Part number	827 726 5	827 727 3	827 728 1	827 729 X
	828 951 4	828 952 2	828 953 0	828 954 9
Recommended motor power				

	P _{Mot}	0.55 kW (0.74 HP)	0.75 kW (1.0 HP)	1.1 kW (1.5 HP)	1.5 kW (2.0 HP)
Constant load					
	P _{Mot}	0.75 kW (1.0 HP)	1.1 kW (1.5 HP)	1.5 kW (2.0 HP)	2.2 kW (3.0 HP)
Variable torque load or constant load without overload					
Mass		2.0 kg (4.4 lb)		2.5 kg (5.5 lb)	
Dimensions	W × H × D	45 mm × 317 mm × 260 mm (1.8 in × 12.5 in × 10.2 in)		67.5 mm × 317 mm × 260 mm (2.66 in × 12.5 in × 10.2 in)	
MDX61B standard version (VFC/CFC/SERVO) Design with coated printed circuit boards		0005-5A3-4-00 0005-5A3-4-00/L	0008-5A3-4-00 0008-5A3-4-00/L	0011-5A3-4-00 0011-5A3-4-00/L	0014-5A3-4-00 0014-5A3-4-00/L
Part number		827 730 3 828 955 7	827 731 1 828 956 5	827 732 X 828 957 3	827 733 8 828 958 1
MDX61B application version (VFC/CFC/SERVO) Design with coated printed circuit boards		0005-5A3-4-0T 0005-5A3-4-0T/L	0008-5A3-4-0T 0008-5A3-4-0T/L	0011-5A3-4-0T 0011-5A3-4-0T/L	0014-5A3-4-0T 0014-5A3-4-0T/L
MDX61B standard version (VFC/CFC/SERVO) Design with coated printed circuit boards		0005-5A3-4-00 0005-5A3-4-00/L	0008-5A3-4-00 0008-5A3-4-00/L	0011-5A3-4-00 0011-5A3-4-00/L	0014-5A3-4-00 0014-5A3-4-00/L
Part number		827 734 6 828 960 3	827 735 4 828 961 1	827 736 2 828 963 8	827 737 0 828 964 6
Mass		2.3 kg (5.1 lb)		2.8 kg (6.2 lb)	
Dimensions	W × H × D	72.5 mm × 317 mm × 260 mm (2.85 in × 12.5 in × 10.2 in)		95 mm × 317 mm × 260 mm (3.7 in × 12.5 in × 10.2 in)	
Recommended motor power		→ MOVIDRIVE® B catalog or system manual, motor selection chapter			

3.3.2 MOVIDRIVE® MDX61B0015/0022/0030/0040 size 1 (AC 400/500 V devices)

MOVIDRIVE® MDX61B		0015-5A3-4-0_	0022-5A3-4-0_	0030-5A3-4-0_	0040-5A3-4-0_
INPUT					
Nominal line voltage (to EN 50160)	V _{line}	3 × AC 380 V – 500 V			
Line frequency	f _{line}	50 Hz – 60 Hz ±5%			
Nominal line current ¹⁾ I _{line}	100%	AC 3.6 A	AC 5.0 A	AC 6.3 A	AC 8.6 A
(at V _{line} = 3 × AC 400 V)	125%	AC 4.5 A	AC 6.2 A	AC 7.9 A	AC 10.7 A
OUTPUT					
Apparent output power ²⁾	S _N	2.8 kVA	3.8 kVA	4.9 kVA	6.6 kVA
(at V _{line} = 3 × AC 380 – 500 V)					
Nominal output current ¹⁾	I _N	AC 4 A	AC 5.5 A	AC 7 A	AC 9.5 A
(at V _{line} = 3 × AC 400 V)					
Continuous output current (= 125% I _N)	I _D	AC 5 A	AC 6.9 A	AC 8.8 A	AC 11.9 A
(at V _{line} = 3 × AC 400 V and f _{PWM} = 4 kHz)					
Continuous output current (= 100% I _N)	I _D	AC 4 A	AC 5.5 A	AC 7 A	AC 9.5 A
(at V _{line} = 3 × AC 400 V and f _{PWM} = 8 kHz)					
Max. output frequency	f _{max}	599 Hz			
Current limiting	I _{max}	Motor and regenerative 150% I _N , duration depending on the capacity utilization			
Internal current limitation		I _{max} = 0 – 150% adjustable			
Permitted minimum braking resistance value (4Q operation)	R _{BRmin}	68 Ω			
Output voltage	V _O	Max. V _{line}			
PWM frequency	f _{PWM}	Adjustable: 4/8/12/16 kHz			
Speed range / resolution	n _A / Δn _A	–6000 – 0 – +6000 rpm / 0.2 rpm over the entire range			
GENERAL INFORMATION					
Power loss at S _N ²⁾	P _{Vmax}	85 W	105 W	130 W	180 W
Cooling air consumption		40 m³/h			
Mass		3.5 kg (7.7 lb)			
Dimensions	W × H × D	105 mm × 314 mm × 234 mm (4.13 in × 12.4 in × 9.21 in)			

MOVIDRIVE® MDX61B	0015-5A3-4-0_	0022-5A3-4-0_	0030-5A3-4-0_	0040-5A3-4-0_
Cross section of device terminals X1, X2, X3, X4	Separable terminal strip 4 mm ² conductor end sleeve DIN 46228			
Tightening torque	0.6 Nm			

- 1) The line and output currents must be reduced by 20% from the nominal values for $V_{line} = 3 \times 500 \text{ V}$.
2) The performance data applies to $f_{PWM} = 4 \text{ kHz}$.

MDX61B standard version	0015-5A3-4-00	0022-5A3-4-00	0030-5A3-4-00	0040-5A3-4-00
Design with coated printed circuit boards	0015-5A3-4-00/L	0022-5A3-4-00/L	0030-5A3-4-00/L	0040-5A3-4-00/L
Part number	827 957 8 1840 013 2	827 958 6 1840 014 0	827 959 4 1840 015 9	827 960 8 1840 016 7
MDX61B application version	0015-5A3-4-0T	0022-5A3-4-0T	0030-5A3-4-0T	0040-5A3-4-0T
Design with coated printed circuit boards	0015-5A3-4-0T/L	0022-5A3-4-0T/L	0030-5A3-4-0T/L	0040-5A3-4-0T/L
Part number	827 975 6 1840 031 0	827 976 4 1840 032 9	827 977 2 1840 033 7	827 978 0 1840 034 5
Recommended motor power				
 Constant load	P_{Mot}	1.5 kW (2.0 HP) 2.2 kW (3.0 HP)	3.0 kW (4.0 HP) 4.0 kW (5.4 HP)	4.0 kW (5.4 HP) 5.5 kW (7.4 HP)
 Variable torque load or constant load without overload	P_{Mot}	2.2 kW (3.0 HP) 3.0 kW (4.0 HP)	4.0 kW (5.4 HP) 5.5 kW (7.4 HP)	5.5 kW (7.4 HP)
Recommended motor power	→ MOVIDRIVE® B catalog or system manual, motor selection chapter			

3.3.3 MOVIDRIVE® MDX61B0055/0075/0110 size 2S, 2 (AC 400/500 V devices)

MOVIDRIVE® MDX61B		0055-5A3-4-0_	0075-5A3-4-0_	0110-5A3-4-0_
Size		2S		2
INPUT				
Nominal line voltage (to EN 50160)	V_{line}	$3 \times \text{AC } 380 \text{ V} - 500 \text{ V}$		
Line frequency	f_{line}	50 Hz – 60 Hz $\pm 5\%$		
Nominal line current ¹⁾ I_{line}	100%	AC 11.3 A	AC 14.4 A	AC 21.6 A
(at $V_{line} = 3 \times \text{AC } 400 \text{ V}$)	125%	AC 14.1 A	AC 18.0 A	AC 27.0 A
OUTPUT				
Apparent output power ²⁾	S_N	8.7 kVA	11.2 kVA	16.8 kVA
(at $V_{line} = 3 \times \text{AC } 380 - 500 \text{ V}$)				
Nominal output current ¹⁾	I_N	AC 12.5 A	AC 16 A	AC 24 A
(at $V_{line} = 3 \times \text{AC } 400 \text{ V}$)				
Continuous output current (= 125% I_N)	I_D	AC 15.6 A	AC 20 A	AC 30 A
(at $V_{line} = 3 \times \text{AC } 400 \text{ V}$ with $f_{PWM} = 4 \text{ kHz}$)				
Continuous output current (= 100% I_N)	I_D	AC 12.5 A	AC 16 A	AC 24 A
(at $V_{line} = 3 \times \text{AC } 400 \text{ V}$ with $f_{PWM} = 8 \text{ kHz}$)				
Max. output frequency	f_{max}	599 Hz		
Current limiting	I_{max}	Motor and regenerative 150% I_N , duration depending on the capacity utilization		
Internal current limitation		$I_{max} = 0 - 150\%$ adjustable		
Permitted minimum braking resistance value (4Q operation)	R_{BRmin}	47 Ω		22 Ω
Output voltage	V_O	Max. V_{line}		
PWM frequency	f_{PWM}	Adjustable: 4/8/12/16 kHz		
Speed range / resolution	$n_A / \Delta n_A$	-6000 – 0 – +6000 rpm / 0.2 rpm over the entire range		
GENERAL INFORMATION				
Power loss at S_N ²⁾	P_{Vmax}	220 W	290 W	400 W
Cooling air consumption		80 m ³ /h		
Mass		6.6 kg (15 lb)		
Dimensions	$W \times H \times D$	105 mm $\times$ 335 mm $\times$ 294 mm (4.13 in $\times$ 13.2 in $\times$ 11.6 in)		130 mm $\times$ 315 mm $\times$ 285 mm (5.12 in $\times$ 12.4 in $\times$ 11.2 in)

MOVIDRIVE® MDX61B	0055-5A3-4-0_	0075-5A3-4-0_	0110-5A3-4-0_
Cross section of device terminals X1, X2, X3, X4	Terminal strips 4 mm ² conductor end sleeve DIN 46228	M4 screw and washer assembly with terminal clip 4 mm ² conductor end sleeve DIN 46228 6 mm ² crimp cable lug DIN 46234	
Tightening torque	0.6 Nm	1.5 Nm	

1) The line and output currents must be reduced by 20% from the nominal values for $V_{line} = 3 \times 500 \text{ V}$.

2) The performance data applies to $f_{PWM} = 4 \text{ kHz}$.

MDX61B standard version		0055-5A3-4-00	0075-5A3-4-00	0110-5A3-4-00
Design with coated printed circuit boards		0055-5A3-4-00/L	0075-5A3-4-00/L	0110-5A3-4-00/L
Part number		827 961 6	827 962 4	827 963 2
		1840 017 5	1840 018 3	1840 019 1
MDX61B application version		0055-5A3-4-0T	0075-5A3-4-0T	0110-5A3-4-0T
Design with coated printed circuit boards		0055-5A3-4-0T/L	0075-5A3-4-0T/L	0110-5A3-4-0T/L
Part number		827 979 9	827 980 2	827 981 0
		1840 035 3	1840 036 1	1840 038 8
Recommended motor power				
	P_{Mot}	5.5 kW (7.4 HP)	7.5 kW (10 HP)	11 kW (15 HP)
Constant load				
	P_{Mot}	7.5 kW (10 HP)	11 kW (15 HP)	15 kW (20 HP)
Variable torque load or constant load without overload				
Recommended motor power		→ MOVIDRIVE® B catalog or system manual, motor selection chapter		

3.3.4 MOVIDRIVE® MDX61B0150/0220/0300 size 3 (AC 400/500 V devices)

MOVIDRIVE® MDX61B		0150-503-4-0_	0220-503-4-0_	0300-503-4-0_
INPUT				
Nominal line voltage (to EN 50160)	V _{line}	3 × AC 380 V – 500 V		
Line frequency	f _{line}	50 Hz – 60 Hz ±5%		
Nominal line current ¹⁾ I _{line}	100%	AC 28.8 A	AC 41.4 A	AC 54 A
(at V _{line} = 3 × AC 400 V)	125%	AC 36 A	AC 51.7 A	AC 67.5 A
OUTPUT				
Apparent output power ²⁾	S _N	22.2 kVA	31.9 kVA	41.6 kVA
(at V _{line} = 3 × AC 380 – 500 V)				
Nominal output current ¹⁾	I _N	AC 32 A	AC 46 A	AC 60 A
(at V _{line} = 3 × AC 400 V)				
Continuous output current (= 125% I _N)	I _D	AC 40 A	AC 57.5 A	AC 75 A
(at V _{line} = 3 × AC 400 V with f _{PWM} = 4 kHz)				
Continuous output current (= 100% I _N)	I _D	AC 32 A	AC 46 A	AC 60 A
(at V _{line} = 3 × AC 400 V with f _{PWM} = 8 kHz)				
Max. output frequency	f _{max}	599 Hz		
Current limiting	I _{max}	Motor and regenerative 150% I _N , duration depending on the capacity utilization		
Internal current limitation		I _{max} = 0 – 150% adjustable		
Permitted minimum braking resistance value (4Q operation)	R _{BRmin}	15 Ω	12 Ω	
Output voltage	V _O	Max. V _{line}		
PWM frequency	f _{PWM}	Adjustable: 4/8/12/16 kHz		
Speed range / resolution	n _A / Δn _A	–6000 – 0 – +6000 rpm / 0.2 rpm over the entire range		
GENERAL INFORMATION				
Power loss at S _N ²⁾	P _{Vmax}	550 W	750 W	950 W
Cooling air consumption		180 m³/h		

MOVIDRIVE® MDX61B		0150-503-4-0_	0220-503-4-0_	0300-503-4-0_
Mass		15.0 kg (33 lb)		
Dimensions	W × H × D	200 mm × 465 mm × 308 mm (7.87 in × 18.3 in × 12.1 in)		
Cross section of device terminals X1, X2, X3, X4		M6 screw and washer assembly with washer max. 25 mm ² Crimp cable lug DIN 46234		
Tightening torque		3.5 Nm		

1) The line and output currents must be reduced by 20% from the nominal values for V line = 3 × 500 V.

2) The performance data applies to f PWM = 4 kHz.

MDX61B standard version		0150/-503/-4/-00	0220-503-4-00	0300-503-4-00
Design with coated printed circuit boards		0150-503-4-00/L	0220-503-4-00/L	0300-503-4-00/L
Part number		827 964 0	827 965 9	827 966 7
		1840 020 5	1840 021 3	1840 022 1
MDX61B application version		0150-503-4-0T	0220-503-4-0T	0300-503-4-0T
Design with coated printed circuit boards		0150-503-4-0T/L	0220-503-4-0T/L	0300-503-4-0T/L
Part number		827 982 9	827 983 7	827 984 5
		1840 039 6	1840 041 8	1840 042 6
Recommended motor power				
 Constant load	P _{Mot}	15 kW (20 HP)	22 kW (30 HP)	30 kW (40 HP)
 Variable torque load or constant load without overload	P _{Mot}	22 kW (30 HP)	30 kW (40 HP)	37 kW (50 HP)
Recommended motor power		→ MOVIDRIVE® B catalog or system manual, motor selection chapter		

3.3.5 MOVIDRIVE® MDX61B0370/0450 size 4 (AC 400/500 V devices)

MOVIDRIVE® MDX61B		0370-503-4-0_	0450-503-4-0_
INPUT			
Nominal line voltage (to EN 50160)	V _{line}	3 × AC 380 V – 500 V	
Line frequency	f _{line}	50 Hz – 60 Hz ±5%	
Nominal line current ¹⁾ I _{line}	100%	AC 65.7 A	AC 80.1 A
(at V _{line} = 3 × AC 400 V)	125%	AC 81.9 A	AC 100.1 A
OUTPUT			
Apparent output power ²⁾	S _N	51.1 kVA	62.3 kVA
(at V _{line} = 3 × AC 380 – 500 V)			
Nominal output current ¹⁾	I _N	AC 73 A	AC 89 A
(at V _{line} = 3 × AC 400 V)			
Continuous output current (= 125% I _N)	I _D	AC 91 A	AC 111 A
(at V _{line} = 3 × AC 400 V with f _{PWM} = 4 kHz)			
Continuous output current (= 100% I _N)	I _D	AC 73 A	AC 89 A
(at V _{line} = 3 × AC 400 V with f _{PWM} = 8 kHz)			
Max. output frequency	f _{max}	599 Hz	
Current limiting	I _{max}	Motor and regenerative 150% I _N , duration depending on the capacity utilization	
Internal current limitation		I _{max} = 0 – 150% adjustable	
Permitted minimum braking resistance value (4Q operation)	R _{BRmin}	6 Ω	
Output voltage	V _O	Max. V _{line}	
PWM frequency	f _{PWM}	Adjustable: 4/8/12/16 kHz	
Speed range / resolution	n _A / Δn _A	–6000 – 0 – +6000 rpm / 0.2 rpm over the entire range	
GENERAL INFORMATION			
Power loss at S _N ²⁾	P _{Vmax}	1200 W	1450 W
Cooling air consumption		180 m ³ /h	

MOVIDRIVE® MDX61B		0370-503-4-0_	0450-503-4-0_
Mass		27 kg (60 lb)	
Dimensions	W × H × D	280 mm × 522 mm × 307 mm (11.0 in × 20.6 in × 12.1 in)	
Cross section of device terminals X1, X2, X3, X4		M10 bolt with nut Max. 70 mm ² Crimp cable lug DIN 46235	
Tightening torque		14 Nm	

1) The line and output currents must be reduced by 20% from the nominal values for V line = 3 × 500 V.

2) The performance data applies to f_{PWM} = 4 kHz.

MDX61B standard version		0370-503-4-00	0450-503-4-00
Design with coated printed circuit boards		0370-503-4-00/L	0450-503-4-00/L
Part number		827 967 5	827 968 3
		1840 024 8	1840 025 6
MDX61B application version		0370-503-4-0T	0450-503-4-0T
Design with coated printed circuit boards		0370-503-4-0T/L	0450-503-4-0T/L
Part number		827 985 3	827 986 1
		1840 043 4	1840 044 2
Recommended motor power			
 Constant load	P _{Mot}	37 kW (50 HP)	45 kW (60 HP)
 Variable torque load or constant load without overload	P _{Mot}	45 kW (60 HP)	55 kW (74 HP)
Recommended motor power		→ MOVIDRIVE® B catalog or system manual, motor selection chapter	

3.3.6 MOVIDRIVE® MDX61B0550/0750 size 5 (AC 400/500 V devices)

MOVIDRIVE® MDX61B		0550-503-4-0_	0750-503-4-0_
INPUT			
Nominal line voltage (to EN 50160)	V _{line}	3 × AC 380 V – 500 V	
Line frequency	f _{line}	50 Hz – 60 Hz ±5%	
Nominal line current ¹⁾ I _{line}	100%	AC 94.5 A	AC 117 A
(at V _{line} = 3 × AC 400 V)	125%	AC 118.1 A	AC 146.3 A
OUTPUT			
Apparent output power ²⁾	S _N	73.5 kVA	91.0 kVA
(at V _{line} = 3 × AC 380 – 500 V)			
Nominal output current ¹⁾	I _N	AC 105 A	AC 130 A
(at V _{line} = 3 × AC 400 V)			
Continuous output current (= 125% I _N)	I _D	AC 131 A	AC 162 A
(at V _{line} = 3 × AC 400 V with f _{PWM} = 4 kHz)			
Continuous output current (= 100% I _N)	I _D	AC 105 A	AC 130 A
(at V _{line} = 3 × AC 400 V with f _{PWM} = 8 kHz)			
Max. output frequency	f _{max}	599 Hz	
Current limiting	I _{max}	Motor and regenerative 150% I _N , duration depending on the capacity utilization	
Internal current limitation		I _{max} = 0 – 150% adjustable	
Permitted minimum braking resistance value (4Q operation)	R _{BRmin}	6 Ω	4 Ω
Output voltage	V _O	Max. V _{line}	
PWM frequency	f _{PWM}	Adjustable: 4/8/12/16 kHz	
Speed range / resolution	n _A / Δn _A	–6000 – 0 – +6000 rpm / 0.2 rpm over the entire range	
GENERAL INFORMATION			
Power loss at S _N ²⁾	P _{Vmax}	1700 W	2000 W

MOVIDRIVE® MDX61B		0550-503-4-0_	0750-503-4-0_
Cooling air consumption		360 m³/h	
Mass		35 kg (77 lb)	
Dimensions	W × H × D	280 mm × 610 mm × 330 mm (11.0 in × 24.0 in × 13.0 in)	
Cross section of device terminals X1, X2, X3, X4		M10 bolt with nut Max. 70 mm² Crimp cable lug DIN 46235	
Tightening torque		14 Nm	

1) The line and output currents must be reduced by 20% from the nominal values for V line = 3 × 500 V.

2) The performance data applies to f PWM = 4 kHz.

MDX61B standard version		0550-503-4-00	0750-503-4-00
Design with coated printed circuit boards		0550-503-4-00/L	0750-503-4-00/L
Part number		827 969 1	827 970 5
		1840 026 4	1840 027 2
MDX61B application version		0550-503-4-0T	0750-503-4-0T
Design with coated printed circuit boards		0550-503-4-0T/L	0750-503-4-0T/L
Part number		827 988 8	827 989 6
		1840 045 0	1840 046 9
Recommended motor power			
	P _{Mot}	55 kW (74 HP)	75 kW (100 HP)
Constant load			
	P _{Mot}	75 kW (100 HP)	90 kW (120 HP)
Variable torque load or constant load without overload			
Recommended motor power		→ MOVIDRIVE® B catalog or system manual, motor selection chapter	

3.3.7 MOVIDRIVE® MDX61B0900/1100/1320 size 6 (AC 400/500 V devices)

MOVIDRIVE® MDX61B		0900-503-4-0_	1100-503-4-0_	1320-503-4-0_
INPUT				
Nominal line voltage (to EN 50160)	V _{line}	3 × AC 380 V – 500 V		
Line frequency	f _{line}	50 Hz – 60 Hz ±5%		
Nominal line current ¹⁾ I _{line}	100%	AC 153 A	AC 180 A	AC 225 A
(at V _{line} = 3 × AC 400 V)	125%	AC 191 A	AC 225 A	AC 281 A
OUTPUT				
Apparent output power ²⁾	S _N	118 kVA	139 kVA	174 kVA
(at V _{line} = 3 × AC 380 – 500 V)				
Nominal output current ¹⁾	I _N	AC 170 A	AC 200 A	AC 250 A
(at V _{line} = 3 × AC 400 V)				
Continuous output current (= 125% I _N)	I _D	AC 212 A	AC 250 A	AC 312 A
(at V _{line} = 3 × AC 400 V with f _{PWM} = 4 kHz)				
Continuous output current (= 100% I _N) I _D	I _D	AC 170 A	AC 200 A	AC 250 A
(at V _{line} = 3 × AC 400 V with f _{PWM} = 8 kHz)				
Max. output frequency	f _{max}	599 Hz		
Current limiting	I _{max}	Motor and regenerative 150% I _N , duration depending on the capacity utilization		
Internal current limitation		I _{max} = 0 – 150% adjustable		
Permitted minimum braking resistance value (4Q operation)	R _{BRmin}	2.7 Ω		
Output voltage	V _O	Max. V _{line}		
PWM frequency	f _{PWM}	Adjustable: 4 or 8 kHz possible		
Speed range / resolution	n _A / Δn _A	–6000 – 0 – +6000 rpm / 0.2 rpm over the entire range		
GENERAL INFORMATION				

MOVIDRIVE® MDX61B		0900-503-4-0_	1100-503-4-0_	1320-503-4-0_
Power loss at S_N	P_{Vmax}	2300 W	2500 W	2700 W
Cooling air consumption		600 m ³ /h		
Mass		60 kg (130 lb)		
Dimensions	W × H × D	280 mm × 1000 mm × 382 mm (11.0 in × 39.37 in × 15.0 in)		
Cross section of device terminals X1, X2, X3, X4		M12 bolt with nut Max. 185 mm ² Crimp cable lug DIN 46235		
Tightening torque		20 Nm		

1) The line and output currents must be reduced by 20% from the nominal values for $V_{line} = 3 \times 500$ V.

2) The performance data applies to $f_{PWM} = 4$ kHz.

MDX61B standard version		0900-503-4-00	1100-503-4-00	1320-503-4-00
Design with coated printed circuit boards		0900-503-4-00/L	1100-503-4-00/L	1320-503-4-00/L
Part number		827 971 3 1840 028 0	827 972 1 1840 029 9	827 974 8 1840 030 2
MDX61B application version		0900-503-4-0T	1100-503-4-0T	1320-503-4-0T
Design with coated printed circuit boards		0900-503-4-0T/L	1100-503-4-0T/L	1320-503-4-0T/L
Part number		827 991 8 1840 047 7	827 992 6 1840 048 5	827 993 4 1840 049 3
Recommended motor power				
 Constant load	P_{Mot}	90 kW (120 HP)	110 kW (148 HP)	132 kW (177 HP)
 Variable torque load or constant load without overload	P_{Mot}	110 kW (148 HP)	132 kW (177 HP)	160 kW (215 HP)
Recommended motor power		→ MOVIDRIVE® B catalog or system manual, motor selection chapter		

3.3.8 MOVIDRIVE® MDX61B1600/2000/2500 size 7 (AC 400/500 V devices)

MOVIDRIVE® MDX61B		1600-503-2-0T/L 1600-503-4-0T/L	2000-503-2-0T/L 2000-503-4-0T/L	2500-503-2-0T/L 2500-503-4-0T/L
INPUT				
Nominal line voltage (to EN 50160)	V_{line}	3 × AC 380 V – 500 V		
Line frequency	f_{line}	50 Hz – 60 Hz ±5%		
Nominal line current ¹⁾ I_{line}	100%	AC 280 A	AC 340 A	AC 435 A
(at $V_{line} = 3 \times$ AC 400 V)	125%	AC 340 A	AC 425 A	AC 535 A
OUTPUT				
Apparent output power ²⁾	S_N	208 kVA	263 kVA	326 kVA
(at $V_{line} = 3 \times$ AC 380 – 500 V)				
Nominal output current ¹⁾	I_N	AC 300 A	AC 380 A	AC 470 A
(at $V_{line} = 3 \times$ AC 400 V)				
Continuous output current (= 125% I_N)	I_D	AC 375 A	AC 475 A	AC 588 A
(at $V_{line} = 3 \times$ AC 400 V with $f_{PWM} = 2.5$ kHz)				
Continuous output current (= 100% I_N)	I_D	AC 300 A	AC 380 A	AC 470 A
(at $V_{line} = 3 \times$ AC 400 V with $f_{PWM} = 2.5$ kHz)				
Temperature range 0 °C – +50 °C				
Max. output frequency	f_{max}	599 Hz		
Current limiting	I_{max}	Motor and regenerative 150% I_N , duration depending on the capacity utilization		
Internal current limitation		$I_{max} = 0 - 150\%$ adjustable		
Permitted minimum braking resistance value (4Q operation)	R_{BRmin}	1.1 Ω		
Output voltage	V_O	Max. V_{line}		

MOVIDRIVE® MDX61B		1600-503-2-0T/L 1600-503-4-0T/L	2000-503-2-0T/L 2000-503-4-0T/L	2500-503-2-0T/L 2500-503-4-0T/L
PWM frequency	f _{PWM}	Adjustable: 2.5 or 4 kHz possible		
Speed range / resolution	n _A / Δn _A	–6000 – 0 – +6000 rpm / 0.2 rpm over the entire range		
GENERAL INFORMATION				
Power loss at S _N	P _{Vmax}	3000 W	3600 W	4400 W
Cooling air consumption		1200 m³/h		
Mass		2Q variant: 260 kg (573 lb) 4Q variant: 280 kg (617 lb)		
Dimensions	W × H × D	700 mm × 1490 mm × 470 mm (27.6 in × 58.7 in × 18.5 in)		
Conductor rails X1, X2, X3		Connection rail with bore for M12 Max. 2 × 240 mm² Press cable lug DIN 46235		
Tightening torque		70 Nm (620 lb in)		

- 1) The line and output currents must be reduced by 20% from the nominal values for V line = 3 × 500 V.
2) The performance data applies to f PWM = 2.5 kHz.

MDX61B Application version		1600-503-2-0T/L	2000-503-2-0T/L	2500-503-2-0T/L
With coated printed circuit boards		1600-503-4-0T/L	2000-503-4-0T/L	2500-503-4-0T/L
Part number		829 976 5 829 980 3	829 977 3 829 981 1	829 978 1 829 983 8
Recommended motor power				
 Constant load	P_{Mot}	160 kW (215 HP)	200 kW (268 HP)	250 kW (335 HP)
 Variable torque load or constant load without overload	P_{Mot}	200 kW (268 HP)	250 kW (335 HP)	315 kW (422 HP)
Recommended motor power		→ MOVIDRIVE® B catalog or system manual, motor selection chapter		

3.4 MOVIDRIVE® MDX61B...-2_3 (AC 230 V devices)

3.4.1 MOVIDRIVE® MDX61B0015/0022/0037 size 1 (AC 230 V devices)

MOVIDRIVE® MDX61B		0015-2A3-4-0_	0022-2A3-4-0_	0037-2A3-4-0_
INPUT				
Nominal line voltage (to EN 50160)	V_{line}	3 × AC 200 V - 240 V		
Line frequency	f_{line}	50 Hz – 60 Hz ±5%		
Nominal line current I_{line}	100%	AC 6.7 A	AC 7.8 A	AC 12.9 A
(at $V_{line} = 3 \times AC 230 V$)	125%	AC 8.4 A	AC 9.8 A	AC 16.1 A
OUTPUT				
Apparent output power ¹⁾	S_N	2.7 kVA	3.4 kVA	5.8 kVA
(at $V_{line} = 3 \times AC 230 - 240 V$)				
Nominal output current	I_N	AC 7.3 A	AC 8.6 A	AC 14.5 A
(at $V_{line} = 3 \times AC 230 V$)				
Continuous output current (= 125% I_N)	I_D	AC 9.1 A	AC 10.8 A	AC 18.1 A
(at $V_{line} = 3 \times AC 230 V$ with $f_{PWM} = 4 kHz$)				
Continuous output current (= 100% I_N)	I_D	AC 7.3 A	AC 8.6 A	AC 14.5 A
(at $V_{line} = 3 \times AC 230 V$ with $f_{PWM} = 8 kHz$)				
Max. output frequency	f_{max}	599 Hz		
Current limiting	I_{max}	Motor and regenerative 150% I_N , duration depending on the capacity utilization		
Internal current limitation		$I_{max} = 0 - 150\%$ adjustable		
Minimum permitted braking resistor value (4-Q operation)	R_{BWmin}	27 Ω		

MOVIDRIVE® MDX61B		0015-2A3-4-0_	0022-2A3-4-0_	0037-2A3-4-0_
Output voltage	V _O	Max. V _{line}		
PWM frequency	f _{PWM}	Adjustable: 4/8/12/16 kHz		
Speed range / resolution	n _A / Δn _A	−6000 – 0 – +6000 rpm / 0.2 rpm over the entire range		
GENERAL INFORMATION				
Power loss at S _N ¹⁾	P _{Vmax}	110 W	126 W	210 W
Cooling air consumption		40 m³/h		
Mass		2.8 kg (6.2 lb)		
Dimensions	W × H × D	105 mm × 314 mm × 234 mm (4.13 in × 12.4 in × 9.21 in)		
Cross section of device terminals X1, X2, X3, X4		Separable terminal strip 4 mm² conductor end sleeve DIN 46228		
Tightening torque		0.6 Nm		

1) The performance data applies to $f_{PWM} = 4$ kHz.

MDX61B standard version		0015-2A3-4-00	0022-2A3-4-00	0037-2A3-4-00
Part number		827 994 2	827 995 0	827 996 9
MDX61B application version		0015-2A3-4-0T	0022-2A3-4-0T	0037-2A3-4-0T
Part number		828 003 7	828 004 5	828 005 3
Recommended motor power				
	P_{Mot}	1.5 kW (2.0 HP)	2.2 kW (3.0 HP)	3.7 kW (5.0 HP)
Constant load				
	P_{Mot}	2.2 kW (3.0 HP)	3.7 kW (5.0 HP)	5.0 kW (6.7 HP)
Variable torque load or constant load without overload				
Recommended motor power		→ MOVIDRIVE® B system manual, motor selection chapter		

3.4.2 MOVIDRIVE® MDX61B0055/0075 size 2 (AC 230 V devices)

MOVIDRIVE® MDX61B		0055-2A3-4-0_	0075-2A3-4-0_
INPUT			
Nominal line voltage (to EN 50160)	V _{line}	3 × AC 200 V - 240 V	
Line frequency	f _{line}	50 Hz – 60 Hz ±5%	
Nominal line current I _{line}	100%	AC 19.5 A	AC 27.4 A
(at V _{line} = 3 × AC 230 V)	125%	AC 24.4 A	AC 34.3 A
OUTPUT			
Apparent output power ¹⁾	S _N	8.8 kVA	11.6 kVA
(at V _{line} = 3 × AC 230 – 240 V)			
Nominal output current	I _N	AC 22 A	AC 29 A
(at V _{line} = 3 × AC 230 V)			
Continuous output current (= 125% I _N)	I _D	AC 27.5 A	AC 36.3 A
(at V _{line} = 3 × AC 230 V with f _{PWM} = 4 kHz)			
Continuous output current (= 100% I _N)	I _D	AC 22 A	AC 29 A
(at V _{line} = 3 × AC 230 V with f _{PWM} = 8 kHz)			
Max. output frequency	f _{max}	599 Hz	
Current limiting	I _{max}	Motor and regenerative 150% I _N , duration depending on the capacity utilization	
Internal current limitation		I _{max} = 0 – 150% adjustable	
Permitted minimum braking resistance value (4Q operation)	R _{BRmin}	12 Ω	
Output voltage	V _O	Max. V _{line}	
PWM frequency	f _{PWM}	Adjustable: 4/8/12/16 kHz	
Speed range / resolution	n _A / Δn _A	–6000 – 0 – +6000 rpm / 0.2 rpm over the entire range	
GENERAL INFORMATION			
Power loss at S _N ¹⁾	P _{Vmax}	300 W	380 W

MOVIDRIVE® MDX61B		0055-2A3-4-0_	0075-2A3-4-0_
Cooling air consumption		80 m³/h	
Mass		5.9 kg (13 lb)	
Dimensions	W × H × D	130 mm × 315 mm × 285 mm (5.12 in × 12.4 in × 11.2 in)	
Cross section of device terminals X1, X2, X3, X4		M4 screw and washer assembly with terminal clip 4 mm² conductor end sleeve DIN 46228 6 mm² crimp cable lug DIN 46234 (German Industrial Standard)	
Tightening torque		1.5 Nm	

1) The performance data applies to $f_{PWM} = 4 \text{ kHz}$.

MDX61B standard version		0055-2A3-4-00	0075-2A3-4-00
Part number		827 997 7	827 998 5
MDX61B application version		0055-2A3-4-0T	0075-2A3-4-0T
Part number		828 006 1	828 008 8
Recommended motor power			
	P_{Mot}	5.5 kW (7.4 HP)	7.5 kW (10 HP)
Constant load			
	P_{Mot}	7.5 kW (10 HP)	11 kW (15 HP)
Variable torque load or constant load without overload			
Recommended motor power		→ MOVIDRIVE® B system manual, motor selection chapter	

3.4.3 MOVIDRIVE® MDX61B0110/0150 size 3 (AC 230 V devices)

MOVIDRIVE® MDX61B		0110-203-4-0_	0150-203-4-0_
INPUT			
Nominal line voltage (to EN 50160)	V_{line}	3 × AC 200 V - 240 V	
Line frequency	f_{line}	50 Hz – 60 Hz ±5%	
Nominal line current I_{line}	100%	AC 40 A	AC 49 A
(at $V_{line} = 3 \times \text{AC } 230 \text{ V}$)	125%	AC 50 A	AC 61 A
OUTPUT			
Apparent output power ¹⁾	S_N	17.1 kVA	21.5 kVA
(at $V_{line} = 3 \times \text{AC } 230 - 240 \text{ V}$)			
Nominal output current	I_N	AC 42 A	AC 54 A
(at $V_{line} = 3 \times \text{AC } 230 \text{ V}$)			
Continuous output current (= 125% I_N)	I_D	AC 52.5 A	AC 67.5 A
(at $V_{line} = 3 \times \text{AC } 230 \text{ V}$ with $f_{PWM} = 4 \text{ kHz}$)			
Continuous output current (= 100% I_N)	I_D	AC 42 A	AC 54 A
(at $V_{line} = 3 \times \text{AC } 230 \text{ V}$ with $f_{PWM} = 8 \text{ kHz}$)			
Max. output frequency	f_{max}	599 Hz	
Current limiting	I_{max}	Motor and regenerative 150% I_N , duration depending on the capacity utilization	
Internal current limitation		$I_{max} = 0 - 150\%$ adjustable	
Permitted minimum braking resistance value (4Q operation)	R_{BRmin}	7.5 Ω	5.6 Ω
Output voltage	V_O	Max. V_{line}	
PWM frequency	f_{PWM}	Adjustable: 4/8/12/16 kHz	
Speed range / resolution	$n_A / \Delta n_A$	-6000 – 0 – +6000 rpm / 0.2 rpm over the entire range	
GENERAL INFORMATION			
Power loss at S_N ¹⁾	P_{Vmax}	580 W	720 W
Cooling air consumption		180 m³/h	
Mass		14.3 kg (31.5 lb)	
Dimensions	W × H × D	200 mm × 465 mm × 308 mm (7.87 in × 18.3 in × 12.1 in)	

MOVIDRIVE® MDX61B	0110-203-4-0_	0150-203-4-0_
Cross section of device terminals X1, X2, X3, X4	M6 screw and washer assembly with washer Max. 25 mm ² Crimp cable lug DIN 46234	
Tightening torque	3.5 Nm	

1) The performance data applies to $f_{PWM} = 4 \text{ kHz}$.

MDX61B standard version	0110-203-4-00	0150-203-4-00
Part number	827 999 3	828 000 2
MDX61B application version	0110-203-4-0T	0150-203-4-0T
Part number	828 009 6	828 011 8
Recommended motor power		
 P_{Mot}	11 kW (15 HP)	15 kW (20 HP)
Constant load		
 P_{Mot}	15 kW (20 HP)	22 kW (30 HP)
Variable torque load or constant load without overload		
Recommended motor power	→ MOVIDRIVE® B system manual, motor selection chapter	

3.4.4 MOVIDRIVE® MDX61B0220/0300 size 4 (AC 230 V devices)

MOVIDRIVE® MDX61B	0220-203-4-0_	0300-203-4-0_
INPUT		
Nominal line voltage (to EN 50160)	V_{line}	3 × AC 200 V - 240 V
Line frequency	f_{line}	50 Hz – 60 Hz ±5%
Nominal line current I_{line}	100%	AC 72 A
(at $V_{line} = 3 \times \text{AC } 230 \text{ V}$)	125%	AC 90 A
OUTPUT		
Apparent output power ¹⁾	S_N	31.8 kVA
(at $V_{line} = 3 \times \text{AC } 230 - 240 \text{ V}$)		37.8 kVA
Nominal output current	I_N	AC 80 A
(at $V_{line} = 3 \times \text{AC } 230 \text{ V}$)		AC 95 A
Continuous output current (= 125% I_N)	I_D	AC 100 A
(at $V_{line} = 3 \times \text{AC } 230 \text{ V}$ with $f_{PWM} = 4 \text{ kHz}$)		AC 118 A
Continuous output current (= 100% I_N)	I_D	AC 80 A
(at $V_{line} = 3 \times \text{AC } 230 \text{ V}$ with $f_{PWM} = 8 \text{ kHz}$)		AC 95 A
Max. output frequency	f_{max}	599 Hz
Current limiting	I_{max}	Motor and regenerative 150% I_N , duration depending on the capacity utilization
Internal current limitation		$I_{max} = 0 - 150\%$ adjustable
Permitted minimum braking resistance value (4Q operation)	R_{BRmin}	3 Ω
Output voltage	V_O	Max. V_{line}
PWM frequency	f_{PWM}	Adjustable: 4/8/12/16 kHz
Speed range / resolution	$n_A / \Delta n_A$	–6000 – 0 – +6000 rpm / 0.2 rpm over the entire range
GENERAL INFORMATION		
Power loss at $S_N^{1)}$	P_{Vmax}	1100 W
Cooling air consumption		180 m ³ /h
Mass		26.3 kg (57 lb)
Dimensions	$W \times H \times D$	280 mm × 522 mm × 307 mm (11.0 in × 20.6 in × 12.1 in)
Cross section of device terminals X1, X2, X3, X4	M10 bolt with nut Max. 70 mm ² Crimp cable lug DIN 46235	

MOVIDRIVE® MDX61B	0220-203-4-0_	0300-203-4-0_
Tightening torque	3.5 Nm	

1) The performance data applies to $f_{PWM} = 4 \text{ kHz}$.

MDX61B standard version		0220-203-4-00	0300-203-4-00
Part number		828 001 0	828 002 9
MDX61B application version		0220-203-4-0T	0300-203-4-0T
Part number		828 012 6	828 013 4
Recommended motor power			
	P_{Mot}	22 kW (30 HP)	30 kW (40 HP)
Constant load			
	P_{Mot}	30 kW (40 HP)	37 kW (50 HP)
Variable torque load or constant load without overload			
Recommended motor power		→ MOVIDRIVE® B system manual, motor selection chapter	

4 DEU21B multi-encoder card

4.1 Part number

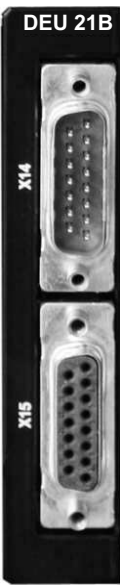
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4.2 Description

Option-capable MOVIDRIVE® MDX61B devices can be equipped with a DEU21B multi-encoder card. The encoder card provides one input for the motor encoder and one input for an external encoder, also referred to as a distance encoder.

Both encoder inputs can evaluate incremental and absolute encoders. The input for the external encoder can also be used as an output for incremental encoder simulation.

4.3 Electronics data

DEU21B option	
 DEU 21B X14 X15	External encoder connection X14: Output for incremental encoder simulation: • Signal level to RS422 • The number of pulses is the same as on X15 motor encoder input
	Permitted encoder types: • HIPERFACE® encoder • sin/cos encoder $V_{PP} = AC\ 1\ V$ • CANopen encoder • TTL encoder with negated tracks • HTL encoder • SSI encoder • SSI Combi encoder • EnDat encoder • Encoder with signal level to RS422 • Permitted PPR count: 2-4096 increments Encoder power supply: • DC 24 V encoder supply • DC 12 V encoder supply¹⁾
	Motor encoder connection X15: Permitted encoder types: • HIPERFACE® encoder • sin/cos encoder $V_{PP} = AC\ 1\ V$ • TTL encoder with negated tracks • HTL encoder • SSI encoder • SSI Combi encoder • EnDat encoder • Encoder with signal level to RS422 • Permitted PPR count: 2-4096 increments Encoder power supply: • DC 24 V voltage supply²⁾ • DC 12 V voltage supply³⁾

1) The maximum load on X14:15 and X15:15 is DC 650 mA in total.

2) If the overall unit load on the 24 V level exceeds 400 mA, connect an external DC 24 V supply to X10:9/X10:10. Observe the "Project planning" chapter in the MOVIDRIVE® MDX60B/61B system manual

3) The maximum load on X14:15 and X15:15 is DC 650 mA in total.

5 NF...-... line filters

- Are used to suppress interference emission on the line side of inverters.
- Do not switch between NF... line filters and MOVIDRIVE®.
- NF... line filters have a cRUus approval independent of MOVIDRIVE®.

Line filter type	NF009-503	NF014-503	NF018-503	NF035-503	NF048-503
Part number	827 412 6	827 116 X	827 413 4	827 128 3	827 117 8
Nominal line voltage V_{line} (according to EN 50160)	3 × AC 380 V - 500 V, 50/60 Hz				
Nominal current I_N	AC 9 A	AC 14 A	AC 18 A	AC 35 A	AC 48 A
Power loss at I_N P_V	6 W	9 W	12 W	15 W	22 W
Leakage current at V_N	< 25 mA	< 25 mA	< 25 mA	< 25 mA	< 40 mA
Ambient temperature ϑ_A	-25 to 100%				
Degree of protection	IP20 (EN 60529)				
Connections L1-L3/L1'-L3'	4 mm ² (AWG 10)			10 mm ²	10 mm ²
Tightening torque L1-L3/ L1'-L3'	0.8 Nm			(AWG 8)	(AWG 8)
Connection PE	M5 stud			1.8 Nm	1.8 Nm
Tightening torque PE	3.4 Nm			M5 stud	M6 stud
Assignment to AC 400/500 V devices (MDX60/61B...-5_3)					
Nominal operation (100%)	0005 – 0040	0055/0075	-	0110/0150	0220
Increased power (125%)	0005 – 0030	0040/0055	0075	0110	0150
Assignment to AC 230 V devices (MDX61B...-2_3)					
Nominal operation (100%)	0015/0022	0037	-	0055/0075	0110
Increased power (125%)	0015	0022	0037	0055/0075	-

Line filter type	NF063-503	NF085-503	NF115-503	NF150-503	NF210-503
Part number	827 414 2	827 415 0	827 416 9	827 417 7	827 418 5
Nominal line voltage V_{line} (according to EN 50160)	3 × AC 380 V - 500 V, 50/60 Hz				
Nominal current I_N	AC 63 A	AC 85 A	AC 115 A	AC 150 A	AC 210 A
Power loss at I_N P_V	30 W	35 W	60 W	90 W	150 W
Leakage current at V_N	< 30 mA	< 30 mA	< 30 mA	< 30 mA	< 40 mA
Ambient temperature ϑ_A	-25 to 100%				
Degree of protection	IP20 (EN 60529)				
Connections L1-L3/L1'-L3'	16 mm ²	35 mm ²	50 mm ²	50 mm ²	95 mm ²
Tightening torque L1-L3/ L1'-L3'	(AWG 6)	(AWG 2)	(AWG1/0)	(AWG1/0)	(AWG4/0)
Connection PE	3 Nm	3.7 Nm	3.7 Nm	3.7 Nm	20 Nm
Tightening torque PE	M6	M8	M10	M10	M10
	5.5 Nm	12.8 Nm	23.8 Nm	23.8 Nm	23.8 Nm

Line filter type	NF063-503	NF085-503	NF115-503	NF150-503	NF210-503
Assignment to AC 400/500 V devices (MDX60/61B...-5_3)					
Nominal operation (100%)	0300	0370/0450	0550	0750	0900/1100
Increased power (125%)	0220	0300/0370	0450	0550/0750	0900
Assignment to AC 230 V devices (MDX61B...-2_3)					
Nominal operation (100%)	0150	0220	0300	-	-
Increased power (125%)	0110/0150	-	0220/0300	-	-

Line filter type	NF300-503	NF600-503
Part number	827 419 3	1 796 338 9
Nominal line voltage V_{line} (according to EN 50160)	3 × AC 380 V - 500 V, 50/60 Hz	
Nominal current I_N	AC 300 A	AC 600 A
Power loss at I_N P_V	180 W	44 W
Leakage current at V_N	< 45 mA	< 6 mA
Ambient temperature ϑ_A	-25 to 100%	
Degree of protection	IP20 (EN 60529)	IP00 (EN 60529)
Connections L1-L3/L1'-L3'	150 mm ²	Connection rail with bore for M12
Tightening torque L1-L3/ L1'-L3'	(AWG300-2) 30 Nm	Max. 2 × 240 mm ² 70 Nm (620 lb in)
Connection PE	M12	M12
Tightening torque PE	36 Nm	36 Nm
Assignment to AC 400/500 V devices (MDX60/61B...-5_3)		
Nominal operation (100%)	1320	2500
Increased power (125%)	1100/1320	1600/2000/2500
Assignment to AC 230 V devices (MDX61B...-2_3)		
Nominal operation (100%)	-	-
Increase power (125%)	-	-

6 Assignment of braking resistors, chokes and filters

6.1 AC 400/500 V devices, sizes 5 to 7

MOVIDRIVE® MDX61B....503			0550	0750	0900	1100	1320	1600	2000	2500
Size			5		6			7		
Braking resistors BW....-T	Trip current	Part number BW....-T								
BW106-T	$I_F = 47.4 \text{ A}$	1820 083 4			C	C	C	D	E	F
BW206-T	$I_F = 54.8 \text{ A}$	1820 412 0			C	C	C	D	E	F
BW1.4-170	$I_F = 110 \text{ A}$	1330 152 7								
BW003-420-T	$I_F = 129 \text{ A}$	1330 234 5						C	C	C
Line filter		Part number								
NF115-503	$V_{\max} = \text{AC } 550 \text{ V}$	827 416 9	A							
NF150-503		827 417 7	B							
NF210-503		827 418 5				A				
NF300-503		827 419 3				B				
NF600-503		1 796 338 9						B	B	B
Output chokes	Inner diameter	Part number								
HD001	$d = 50 \text{ mm}$	813 325 5	For cable cross sections $1.5 - 16 \text{ mm}^2$ (AWG 16 – 6)							
HD003	$d = 88 \text{ mm}$	813 558 4	for cable cross sections $> 16 \text{ mm}^2$ (AWG 6)							
HD004	Connection with M12 bolt	816 885 7								
HD005	Connection With M12 cable lug, M10 PE connection	1 796 336 2						B	B	B
Output filter (only in V/f and VFC operating mode)		Part number								
HF450-503		826 948 3	H	H						
HF180-403		829 909 9								
HF325-403		829 948 3								

A In nominal operation (100%)

B With variable torque load (125%)

C Connect two braking resistors in parallel and set twice the trip current ($2 \times I_F$) on F16

D Connect three braking resistors in parallel and set three times the trip current ($3 \times I_F$) on F16

E Connect four braking resistors in parallel and set four times the trip current ($4 \times I_F$) on F16

F Connect five braking resistors in parallel and set five times the trip current ($5 \times I_F$) on F16

H Two filters in parallel

7 Motor table DRS.. series AC motors (characteristic value with double-star/star connection AC 230/460 V / 60 Hz)

Motor	P _m	M _N	Mass moment of inertia J _M		Star Δ (AC 460 V)				Double-star 〰 (AC 230 V)			
	kW	Nm	without brake	with brake	I _n	I _{q,n} ¹⁾	I _{d,n} ¹⁾	k _T ¹⁾	I _n	I _{q,n} ¹⁾	I _{d,n} ¹⁾	k _T ¹⁾
			10 ⁻⁴ kgm ²		A	A	A	Nm/A (lb in/A)	A	A	A	Nm/A (lb in/A)
DRS71S4	0.37	2.1 (18.6)	4.9	6.2	0.92	0.72	0.58	2.93 (25.9)	1.84	1.43	1.16	1.47 (13.0)
DRS71M4	0.55	3.1 (27.4)	7.1	8.4	1.25	1.00	0.75	3.09 (27.3)	2.50	2.00	1.49	1.55 (13.7)
DRS80S4	0.75	4.2 (37.2)	14.9	16.4	1.66	1.23	1.12	3.43 (30.4)	3.32	2.45	2.24	1.71 (15.1)
DRS80M4	1.1	6.1 (54.0)	21.5	26	2.14	1.75	1.23	3.48 (30.8)	4.28	3.50	2.46	1.74 (15.4)
DRS90M4	1.5	8.4 (74.3)	35.5	40	2.87	2.52	1.38	3.34 (29.6)	5.74	5.03	2.76	1.67 (14.8)
DRS90L4	2.2	12.2 (108)	43.5	49.5	4.1	3.33	2.37	3.66 (32.4)	8.20	6.66	4.75	1.83 (16.2)
DRS100M4	3	16.7 (148)	56	62	5.5	4.92	2.45	3.39 (30.0)	11.0	9.85	4.90	1.70 (15.0)
DRS100M4	3.7	21 (186)	56	62	6.65	6.19	2.42	3.39 (30.0)	13.3	12.4	4.84	1.70 (15.0)
DRS100L4	4	22.5 (199)	68.3	74.3	7.3	6.25	3.78	3.60 (31.9)	14.6	12.5	7.56	1.80 (15.9)
DRS112M4	4	22 (195)	146	151	6.8	6.41	2.26	3.43 (30.4)	13.6	12.8	4.52	1.71 (15.1)
DRS132S4	5.5	30 (266)	190	200	9.4	8.8	3.36	3.42 (30.3)	18.8	17.6	6.72	1.71 (15.1)
DRS132M4	7.5	41 (363)	255	265	12.4	11.7	4.01	3.50 (31.0)	24.8	23.5	8.02	1.75 (15.5)
DRS132MC4	9.2	50 (443)	342	355	16	14.7	6.33	3.40 (30.1)	32.0	29.4	12.7	1.70 (15.0)
DRS160S4	9.2	50 (443)	370	420	15.9	14.2	7.2	3.53 (31.2)	31.8	28.4	14.4	1.76 (15.6)
DRS160M4	11	60 (531)	450	500	18.8	17.5	6.99	3.44 (30.4)	37.6	34.9	14.0	1.72 (15.2)
DRS160MC4	15	81 (717)	590	640	26.5	24.7	9.57	3.28 (29.0)	53.0	49.4	19.1	1.64 (14.5)
DRS180S4	15	81 (717)	895	955	25.5	23.6	9.68	3.43 (30.4)	51.0	47.2	19.4	1.72 (15.2)
DRS180M4	18.5	100 (885)	1110	1250	30.5	27.0	14.1	3.70 (32.7)	61.0	54.1	28.2	1.85 (16.4)
DRS180L4	22	119 (1053)	1300	1440	35.9	32.1	16.0	3.70 (32.7)	71.8	64.2	32.0	1.85 (16.4)
DRS180LC4	30	161 (1425)	1680	1910	48.5	45.5	16.9	3.54 (31.3)	97.0	90.9	33.8	1.77 (15.7)
DRS200L4	30	161 (1425)	2360	2590	51	47.9	17.6	3.36 (29.7)	102	95.8	35.1	1.68 (14.9)
DRS225S4	37	198 (1752)	2930	3160	61	56.6	22.6	3.50 (31.0)	122	113	45.3	1.75 (15.5)
DRS225M4	45	240 (2124)	3430	3660	72	68.7	21.7	3.50 (31.0)	144	137	43.4	1.75 (15.5)
DRS225MC4	55	295 (2611)	4330	4560	87.9	84.5	24.2	3.49 (30.9)	176	169	48.4	1.75 (15.5)
DRS315K4	110	589 (5213)	18400	19500	172	165	47.4	3.56 (31.5)	-	-	-	-
DRS315S4	132	707 (6257)	22500	23600	205	202	43.4	3.49 (30.9)	-	-	-	-
DRS315S4	150	802 (7098)	22500	23600	230	222	60.7	3.62 (32.0)	-	-	-	-

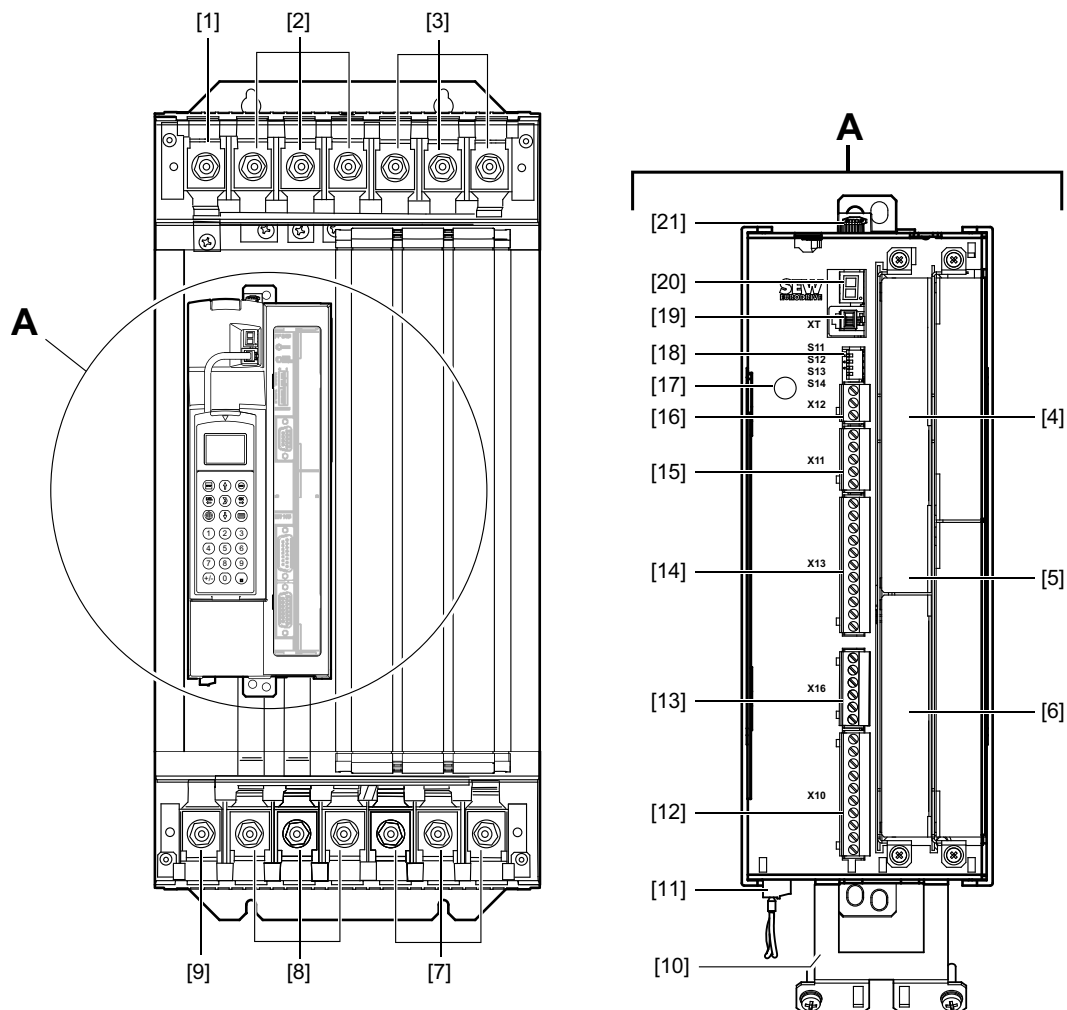
7 Motor table DRS.. series AC motors (characteristic value with double-star/star connection AC 230/460 V / 60 Hz)

Motor	P _m	M _N	Mass moment of inertia J _M		Star ⋄ (AC 460 V)				Double-star ⋄⋄ (AC 230 V)			
			without brake	with brake	I _n	I _{q,n} ¹⁾	I _{d,n} ¹⁾	k _T ¹⁾	I _n	I _{q,n} ¹⁾	I _{d,n} ¹⁾	k _T ¹⁾
	kW	Nm	10 ⁻⁴ kgm ²		A	A	A	Nm/A (lb in/A)	A	A	A	Nm/A (lb in/A)
DRS315M4	160	856 (7576)	27900	29000	245	237	60.3	3.60 (31.9)	-	-	-	-
DRS315M4	185	991 (8771)	27900	29000	280	274	59.9	3.62 (32.0)	-	-	-	-
DRS315L4	200	1072 (9488)	31900	33000	304	295	73.4	3.63 (32.1)	-	-	-	-
DRS315L4	225	1205 (10665)	31900	33000	335	328	72.8	3.67 (32.5)	-	-	-	-

1) Applies in the basic speed range up to n trans.

8 Size 5

MDX61B-503 (AC 400/500 V devices): 0550 / 0750



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- [1] PE connection
- [2] X1: Line connection 1/L1, 2/L2, 3/L3
- [3] X4: Connection for DC link coupling $-U_z + U_z$ and PE connection
- [4] Fieldbus option slot
- [5] Expansion slot
- [6] Encoder slot
- [7] X3: Braking resistor connection 8/+R, 9/-R and PE connection
- [8] X2: Motor connection 4/U, 5/V, 6/W
- [9] PE connection
- [10] Shield terminal for signal lines
- [11] X17: Signal terminal strip for safety contacts for safe stop
- [12] X10: Signal terminal strip for digital outputs and TF/TH input
- [13] X16: Signal terminal strip digital inputs and outputs
- [14] X13: Signal terminal strip terminal strip for digital inputs and RS485 interface

[15] X11: Signal terminal strip for setpoint input AI1 and 10 V reference voltage

[16] X12: Signal terminal strip system bus (SBus)

[17] Grounding screw M4 × 14

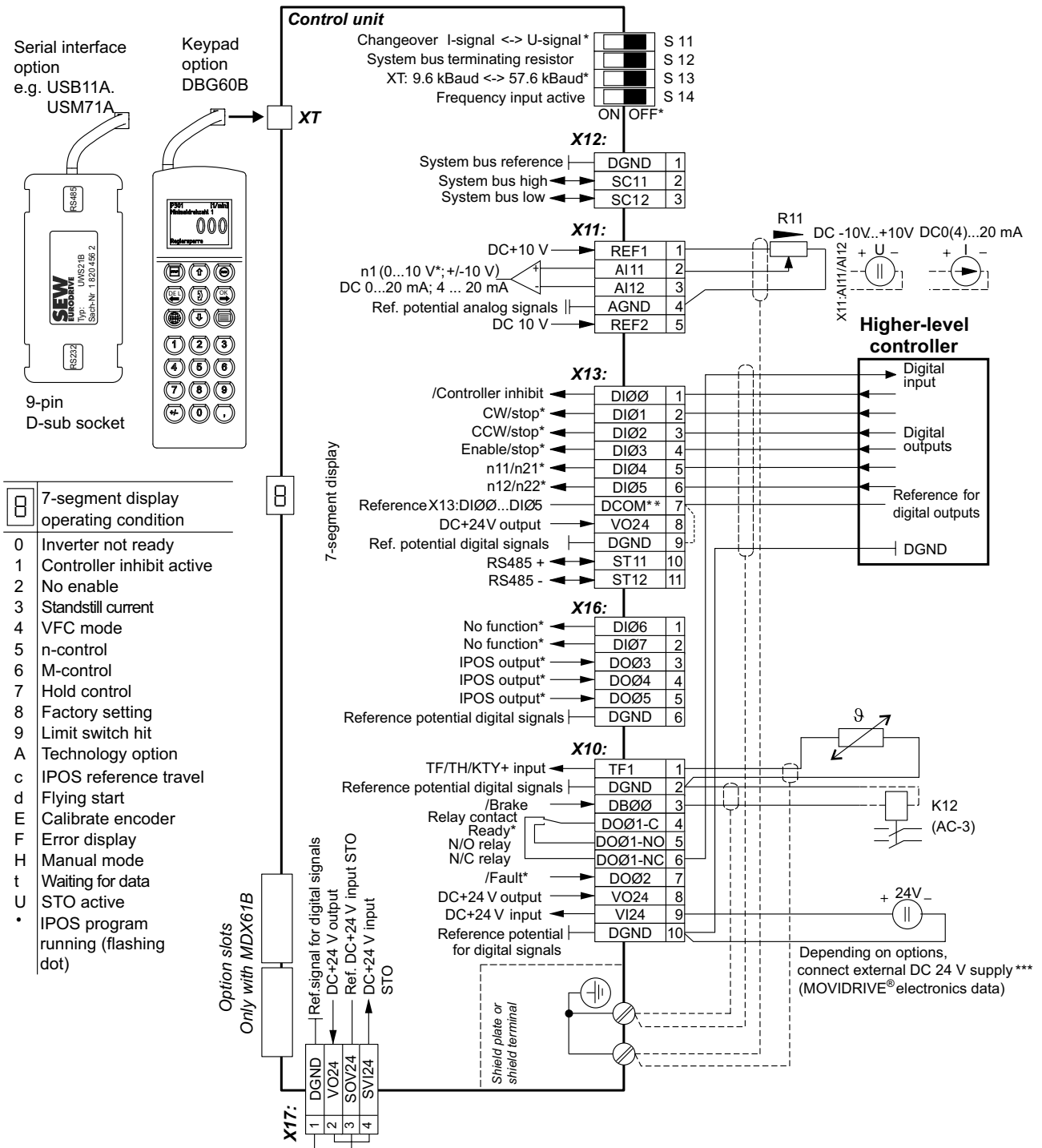
[18] DIP switches S11 – S14

[19] XT: Slot for DBG60B keypad or UWS21B serial interface

[20] 7-segment display

[21] Memory card

9 MDX60B/61B signal terminals



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* Factory setting

** If the digital inputs are connected to the DC 24 V voltage supply X13:8 "VO24", install a jumper between X13:7 (DCOM) and X13:9 (DGND) on MOVIDRIVE®.

DGND (X10, X12, X13, X16, X17) is connected with PE as standard (tapped hole, see chapter "Device structure"). You can establish electrical isolation by removing the M4 x 14 grounding screw. When using a DCS21B, DCS31B and DEU21B option card, electrical isolation is not possible.

*** External voltage supply via X:10 only for sizes 0-6. For size 7, you must connect the 24 V backup voltage via the DC power supply.

10 Declarations of conformity

10.1 MOVIDRIVE®

10.1.1 Declaration of conformity

EU Declaration of Conformity



Translation of the original text

900230210/EN

SEW-EURODRIVE GmbH & Co. KG
Ernst-Blickle-Straße 42, D-76646 Bruchsal

declares under sole responsibility that the following products

Frequency inverters of the product series **MOVIDRIVE® MDX6.B.....-...-.../.**
are in conformity with

Machinery Directive **2006/42/EC**
(L 157, 09.06.2006, 24-86)

This includes the fulfillment of the protection targets for "electrical power supply" in accordance with annex I No. 1.5.1 according to the Low Voltage Directive 73/23/EEC -- Note: 2006/95/EC (until 19 Apr 2016) and 2014/35/EU (as of 20 Apr 2016) are currently valid.

EMC Directive **2004/108/EC (valid until April 19, 2016)** **4)**
2014/30/EU (valid as of April 20, 2016) **4)**
(L 96, 29.03.2014, 79-106)

Applied harmonized standards: **EN ISO 13849-1:2008/AC:2009**
EN 61800-5-1:2007
EN 61800-3:2004/A1:2012

4) According to the EMC Directive, the listed products are not independently operable products. EMC assessment is only possible after these products have been integrated in an overall system. For the assessment, the product was installed in a typical plant configuration.

Bruchsal

12.04.2016

Place

Date

Johann Soder

Managing Director Technology

a) b)

- a) Authorized representative for issuing this declaration on behalf of the manufacturer
b) Authorized representative for compiling the technical documents

10.2 MOVIDRIVE® with DFS11B/DFS21B
10.2.1 Declaration of conformity

EU Declaration of Conformity



Translation of the original text

900010410/EN

SEW-EURODRIVE GmbH & Co. KG
Ernst-Blickle-Straße 42, D-76646 Bruchsal

declares under sole responsibility that the following products

Frequency inverters of the product series **MOVIDRIVE® MDX6.B....-3-.../.**
with built-in **DFS11B PROFIBUS-DP-V1 with PROFIsafe**
 DFS21B PROFINET IO with PROFIsafe
are in conformity with

Machinery Directive **2006/42/EC**
 (L 157, 09.06.2006, 24-86)

This includes the fulfillment of the protection targets for "electrical power supply" in accordance with annex I No. 1.5.1 according to the Low Voltage Directive 73/23/EEC -- Note: 2006/95/EC (until 19 Apr 2016) and 2014/35/EU (as of 20 Apr 2016) are currently valid.

EMC Directive **2004/108/EC (valid until April 19, 2016)** **4)**
 2014/30/EU (valid as of April 20, 2016) **4)**
 (L 96, 29.03.2014, 79-106)

Applied harmonized standards: **EN ISO 13849-1:2008/AC:2009**
 EN 61800-5-1:2007
 EN 61800-3:2004/A1:2012

Other applicable standards: **EN 61508:2001 (part 1-7)**
 EN 62061:2005

4) According to the EMC Directive, the listed products are not independently operable products. EMC assessment is only possible after these products have been integrated in an overall system. For the assessment, the product was installed in a typical plant configuration.

 Bruchsal **18.04.2016**

Place Date

 Johann Soder
 Managing Director Technology

a) b)

- a) Authorized representative for issuing this declaration on behalf of the manufacturer
 b) Authorized representative for compiling the technical documents

10.3 MOVIDRIVE® with DCS21B/DCS31B

10.3.1 Declaration of conformity

EU Declaration of Conformity



Translation of the original text

901920413/EN

SEW-EURODRIVE GmbH & Co. KG
Ernst-Blickle-Straße 42, D-76646 Bruchsal

declares under sole responsibility that the following products

Frequency inverters of the product series **MOVIDRIVE® MDX6.B....-3-.../.**
with built-in **DCS2.B with DFS12B PROFIBUS-DP-V1 with PROFIsafe**
DCS2.B with DFS22B PROFINET IO with PROFIsafe
DCS3.B

are in conformity with

Machinery Directive **2006/42/EC**
(L 157, 09.06.2006, 24-86)

This includes the fulfillment of the protection targets for "electrical power supply" in accordance with annex I No. 1.5.1 according to the Low Voltage Directive 73/23/EEC -- Note: 2006/95/EC (until 19 Apr 2016) and 2014/35/EU (as of 20 Apr 2016) are currently valid.

EMC Directive **2004/108/EC (valid until April 19, 2016)** **4)**
2014/30/EU (valid as of April 20, 2016) **4)**
(L 96, 29.03.2014, 79-106)

Applied harmonized standards: **EN ISO 13849-1:2008/AC:2009**
EN 61800-3:2004/A1:2012
EN 61800-5-1:2007
EN 61800-5-2:2007

Other applied standards: **EN 61508:2001 (part 1-7)**
EN 62061:2005

4) According to the EMC Directive, the listed products are not independently operable products. EMC assessment is only possible after these products have been integrated in an overall system. For the assessment, the product was installed in a typical plant configuration.

Freely programmable safety controller for monitoring drive systems, suitable for SIL 3 IEC 61508:2010 and PL e according to EN ISO 13849-1:2008. An EC type examination was carried out for the safety module by the following testing institute: TÜV Rheinland Industrie Service GmbH, Alboinstr. 56, 12103 Berlin, Germany. ID of notified body NB 0035

Bruchsal **18.04.2016**

Place Date

Johann Soder
Managing Director Technology

a) b)

- a) Authorized representative for issuing this declaration on behalf of the manufacturer
b) Authorized representative for compiling the technical documents

11 Size 3**11.1 Nameplate**

The new inverters of size 3 can be recognized by the entries in the status fields 2 and 5 on the nameplate of the power section. Older hardware versions do not have entries in the status fields 2 and 5.

As an example for the new hardware version, the entry in status field 2 is "10" and the entry in status field 5 is "11" in the nameplate shown below.



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11.2 Technical data

11.2.1 General technical data

The following table lists the technical data applicable to all MOVIDRIVE® MDX60/61B drive inverters, regardless of their type, version, size and power rating.

MOVIDRIVE® MDX60B/61B	All sizes
Interference immunity	Complies with EN 61800-3
Interference emission with EMC compliant installation	Sizes 0 to 7 meet EN 61800-3 Sizes 0 to 5: According to limit value class C1 to EN 61800-3 with a corresponding line filter Sizes 0, 1, 2S, and 2 in accordance with limit value class C2 to EN 61800-3 without additional measures Size 6 and 7 in accordance with limit value class C2 to EN 61800-3 with corresponding line filter
Ambient temperature ϑ_A	0 °C – +50 °C at $I_D = 100\% I_N$ and $f_{PWM} = 4$ kHz / size 7: 2.5 kHz 0 °C – +40 °C at $I_D = 125\% I_N$ and $f_{PWM} = 4$ kHz / size 7: 2.5 kHz 0 °C – +40 °C at $I_D = 100\% I_N$ and $f_{PWM} = 8$ kHz (sizes 0 – 6) 0 °C – +40 °C at $I_D = 100\% I_N$ and $f_{PWM} = 4$ kHz (size 7)
I_N reduction Ambient temperature	2.5% I_N per K between 40 °C – 50 °C 3% I_N per K at 50 °C – 60 °C
Climate class	EN 60721-3-3 class 3K3
Storage temperature ¹⁾ ϑ_L	-25 °C – +70 °C (EN 60721-3-3, class 3K3) DBG keypad: -20 °C – +60 °C
Type of cooling (DIN 41751)	Forced cooling (temperature-controlled fan, response threshold 45 °C)
Degree of protection EN 60529 (NEMA1) Sizes 0 to 2 Size 3	IP20 Status fields 2 and 5 of the power section nameplate do not have any entries: • IP10 without touch guard • IP20 with touch guard
Sizes 4 to 5	Status fields 2 and 5 of the power section nameplate have entries: • IP20 (power connections) with connected cable and installed heat shrink tubing (not included in the delivery) or with the delivered protection caps IP00 (power connections) IP10 (power connections) with • fitted Plexiglas cover supplied as standard and • fitted heat shrink tubing (not included in scope of delivery) IP20 (power connections) with • DLB11B option
Size 6	IP00 (power connections) IP10 (power connections) with • fitted Plexiglas cover supplied as standard and • fitted heat shrink tubing (not included in scope of delivery)
Size 7	IP00 (power connections) IP20 (power connections) with • installed DLB21B touch guard
Max. output frequency	599 Hz
Operating mode	Continuous duty with 50% overload capacity (size 0: 100%)
Overvoltage category	III according to IEC 60664-1 (VDE 0110-1)
Pollution class	2 according to IEC 60664-1 (VDE 0110-1)

MOVIDRIVE® MDX60B/61B	All sizes
Protection against mechanically active substances	3S1 DIN EN 60721-3-3 / IEC 721-3-3
Protection against chemically active substances	3C2 DIN EN 60721-3-3 / IEC 721-3-3
Installation altitude h	Up to $h \leq 1000$ m without restrictions. The following restrictions apply at $h \geq 1000$ m: • From 1000 m to max. 4000 m: – I_N reduction by 1% per 100 m • From 2000 m to max. 4000 m: – The safe disconnection of power and electronics connections can no longer be assured above 2000 m. This requires external measures (IEC 60664-1/EN 61800-5-1) – You have to connect an overvoltage protection device in order to reduce the overvoltages from category III to category II.

1) In case of long-term storage, connect the device to the power supply for at least 5 minutes every two years, otherwise the device's service life may be reduced.

11.2.2 MOVIDRIVE® MDX61B0150/0220/0300 size 3 (AC-400/500 V devices)

MOVIDRIVE® MDX61B		0150-503-4-0_	0220-503-4-0_	0300-503-4-0_
INPUT				
Rated supply voltage (to EN 50160)	V _{line}	3 × AC 380 V – 500 V		
Line frequency	f _{line}	50 Hz – 60 Hz ±5%		
Nominal line current ¹⁾ I _{line}	100%	AC 28.8 A	AC 41.4 A	AC 54 A
(at V _{line} = 3 × AC 400 V)	125%	AC 36 A	AC 51.7 A	AC 67.5 A
OUTPUT				
Apparent output power ²⁾	S _N	22.2 kVA	31.9 kVA	41.6 kVA
(at V _{line} = 3 × AC 380 – 500 V)				
Nominal output current ¹⁾	I _N	AC 32 A	AC 46 A	AC 60 A
(at V _{line} = 3 × AC 400 V)				
Continuous output current (= 125% I _N)	I _D	AC 40 A	AC 57.5 A	AC 75 A
(at V _{line} = 3 × AC 400 V with f _{PWM} = 4 kHz)				
Continuous output current (= 100% I _N)	I _D	AC 32 A	AC 46 A	AC 60 A
(at V _{line} = 3 × AC 400 V with f _{PWM} = 8 kHz)				
Max. output frequency	f _{max}	599 Hz		
Current limiting	I _{max}	Motoring and regenerative operation 150% I _N , duration depending on the capacity utilization		
Internal current limiting		I _{max} = 0 – 150% adjustable		
Permitted minimum braking resistance value (4Q operation)	R _{BWmin}	15 Ω	12 Ω	
Output voltage	V _O	Max. V _{line}		
PWM frequency	f _{PWM}	Adjustable: 4/8/12/16 kHz		
Speed range / resolution	n _A / Δn _A	–6000 – 0 – +6000 rpm / 0.2 rpm over the entire range		
GENERAL INFORMATION				
Power loss at S _N ²⁾	P _{Vmax}	550 W	750 W	950 W
Cooling air consumption		180 m³/h		
Weight		15.0 kg		
Dimensions	W × H × D	200 mm × 465 mm × 308 mm		
Cross section of device terminals X1, X2, X3, X4		Status fields 2 and 5 of the power section nameplate do not have any entries: Screw and washer assembly M6, max. 25 mm² crimp cable lug DIN 46234 Status fields 2 and 5 of the power section nameplate have entries: Bolt M6 with nut max. 25 mm² crimp cable lug DIN 46235		
Tightening torque		3.5 Nm		

1) The system and output currents must be reduced by 20% from the nominal values for $V_{line} = 3 \times AC 500 V$.

2) The performance data applies to $f_{PWM} = 4 kHz$.

MDX61B standard version		0150-503-4-00	0220-503-4-00	0300-503-4-00
Variant with coated printed circuit boards		0150-503-4-00/L	0220-503-4-00/L	0300-503-4-00/L
Part number		08279640	08279659	08279667
		18400205	18400213	18400221
MDX61B Application version		0150-503-4-0T	0220-503-4-0T	0300-503-4-0T
Variant with coated printed circuit boards		0150-503-4-0T/L	0220-503-4-0T/L	0300-503-4-0T/L
Part number		08279829	08279837	08279845
		18400396	18400418	18400426
Recommended motor power				
 Constant load	P_{Mot}	15 kW	22 kW	30 kW
 Variable torque load or constant load without overload	P_{Mot}	22 kW	30 kW	37 kW
Recommended motor power		→ MOVIDRIVE® B system manual or catalog, chapter "Motor selection"		

11.2.3 MOVIDRIVE® MDX61B0110/0150 size 3 (AC 230 V devices)

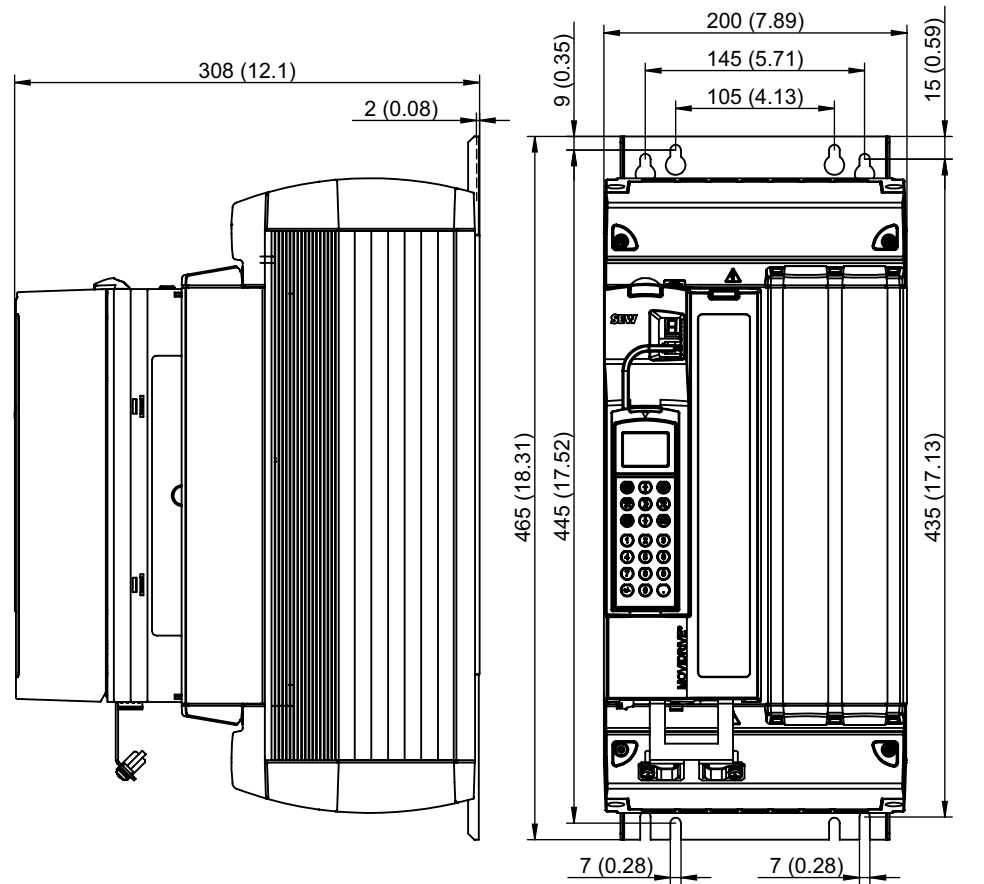
MOVIDRIVE® MDX61B		0110-203-4-0_	0150-203-4-0_
INPUT			
Rated supply voltage (to EN 50160)	V _{line}	3 × AC 200 V - 240 V	
Line frequency	f _{line}	50 Hz – 60 Hz ±5%	
Nominal line current I _{line}	100%	AC 40 A	AC 49 A
(at V _{line} = 3 × AC 230 V)	125%	AC 50 A	AC 61 A
OUTPUT			
Apparent output power ¹⁾	S _N	17.1 kVA	21.5 kVA
(at V _{line} = 3 × AC 230 – 240 V)			
Nominal output current	I _N	AC 42 A	AC 54 A
(at V _{line} = 3 × AC 230 V)			
Continuous output current (= 125% I _N)	I _D	AC 52.5 A	AC 67.5 A
(at V _{line} = 3 × AC 230 V with f _{PWM} = 4 kHz)			
Continuous output current (= 100% I _N)	I _D	AC 42 A	AC 54 A
(at V _{line} = 3 × AC 230 V with f _{PWM} = 8 kHz)			
Max. output frequency	f _{max}	599 Hz	
Current limiting	I _{max}	Motoring and regenerative operation 150% I _N , duration depending on the capacity utilization	
Internal current limiting		I _{max} = 0 – 150% adjustable	
Permitted minimum braking resistance value (4Q operation)	R _{BWmin}	7.5 Ω	5.6 Ω
Output voltage	V _O	Max. V _{line}	
PWM frequency	f _{PWM}	Adjustable: 4/8/12/16 kHz	
Speed range / resolution	n _A / Δn _A	–6000 – 0 – +6000 min ^{–1} / 0.2 min ^{–1} over the entire range	
GENERAL INFORMATION			
Power loss at S _N ¹⁾	P _{Vmax}	580 W	720 W
Cooling air consumption		180 m³/h	
Weight		14.3 kg	
Dimensions	W × H × D	200 mm × 465 mm × 308 mm	
Cross section of device terminals X1, X2, X3, X4		Status fields 2 and 5 of the power section nameplate do not have any entries: Screw and washer assembly M6, max. 25 mm² crimp cable lug DIN 46234	
		Status fields 2 and 5 of the power section nameplate have entries: Bolt M6 with nut max. 25 mm² crimp cable lug DIN 46235	
Tightening torque		3.5 Nm	

1) The performance data applies to $f_{PWM} = 4 \text{ kHz}$.

MDX61B standard version		0110-203-4-00	0150-203-4-00
Part number		08279993	08280002
MDX61B application version		0110-203-4-0T	0150-203-4-0T
Part number		08280096	08280118
Recommended motor power			
	P_{Mot}	11 kW	15 kW
Constant load			
	P_{Mot}	15 kW	22 kW
Variable torque load or constant load without overload			
Recommended motor power		→ MOVIDRIVE® B system manual, chapter "Motor selection"	

11.2.4 MOVIDRIVE® MDX61B size 3

The following dimension drawing shows MDX61B size 3, dimensions in mm (in)



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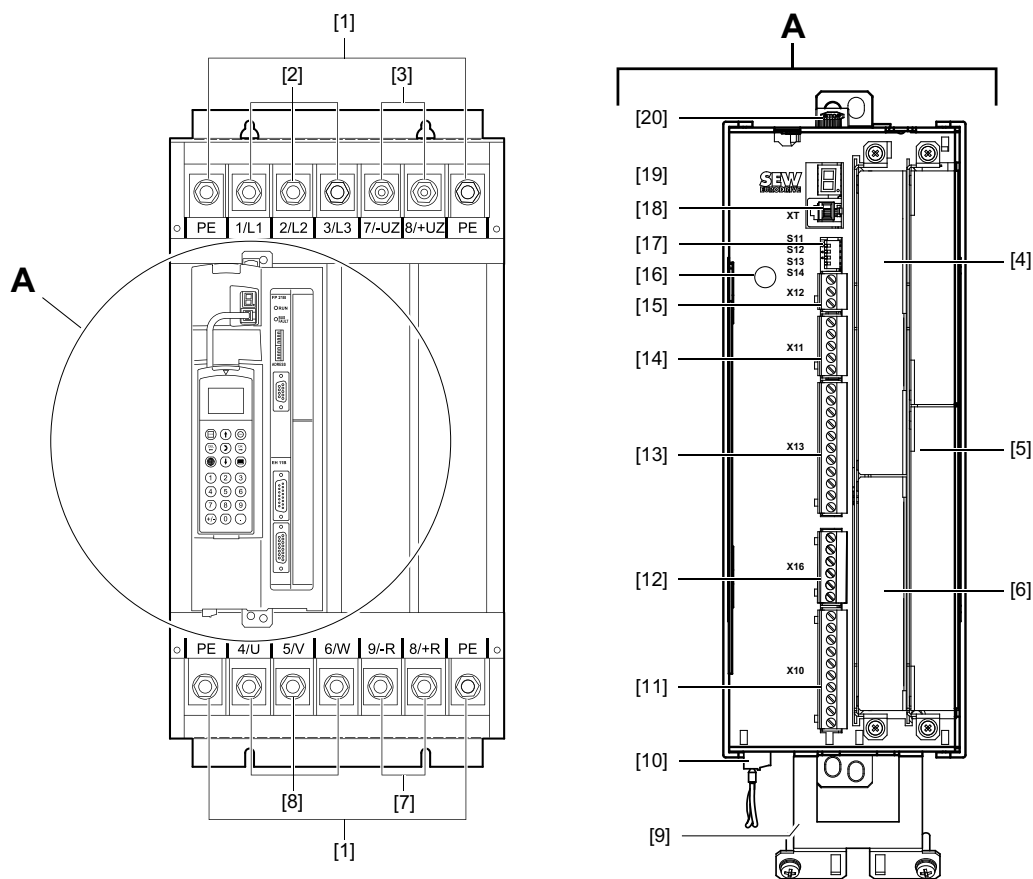
11.3 Device structure

11.3.1 Size 3

MDX61B-503 (AC 400/500 V devices): 0150 / 0220 / 0300

MDX61B-203 (AC 230 V devices): 0110 / 0150

Status fields 2 and 5 of the power section nameplate have entries.



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- [1] PE connections
- [2] X1: Line connection 1/L1, 2/L2, 3/L3
- [3] X4: Connection for DC link coupling $-U_z + U_z$
- [4] Fieldbus option slot
- [5] Expansion slot
- [6] Encoder slot
- [7] X3: Braking resistor connection 8/+R, 9/-R
- [8] X2: Motor connection 4/U, 5/V, 6/W
- [9] Shield terminal for signal cables and PE connection
- [10] X17: Signal terminal strip for safety contacts for safe stop
- [11] X10: Signal terminal strip for digital outputs and TF/TH input
- [12] X16: Signal terminal strip digital inputs and outputs
- [13] X13: Signal terminal strip terminal strip for digital inputs and RS485 interface
- [14] X11: Signal terminal strip for setpoint input AI1 and 10 V reference voltage
- [15] X12: Signal terminal strip system bus (SBus)
- [16] Grounding screw M4 × 14
- [17] DIP switches S11 – S14
- [18] XT: Slot for DBG60B keypad or UWS21B serial interface
- [19] 7-segment display
- [20] Memory card

11.4 Protection against contact using insulating covers

The new inverters of size 3 can be recognized by the entries in the status fields 2 and 5 on the nameplate of the power section. Older hardware versions do not have entries in the status fields 2 and 5.

As an example for the new hardware version, the entry in status field 2 is "10" and the entry in status field 5 is "11" in the nameplate shown below.



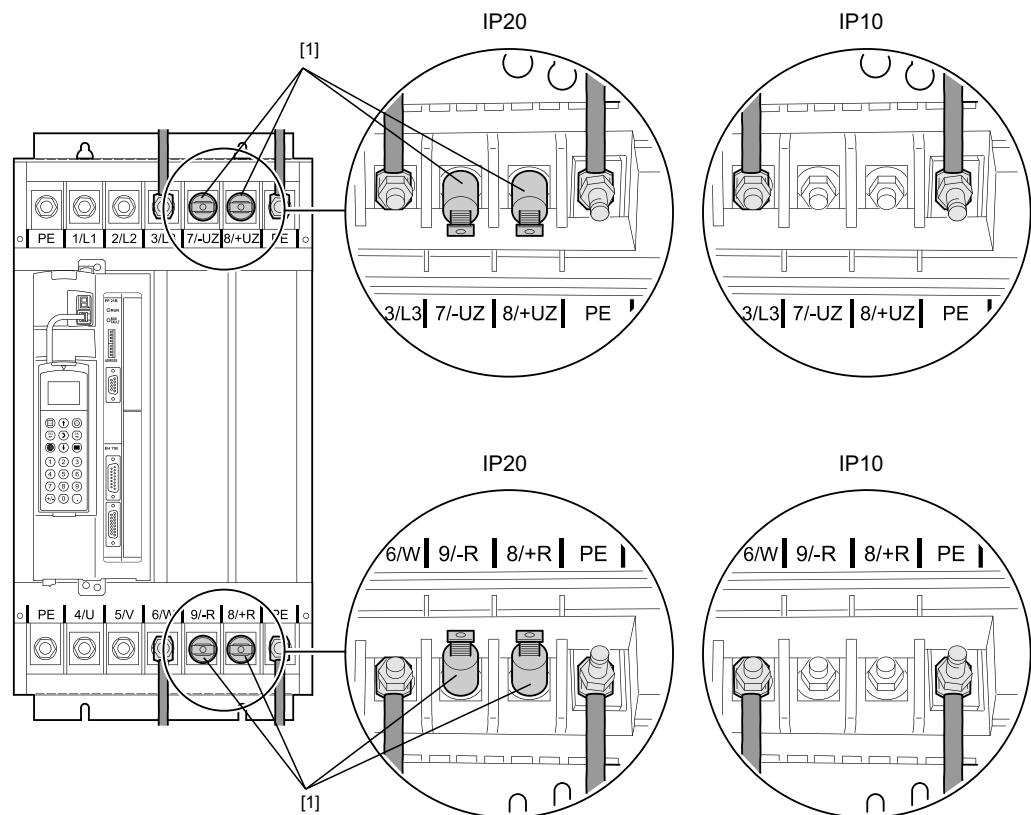
At the factory, the power connections 7/-UZ, 8/+UZ, 9/-R and 8/+R of inverters of size 3 are equipped with insulation covers for protection against contact, see figure. If the insulation covers are removed without connecting cables with heat shrink tubing, the inverters only have degree of protection IP00.

⚠ DANGER

Uninsulated power connections.

Severe or fatal injuries

Never start up inverters without installed insulating covers for protection against contact.



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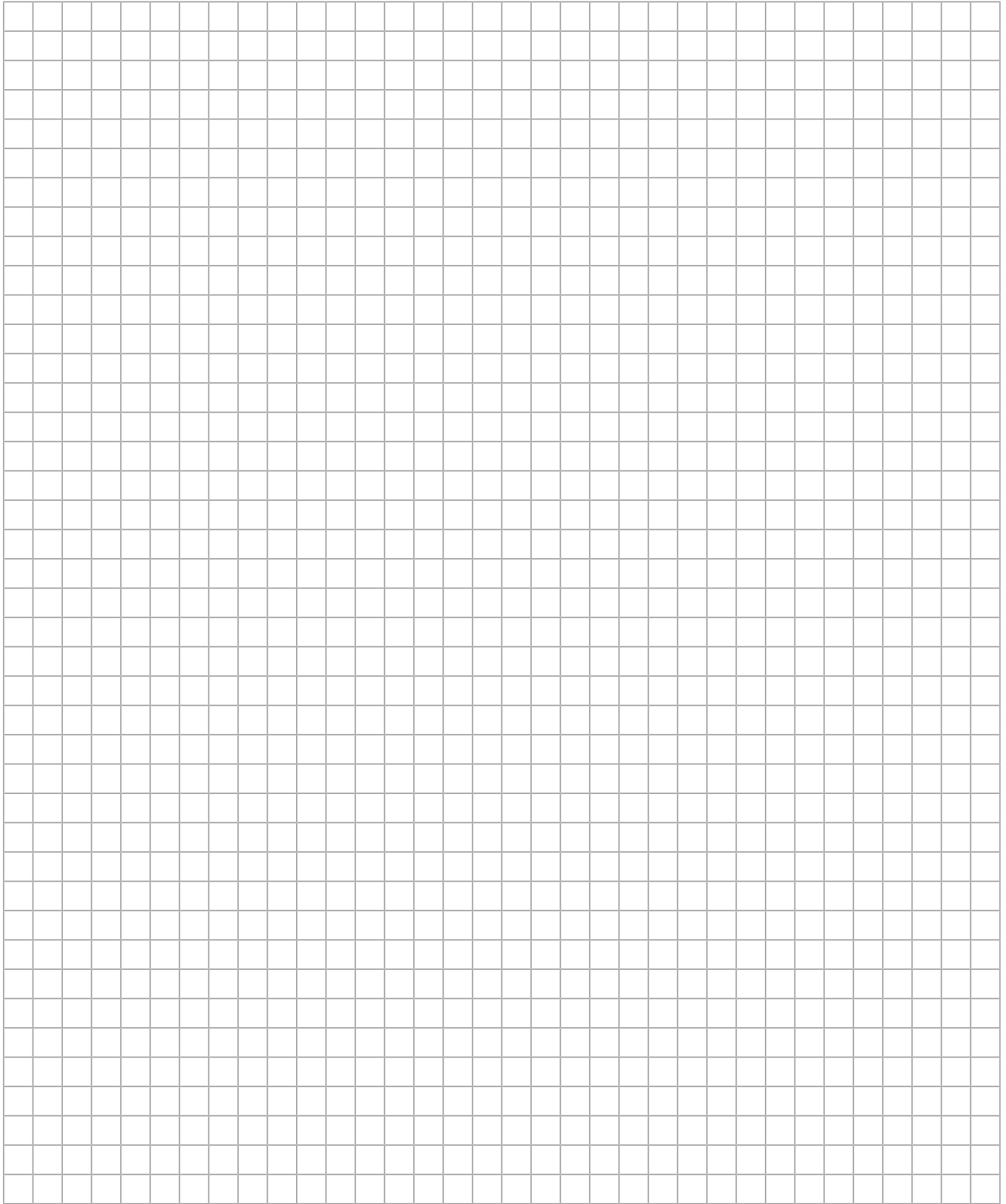
[1] Insulating caps

11.4.1 Heat shrink tubing

The size 3 inverters have degree of protection IP20 if all power cables (connections X1, X2, X3, X4) are covered with a heat shrink tubing as shown in the following illustration.



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