

Servo Motors for SIMOVERT MASTERDRIVES

Asynchronous Servo Motors

1PL6 Motors

Selection and Ordering Data with SIMOVERT MASTERDRIVES Vector Control

Rated Rotational Speed	Shaft Height	Rated Output	Rated Torque	Rated Current	Rated Voltage	Speed during Field Weakening ¹⁾	Max. Permissible Continuous Speed ²⁾	Max. Speed ³⁾	1PL6 Asynchronous Motors
n_{rated}		P_{rated}	M_{rated}	I_{rated}	V_{rated}	n_1	n_{S1}	n_{max}	
rpm	SH	kW (HP)	Nm (lb _f -ft)	A	V	rpm	rpm	rpm	Order No.

Supply voltage 3-ph. AC 400 V for SIMOVERT MASTERDRIVES Vector Control

400	180	24.5 (32.84)	585 (431.5)	69	300	1000	2000	2000	1PL6 184 – ■ ■ B ■ ■ – 0 ...
		31.5 (42.23)	752 (554.7)	90	290	1400	2000	2000	1PL6 186 – ■ ■ B ■ ■ – 0 ...
	225	45 (60.32)	1074 (792.2)	117	300	1150	2000	2000	1PL6 224 – ■ ■ B ■ ■ – 0 ...
		57 (76.41)	1361 (1003.9)	145	305	1400	2000	2000	1PL6 226 – ■ ■ B ■ ■ – 0 ...
		72 (96.51)	1719 (1267.9)	181	305	1300	2000	2000	1PL6 228 – ■ ■ B ■ ■ – 0 ...
1150	180	65 (87.13)	540 (398.3)	121	400	1750	3500 ⁴⁾	5000	1PL6 184 – ■ ■ D ■ ■ – 0 ...
		85 (113.94)	706 (520.7)	158	400	1950	3500 ⁴⁾	5000	1PL6 186 – ■ ■ D ■ ■ – 0 ...
	225	120 (160.86)	997 (735.4)	218	400	2100	3100 ⁴⁾	4500	1PL6 224 – ■ ■ D ■ ■ – 0 ...
		155 (207.77)	1287 (949.3)	275	400	2000	3100 ⁴⁾	4500	1PL6 226 – ■ ■ D ■ ■ – 0 ...
		190 (254.69)	1578 (1161.7)	334	400	1850	3100 ⁴⁾	4500 ⁴⁾	1PL6 228 – ■ ■ D ■ ■ – 0 ...

• Separate fan:

With separate fan
 Without separate fan, for pipe connection
 With separate fan, but with metric cable entries in accordance with EN 50262
 Without separate fan, for pipe connection,
 but with metric cable entries in accordance with EN 50262

4
6
7
8

• Encoder:

Without encoder
 Incremental encoder HTL (1,024 pulses/revolution)
 Incremental encoder HTL (2,048 pulses/revolution)

A
H
J

• Terminal box arrangement/direction of cable entry (drive-end view):

On top/from right
 On top/from drive end
 On top/from non-drive end
 On top/from left

0
1
2
3

• Construction type:

IM B3
 IM B3
 IM B35 (SH 180: With flange A 450,
 SH 225: With flange A 550)
 IM B35 (SH 180: With flange A 450,
 SH 225: With flange A 550)

Hoisting concept for other construction types
 (IM B6, IM B7, IM B8, IM V5, IM V6)

Hoisting concept for other construction types
 (IM V15, IM V36)

0
1
3
5

For order number supplements for drive type, direction of air flow, and paint finish (positions 14 through 16 of the order no.), see page 3/47.

Servo Motors for SIMOVERT MASTERDRIVES

Asynchronous Servo Motors

1PL6 Motors

Selection and Ordering Data with SIMOVERT MASTERDRIVES Vector Control

Power Factor	Magnetizing Current	Rated Efficiency	Rated Frequency	Moment of inertia	Weight, approx.	1PL6 Asynchronous Motors	SIMOVERT MASTERDRIVES VC Inverter/Converter Rated Current	
$\cos \varphi$	I_μ A	η_{rated}	f_{rated} Hz	J kgm ² (lb _f -in-s ²)	kg (lb)	Order No.	I_{rated} A	Order No.
Supply voltage 3-ph. AC 400 V for SIMOVERT MASTERDRIVES Vector Control								
0.86	33	0.80	14.4	0.503 (4.4545)	370 (815.8)	1PL6 184 - . . B . . - 0 ■ ■ ■ ■	72	6SE7 027 - 2 ■ D61
0.85	47	0.814	14.3	0.666 (5.894)	440 (970.2)	1PL6 186 - . . B . . - 0 ■ ■ ■ ■	92	6SE7 031 - 0 ■ E60
0.87	45	0.844	14.2	1.479 (13.0889)	630 (1389.2)	1PL6 224 - . . B . . - 0 ■ ■ ■ ■	124	6SE7 031 - 2 ■ F60
0.85	67	0.868	14.0	1.930 (17.0802)	750 (1653.8)	1PL6 226 - . . B . . - 0 ■ ■ ■ ■	146	6SE7 031 - 5 ■ F60
0.86	77	0.871	14.0	2.326 (20.5848)	860 (1896.3)	1PL6 228 - . . B . . - 0 ■ ■ ■ ■	186	6SE7 031 - 8 ■ F60
0.86	46	0.906	39.4	0.503 (4.4545)	370 (815.8)	1PL6 184 - . . D . . - 0 ■ ■ ■ ■	124	6SE7 031 - 2 ■ F60
0.86	62	0.910	39.4	0.666 (5.894)	440 (970.2)	1PL6 186 - . . D . . - 0 ■ ■ ■ ■	186	6SE7 031 - 8 ■ F60
0.85	86	0.930	39.1	1.479 (13.0889)	630 (1389.2)	1PL6 224 - . . D . . - 0 ■ ■ ■ ■	260	6SE7 032 - 6 ■ G60
0.87	92	0.930	39.2	1.930 (17.0802)	750 (1653.8)	1PL6 226 - . . D . . - 0 ■ ■ ■ ■	315	6SE7 033 - 2 ■ G60
0.88	102	0.931	39.2	2.326 (20.5848)	860 (1896.3)	1PL6 228 - . . D . . - 0 ■ ■ ■ ■	370	6SE7 033 - 7 ■ G60
• Drive type: Coupling R Coupling R Coupling S Coupling SR Belt R Belt R Increased cantilever forces R Increased cantilever forces R		• Vibration sev. grade: R R S SR R R R R		• Shaft and flange accuracy: N R R R N R N R		A B C D E F G H		
• Direction of air flow: DE → NDE NDE → DE ⁵⁾ DE → NDE NDE → DE ⁵⁾ DE → NDE NDE → DE ⁵⁾		• Shaft end: With keyway, half-key balancing With keyway, half-key balancing With keyway, full-key balancing With keyway, full-key balancing Without keyway Without keyway				A B C D J K		
• Paint finish: Primed Anthracite gray, standard finish (RAL 7016) Anthracite gray, special finish (RAL 7016)						0 3 6		
• Special models: Please specify additional order code and any required plain text; see Page 3/45.						-Z		
Converter Inverter						E T		

1) n_1 : Maximum permissible speed at constant power or speed where for $P = P_{\text{rated}}$, there is still a 30% power reserve up to the stall limit.

2) n_{S1} : Maximum permissible speed that is continuously permitted with-

4) Rotational speed is reduced in the event of increased cantilever forces, see Part 7.

5) Preferred air flow direction in contaminated environments.

Servo Motors for SIMOVERT MASTERDRIVES

Asynchronous Servo Motors

1PL6 Motors

Selection and Ordering Data with SIMOVERT MASTERDRIVES Vector Control (continued)

Rated Rotational Speed	Shaft Height	Rated Output	Rated Torque	Rated Current	Rated Voltage	Speed during Field Weakening ¹⁾	Max. Permissible Continuous Speed ²⁾	Max. Speed ³⁾	1PL6 Asynchronous Motors
n_{rated}		P_{rated}	M_{rated}	I_{rated}	V_{rated}	n_1	n_{S1}	n_{max}	
rpm	SH	kW (HP)	Nm (lb _f -ft)	A	V	rpm	rpm	rpm	Order No.
Supply voltage 3-ph. AC 400 V for SIMOVERT MASTERDRIVES Vector Control									
1750	180	89 (119.3)	486 (358.5)	166	400	3500	3500 ⁴⁾	5000	1PL6 184 – ■ ■ F ■ ■ – 0 ...
		125 (167.56)	682 (503)	231	400	3400	3500 ⁴⁾	5000	1PL6 186 – ■ ■ F ■ ■ – 0 ...
	225	165 (221.18)	900 (663.8)	292	400	3000	3100 ⁴⁾	4500	1PL6 224 – ■ ■ F ■ ■ – 0 ...
		200 (268.1)	1091 (804.7)	350	400	2900	3100 ⁴⁾	4500	1PL6 226 – ■ ■ F ■ ■ – 0 ...
		265 (355.23)	1446 (1066.6)	470	400	2900	3100 ⁴⁾	4500 ⁴⁾	1PL6 228 – ■ ■ F ■ ■ – 0 ...
2900	180	113 (151.47)	372 (274.4)	209	400	5000	3500 ⁴⁾	5000	1PL6 184 – ■ ■ L ■ ■ – 0 ...
		150 (201.07)	494 (364.4)	280	390	5000	3500 ⁴⁾	5000	1PL6 186 – ■ ■ L ■ ■ – 0 ...
	225	205 (274.8)	675 (479.9)	365	400	3500	3100 ⁴⁾	4500	1PL6 224 – ■ ■ L ■ ■ – 0 ...
		270 (361.93)	889 (655.7)	470	400	3500	3100 ⁴⁾	4500	1PL6 226 – ■ ■ L ■ ■ – 0 ...
		300 (402.14)	988 (728.7)	530	400	3500	3100 ⁴⁾	4500 ⁴⁾	1PL6 228 – ■ ■ L ■ ■ – 0 ...

• Separate fan:

With separate fan
 Without separate fan, for pipe connection
 With separate fan, but with metric cable entries in accordance with EN 50262
 Without separate fan, for pipe connection, but with metric cable entries in accordance with EN 50262

4
6
7
8

• Encoder:

Without encoder
 Incremental encoder HTL (1,024 pulses/revolution)
 Incremental encoder HTL (2,048 pulses/revolution)

A
H
J

• Terminal box arrangement/direction of cable entry (drive-end view):

On top/from right
 On top/from drive end
 On top/from non-drive end
 On top/from left

0
1
2
3

• Construction type:

IM B3
 IM B3
 IM B35 (SH 180: With flange A 450, SH 225: With flange A 550)
 IM B35 (SH 180: With flange A 450, SH 225: With flange A 550)

Hoisting concept for other construction types (IM B6, IM B7, IM B8, IM V5, IM V6)

Hoisting concept for other construction types (IM V15, IM V36)

0
1
3
5

For order number supplements for drive type, direction of air flow, and paint finish (positions 14 through 16 of the order no.), see page 3/49.

Servo Motors for SIMOVERT MASTERDRIVES

Asynchronous Servo Motors

1PL6 Motors

Selection and Ordering Data with SIMOVERT MASTERDRIVES Vector Control (continued)

Power Factor	Magnetizing Current	Rated Efficiency	Rated Frequency	Moment of inertia	Weight, approx.	1PL6 Asynchronous Motors	SIMOVERT MASTERDRIVES VC Inverter/Converter Rated Current	
$\cos \varphi$	I_{μ} A	η_{rated}	f_{rated} Hz	J kgm ² (lb _f -in-s ²)	kg (lb)	Order No.	I_{rated} A	Order No.
Supply voltage 3-ph. AC 400 V for SIMOVERT MASTERDRIVES Vector Control								
0.84	68	0.921	59.3	0.503 (4.4545)	370 (815.8)	1PL6 184 - . . F . . - 0 ■■■	186	6SE7 031 - 8 ■ F60
0.84	92	0.935	59.3	0.666 (5.894)	440 (970.2)	1PL6 186 - . . F . . - 0 ■■■	260	6SE7 032 - 6 ■ G60
0.87	90	0.942	59.2	1.479 (13.0889)	630 (1389.2)	1PL6 224 - . . F . . - 0 ■■■	315	6SE7 033 - 2 ■ G60
0.87	122	0.942	59.1	1.930 (17.0802)	750 (1653.8)	1PL6 226 - . . F . . - 0 ■■■	370	6SE7 033 - 7 ■ G60
0.86	174	0.948	59.0	2.326 (20.5848)	860 (1896.3)	1PL6 228 - . . F . . - 0 ■■■	510	6SE7 035 - 1 ■ K/J60
0.85	79	0.938	97.6	0.503 (4.4545)	370 (815.8)	1PL6 184 - . . L . . - 0 ■■■	210	6SE7 032 - 1 ■ G60
0.84	110	0.943	97.5	0.666 (5.894)	440 (970.2)	1PL6 186 - . . L . . - 0 ■■■	315	6SE7 033 - 2 ■ G60
0.86	118	0.950	97.5	1.479 (13.0889)	630 (1389.2)	1PL6 224 - . . L . . - 0 ■■■	370	6SE7 033 - 7 ■ G60
0.87	160	0.952	97.4	1.930 (17.0802)	750 (1653.8)	1PL6 226 - . . L . . - 0 ■■■	510	6SE7 035 - 1 ■ K/J60
0.86	188	0.952	97.3	2.326 (20.5848)	860 (1896.3)	1PL6 228 - . . L . . - 0 ■■■	590	6SE7 036 - 0 ■ K/J60
• Drive type: Coupling R Coupling R Coupling S Coupling SR Belt R Belt R Increased cantilever forces R Increased cantilever forces R						• Vibration sev. grade: R R S SR R R R R	• Shaft and flange accuracy: N R R R N R N R	A B C D E F G H
• Direction of air flow: DE → NDE NDE → DE ⁵⁾ DE → NDE NDE → DE ⁵⁾ DE → NDE NDE → DE ⁵⁾						• Shaft end: With keyway, half-key balancing With keyway, half-key balancing With keyway, full-key balancing With keyway, full-key balancing Without keyway Without keyway	A B C D J K	0 3 6
• Paint finish: Primed Anthracite gray, standard finish (RAL 7016) Anthracite gray, special finish (RAL 7016)								-Z
• Special models: Please specify additional order code and any required plain text; see Page 3/45.								E T
Converter Inverter								

1) n_1 : Maximum permissible speed at constant power or speed where for $P = P_{\text{rated}}$, there is still a 30% power reserve up to the stall limit.

2) n_{S1} : Maximum permissible speed that is continuously permitted with-

4) Rotational speed is reduced in the event of increased cantilever forces, see Part 7.

5) Preferred air flow direction in contaminated environments.

Servo Motors for SIMOVERT MASTERDRIVES

Asynchronous Servo Motors

1PL6 Motors

Selection and Ordering Data with SIMOVERT MASTERDRIVES Vector Control

Rated Rotational Speed	Shaft Height	Rated Output	Rated Torque	Rated Current	Rated Voltage	Speed during Field Weakening ¹⁾	Max. Permissible Continuous Speed ²⁾	Max. Speed ³⁾	1PL6 Asynchronous Motors
n_{rated}		P_{rated}	M_{rated}	I_{rated}	V_{rated}	n_1	n_{S1}	n_{max}	
rpm	SH	kW (HP)	Nm (lb _f -ft)	A	V	rpm	rpm	rpm	Order No.
Supply voltage 3-ph. AC 400 V for SIMOVERT MASTERDRIVES Vector Control									
800	280	195 (261.39)	2328 (1717.1)	335	400	1340	2200	3300	1PL6 284 – ■ ■ C ■ ■ – 0 ...
		250 (335.12)	2984 (2201)	440	385	1450	2200	3300	1PL6 286 – ■ ■ C ■ ■ – 0 ...
		310 (415.55)	3701 (2729.9)	570	370	1520	2200	3300	1PL6 288 – ■ ■ C ■ ■ – 0 ...
1150	280	280 (375.33)	2325 (1714.9)	478	400	2200	2200	3300	1PL6 284 – ■ ■ D ■ ■ – 0 ...
		355 (475.87)	2944 (2171.5)	637	380	2200	2200	3300	1PL6 286 – ■ ■ D ■ ■ – 0 ...
		435 (583.11)	3607 (2660.5)	765	385	2200	2200	3300	1PL6 288 – ■ ■ D ■ ■ – 0 ...
1750	280	370 (495.99)	2019 (1489.2)	616	400	2200	2200	3300	1PL6 284 – ■ ■ F ■ ■ – 0 ...
		445 (596.51)	2429 (1791.6)	736	400	2200	2200	3300	1PL6 286 – ■ ■ F ■ ■ – 0 ...
		560 (750.67)	3055 (2253.4)	924	400	2200	2200	3300	1PL6 288 – ■ ■ F ■ ■ – 0 ...

• Separate fan:⁴⁾

- With separate fan, non-drive end on top, air flow non-drive end to drive end
- With separate fan, non-drive end on the right, air flow non-drive end to drive end
- With separate fan, non-drive end on the left, air flow non-drive end to drive end
- With separate fan, drive end on top, air flow drive end to non-drive end
- With separate fan, drive end on the right, air flow drive end to non-drive end
- With separate fan, drive end on the left, air flow drive end to non-drive end
- Without separate fan, for simple pipe connection on non-drive end on the right

0
1
2
3
4
5
6

• Encoder:

- Without encoder
- Incremental encoder HTL (1,024 pulses/revolution)
- Incremental encoder HTL (2,048 pulses/revolution)

A
H
J

• Terminal box arrangement/direction of cable entry (drive-end view):⁴⁾

- Terminal box non-drive side on right/cable entry underneath/encoder connector on drive side
- Terminal box non-drive side on left/cable entry underneath/encoder connector on drive side
- Terminal box non-drive side on top/cable entry on right/encoder connector on drive side
- Terminal box drive side on top/cable entry on right/encoder connector on non-drive side

0
1
2
5

• Construction type:⁴⁾

- IM B3
- IM V5 (can be converted later to IM V6)
- IM B35 (with flange A 660)
- IM V15 (with flange A 660; can be converted later to IM V36)

0
1
3
5

For order number supplements for drive type, direction of air flow, and paint finish (positions 14 through 16 of the order no.), see page 3/51.

Servo Motors for SIMOVERT MASTERDRIVES

Asynchronous Servo Motors

1PL6 Motors

Selection and Ordering Data with SIMOVERT MASTERDRIVES Vector Control

Power Factor	Magnetizing Current	Rated Efficiency	Rated Frequency	Moment of inertia	Weight, approx.	1PL6 Asynchronous Motors	SIMOVERT MASTERDRIVES VC Inverter/Converter Rated Current	
$\cos \varphi$	I_{μ} A	η_{rated}	f_{rated} Hz	J kgm ² (lb _f -in-s ²)	kg (lb)	Order No.	I_{rated} A	Order No.
Supply voltage 3-ph. AC 400 V for SIMOVERT MASTERDRIVES Vector Control								
0.90	95	0.929	27.3	4.2 (37.1694)	1300 (2866.5)	1PL6 284 - . . C . . - 0 ■ ■ ■ ■	370	6SE7 033 - 7 ■ G60
0.90	135	0.934	27.3	5.2 (46.0192)	1500 (3307.5)	1PL6 286 - . . C . . - 0 ■ ■ ■ ■	510	6SE7 035 - 1 ■ K/J60
0.90	170	0.939	27.3	6.3 (55.754)	1700 (3748.5)	1PL6 288 - . . C . . - 0 ■ ■ ■ ■	590	6SE7 036 - 0 ■ K/J60
0.89	156	0.950	38.9	4.2 (37.1694)	1300 (2866.5)	1PL6 284 - . . D . . - 0 ■ ■ ■ ■	510	6SE7 035 - 1 ■ K/J60
0.89	214	0.953	38.9	5.2 (46.0192)	1500 (3307.5)	1PL6 286 - . . D . . - 0 ■ ■ ■ ■	690	6SE7 037 - 0 ■ K/J60
0.89	248	0.955	38.9	6.3 (55.754)	1700 (3748.5)	1PL6 288 - . . D . . - 0 ■ ■ ■ ■	860	6SE7 038 - 6 T K60
0.90	162	0.959	59.0	4.2 (37.1694)	1300 (2866.5)	1PL6 284 - . . F . . - 0 ■ ■ ■ ■	690	6SE7 037 - 0 ■ K/J60
0.91	182	0.960	59.0	5.2 (46.0192)	1500 (3307.5)	1PL6 286 - . . F . . - 0 ■ ■ ■ ■	860	6SE7 038 - 6 T K60
0.91	232	0.962	59.0	6.3 (55.754)	1700 (3748.5)	1PL6 288 - . . F . . - 0 ■ ■ ■ ■	1100	6SE7 041 - 1 T K60
• Drive type:⁴⁾ Coupling N Coupling R Belt/increased cantilever forces N Belt/increased cantilever forces R						• Vibration sev. grade: N R N R		
• Shaft and flange accuracy: A B E F						• Shaft end: With keyway, half-key balancing A With keyway, full-key balancing C Without keyway J		
• Paint finish: Primed 0 Anthracite gray, standard finish (RAL 7016) 3 Anthracite gray, special finish (RAL 7016) 6						• Special models: Please specify additional order code and any required plain text; see Page 3/45. -Z		
Converter Inverter						E T		

Servo Motors for SIMOVERT MASTERDRIVES

Asynchronous Servo Motors

1PL6 Motors

Selection and Ordering Data with SIMOVERT MASTERDRIVES Vector Control

Rated Rotational Speed	Shaft Height	Rated Output	Rated Torque	Rated Current	Rated Voltage	Speed during Field Weakening ¹⁾	Max. Permissible Continuous Speed ²⁾	Max. Speed ³⁾	1PL6 Asynchronous Motors
n_{rated}		P_{rated}	M_{rated}	I_{rated}	U_{rated}	n_1	n_{S1}	n_{max}	
rpm	SH	kW (HP)	Nm (lb _f -ft)	A	V	rpm	rpm	rpm	Order No.

Supply voltage 3-ph. AC 480 V for SIMOVERT MASTERDRIVES Vector Control

500	180	30 (40.21)	573 (422.6)	66	370	1300	2500	2500	1PL6 184 – ■ ■ B ■ ■ – 0 ...
		40 (53.62)	764 (563.5)	91	355	1500	2500	2500	1PL6 186 – ■ ■ B ■ ■ – 0 ...
	225	55 (73.73)	1050 (774.5)	114	370	1300	2500	2500	1PL6 224 – ■ ■ B ■ ■ – 0 ...
		72 (96.51)	1375 (1014.2)	147	375	1500	2500	2500	1PL6 226 – ■ ■ B ■ ■ – 0 ...
		90 (120.64)	1719 (1267.9)	180	380	1400	2500	2500	1PL6 228 – ■ ■ B ■ ■ – 0 ...
1350	180	74 (99.2)	523 (385.8)	119	460	2200	3500 ⁴⁾	5000	1PL6 184 – ■ ■ D ■ ■ – 0 ...
		98 (131.37)	693 (511.2)	156	460	2400	3500 ⁴⁾	5000	1PL6 186 – ■ ■ D ■ ■ – 0 ...
	225	137 (183.65)	969 (714.7)	215	460	2500	3100 ⁴⁾	4500	1PL6 224 – ■ ■ D ■ ■ – 0 ...
		172 (230.56)	1217 (897.7)	265	460	2500	3100 ⁴⁾	4500	1PL6 226 – ■ ■ D ■ ■ – 0 ...
		218 (292.23)	1542 (1137.4)	332	460	2200	3100 ⁴⁾	4500 ⁴⁾	1PL6 228 – ■ ■ D ■ ■ – 0 ...

• Separate fan:

- With separate fan
- Without separate fan, for pipe connection
- With separate fan, but with metric cable entries in accordance with EN 50262
- Without separate fan, for pipe connection, but with metric cable entries in accordance with EN 50262

4
6
7
8

• Encoder:

- Without encoder
- Incremental encoder HTL (1,024 pulses/revolution)
- Incremental encoder HTL (2,048 pulses/revolution)

A
H
J

• Terminal box arrangement/direction of cable entry (drive-end view):

- On top/from right
- On top/from drive end
- On top/from non-drive end
- On top/from left

0
1
2
3

• Construction type:

- IM B3
 - IM B3
 - IM B35 (SH 180: With flange A 450, SH 225: With flange A 550)
 - IM B35 (SH 180: With flange A 450, SH 225: With flange A 550)
- Hoisting concept for other construction types (IM B6, IM B7, IM B8, IM V5, IM V6)
- Hoisting concept for other construction types (IM V15, IM V36)

0
1
3
5

For order number supplements for drive type, direction of air flow, and paint finish (positions 14 through 16 of the order no.), see page 3/53.

Servo Motors for SIMOVERT MASTERDRIVES

Asynchronous Servo Motors

1PL6 Motors

Selection and Ordering Data with SIMOVERT MASTERDRIVES Vector Control

Power Factor	Magnetizing Current	Rated Efficiency	Rated Frequency	Moment of inertia	Weight, approx.	1PL6 Asynchronous Motors	SIMOVERT MASTERDRIVES VC Inverter/Converter Rated Current	
$\cos \varphi$	I_μ A	η_{rated}	f_{rated} Hz	J kgm ² (lb _f -in-s ²)	kg (lb)	Order No.	I_{rated} A	Order No.
Supply voltage 3-ph. AC 480 V for SIMOVERT MASTERDRIVES Vector Control								
0.84	34	0.844	17.6	0.503 (4.4545)	370 (815.8)	1PL6 184 - . . B . . - 0 ■ ■ ■ ■	72	6SE7 027 - 2 ■ D61
0.84	46	0.845	17.6	0.666 (5.894)	440 (970.2)	1PL6 186 - . . B . . - 0 ■ ■ ■ ■	92	6SE7 031 - 0 ■ E60
0.86	46	0.875	17.5	1.479 (13.0889)	630 (1389.2)	1PL6 224 - . . B . . - 0 ■ ■ ■ ■	124	6SE7 031 - 2 ■ F60
0.85	66	0.887	17.4	1.930 (17.0802)	750 (1653.8)	1PL6 226 - . . B . . - 0 ■ ■ ■ ■	146	6SE7 031 - 5 ■ F60
0.85	79	0.894	17.4	2.326 (20.5848)	860 (1896.3)	1PL6 228 - . . B . . - 0 ■ ■ ■ ■	186	6SE7 031 - 8 ■ F60
0.86	44	0.918	46.1	0.503 (4.4545)	370 (815.8)	1PL6 184 - . . D . . - 0 ■ ■ ■ ■	124	6SE7 031 - 2 ■ F60
0.85	60	0.920	46.0	0.666 (5.894)	440 (970.2)	1PL6 186 - . . D . . - 0 ■ ■ ■ ■	186	6SE7 031 - 8 ■ F60
0.85	82	0.940	45.8	1.479 (13.0889)	630 (1389.2)	1PL6 224 - . . D . . - 0 ■ ■ ■ ■	260	6SE7 032 - 6 ■ G60
0.87	88	0.940	45.8	1.930 (17.0802)	750 (1653.8)	1PL6 226 - . . D . . - 0 ■ ■ ■ ■	315	6SE7 033 - 2 ■ G60
0.88	100	0.938	45.8	2.326 (20.5848)	860 (1896.3)	1PL6 228 - . . D . . - 0 ■ ■ ■ ■	370	6SE7 033 - 7 ■ G60
• Drive type: Coupling Coupling Coupling Coupling Belt Belt Increased cantilever forces Increased cantilever forces		• Vibration sev. grade: R R S SR R R R R		• Shaft and flange accuracy: N R R R N R N R		A B C D E F G H		
• Direction of air flow: DE → NDE NDE → DE ⁵⁾ DE → NDE NDE → DE ⁵⁾ DE → NDE NDE → DE ⁵⁾		• Shaft end: With keyway, half-key balancing With keyway, half-key balancing With keyway, full-key balancing With keyway, full-key balancing Without keyway Without keyway				A B C D J K		
• Paint finish: Primed Anthracite gray, standard finish (RAL 7016) Anthracite gray, special finish (RAL 7016)						0 3 6		
• Special models: Please specify additional order code and any required plain text; see Page 3/45.						-Z		
Converter Inverter						E T		

1) n_1 : Maximum permissible speed at constant power or speed where for $P = P_{\text{rated}}$, there is still a 30% power reserve up to the stall limit.

2) n_{S1} : Maximum permissible speed that is continuously permitted with-

4) Rotational speed is reduced in the event of increased cantilever forces, see Part 7.

5) Preferred air flow direction in contaminated environments.

Asynchronous Servo Motors

1PL6 Motors

Selection and Ordering Data with SIMOVERT MASTERDRIVES Vector Control (continued)

Rated Rotational Speed	Shaft Height	Rated Output	Rated Torque	Rated Current	Rated Voltage	Speed during Field Weakening ¹⁾	Max. Permissible Continuous Speed ²⁾	Max. Speed ³⁾	1PL6 Asynchronous Motors
n_{rated}		P_{rated}	M_{rated}	I_{rated}	V_{rated}	n_1	n_{S1}	n_{max}	
rpm	SH	kW (HP)	Nm (lb _F -ft)	A	V	rpm	rpm	rpm	
Order No.									
Supply voltage 3-ph. AC 480 V for SIMOVERT MASTERDRIVES Vector Control									
2000	180	98 (131.37)	468 (345.2)	161	460	4200	3500 ⁴⁾	5000	1PL6 184 – ■■■ F ■■ – 0 ...
		135 (180.97)	645 (475.8)	220	460	4200	3500 ⁴⁾	5000	1PL6 186 – ■■■ F ■■ – 0 ...
	225	178 (238.61)	850 (627)	275	460	2900	3100 ⁴⁾	4500	1PL6 224 – ■■■ F ■■ – 0 ...
		220 (294.91)	1050 (774.5)	342	460	2900	3100 ⁴⁾	4500	1PL6 226 – ■■■ F ■■ – 0 ...
		288 (386.06)	1375 (1014.2)	450	460	2900	3100 ⁴⁾	4500 ⁴⁾	1PL6 228 – ■■■ F ■■ – 0 ...
2900	180	113 (151.47)	372 (274.4)	209	400	5000	3500 ⁴⁾	5000	1PL6 184 – ■■■ L ■■ – 0 ...
		150 (201.07)	494 (364.4)	280	390	5000	3500 ⁴⁾	5000	1PL6 186 – ■■■ L ■■ – 0 ...
	225	205 (274.8)	675 (497.9)	365	400	3500	3100 ⁴⁾	4500	1PL6 224 – ■■■ L ■■ – 0 ...
		270 (361.93)	889 (655.7)	470	395	3500	3100 ⁴⁾	4500	1PL6 226 – ■■■ L ■■ – 0 ...
		300 (402.14)	988 (728.7)	530	400	3500	3100 ⁴⁾	4500 ⁴⁾	1PL6 228 – ■■■ L ■■ – 0 ...

- **Separate fan:**

With separate fan
Without separate fan, for pipe connection
With separate fan, but with metric cable entries in accordance with EN 50262
Without separate fan, for pipe connection,
but with metric cable entries in accordance with EN 50262

4
6
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8

- **Encoder:**

Without encoder
Incremental encoder HTL (1,024 pulses/revolution)
Incremental encoder HTL (2,048 pulses/revolution)

A
H
J

- **Terminal box arrangement/direction of cable entry (drive-end view):**

- On top/from right
- On top/from drive end
- On top/from non-drive end
- On top/from left

0
1
2
3

- **Construction type:**

IM B3		
IM B3		Hoisting concept for other construction types (IM B6, IM B7, IM B8, IM V5, IM V6)
IM B35	(SH 180: With flange A 450, SH 225: With flange A 550)	
IM B35	(SH 180: With flange A 450, SH 225: With flange A 550)	Hoisting concept for other construction types (IM V15, IM V36)

0
1
3
5

For order number supplements for drive type, direction of air flow, and paint finish (positions 14 through 16 of the order no.), see page 3/55.

Servo Motors for SIMOVERT MASTERDRIVES

Asynchronous Servo Motors

1PL6 Motors

Selection and Ordering Data with SIMOVERT MASTERDRIVES Vector Control (continued)

Power Factor	Magnetizing Current	Rated Efficiency	Rated Frequency	Moment of inertia	Weight, approx.	1PL6 Asynchronous Motors	SIMOVERT MASTERDRIVES VC Inverter/Converter Rated Current	
$\cos \varphi$	I_μ A	η_{rated}	f_{rated} Hz	J kgm ² (lb _f -in-s ²)	kg (lb)	Order No.	I_{rated} A	Order No.
Supply voltage 3-ph. AC 480 V for SIMOVERT MASTERDRIVES Vector Control								
0.83	70	0.934	67.5	0.503 (4.4545)	370 (815.8)	1PL6 184 - . . F . . - 0 ■ ■ ■ ■	186	6SE7 031 - 8 ■ F60
0.83	94	0.94	67.5	0.666 (5.894)	440 (970.2)	1PL6 186 - . . F . . - 0 ■ ■ ■ ■	260	6SE7 032 - 6 ■ G60
0.86	91	0.944	67.5	1.479 (13.0889)	630 (1389.2)	1PL6 224 - . . F . . - 0 ■ ■ ■ ■	315	6SE7 033 - 2 ■ G60
0.86	124	0.948	67.5	1.930 (17.0802)	750 (1653.8)	1PL6 226 - . . F . . - 0 ■ ■ ■ ■	370	6SE7 033 - 7 ■ G60
0.85	176	0.948	67.3	2.326 (20.5848)	860 (1896.3)	1PL6 228 - . . F . . - 0 ■ ■ ■ ■	510	6SE7 035 - 1 ■ K/J60
0.85	79	0.938	97.6	0.503 (4.4545)	370 (815.8)	1PL6 184 - . . L . . - 0 ■ ■ ■ ■	210	6SE7 032 - 1 ■ G60
0.84	110	0.943	97.5	0.666 (5.894)	440 (970.2)	1PL6 186 - . . L . . - 0 ■ ■ ■ ■	315	6SE7 033 - 2 ■ G60
0.86	118	0.950	97.5	1.479 (13.0889)	630 (1389.2)	1PL6 224 - . . L . . - 0 ■ ■ ■ ■	370	6SE7 033 - 7 ■ G60
0.87	160	0.952	97.4	1.930 (17.0802)	750 (1653.8)	1PL6 226 - . . L . . - 0 ■ ■ ■ ■	510	6SE7 035 - 1 ■ K/J60
0.86	188	0.952	97.3	2.326 (20.5848)	860 (1896.3)	1PL6 228 - . . L . . - 0 ■ ■ ■ ■	590	6SE7 036 - 0 ■ K/J60
• Drive type:		• Vibration sev. grade:		• Shaft and flange accuracy:				
Coupling		R		N				
Coupling		R		R				
Coupling		S		R				
Coupling		SR		R				
Belt		R		N				
Belt		R		R				
Increased cantilever forces		R		N				
Increased cantilever forces		R		R				
• Direction of air flow:		• Shaft end:						
DE → NDE		With keyway, half-key balancing						
NDE → DE ⁵⁾		With keyway, half-key balancing						
DE → NDE		With keyway, full-key balancing						
NDE → DE ⁵⁾		With keyway, full-key balancing						
DE → NDE		Without keyway						
NDE → DE ⁵⁾		Without keyway						
• Paint finish:								
Primed								
Anthracite gray, standard finish (RAL 7016)								
Anthracite gray, special finish (RAL 7016)								
• Special models:								
Please specify additional order code and any required plain text; see Page 3/45.								
Converter								
Inverter								

1) n_1 : Maximum permissible speed at constant power or speed where for $P = P_{\text{rated}}$, there is still a 30% power reserve up to the stall limit.

2) n_{S1} : Maximum permissible speed that is continuously permitted with-

4) Rotational speed is reduced in the event of increased cantilever forces, see Part 7.

5) Preferred air flow direction in contaminated environments.

Servo Motors for SIMOVERT MASTERDRIVES

Asynchronous Servo Motors

1PL6 Motors

Selection and Ordering Data with SIMOVERT MASTERDRIVES Vector Control

Rated Rotational Speed	Shaft Height	Rated Output	Rated Torque	Rated Current	Rated Voltage	Speed during Field Weakening ¹⁾	Max. Permissible Continuous Speed ²⁾	Max. Speed ³⁾	1PL6 Asynchronous Motors
n_{rated}		P_{rated}	M_{rated}	I_{rated}	V_{rated}	n_1	n_{S1}	n_{max}	
rpm	SH	kW (HP)	Nm (lb _f -ft)	A	V	rpm	rpm	rpm	Order No.
Supply voltage 3-ph. AC 480 V for SIMOVERT MASTERDRIVES Vector Control									
1000	280	235 (315.01)	2244 (1655.2)	335	480	1700	2200	3300	1PL6 284 – ■ ■ C ■ ■ – 0 ...
		310 (415.55)	2961 (2184)	440	480	2000	2200	3300	1PL6 286 – ■ ■ C ■ ■ – 0 ...
		385 (516.09)	3677 (2712.2)	570	460	2050	2200	3300	1PL6 288 – ■ ■ C ■ ■ – 0 ...
1350	280	325 (435.66)	2299 (1695.7)	478	470	2200	2200	3300	1PL6 284 – ■ ■ D ■ ■ – 0 ...
		410 (549.6)	2901 (2139.8)	637	445	2200	2200	3300	1PL6 286 – ■ ■ D ■ ■ – 0 ...
		505 (676.94)	3573 (2635.4)	765	450	2200	2200	3300	1PL6 288 – ■ ■ D ■ ■ – 0 ...
2000	280	415 (556.3)	1981 (1461.2)	616	455	2200	2200	3300	1PL6 284 – ■ ■ F ■ ■ – 0 ...
		500 (670.24)	2387 (1760.7)	736	455	2200	2200	3300	1PL6 286 – ■ ■ F ■ ■ – 0 ...
		630 (844.5)	3009 (2219.4)	924	455	2200	2200	3300	1PL6 288 – ■ ■ F ■ ■ – 0 ...

• Separate fan:⁴⁾

- With separate fan, non-drive end on top, air flow non-drive end to drive end
- With separate fan, non-drive end on the right, air flow non-drive end to drive end
- With separate fan, non-drive end on the left, air flow non-drive end to drive end
- With separate fan, drive end on top, air flow drive end to non-drive end
- With separate fan, drive end on the right, air flow drive end to non-drive end
- With separate fan, drive end on the left, air flow drive end to non-drive end
- Without separate fan, for simple pipe connection on non-drive end on the right

0
1
2
3
4
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6

• Encoder:

- Without encoder
- Incremental encoder HTL (1,024 pulses/revolution)
- Incremental encoder HTL (2,048 pulses/revolution)

A
H
J

• Terminal box arrangement/direction of cable entry (drive-end view):⁴⁾

- Terminal box non-drive side on right/cable entry underneath/encoder connector on drive side
- Terminal box non-drive side on left/cable entry underneath/encoder connector on drive side
- Terminal box non-drive side on top/cable entry on right/encoder connector on drive side
- Terminal box drive side on top/cable entry on right/encoder connector on non-drive side

0
1
2
5

• Construction type:

- IM B3
- IM V5 (can be converted later to IM V6)
- IM B35 (with flange A 660)
- IM V15 (with flange A 660; can be converted later to IM V36)

0
1
3
5

For order number supplements for drive type, direction of air flow, and paint finish (positions 14 through 16 of the order no.), see page 3/57.

Servo Motors for SIMOVERT MASTERDRIVES

Asynchronous Servo Motors

1PL6 Motors

Selection and Ordering Data with SIMOVERT MASTERDRIVES Vector Control

Power Factor	Magnetizing Current	Rated Efficiency	Rated Frequency	Moment of inertia	Weight, approx.	1PL6 Asynchronous Motors	SIMOVERT MASTERDRIVES VC Inverter/Converter Rated Current	
	I_{μ}	η_{rated}	f_{rated}	J		Order No.	I_{rated}	Order No.
$\cos \varphi$	A		Hz	kgm^2 ($\text{lb}_f\text{-in-s}^2$)	kg (lb)		A	
Supply voltage 3-ph. AC 480 V for SIMOVERT MASTERDRIVES Vector Control								
0.90	90	0.939	34.0	4.2 (37.1694)	1300 (2866.5)	1PL6 284 - . . C . . - 0 ■ ■ ■ ■	370	6SE7 033 - 7 ■ G60
0.90	135	0.945	34.0	5.2 (46.0192)	1500 (3307.5)	1PL6 286 - . . C . . - 0 ■ ■ ■ ■	510	6SE7 035 - 1 ■ K/J60
0.90	170	0.948	34.0	6.3 (55.754)	1700 (3748.5)	1PL6 288 - . . C . . - 0 ■ ■ ■ ■	590	6SE7 036 - 0 ■ K/J60
0.89	157	0.955	45.5	4.2 (37.1694)	1300 (2866.5)	1PL6 284 - . . D . . - 0 ■ ■ ■ ■	510	6SE7 035 - 1 ■ K/J60
0.89	215	0.957	45.5	5.2 (46.0192)	1500 (3307.5)	1PL6 286 - . . D . . - 0 ■ ■ ■ ■	690	6SE7 037 - 0 ■ K/J60
0.89	248	0.959	45.5	6.3 (55.754)	1700 (3748.5)	1PL6 288 - . . D . . - 0 ■ ■ ■ ■	860	6SE7 038 - 6 T K60
0.90	161	0.961	67.3	4.2 (37.1694)	1300 (2866.5)	1PL6 284 - . . F . . - 0 ■ ■ ■ ■	690	6SE7 037 - 0 ■ K/J60
0.91	181	0.963	67.3	5.2 (46.0192)	1500 (3307.5)	1PL6 286 - . . F . . - 0 ■ ■ ■ ■	860	6SE7 038 - 6 T K60
0.91	231	0.965	67.3	6.3 (55.754)	1700 (3748.5)	1PL6 288 - . . F . . - 0 ■ ■ ■ ■	1100	6SE7 041 - 1 T K60
• Drive type:⁴⁾ Coupling N Coupling R Belt/increased cantilever forces N Belt/increased cantilever forces R						• Vibration sev. grade: N R N R		
• Shaft and flange accuracy: A B E F						• Shaft end: With keyway, half-key balancing A With keyway, full-key balancing C Without keyway J		
• Paint finish: Primed 0 Anthracite gray, standard finish (RAL 7016) 3 Anthracite gray, special finish (RAL 7016) 6						• Special models: Please specify additional order code and any required plain text; see Page 3/45. -Z		
Converter Inverter						E T		

Servo Motors for SIMOVERT MASTERDRIVES

Asynchronous Servo Motors

1PL6 Motors

Selection and Ordering Data with SIMOVERT MASTERDRIVES Vector Control

Rated Rotational Speed	Shaft Height	Rated Output	Rated Torque	Rated Current	Rated Voltage	Speed during Field Weakening ¹⁾	Max. Permissible Continuous Speed ²⁾	Max. Speed ³⁾	1PL6 Asynchronous Motors
n_{rated}		P_{rated}	M_{rated}	I_{rated}	V_{rated}	n_1	n_{S1}	n_{max}	
rpm	SH	kW (HP)	Nm (lb _f -ft)	A	V	rpm	rpm	rpm	Order No.
Supply voltage 3-ph. AC 690 V for SIMOVERT MASTERDRIVES Vector Control (Option C30)									
800	280	185 (247.99)	2208 (1628.6)	185	690	1440	2200	3300	1PL6 284 – ■ ■ C ■ ■ – 0 ...
		240 (321.72)	2865 (2113.2)	250	665	1550	2200	3300	1PL6 286 – ■ ■ C ■ ■ – 0 ...
		300 (402.14)	3581 (2641.3)	320	640	1600	2200	3300	1PL6 288 – ■ ■ C ■ ■ – 0 ...
1150	280	272 (364.61)	2259 (1666.2)	270	690	2200	2200	3300	1PL6 284 – ■ ■ D ■ ■ – 0 ...
		344 (461.13)	2857 (2107.3)	359	655	2200	2200	3300	1PL6 286 – ■ ■ D ■ ■ – 0 ...
		422 (565.68)	3504 (2584.6)	431	665	2200	2200	3300	1PL6 288 – ■ ■ D ■ ■ – 0 ...
1750	280	359 (481.23)	1959 (1445)	347	690	2200	2200	3300	1PL6 284 – ■ ■ F ■ ■ – 0 ...
		432 (579.09)	2357 (1738.5)	415	690	2200	2200	3300	1PL6 286 – ■ ■ F ■ ■ – 0 ...
		543 (727.88)	2963 (2185.5)	520	690	2200	2200	3300	1PL6 288 – ■ ■ F ■ ■ – 0 ...

• Separate fan:⁵⁾

- With separate fan, non-drive end on top, air flow non-drive end to drive end
- With separate fan, non-drive end on the right, air flow non-drive end to drive end
- With separate fan, non-drive end on the left, air flow non-drive end to drive end
- With separate fan, drive end on top, air flow drive end to non-drive end
- With separate fan, drive end on the right, air flow drive end to non-drive end
- With separate fan, drive end on the left, air flow drive end to non-drive end
- Without separate fan, for simple pipe connection on non-drive end on the right

0
1
2
3
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5
6

• Encoder:

- Without encoder
- Incremental encoder HTL (1,024 pulses/revolution)
- Incremental encoder HTL (2,048 pulses/revolution)

A
H
J

• Terminal box arrangement/direction of cable entry (drive-end view):⁵⁾

- Terminal box non-drive side on right/cable entry underneath/encoder connector on drive side
- Terminal box non-drive side on left/cable entry underneath/encoder connector on drive side
- Terminal box non-drive side on top/cable entry on right/encoder connector on drive side
- Terminal box drive side on top/cable entry on right/encoder connector on non-drive side

0
1
2
5

• Construction type:⁵⁾

- IM B3
- IM V5 (can be converted later to IM V6)
- IM B35 (with flange A 660)
- IM V15 (with flange A 660; can be converted later to IM V36)

0
1
3
5

For order number supplements for drive type, direction of air flow, and paint finish (positions 14 through 16 of the order no.), see page 3/59.

Servo Motors for SIMOVERT MASTERDRIVES

Asynchronous Servo Motors

1PL6 Motors

Selection and Ordering Data with SIMOVERT MASTERDRIVES Vector Control

Power Factor	Magnetizing Current	Rated Efficiency	Rated Frequency	Moment of inertia	Weight, approx.	1PL6 Asynchronous Motors	SIMOVERT MASTERDRIVES VC Inverter/Converter Rated Current	
	I_{μ}	η_{rated}	f_{rated}	J kgm ² (lb _F -in-s ²)	kg (lb)		I_{rated}	Order No.
cos φ	A		Hz			Order No.	A	Order No.
Supply voltage 3-ph. AC 690 V for SIMOVERT MASTERDRIVES Vector Control (Option C30)								
0.90	55	0.928	27.0	4.2 (37.1694)	1300 (2866.5)	1PL6 284 – . . C . . – 0 ■ ■ ■	208	6SE7 032 – 0 ■ G60
0.90	80	0.934	27.0	5.2 (46.0192)	1500 (3307.5)	1PL6 286 – . . C . . – 0 ■ ■ ■	297	6SE7 033 – 0 ■ K/J60
0.90	100	0.938	27.0	6.3 (55.754)	1700 (3748.5)	1PL6 288 – . . C . . – 0 ■ ■ ■	354	6SE7 033 – 5 ■ K/J60
0.89	89	0.949	38.9	4.2 (37.1694)	1300 (2866.5)	1PL6 284 – . . D . . – 0 ■ ■ ■	297	6SE7 033 – 0 ■ K/J60
0.89	123	0.953	38.9	5.2 (46.0192)	1500 (3307.5)	1PL6 286 – . . D . . – 0 ■ ■ ■	354 ⁴⁾	6SE7 033 – 5 ■ K/J60
0.89	143	0.955	38.9	6.3 (55.754)	1700 (3748.5)	1PL6 288 – . . D . . – 0 ■ ■ ■	452	6SE7 034 – 5 ■ K/J60
0.90	93	0.958	59.0	4.2 (37.1694)	1300 (2866.5)	1PL6 284 – . . F . . – 0 ■ ■ ■	354	6SE7 033 – 5 ■ K/J60
0.91	105	0.960	59.0	5.2 (46.0192)	1500 (3307.5)	1PL6 286 – . . F . . – 0 ■ ■ ■	452	6SE7 034 – 5 ■ K/J60
0.91	133	0.962	59.0	6.3 (55.754)	1700 (3748.5)	1PL6 288 – . . F . . – 0 ■ ■ ■	570	6SE7 035 – 7 U K60
• Drive type: ⁵⁾		• Vibration sev. grade:		• Shaft and flange accuracy:		A B E F		
Coupling N Coupling R Belt/increased cantilever forces N Belt/increased cantilever forces R				N R N R				
• Shaft end:						A C J		
With keyway, half-key balancing With keyway, full-key balancing Without keyway								
• Paint finish:						0 3 6		
Primed Anthracite gray, standard finish (RAL 7016) Anthracite gray, special finish (RAL 7016)								
• Special models:						–C30		
Please specify additional order code and any required plain text; see Page 3/45.								
Converter Inverter								H W

1) n_1 : Maximum permissible speed at constant power or speed where for $P = P_{\text{rated}}$, there is still a 30% power reserve up to the stall limit.

2) n_{S1} : Maximum permissible speed that is continuously permitted with-

4) Notice: The rated converter current is smaller than the rated motor current.

5) For possible combinations, refer to page 3/68.

Servo Motors for SIMOVERT MASTERDRIVES

Asynchronous Servo Motors

1PL6 Motors

Selection and Ordering Data with SIMOVERT MASTERDRIVES Motion Control

Rated Rotational Speed n_{rated} rpm	Shaft Height SH	Rated Output P_{rated} kW (HP)	Rated Torque M_{rated} Nm (lb _f -ft)	Rated Current I_{rated} A	Rated Voltage V_{rated} V	Speed during Field Weakening ¹⁾ n_1 rpm	Max. Permissible Continuous Speed ²⁾ n_{S1} rpm	Max. Speed ³⁾ n_{max} rpm	1PL6 Asynchronous Motors Order No.
Supply voltage 3-ph. AC 400 V for SIMOVERT MASTERDRIVES Motion Control									
400	180	20.5 (27.48)	489 (360.7)	58	290	800	800	800	1PL6 184 – ■ ■ B ■ ■ – 0 ...
		30.5 (40.88)	728 (537)	87	290	800	800	800	1PL6 186 – ■ ■ B ■ ■ – 0 ...
	225	40 (53.62)	955 (704.4)	105	296	800	800	800	1PL6 224 – ■ ■ B ■ ■ – 0 ...
		57 (76.41)	1361 (1003.9)	145	305	800	800	800	1PL6 226 – ■ ■ B ■ ■ – 0 ...
		72 (96.51)	1719 (1267.9)	181	305	800	800	800	1PL6 228 – ■ ■ B ■ ■ – 0 ...
1000	180	57 (76.41)	544 (401.3)	122	345	1300	2000	2000	1PL6 184 – ■ ■ D ■ ■ – 0 ...
		74 (99.2)	707 (521.5)	157	345	1600	2000	2000	1PL6 186 – ■ ■ D ■ ■ – 0 ...
	225	105 (140.75)	1003 (739.8)	220	345	1700	2000	2000	1PL6 224 – ■ ■ D ■ ■ – 0 ...
		135 (180.97)	1289 (213.2)	278	345	1700	2000	2000	1PL6 226 – ■ ■ D ■ ■ – 0 ...
		165 (221.18)	1576 (1162.5)	331	348	1700	2000	2000	1PL6 228 – ■ ■ D ■ ■ – 0 ...
1500	180	76 (101.88)	484 (357)	165	345	3000	3000	3000	1PL6 184 – ■ ■ F ■ ■ – 0 ...
		108 (144.77)	688 (507.5)	233	340	3000	3000	3000	1PL6 186 – ■ ■ F ■ ■ – 0 ...
	225	142 (190.35)	904 (666.8)	292	345	2500	3000	3000	1PL6 224 – ■ ■ F ■ ■ – 0 ...
		175 (234.58)	1114 (821.7)	356	345	3000	3000 ⁴⁾	3000	1PL6 226 – ■ ■ F ■ ■ – 0 ...
		230 (308.31)	1465 (1080.6)	468	345	2900	3000 ⁴⁾	3000	1PL6 228 – ■ ■ F ■ ■ – 0 ...

• Separate fan:

- With separate fan
- Without separate fan, for pipe connection
- With separate fan, but with metric cable entries in accordance with EN 50262
- Without separate fan, for pipe connection, but with metric cable entries in accordance with EN 50262

4
6
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8

• Encoder:

- Absolute encoder EnDat 2,048 pulses/revolution
- Incremental encoder sin/cos 1 V_{pp} (without C track or D track)
- Incremental encoder sin/cos 1 V_{pp} (with C track and D track)
- Resolver, 2-pole

E
N
M
R

• Terminal box arrangement/direction of cable entry (drive-end view):

- On top/from right
- On top/from drive end
- On top/from non-drive end
- On top/from left

0
1
2
3

• Construction type:

- IM B3
 - IM B3
 - IM B35 (SH 180: With flange A 450, SH 225: With flange A 550)
 - IM B35 (SH 180: With flange A 450, SH 225: With flange A 550)
- Hoisting concept for other construction types (IM B6, IM B7, IM B8, IM V5, IM V6)
- Hoisting concept for other construction types (IM V15, IM V36)

0
1
3
5

Servo Motors for SIMOVERT MASTERDRIVES

Asynchronous Servo Motors

1PL6 Motors

Selection and Ordering Data with SIMOVERT MASTERDRIVES Motion Control

Power Factor	Magnetizing Current	Rated Efficiency	Rated Frequency	Moment of inertia	Weight, approx.	1PL6 Asynchronous Motors	SIMOVERT MASTERDRIVES MC Inverter/Converter Rated Current	
	I_μ	η_{rated}	f_{rated}	J		Order No.	I_{rated}	Order No.
$\cos \varphi$	A		Hz	kgm^2 ($\text{lb}_f\text{-in-s}^2$)	kg (lb)		A	
Supply voltage 3-ph. AC 400 V for SIMOVERT MASTERDRIVES Motion Control								
0.84	33.4	0.820	14.2	0.503 (4.4545)	370 (815.8)	1PL6 184 - . . B . . 0 ■ ■ ■ ■	59	6SE7 026 - 0 ■ D51
0.84	48.6	0.828	14.1	0.666 (5.894)	440 (970.2)	1PL6 186 - . . B . . 0 ■ ■ ■ ■	92	6SE7 031 - 0 ■ E50
0.86	45.8	0.864	14	1.479 (13.0889)	630 (1389.2)	1PL6 224 - . . B . . 0 ■ ■ ■ ■	124	6SE7 031 - 2 ■ F50
0.85	67	0.868	14	1.930 (17.0802)	750 (1653.8)	1PL6 226 - . . B . . 0 ■ ■ ■ ■	155	6SE7 031 - 8 ■ F50
0.86	77	0.871	14.1	2.326 (20.5848)	860 (1896.3)	1PL6 228 - . . B . . 0 ■ ■ ■ ■	218	6SE7 032 - 6 ■ G50
0.87	45	0.897	34.4	0.503 (4.4545)	370 (815.8)	1PL6 184 - . . D . . 0 ■ ■ ■ ■	124	6SE7 031 - 2 ■ F50
0.86	61	0.907	34.3	0.666 (5.894)	440 (970.2)	1PL6 186 - . . D . . 0 ■ ■ ■ ■	155	6SE7 031 - 8 ■ E50
0.86	86	0.927	34.5	1.479 (13.0889)	630 (1389.2)	1PL6 224 - . . D . . 0 ■ ■ ■ ■	218	6SE7 032 - 6 ■ G50
0.88	90	0.927	31.1	1.930 (17.0802)	750 (1653.8)	1PL6 226 - . . D . . 0 ■ ■ ■ ■	308	6SE7 033 - 7 ■ G50
0.89	103	0.928	34.2	2.326 (20.5848)	860 (1896.3)	1PL6 228 - . . D . . 0 ■ ■ ■ ■	423	6SE7 035 - 1 E K50
0.84	70	0.924	50.9	0.503 (4.4545)	370 (815.8)	1PL6 184 - . . F . . 0 ■ ■ ■ ■	175	6SE7 032 - 1 ■ G50
0.85	91	0.930	50.9	0.666 (5.894)	460 (1014.3)	1PL6 186 - . . F . . 0 ■ ■ ■ ■	262	6SE7 033 - 2 ■ G50
0.87	91	0.940	50.9	1.479 (13.0889)	640 (1411.2)	1PL6 224 - . . F . . 0 ■ ■ ■ ■	308	6SE7 033 - 7 ■ G50
0.87	125	0.944	50.7	1.930 (17.0802)	760 (1675.8)	1PL6 226 - . . F . . 0 ■ ■ ■ ■	423	6SE7 035 - 1 E K50
0.86	177	0.947	50.7	2.326 (20.5848)	870 (1918.4)	1PL6 228 - . . F . . 0 ■ ■ ■ ■	491	6SE7 036 - 0 E K50
• Drive type: Coupling R Coupling R Coupling S Coupling SR Belt R Belt R Increased cantilever forces R Increased cantilever forces R						• Vibration sev. grade: N R R R N R N R		
• Shaft and flange accuracy: A B C D E F G H						• Direction of air flow: DE → NDE NDE → DE ⁵⁾ DE → NDE NDE → DE ⁵⁾ DE → NDE NDE → DE ⁵⁾		
• Shaft end: With keyway, half-key balancing With keyway, half-key balancing With keyway, full-key balancing With keyway, full-key balancing Without keyway Without keyway						• Paint finish: Primed Anthracite gray, standard finish (RAL 7016) Anthracite gray, special finish (RAL 7016)		
• Special models: Please specify additional order code and any required plain text; see Page 3/45.						• Conversion: 0 3 6 -Z		
Converter Inverter						• Conversion: E T		

1) n_1 : Maximum permissible speed at constant power or speed where for $P = P_{\text{rated}}$, there is still a 30% power reserve up to the stall limit.

3) n_{max} : Maximum rotational speed. This speed may not be exceeded!
 Notice: Due to $f_{\text{max}} < 2 \cdot f_{\text{rated}}$, the maximum rotational speed is some-

Servo Motors for SIMOVERT MASTERDRIVES

Asynchronous Servo Motors

1PL6 Motors

Selection and Ordering Data with SIMOVERT MASTERDRIVES Motion Control (continued)

Rated Rotational Speed	Shaft Height	Rated Output	Rated Torque	Rated Current	Rated Voltage	Speed during Field Weakening ¹⁾	Max. Permissible Continuous Speed ²⁾	Max. Speed ³⁾	1PL6 Asynchronous Motors
n_{rated}		P_{rated}	M_{rated}	I_{rated}	V_{rated}	n_1	n_{S1}	n_{max}	
rpm	SH	kW (HP)	Nm (lb _f -ft)	A	V	rpm	rpm	rpm	Order No.
Supply voltage 3-ph. AC 400 V for SIMOVERT MASTERDRIVES Motion Control									
2500	180	100 (134.05)	382 (281.8)	208	345	5000	3500 ⁴⁾	5000	1PL6 184 – ■ ■ L ■ ■ – 0 ...
		130 (174.26)	497 (366.6)	275	340	5000	3500 ⁴⁾	5000	1PL6 186 – ■ ■ L ■ ■ – 0 ...
	225	178 (238.61)	680 (501.6)	358	345	3500	3100 ⁴⁾	4500	1PL6 224 – ■ ■ L ■ ■ – 0 ...
		235 (315.01)	898 (662.4)	476	340	3500	3100 ⁴⁾	4500	1PL6 226 – ■ ■ L ■ ■ – 0 ...
		265 (355.23)	1013 (747.2)	535	345	3500	3100 ⁴⁾	4500 ⁴⁾	1PL6 228 – ■ ■ L ■ ■ – 0 ...

• Separate fan:

- With separate fan
- Without separate fan, for pipe connection
- With separate fan, but with metric cable entries in accordance with EN 50262
- Without separate fan, for pipe connection, but with metric cable entries in accordance with EN 50262

4
6
7
8

• Encoder:

- Absolute encoder EnDat 2,048 pulses/revolution
- Incremental encoder sin/cos 1 V_{pp} (without C track or D track)
- Incremental encoder sin/cos 1 V_{pp} (with C track and D track)
- Resolver, 2-pole

E
N
M
R

• Terminal box arrangement/direction of cable entry (drive-end view):

- On top/from right
- On top/from drive end
- On top/from non-drive end
- On top/from left

0
1
2
3

• Construction type:

- IM B3
 - IM B3
 - IM B35 (SH 180: With flange A 450, SH 225: With flange A 550)
 - IM B35 (SH 180: With flange A 450, SH 225: With flange A 550)
- Hoisting concept for other construction types (IM B6, IM B7, IM B8, IM V5, IM V6)
- Hoisting concept for other construction types (IM V15, IM V36)

0
1
3
5

For order number supplements for drive type, direction of air flow, and paint finish (positions 14 through 16 of the order no.), see page 3/63.

Servo Motors for SIMOVERT MASTERDRIVES

Asynchronous Servo Motors

1PL6 Motors

Selection and Ordering Data with SIMOVERT MASTERDRIVES Motion Control (continued)

Power Factor	Magnetizing Current	Rated Efficiency	Rated Frequency	Moment of inertia	Weight, approx.	1PL6 Asynchronous Motors	SIMOVERT MASTERDRIVES MC Inverter/Converter Rated Current		
$\cos \varphi$	I_{μ} A	η_{rated}	f_{rated} Hz	J kgm ² (lb _F -in-s ²)	kg (lb)	Order No.	I_{rated} A	Order No.	
Supply voltage 3-ph. AC 400 V for SIMOVERT MASTERDRIVES Motion Control									
0.86	80	0.936	84.2	0.503 (4.4545)	390 (860)	1PL6 184 – . . . L . . . – 0 ■ ■ ■ ■	218	6SE7 032 – 6 ■ G50	
0.85	113	0.943	84.1	0.666 (5.894)	470 (1036.4)	1PL6 186 – . . . L . . . – 0 ■ ■ ■ ■	308	6SE7 033 – 7 ■ G50	
0.87	119	0.95	84.1	1.479 (13.0889)	640 (1411.2)	1PL6 224 – . . . L . . . – 0 ■ ■ ■ ■	423	6SE7 035 – 1 E K50	
0.88	157	0.953	84	1.930 (17.0802)	760 (1675.8)	1PL6 226 – . . . L . . . – 0 ■ ■ ■ ■	491	6SE7 036 – 0 E K50	
0.87	189	0.952	84	2.326 (20.5848)	870 (1918.4)	1PL6 228 – . . . L . . . – 0 ■ ■ ■ ■	491 ⁵⁾	6SE7 036 – 0 E K50	
• Drive type: Coupling Coupling Coupling Coupling Belt Belt Increased cantilever forces Increased cantilever forces						• Vibration sev. grade: R R S SR R R R R		• Shaft and flange accuracy: N R R R N R N R	
• Direction of air flow: DE → NDE NDE → DE⁶⁾ DE → NDE NDE → DE⁶⁾ DE → NDE NDE → DE⁶⁾						• Shaft end: With keyway, half-key balancing With keyway, half-key balancing With keyway, full-key balancing With keyway, full-key balancing Without keyway Without keyway			
• Paint finish: Primed Anthracite gray, standard finish (RAL 7016) Anthracite gray, special finish (RAL 7016)									
• Special models: Please specify additional order code and any required plain text; see Page 3/45.									
Converter Inverter								E T	

1) n_1 : Maximum permissible speed at constant power or speed where for $P = P_{\text{rated}}$, there is still a 30% power reserve up to the stall limit.

2) n_{S1} : Maximum permissible speed that is continuously permitted with-

4) Rotational speed is reduced in the event of increased cantilever forces, see Part 7.

5) Notice: The rated converter current is smaller than the rated motor cur-

Servo Motors for SIMOVERT MASTERDRIVES

Asynchronous Servo Motors

1PL6 Motors

Selection and Ordering Data with SIMOVERT MASTERDRIVES Motion Control

Rated Rotational Speed	Shaft Height	Rated Output	Rated Torque	Rated Current	Rated Voltage	Speed during Field Weakening ¹⁾	Max. Permissible Continuous Speed ²⁾	Max. Speed ³⁾	1PL6 Asynchronous Motors
n_{rated}		P_{rated}	M_{rated}	I_{rated}	V_{rated}	n_1	n_{S1}	n_{max}	
rpm	SH	kW (HP)	Nm (lb _f -ft)	A	V	rpm	rpm	rpm	Order No.
Supply voltage 3-ph. AC 480 V for SIMOVERT MASTERDRIVES Motion Control									
400	180	24.5 (32.84)	585 (431.5)	69	300	800	800	800	1PL6 184 – ■ ■ B ■ ■ – 0 ...
		31.5 (42.23)	752 (554.7)	90	290	800	800	800	1PL6 186 – ■ ■ B ■ ■ – 0 ...
	225	45 (60.32)	1074 (792.2)	117	300	800	800	800	1PL6 224 – ■ ■ B ■ ■ – 0 ...
		57 (76.41)	1361 (1003.9)	145	305	800	800	800	1PL6 226 – ■ ■ B ■ ■ – 0 ...
		72 (96.51)	1719 (1267.9)	181	305	800	800	800	1PL6 228 – ■ ■ B ■ ■ – 0 ...
1150	180	65 (87.13)	540 (398.3)	121	400	1750	2300	2300	1PL6 184 – ■ ■ D ■ ■ – 0 ...
		85 (113.94)	706 (520.7)	158	400	1950	2300	2300	1PL6 186 – ■ ■ D ■ ■ – 0 ...
	225	120 (160.86)	997 (735.4)	218	400	2100	2300	2300	1PL6 224 – ■ ■ D ■ ■ – 0 ...
		155 (207.77)	1287 (949.3)	275	400	2000	2300	2300	1PL6 226 – ■ ■ D ■ ■ – 0 ...
		190 (254.69)	1578 (1163.9)	334	400	1850	2300	2300	1PL6 228 – ■ ■ D ■ ■ – 0 ...

• Separate fan:

With separate fan
 Without separate fan, for pipe connection
 With separate fan, but with metric cable entries in accordance with EN 50262
 Without separate fan, for pipe connection, but with metric cable entries in accordance with EN 50262

4
6
7
8

• Encoder:

Absolute encoder EnDat 2,048 pulses/revolution
 Incremental encoder sin/cos 1 V_{pp} (without C track or D track)
 Incremental encoder sin/cos 1 V_{pp} (with C track and D track)
 Resolver, 2-pole

E
N
M
R

• Terminal box arrangement/direction of cable entry (drive-end view):

On top/from right
 On top/from drive end
 On top/from non-drive end
 On top/from left

0
1
2
3

• Construction type:

IM B3
 IM B3
 IM B35 (SH 180: With flange A 450, SH 225: With flange A 550)
 IM B35 (SH 180: With flange A 450, SH 225: With flange A 550)

Hoisting concept for other construction types (IM B6, IM B7, IM B8, IM V5, IM V6)

Hoisting concept for other construction types (IM V15, IM V36)

0
1
3
5

For order number supplements for drive type, direction of air flow, and paint finish (positions 14 through 16 of the order no.), see page 3/65.

Servo Motors for SIMOVERT MASTERDRIVES

Asynchronous Servo Motors

1PL6 Motors

Selection and Ordering Data with SIMOVERT MASTERDRIVES Motion Control

Power Factor	Magnetizing Current	Rated Efficiency	Rated Frequency	Moment of inertia	Weight, approx.	1PL6 Asynchronous Motors	SIMOVERT MASTERDRIVES MC Inverter/Converter Rated Current	
$\cos \varphi$	I_{μ} A	η_{rated}	f_{rated} Hz	J kgm ² (lb _f -in-s ²)	kg (lb)	Order No.	I_{rated} A	Order No.
Supply voltage 3-ph. AC 480 V for SIMOVERT MASTERDRIVES Motion Control								
0.86	33	0.80	14.4	0.503 (4.4545)	370 (815.8)	1PL6 184 – . . B . . – 0 ■ ■ ■ ■	72	6SE7 027 – 2 ■ D51
0.85	47	0.814	14.3	0.666 (5.894)	440 (970.2)	1PL6 186 – . . B . . – 0 ■ ■ ■ ■	92	6SE7 031 – 0 ■ E50
0.87	45	0.844	14.2	1.479 (13.0889)	630 (1389.2)	1PL6 224 – . . B . . – 0 ■ ■ ■ ■	124	6SE7 031 – 2 ■ F50
0.85	67	0.868	14.0	1.930 (17.0802)	750 (1653.8)	1PL6 226 – . . B . . – 0 ■ ■ ■ ■	155	6SE7 031 – 8 ■ F50
0.86	77	0.871	14.0	2.326 (20.5848)	860 (1896.3)	1PL6 228 – . . B . . – 0 ■ ■ ■ ■	175	6SE7 032 – 1 ■ G50
0.86	46	0.906	39.4	0.503 (4.4545)	370 (815.8)	1PL6 184 – . . D . . – 0 ■ ■ ■ ■	124	6SE7 031 – 2 ■ F50
0.86	62	0.910	39.4	0.666 (5.894)	440 (970.2)	1PL6 186 – . . D . . – 0 ■ ■ ■ ■	155	6SE7 031 – 8 ■ F50
0.86	86	0.930	39.1	1.479 (13.0889)	630 (1389.2)	1PL6 224 – . . D . . – 0 ■ ■ ■ ■	218	6SE7 032 – 6 ■ G50
0.87	92	0.930	39.2	1.930 (17.0802)	750 (1653.8)	1PL6 226 – . . D . . – 0 ■ ■ ■ ■	308	6SE7 033 – 7 ■ G50
0.88	102	0.931	39.2	2.326 (20.5848)	860 (1896.3)	1PL6 228 – . . D . . – 0 ■ ■ ■ ■	423	6SE7 035 – 1 E K50
• Drive type:		• Vibration sev. grade:		• Shaft and flange accuracy:		A B C D E F G H A B C D J K 0 3 6 –Z		
Coupling		R		N				
Coupling		R		R				
Coupling		S		R				
Coupling		SR		R				
Belt		R		N				
Belt		R		R				
Increased cantilever forces		R		N				
Increased cantilever forces		R		R				
• Direction of air flow:		• Shaft end:						
DE → NDE		With keyway, half-key balancing						
NDE → DE ⁴⁾		With keyway, half-key balancing						
DE → NDE		With keyway, full-key balancing						
NDE → DE ⁴⁾		With keyway, full-key balancing						
DE → NDE		Without keyway						
NDE → DE ⁴⁾		Without keyway						
• Paint finish:								
Primed								
Anthracite gray, standard finish (RAL 7016)								
Anthracite gray, special finish (RAL 7016)								
• Special models:								
Please specify additional order code and any required plain text; see Page 3/45.								
Converter						E T		
Inverter								

Servo Motors for SIMOVERT MASTERDRIVES

Asynchronous Servo Motors

1PL6 Motors

Selection and Ordering Data with SIMOVERT MASTERDRIVES Motion Control (continued)

Rated Rotational Speed n_{rated} rpm	Shaft Height SH	Rated Output P_{rated} kW (HP)	Rated Torque M_{rated} Nm (lb _f -ft)	Rated Current I_{rated} A	Rated Voltage V_{rated} V	Speed during Field Weakening ¹⁾ n_1 rpm	Max. Permissible Continuous Speed ²⁾ n_{S1} rpm	Max. Speed ³⁾ n_{max} rpm	1PL6 Asynchronous Motors Order No.
Supply voltage 3-ph. AC 480 V for SIMOVERT MASTERDRIVES Motion Control									
1750	180	89 (119.3)	486 (358.5)	166	400	3500	3500 ⁴⁾	3500	1PL6 184 – ■ ■ F ■ ■ – 0 ...
		125 (167.56)	682 (503)	231	400	3400	3500 ⁴⁾	3500	1PL6 186 – ■ ■ F ■ ■ – 0 ...
	225	165 (221.18)	900 (663.8)	292	400	3000	3100 ⁴⁾	3500	1PL6 224 – ■ ■ F ■ ■ – 0 ...
		200 (268.1)	1091 (804.7)	350	400	2900	3100 ⁴⁾	3500	1PL6 226 – ■ ■ F ■ ■ – 0 ...
		265 (355.23)	1446 (1066.6)	470	400	2900	3100 ⁴⁾	3500	1PL6 228 – ■ ■ F ■ ■ – 0 ...
2900	180	113 (151.47)	372 (274.4)	209	400	5000	3500 ⁴⁾	5000	1PL6 184 – ■ ■ L ■ ■ – 0 ...
		150 (201.07)	494 (364.4)	280	390	5000	3500 ⁴⁾	5000	1PL6 186 – ■ ■ L ■ ■ – 0 ...
	225	205 (274.8)	675 (497.9)	365	400	3500	3100 ⁴⁾	4500	1PL6 224 – ■ ■ L ■ ■ – 0 ...
		270 (361.93)	889 (655.7)	470	400	3500	3100 ⁴⁾	4500	1PL6 226 – ■ ■ L ■ ■ – 0 ...
		300 (402.14)	988 (728.7)	530	400	3500	3100 ⁴⁾	4500 ⁴⁾	1PL6 228 – ■ ■ L ■ ■ – 0 ...

• Separate fan:

With separate fan
Without separate fan, for pipe connection
With separate fan, but with metric cable entries in accordance with EN 50262
Without separate fan, for pipe connection,
but with metric cable entries in accordance with EN 50262

4
6
7
8

• Encoder:

Absolute encoder EnDat 2,048 pulses/revolution
Incremental encoder sin/cos 1 V_{pp} (without C track or D track)
Incremental encoder sin/cos 1 V_{pp} (with C track and D track)
Resolver, 2-pole

E
N
M
R

• Terminal box arrangement/direction of cable entry (drive-end view):

On top/from right
On top/from drive end
On top/from non-drive end
On top/from left

0
1
2
3

• Construction type:

IM B3
IM B3

IM B35 (SH 180: With flange A 450,
SH 225: With flange A 550)
IM B35 (SH 180: With flange A 450,
SH 225: With flange A 550)

Hoisting concept for other construction types
(IM B6, IM B7, IM B8, IM V5, IM V6)

Hoisting concept for other construction types
(IM V15, IM V36)

0
1
3
5

For order number supplements for drive type, direction of air flow, and paint finish (positions 14 through 16 of the order no.), see page 3/67.

Servo Motors for SIMOVERT MASTERDRIVES

Asynchronous Servo Motors

1PL6 Motors

Selection and Ordering Data with SIMOVERT MASTERDRIVES Motion Control (continued)

Power Factor	Magnetizing Current	Rated Efficiency	Rated Frequency	Moment of inertia	Weight, approx.	1PL6 Asynchronous Motors	SIMOVERT MASTERDRIVES MC Inverter/Converter Rated Current	
$\cos \varphi$	I_μ A	η_{rated}	f_{rated} Hz	J kgm ² (lb _f -in-s ²)	kg (lb)	Order No.	I_{rated} A	Order No.
Supply voltage 3-ph. AC 480 V for SIMOVERT MASTERDRIVES Motion Control								
0.84	68	0.921	59.3	0.503 (4.4545)	370 (815.8)	1PL6 184 - . . F . . - 0 ■ ■ ■ ■	175	6SE7 032 - 1 ■ G50
0.84	92	0.935	59.3	0.666 (5.894)	440 (970.2)	1PL6 186 - . . F . . - 0 ■ ■ ■ ■	262	6SE7 033 - 2 ■ G50
0.87	90	0.942	59.2	1.479 (13.0889)	630 (1389.2)	1PL6 224 - . . F . . - 0 ■ ■ ■ ■	308	6SE7 033 - 7 ■ G50
0.87	122	0.945	59.1	1.930 (17.0802)	750 (1653.8)	1PL6 226 - . . F . . - 0 ■ ■ ■ ■	423	6SE7 035 - 1 E K50
0.86	174	0.948	59.0	2.326 (20.5848)	860 (1896.3)	1PL6 228 - . . F . . - 0 ■ ■ ■ ■	491	6SE7 036 - 0 E K50
0.85	79	0.938	97.6	0.503 (4.4545)	370 (815.8)	1PL6 184 - . . L . . - 0 ■ ■ ■ ■	218	6SE7 032 - 6 ■ G50
0.84	110	0.943	97.5	0.666 (5.894)	440 (970.2)	1PL6 186 - . . L . . - 0 ■ ■ ■ ■	308	6SE7 033 - 7 ■ G50
0.86	118	0.950	97.5	1.479 (13.0889)	630 (1389.2)	1PL6 224 - . . L . . - 0 ■ ■ ■ ■	423	6SE7 035 - 1 K U50
0.87	160	0.952	97.4	1.930 (17.0802)	750 (1653.8)	1PL6 226 - . . L . . - 0 ■ ■ ■ ■	491	6SE7 036 - 0 K U50
0.86	188	0.952	97.3	2.326 (20.5848)	860 (1896.3)	1PL6 228 - . . L . . - 0 ■ ■ ■ ■	491 ⁵⁾	6SE7 036 - 0 E K50
• Drive type:		• Vibration sev. grade:		• Shaft and flange accuracy:				
Coupling		R		N				
Coupling		R		R				
Coupling		S		R				
Coupling		SR		R				
Belt		R		N				
Belt		R		R				
Increased cantilever forces		R		N				
Increased cantilever forces		R		R				
• Direction of air flow:		• Shaft end:						
DE → NDE		With keyway, half-key balancing						
NDE → DE ⁶⁾		With keyway, half-key balancing						
DE → NDE		With keyway, full-key balancing						
NDE → DE ⁶⁾		With keyway, full-key balancing						
DE → NDE		Without keyway						
NDE → DE ⁶⁾		Without keyway						
• Paint finish:								
Primed								
Anthracite gray, standard finish (RAL 7016)								
Anthracite gray, special finish (RAL 7016)								
• Special models:								
Please specify additional order code and any required plain text; see Page 3/45.								
Converter								
Inverter								

1) n_1 : Maximum permissible speed at constant power or speed where for $P = P_{\text{rated}}$, there is still a 30% power reserve up to the stall limit.

2) n_{S1} : Maximum permissible speed that is continuously permitted with-

4) Rotational speed is reduced in the event of increased cantilever forces, see Part 7.

5) Notice: The rated converter current is smaller than the rated motor cur-

Servo Motors for SIMOVERT MASTERDRIVES

Asynchronous Servo Motors

1PL6 Motors, Shaft Height 280

Selection and Ordering Data

Permissible Combinations of Mechanical Models

1PL6 28 . Motors Shaft Height 280

Position in
Order No. 8. 9. 10. 11. 12. 13. 14. 15. 16.
1PL6 28 . - ■ . . . ■ ■ - . . ■ . .

Permissible Combinations of Mechanical Models

Separately driven fan
8th Position in Order No.
1PL6 28 . - ■ -

Order No. Supplement

0	1	2	3	4	5	6
NDE Top Non- Drive End --> Drive End	NDE Right Non- Drive End --> Drive End	NDE Left Non- Drive End --> Drive End	Drive End Top Drive End --> Non- Drive End	Drive End Right Drive End --> Non- Drive End	Drive End Left Drive End --> Non- Drive End	Simple Pip Connection Non-Drive Right (Can Converted to NDE Left)
1PL6 28 . - 0 - Type of construction IM B3						
1PL6 28 . - 1 - Type IM V5 (Can be converted later to IM V6)						
1PL6 28 . - 3 - Type of construction IM B35						
1PL6 28 . - 5 - Type IM V15 (Can be converted later to IM V36)						

Option codes

R1Y Standard finish RAL ...						
R2Y Special finish RAL ...						
G14 With air filter						
K08 Encoder connector attachment, facing						
K55 Customer-specific entry plate for terminal box ¹⁾						
K83 Terminal box rotation by + 90 degrees (from standard position)						
K84 Terminal box rotation by - 90 degrees (from standard position)						
K85 Terminal box rotation by 180 degrees (from standard position)						
K16 Additional normal shaft end (only available with no encoder)						
K31 Additional rating plate						
K45 230 V standstill heating						
C30 690 V model						
Y55 Atypical shaft end, drive end						
Y90 Different rating plate data ¹⁾						

1PL6 Motors, Shaft Height 280

[illegible]