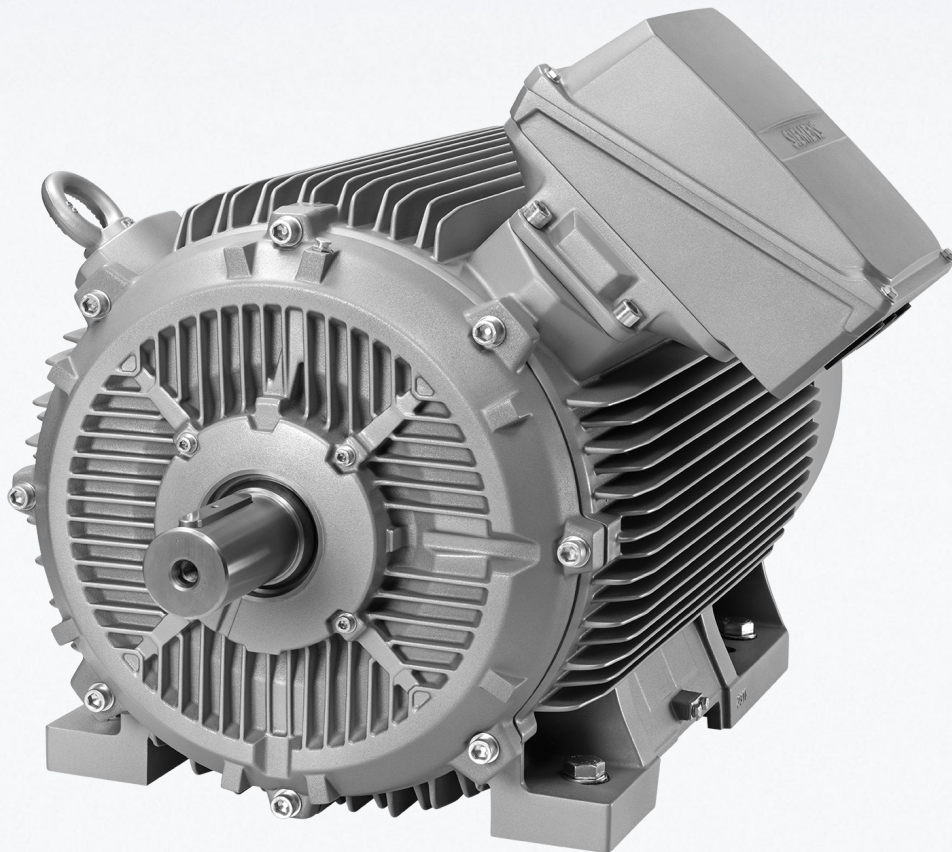


SIEMENS



Motors

Low-Voltage Motors

**SIMOTICS SD next generation
(1LE5)**

250 to 500 kW

Catalog
Add-on
D 81.1 AO

Edition
06/2017

[siemens.com/simotics-sd-nextgeneration](https://www.siemens.com/simotics-sd-nextgeneration)

SIMOTICS SD 1LE5 standard motors

Motors with IE3 Premium Efficiency

Self-ventilated motors, cast-iron series 1LE5503 Basic Line

Selection and ordering data

Operating values at rated power															Cast-iron series 1LE5503 – Basic Line IE3 version acc. to IEC 60034-30-1 Article No.	m_{MB3}	J	Torque class
P_{rated}	Frame size	n_{rated}	T_{rated}	IE class	$\eta_{rated, 4/4}$	$\eta_{rated, 3/4}$	$\eta_{rated, 2/4}$	$\cos\phi_{rated, 4/4}$	I_{rated}	$\frac{T_{LR}}{T_{rat.}}$	$\frac{I_{LR}}{I_{rated}}$	$\frac{T_B}{T_{rat.}}$	L_{pFA}	L_{WA}				
kW	FS	rpm	Nm		%	%	%		A				dB(A)	dB(A)	▲ New	kg	kgm ²	CL
• Cooling: Self-ventilated (IC 411) • Efficiency: IE3 Premium Efficiency, service factor (SF) 1.15 • Insulation: Thermal class 155 (temperature class F), IP55 degree of protection, utilization in accordance with thermal class 130 (temperature class B)																		
2-pole: 3000 rpm at 50 Hz																		
250	315 L	2986	800	IE3	95.8	95.6	94.8	0.87	435	3.0	9.1	4.0	80	94	▲ 1LE55 03-3AA6	1310	2.7	16
315	315 L	2986	1007	IE3	95.8	95.6	94.8	0.87	550	3.5	9.9	4.2	81	96	▲ 1LE55 03-3AA7	1520	3.3	16
2-pole: 3600 rpm at 60 Hz																		
250	315 L	3588	800	IE3	95.8	95.4	94.3	0.88	370	3.8	10.0	4.0	84	99	▲ 1LE55 03-3AA6	1310	2.7	16
315	315 L	3588	1007	IE3	95.8	95.3	94.2	0.87	475	4.1	11.0	4.6	85	100	▲ 1LE55 03-3AA7	1520	3.3	16
4-pole: 1500 rpm at 50 Hz																		
250	315 L	1490	1602	IE3	96.0	96.1	95.7	0.85	440	2.8	7.9	3.2	75	91	▲ 1LE55 03-3AB6	1290	4.3	16
315	315 L	1490	2019	IE3	96.0	96.0	95.6	0.83	570	3.2	8.5	3.5	75	90	▲ 1LE55 03-3AB7	1560	5.4	16
4-pole: 1800 rpm at 60 Hz																		
250	315 L	1791	1602	IE3	96.2	96.1	95.3	0.85	385	3.1	8.6	3.5	82	97	▲ 1LE55 03-3AB6	1290	4.3	16
315	315 L	1792	2019	IE3	96.2	96.0	95.3	0.83	495	3.4	9.4	3.7	81	95	▲ 1LE55 03-3AB7	1560	5.4	16
Voltagess ¹⁾																		
				No. of poles	Frame size		Motor type		Version				Order code(s)					
50 Hz	400 VΔ/690 VY		60 Hz ¹⁾	460 VΔ	2, 4	315 L	1LE5503-3A	Standard	3	4			–					
50 Hz	500 VΔ				2, 4	315 L	1LE5503-3A	W/o add. charge	4	0			–					
50 Hz	690 VΔ				2, 4	315 L	1LE5503-3A	With add. charge	4	7			–					
Further voltagess ¹⁾				For additional charges, code numbers, order codes and descriptions, see from page 5														
Types of construction																		
				No. of poles	Frame size		Motor type		Version				Order code(s)					
Without flange		IM B3 ²⁾		2, 4	315 L	1LE5503-3A	Standard	A					–					
With flange		IM B5 ²⁾		2, 4	315 L	1LE5503-3A	With add. charge	F					–					
Further types of construction				For additional charges, code letters and descriptions, see from page 7														
Motor protection																		
				No. of poles	Frame size		Motor type		Version				Order code(s)					
Without				2, 4	315 L	1LE5503-3A	Standard	A					–					
PTC thermistor with 3 temperature sensors				2, 4	315 L	1LE5503-3A	With add. charge	B					–					
Further motor protection				For additional charges, code letters and descriptions, see from page 9														
Terminal box position																		
				No. of poles	Frame size		Motor type		Version				Order code(s)					
Terminal box base left with terminal box 45°				2, 4	315 L	1LE5503-3A	W/o add. charge	2					–					
Terminal box base right with terminal box 45°				2, 4	315 L	1LE5503-3A	Standard	3					–					
Further terminal box positions				For additional charges, code numbers and descriptions, see from page 10														
Special versions																		
				No. of poles	Frame size		Motor type		Version				Order code(s)					
Options				For additional charges, order codes and descriptions, see from page 11										1LE5503-	–Z		

- 1) Parallel supply lines are required, except in the case of connection to 690 V.
- 2) For a power rating of 315 kW, 2-pole, 60 Hz and 315 kW, 4-pole, 50 Hz, a larger terminal box can be used (order code R50) due to the magnitude of the current. Order code R50 alters the motor dimensions.

SIMOTICS SD 1LE5 standard motors

Motors with IE3 Premium Efficiency

Self-ventilated motors, cast-iron series 1LE5603 Performance Line

Selection and ordering data

Operating values at rated power														Cast-iron series 1LE5603 -Performance Line IE3 version acc. to IEC 60034-30-1 Article No.	m_{MB3}	J	Torque class		
P_{rated}	Frame size	n_{rated}	T_{rated}	IE class	$\eta_{rated, 4/4}$	$\eta_{rated, 3/4}$	$\eta_{rated, 2/4}$	$\cos\phi_{rated, 4/4}$	I_{rated}	$\frac{T_{LR}}{T_{rated}}$	$\frac{L_{LR}}{L_{rated}}$	$\frac{T_B}{T_{rated}}$	L_{pFA}					L_{WA}	
kW	FS	rpm	Nm		%	%	%		A										
<ul style="list-style-type: none"> Cooling: Self-ventilated (IC 411) Efficiency: IE3 Premium Efficiency, service factor (SF) 1.15 Insulation: Thermal class 155 (temperature class F), IP55 degree of protection, utilization in accordance with thermal class 130 (temperature class B) 																			
2-pole: 3000 rpm at 50 Hz																			
250	315 L	2986	800	IE3	95.8	95.6	94.8	0.87	435	3.0	9.1	4.0	80	94	▲ 1LE56 03-3AA6	■	1310	2.7	16
315	315 L	2986	1007	IE3	95.8	95.6	94.8	0.87	550	3.5	9.9	4.2	81	96	▲ 1LE56 03-3AA7	■	1520	3.3	16
355	355 M	2988	1135	IE3	95.8	95.6	94.8	0.89	600	2.6	8.9	4.0	84	99	▲ 1LE56 03-3BA3	■	2100	4.7	16
400	355 L	2986	1279	IE3	95.8	95.7	95.2	0.92	660	2.6	8.5	3.4	83	98	▲ 1LE56 03-3BA4	■	2240	5.4	13
500	355 L	2988	1598	IE3	95.8	95.7	95.1	0.89	850	3.0	8.9	3.8	84	98	▲ 1LE56 03-3BA5	■	2340	5.8	13
2-pole: 3600 rpm at 60 Hz																			
250	315 L	3588	800	IE3	95.8	95.4	94.3	0.88	370	3.8	10	4.0	84	99	▲ 1LE56 03-3AA6	■	1310	2.7	16
315	315 L	3588	1007	IE3	95.8	95.3	94.2	0.87	475	4.1	11	4.6	85	100	▲ 1LE56 03-3AA7	■	1520	3.3	16
355	355 M	3590	1135	IE3	95.8	95.3	94.2	0.89	520	2.6	9.5	4.5	88	103	▲ 1LE56 03-3BA3	■	2100	4.7	16
400	355 L	3590	1279	IE3	95.8	95.4	94.4	0.91	580	3.3	9.8	4.0	88	103	▲ 1LE56 03-3BA4	■	2240	5.4	13
500	355 L	3590	1598	IE3	95.8	95.5	94.6	0.89	740	3.4	10.0	4.4	88	103	▲ 1LE56 03-3BA5	■	2340	5.8	13
4-pole: 1500 rpm at 50 Hz																			
250	315 L	1490	1602	IE3	96.0	96.1	95.7	0.85	440	2.8	7.9	3.2	75	91	▲ 1LE56 03-3AB6	■	1290	4.3	16
315	315 L	1490	2019	IE3	96.0	96.0	95.6	0.83	570	3.2	8.5	3.5	75	90	▲ 1LE56 03-3AB7	■	1560	5.4	16
355	355 M	1492	2272	IE3	96.0	96.0	95.4	0.86	620	2.9	7.9	2.8	81	96	▲ 1LE56 03-3BB3	■	2020	6.8	13
400	355 L	1492	2560	IE3	96.0	96.0	95.5	0.84	720	3.4	8.4	3.0	81	96	▲ 1LE56 03-3BB4	■	2110	7.2	16
500	355 L	1490	3204	IE3	96.0	96.2	95.9	0.85	880	3.0	7.8	2.6	82	97	▲ 1LE56 03-3BB5	■	2290	8.5	13
4-pole: 1800 rpm at 60 Hz																			
250	315 L	1791	1602	IE3	96.2	96.1	95.3	0.85	385	3.1	8.6	3.5	82	97	▲ 1LE56 03-3AB6	■	1290	4.3	16
315	315 L	1792	2019	IE3	96.2	96.0	95.3	0.83	495	3.4	9.4	3.7	81	95	▲ 1LE56 03-3AB7	■	1560	5.4	16
355	355 M	1793	2272	IE3	96.2	95.9	95.0	0.85	540	3.4	9.0	3.1	84	99	▲ 1LE56 03-3BB3	■	2020	6.8	13
400	355 L	1794	2560	IE3	96.2	96.0	95.2	0.84	620	4.1	9.5	3.3	88	99	▲ 1LE56 03-3BB4	■	2110	7.2	16
500	355 L	1792	3204	IE3	96.2	96.2	95.6	0.85	770	3.3	8.0	2.8	85	100	▲ 1LE56 03-3BB5	■	2290	8.5	13
Voltagess ¹⁾																			
				No. of poles	Frame size		Motor type		Version				Order code(s)						
50 Hz	400 VΔ/690 VY			60 Hz ¹⁾	460 VΔ	2, 4	315 L ... 355 L	1LE5603-3A ... -3B	Standard	3	4			-					
50 Hz	500 VΔ			2, 4			315 L ... 355 L	1LE5603-3A ... -3B	W/o add. charge	4	0			-					
50 Hz	690 VΔ			2, 4			315 L ... 355 L	1LE5603-3A ... -3B	With add. charge	4	7			-					
Further voltagess ¹⁾ For additional charges, code numbers, order codes and descriptions, see from page 5																			
Types of construction																			
				No. of poles	Frame size		Motor type		Version				Order code(s)						
Without flange		IM B3 ²⁾		2, 4	315 L ... 355 L		1LE5603-3A ... -3B		Standard	A				-					
With flange		IM B5 ²⁾		2, 4	315 L ... 355 L		1LE5603-3A ... -3B		With add. charge	F				-					
Further types of construction For additional charges, code letters and descriptions, see from page 7																			
Motor protection Line																			
				No. of poles	Frame size		Motor type		Version				Order code(s)						
PTC thermistor with 3 temperature sensors				2, 4	315 L ... 355 L		1LE5603-3A ... -3B		Standard	B				-					
Further motor protection For additional charges, code letters and descriptions, see from page 9																			
Terminal box position																			
				No. of poles	Frame size		Motor type		Version				Order code(s)						
Terminal box base left with terminal box 45°				2, 4	315 L ... 355 L		1LE5603-3A ... -3B		W/o add. charge	2				-					
Terminal box base right with terminal box 45°				2, 4	315 L ... 355 L		1LE5603-3A ... -3B		Standard	3				-					
Further terminal box positions For additional charges, code numbers and descriptions, see from page 10																			
Special versions																			
				No. of poles	Frame size		Motor type						Order code(s)						
Options									1LE5603-	■	■	■	■	■	-Z . . .+ . . .+ . . .+ . . .+				

- Parallel supply lines are required, except in the case of connection to 690 V.
- For a power rating of 315 kW, 2-pole, 60 Hz and 315 kW, 4-pole, 50 Hz, a larger terminal box can be used (order code R50) due to the magnitude of the current. Order code R50 alters the motor dimensions.

SIMOTICS SD 1LE5 standard motors

Motors with IE4 Super Premium Efficiency

Self-ventilated motors, cast-iron series 1LE5504 Basic Line

Selection and ordering data

P _{rated}	Frame size	Operating values at rated power											Cast-iron series 1LE5504 - Basic Line IE4 version acc. to IEC 60034-30-1 Article No.	m _{MM B3}	J	Torque class		
		n _{rated}	T _{rated}	IE class	η _{rated, 4/4}	η _{rated, 3/4}	η _{rated, 2/4}	cosφ _{rated, 4/4}	I _{rated}	T _{LR} /T _{rated}	I _{LR} /I _{rated}	T _B /T _{rated}					L _{pFA}	L _{WA}
kW	FS	rpm	Nm		%	%	%	A					dB(A)	dB(A)	▲ New	kg	kgm ²	CL
• Cooling: Self-ventilated (IC 411) • Efficiency: IE4 Super Premium Efficiency, service factor (SF) 1.15 • Insulation: Thermal class 155 (temperature class F), IP55 degree of protection, utilization in accordance with thermal class 130 (temperature class B)																		
2-pole: 3000 rpm at 50 Hz																		
250	315 L	2986	800	IE4	96.5	96.4	95.7	0.88	425	3.0	9.3	4.2	80	94	▲ 1LE55 04-3AA6	1340	2.8	16
315	315 L	2986	1007	IE4	96.5	96.3	95.5	0.87	540	3.5	9.9	4.2	81	96	▲ 1LE55 04-3AA7	1520	3.3	16
2-pole: 3600 rpm at 60 Hz ¹⁾																		
250	315 L	3588	800	IE4	96.2	95.8	94.8	0.88	370	4.1	11.0	4.6	84	98	▲ 1LE55 04-3AA6	1340	2.8	16
315	315 L	3588	1007	IE4	96.2	95.7	94.6	0.87	470	4.1	11.0	4.6	85	100	▲ 1LE55 04-3AA7	1520	3.3	16
4-pole: 1500 rpm at 50 Hz																		
250	315 L	1490	1602	IE4	96.7	96.8	96.5	0.86	435	2.8	7.9	3.2	75	90	▲ 1LE55 04-3AB6	1500	5.0	16
315	315 L	1490	2019	IE4	96.7	96.7	96.3	0.83	570	3.2	8.5	3.5	75	90	▲ 1LE55 04-3AB7	1560	5.4	16
4-pole: 1800 rpm at 60 Hz ¹⁾																		
250	315 L	1791	1602	IE4	96.8	96.7	96.0	0.85	380	3.3	8.7	3.5	79	94	▲ 1LE55 04-3AB6	1500	5.0	16
315	315 L	1792	2019	IE4	96.8	96.6	95.9	0.83	490	3.4	9.4	3.7	81	95	▲ 1LE55 04-3AB7	1560	5.4	16
Voltsages ¹⁾																		
				No. of poles	Frame size		Motor type		Version				Order code(s)					
50 Hz	400 VΔ/690 VY			60 Hz ¹⁾	460 VΔ		2, 4	315 L	1LE5504-3A	Standard		3 4	-					
50 Hz	500 VΔ						2, 4	315 L	1LE5504-3A	W/o add. charge		4 0	-					
50 Hz	690 VΔ						2, 4	315 L	1LE5504-3A	With add. charge		4 7	-					
Further voltsages ¹⁾ For additional charges, code numbers, order codes and descriptions, see from page 5																		
Types of construction																		
				No. of poles	Frame size		Motor type		Version				Order code(s)					
Without flange		IM B3 ²⁾		2, 4	315 L		1LE5504-3A		Standard		A		-					
With flange		IM B5 ²⁾		2, 4	315 L		1LE5504-3A		With add. charge		F		-					
Further types of construction For additional charges, code letters and descriptions, see from page 7																		
Motor protection																		
				No. of poles	Frame size		Motor type		Version				Order code(s)					
Without				2, 4	315 L		1LE5504-3A		Standard		A		-					
PTC thermistor with 3 temperature sensors				2, 4	315 L		1LE5504-3A		With add. charge		B		-					
Further motor protection For additional charges, code letters and descriptions, see from page 9																		
Terminal box position																		
				No. of poles	Frame size		Motor type		Version				Order code(s)					
Terminal box base left with terminal box 45°				2, 4	315 L		1LE5504-3A		W/o add. charge		2		-					
Terminal box base right with terminal box 45°				2, 4	315 L		1LE5504-3A		Standard		3		-					
Further terminal box positions For additional charges, code numbers and descriptions, see from page 10																		
Special versions																		
				No. of poles	Frame size		Motor type						Order code(s)					
Options For additional charges, order codes and descriptions, see from page 11 1LE5504-... -Z ...+...+...+...																		

- 1) Parallel supply lines are required, except in the case of connection to 690 V.
- 2) For a power rating of 315 kW, 2-pole, 60 Hz and 315 kW, 4-pole, 50 Hz, a larger terminal box can be used (order code R50) due to the magnitude of the current. Order code R50 alters the motor dimensions.

SIMOTICS SD 1LE5 standard motors

Motors with IE4 Super Premium Efficiency

Self-ventilated motors, cast-iron series 1LE5604 Performance Line

Selection and ordering data

Operating values at rated power														Cast-iron series 1LE5604 - Performance Line IE4 version acc. to IEC 60034-30-1 Article No.		m _M B3 J		Torque class	
P _{rated}	Frame size	n _{rated}	T _{rated}	IE class	η _{rated, 4/4}	η _{rated, 3/4}	η _{rated, 2/4}	cosφ _{rated, 4/4}	I _{rated}	T _{LR} /T _{rated}	I _{LR} /I _{rated}	T _B /T _{rated}	L _p /A	L _{WA}	▲ New	kg	kgm ²	CL	
kW	FS	rpm	Nm		%	%	%		A										
• Cooling: Self-ventilated (IC 411)																			
• Efficiency: IE4 Super Premium Efficiency, service factor (SF) 1.15																			
• Insulation: Thermal class 155 (temperature class F), IP55 degree of protection, utilization in accordance with thermal class 130 (temperature class B)																			
2-pole: 3000 rpm at 50 Hz																			
250	315 L	2986	800	IE4	96.5	96.4	95.7	0.88	425	3.0	9.3	4.2	80	94	▲	1LE56 04-3AA6	1340	2.8	16
315	315 L	2986	1007	IE4	96.5	96.3	95.5	0.87	540	3.5	9.9	4.2	81	96	▲	1LE56 04-3AA7	1520	3.3	16
355	355 M	2988	1135	IE4	96.5	96.3	95.5	0.89	600	2.6	8.9	4.0	84	99	▲	1LE56 04-3BA3	2100	4.7	16
400	355 L	2986	1279	IE4	96.5	96.4	95.9	0.92	650	2.6	8.5	3.4	83	98	▲	1LE56 04-3BA4	2240	5.4	13
500	355 L	2988	1598	IE4	96.5	96.4	95.8	0.89	840	3.0	8.9	3.8	84	98	▲	1LE56 04-3BA5	2340	5.8	13
2-pole: 3600 rpm at 60 Hz																			
250	315 L	3588	800	IE4	96.2	95.8	94.8	0.88	370	4.1	11.0	4.6	84	98	▲	1LE56 04-3AA6	1340	2.8	16
315	315 L	3588	1007	IE4	96.2	95.7	94.6	0.87	470	4.1	11.0	4.6	85	100	▲	1LE56 04-3AA7	1520	3.3	16
355	355 M	3590	1135	IE4	96.2	95.7	94.6	0.89	520	2.6	9.5	4.5	88	103	▲	1LE56 04-3BA3	2100	4.7	16
400	355 L	3590	1279	IE4	96.2	95.8	94.8	0.91	570	3.3	9.8	4.0	88	103	▲	1LE56 04-3BA4	2240	5.4	13
500	355 L	3590	1598	IE4	96.2	95.9	95	0.89	730	3.4	10.0	4.4	88	103	▲	1LE56 04-3BA5	2340	5.8	13
4-pole: 1500 rpm at 50 Hz																			
250	315 L	1490	1602	IE4	96.7	96.8	96.5	0.86	435	2.8	7.9	3.2	75	90	▲	1LE56 04-3AB6	1500	5.0	16
315	315 L	1490	2019	IE4	96.7	96.7	96.3	0.83	570	3.2	8.5	3.5	75	90	▲	1LE56 04-3AB7	1560	5.4	16
355	355 M	1492	2272	IE4	96.7	96.7	96.2	0.83	640	2.8	7.9	2.8	81	96	▲	1LE56 04-3BB3	2050	6.8	13
400	355 L	1492	2560	IE4	96.7	96.7	96.2	0.82	730	3.2	7.9	2.9	81	96	▲	1LE56 04-3BB4	2080	7.2	16
500	355 L	1490	3204	IE4	96.7	96.9	96.6	0.85	880	3.0	7.8	2.6	82	97	▲	1LE56 04-3BB5	2290	8.5	13
4-pole: 1800 rpm at 60 Hz																			
250	315 L	1791	1602	IE4	96.8	96.7	96	0.85	380	3.3	8.7	3.5	79	94	▲	1LE56 04-3AB6	1500	5.0	16
315	315 L	1792	2019	IE4	96.8	96.6	95.9	0.83	490	3.4	9.4	3.7	81	95	▲	1LE56 04-3AB7	1560	5.4	16
355	355 M	1793	2272	IE4	96.8	96.6	95.8	0.84	550	3.5	9.0	3.1	84	99	▲	1LE56 04-3BB3	2050	6.8	13
400	355 L	1794	2560	IE4	96.8	96.6	95.7	0.81	640	3.8	9.5	3.2	84	99	▲	1LE56 04-3BB4	2080	7.2	16
500	355 L	1792	3204	IE4	96.8	96.8	96.2	0.85	760	3.3	8.0	2.8	85	100	▲	1LE56 04-3BB5	2290	8.5	13
Voltagess ¹⁾																			
				No. of poles	Frame size		Motor type		Version				Order code(s)						
50 Hz	400 VΔ/690 VY			60 Hz ¹⁾	460 VΔ		2, 4	315 L ... 355 L	1LE5604-3A ... -3B		Standard		3 4	-					
50 Hz	500 VΔ						2, 4	315 L ... 355 L	1LE5604-3A ... -3B		W/o add. charge		4 0	-					
50 Hz	690 VΔ						2, 4	315 L ... 355 L	1LE5604-3A ... -3B		With add. charge		4 7	-					
Further voltagess ¹⁾ For additional charges, code numbers, order codes and descriptions, see from page 5																			
Types of construction																			
				No. of poles	Frame size		Motor type		Version				Order code(s)						
Without flange					IM B3 ²⁾		2, 4	315 L ... 355 L	1LE5604-3A ... -3B		Standard		A	-					
With flange					IM B5 ²⁾		2, 4	315 L ... 355 L	1LE5604-3A ... -3B		With add. charge		F	-					
Further types of construction For additional charges, code letters and descriptions, see from page 7																			
Motor protection Line																			
				No. of poles	Frame size		Motor type		Version				Order code(s)						
PTC thermistor with 3 temperature sensors							2, 4	315 L ... 355 L	1LE5604-3A ... -3B		Standard		B	-					
Further motor protection For additional charges, code letters and descriptions, see from page 9																			
Terminal box position																			
				No. of poles	Frame size		Motor type		Version				Order code(s)						
Terminal box base left with terminal box 45°							2, 4	315 L ... 355 L	1LE5604-3A ... -3B		W/o add. charge		2	-					
Terminal box base right with terminal box 45°							2, 4	315 L ... 355 L	1LE5604-3A ... -3B		Standard		3	-					
Further terminal box positions For additional charges, code numbers and descriptions, see from page 10																			
Special versions																			
				No. of poles	Frame size		Motor type		Version				Order code(s)						
Options									1LE5604- ...		▲		-Z	...+...+...+...					

- 1) Parallel supply lines are required, except in the case of connection to 690 V.
- 2) For a power rating of 315 kW, 2-pole, 60 Hz and 315 kW, 4-pole, 50 Hz, a larger terminal box can be used (order code R50) due to the magnitude of the current. Order code R50 alters the motor dimensions.

SIMOTICS SD 1LE5 standard motors

Article No. supplements and special versions

Options

Cast-iron series 1LE55 Basic Line, 1LE56 Performance Line

Voltages	Voltage code 12th and 13th position of the Article No.	Additional identification code with order code and plain text if required	Motor category			
			Motor version	Motor type (cast iron)	Motor type – Baugröße	
					315	355
			IE3 Premium Efficiency	1LE5503	Basic Line	
				1LE5603	Performance Line	
			IE4 Super Premium Efficiency	1LE5504	Basic Line	
				1LE5604	Performance Line	
			Motor version	Motor type		
					315	355

1LE5. ■ - ■

Voltage at 50 Hz or 60 Hz						
50 Hz 400 VΔ/690 VY, 60 Hz 460 VΔ	3	4	–	All	All	<input type="checkbox"/> <input type="checkbox"/>
50 Hz 400 VΔ, 60 Hz 460 VΔ						<input type="checkbox"/> <input type="checkbox"/>
50 Hz 400 VΔ, 60 Hz 460 VΔ ¹⁾	0	4	–	All	All	<input type="radio"/> <input type="radio"/>
50 Hz 690 VY	0	6		All	All	<input type="radio"/> <input type="radio"/>
50 Hz 500 VΔ, 60 Hz 575 VΔ	4	0		All	All	<input type="radio"/> <input type="radio"/>
50 Hz 690 VΔ	4	7		All	All	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
50 Hz 380 VΔ/660 VY, 60 Hz 440 VΔ	3	3	–	All	All	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
50 Hz 380 VΔ						<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
50 Hz 415 VΔ, 60 Hz 480 VΔ	3	5	–	All	All	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
60 Hz 380 VΔ/660 VY	3	0	–	All	All	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
60 Hz 380 VΔ						<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
60 Hz 400 VΔ/690 VY	3	1	–	All	All	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
60 Hz 400 VΔ						<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
Voltage at 60 Hz and required power						
380 VΔ/660 VY; 50 Hz power	9	0	M 2B	All	All	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
380 VD; 50 Hz power				All	All	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
440 VΔ; 50 Hz power	9	0	M 2D	All	All	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
460 VΔ; 50 Hz power	9	0	M 2F	All	All	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>

Article No. supplements and special versions

Voltages

Cast-iron series 1LE55 Basic Line, 1LE56 Performance Line

Voltage at 60 Hz and required power (continued)

575 VΔ; 50 Hz power	9	0	M 2H	All	All	✓	✓
400 VΔ/690 VY; 50 Hz power	9	0	M 2J	All	All	✓	✓
400 VΔ; 50 Hz power				All	All	✓	✓
480 VΔ; 50 Hz power	9	0	M 2L	All	All	✓	✓
Voltage at 87 Hz and 87 Hz power							
400 VΔ ¹⁾	9	0	M 3A	All	All	✓	✓
Non-standard voltage and/or frequencies							
Non-standard winding ³⁾	9	0	M 1Y • and customer specifications	All	All	✓	✓

○ Without additional charge







- This order code only determines the price of the version – Additional plain text is required.

- 1) Star connection is not possible.
- 2) The operating data for converter operation is also provided in a table on the ratingplate.
- 3) Plain text must be specified in the order: Voltage between 200 and 690 V (voltages outside this range are available on request), frequency, circuit, for 60 Hz additionally required rated power in kW.

Article No. supplements and special versions

Options



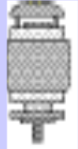
Cast-iron series 1LE55 Basic Line, 1LE56 Performance Line

Types of construction	Type of construction letter 14th position of the Article No.	Additional identification code -Z with order code and plain text if required	Motor category			
			Motor version	Motor type (cast iron)	Motortyp – Baugröße	
					315	355
			IE3 Premium Efficiency	1LE5503	Basic Line	
				1LE5603	Performance Line	
			IE4 Super Premium Efficiency	1LE5504	Basic Line	
				1LE5604	Performance Line	
			Motor version	Motor type		
					315	355
1LE5... - - - - - ■ ...						
Without flange						
IM B3 1)2)		A	-	All	All	□ □
IM B6 2)		T	-	All	All	○ ○
IM B7 2)		U	-	All	All	○ ○
IM B8 2)		V	-	All	All	○ ○
IM V6 2)		D	-	All	All	○ ○
IM V5 Without protective cover 2)		C	-	All	All	○ ○
IM V5 With protective cover 2)3)4)		C	H 00	All	All	✓ ✓

Article No. supplements and special versions

Types of construction

Cast-iron series 1LE55 Basic Line, 1LE56 Performance Line

With flange		acc. to EN 50347		FF 600			
		acc. to DIN 42948		A 660			
IM B5 ²⁾⁵⁾		F	–	All	All	✓	✓
IM V1 Without protective cover ²⁾		G	–	All	All	✓	✓
IM V1 With protective cover ²⁾³⁾⁴⁾		G	H 00	All	All	✓	✓
IM V3 ⁴⁾		H	–	All	All	✓	✓
IM B35 ³⁾		J	–	All	All	✓	✓

○ Without additional charge

- 1) The types of construction IM B6/7/8, IM V6, and IM V5 with/without protective cover are also possible as long as these types of construction do not have to be stamped on the rating plate. As standard, the type of construction IM B3 is then stamped on the rating plate. With type of construction IM V5 with protective cover, the protective cover has to be additionally ordered with order code H00. The protective cover is not stamped on the rating plate.
- 2) The type of construction is stamped on the rating plate. If mounted in a different position, the position must be specified to ensure that the condensation drainage holes are positioned correctly.
- 3) In combination with an encoder, it is not necessary to order the protective cover (order code H00), as this is delivered as protection for the encoder as standard. In this case the protective cover is the standard version (without additional charge).
- 4) The second shaft extension option (order code L05) is not possible.
- 5) The types of construction IM V3 and IM V1 with/without protective cover are also possible as long as these types of construction do not have to be stamped on the rating plate. As standard, the type of construction IM B5 is then stamped on the rating plate. With type of construction IM V1 with protective cover, the protective cover has to be additionally ordered with order code H00. The protective cover is not stamped on the rating plate.

Article No. supplements and special versions						
Options						
Cast-iron series 1LE55 Basic Line, 1LE56 Performance Line						
Motor protection	Motor protection letter 15th position of the Article No.	Additional identification code with order code and plain text if required	Motor category			
			Motor version	Motor type (cast iron)	Motortyp – Baugröße	
					315	355
			IE3 Premium Efficiency	1LE5503	Basic Line	
				1LE5603	Performance Line	
			IE4 Super Premium Efficiency	1LE5504	Basic Line	
				1LE5604	Performance Line	
			Motor version	Motor type		
	1LE5				315	355
Motor protection (winding protection)						
Without (standard) ¹⁾	A	–	All, except Basic Line		<input type="checkbox"/>	<input type="checkbox"/>
3 PTC thermistors - for tripping (2 terminals) ¹⁾²⁾	B	–	All	Basic Line	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
				Performance Line	<input type="checkbox"/>	<input type="checkbox"/>
6 PTC thermistors - for warning and tripping (4 terminals) ²⁾	C	–	All	All	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
1KTY84-130 temperature sensor (2 terminals) ²⁾	F	–	All	All	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
2 KTY84-130 temperature sensors (4 terminals) ²⁾	G	–	All	All	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
3 Pt100 resistance thermometers – 2-wire input (6 terminals)	H	–	All	All	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
6 Pt100 resistance thermometers – 2-wire input (12 terminals)	J	–	All	All	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
1Pt1000 resistance thermometer (2 terminals)	K	–	All	All	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
2 Pt1000 resistance thermometers (4 terminals)	L	–	All	All	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
1Pt100 resistance thermometer – 2-wire input (2 terminals)	P	–	All	All	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Article No. supplements and special versions							
Motor protection							
Cast-iron series 1LE55 Basic Line, 1LE56 Performance Line							
3 Pt100 resistance thermometers – 3-wire input (9 terminals)	Q	–	All	All	✓	✓	
6 Pt100 resistance thermometers – 3-wire input (18 terminals)	R	–	All	All	✓	✓	
3 bimetal sensors (NC contact) for tripping (2 terminals) ²⁾	Z	Q3A	All	All	✓	✓	
6 bimetal sensors (NC contact) for alarm and tripping (4 terminals) ²⁾	Z	Q9A	All	All	✓	✓	
○ Without additional charge							

Note:

Options are available specifically for bearing protection – For order codes and descriptions, see from page 11.

- 1) For the Performance Line, motor protection by means of PTC thermistors with 3 built-in temperature sensors for tripping (motor protection code B) is already included in the basic price. For the Performance Line, the option "without motor protection" (motor protection code A) is not possible.
- 2) Evaluation with appropriate tripping unit (see Catalog IC 10) is recommended.

Article No. supplements and special versions

Options

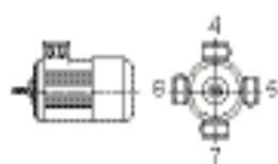
Cast-iron series 1LE55 Basic Line, 1LE56 Performance Line

Terminal box position

Terminal box position code 16th position of the Article No.

Additional identification code with order code and plain text if required

Motor category



Motor version	Motor type (cast iron)	Motor type – Baugröße
		315 355
IE3 Premium Efficiency	1LE5503	Basic Line
	1LE5603	Performance Line
IE4 Super Premium Efficiency	1LE5504	Basic Line
	1LE5604	Performance Line

1LE5..... ■

Motor version	Motor type	315	355

Terminal box position				Motor version	Motor type	315	355
Terminal box base left with terminal box at the top	0	–		All	All	✓	✓
Terminal box base right with terminal box at the top	1	–		All	All	✓	✓
Terminal box base left with oblique terminal box 45°	2	–		All	All	□	□
Terminal box base right with oblique terminal box 45°	3	–		All	All	○	○
Terminal box on right-hand side ¹⁾	5	–		All	All	✓	✓
Terminal box on left-hand side ¹⁾	6	–		All	All	✓	✓

○ Without additional charge

1) For types of construction with feet and flange-mounted with feet, cast feet are standard. Screw-on feet are possible on request only.

Article No. supplements and special versions						
Options						
Cast-iron series 1LE55 Basic Line, 1LE56 Performance Line						
Special versions	Additional identification code -Z with order code and plain text if required	Motor category				
		Motor version	Motor type (cast iron)	Motor typ – Baugröße		
				315	355	
		IE3 Premium Efficiency	1LE5503	Basic Line		
			1LE5603	Performance Line		
		IE4 Super Premium Efficiency	1LE5504	Basic Line		
1LE5604	Performance Line					
		Motor version	Motor type	315	355	
1LE5.....-.....-Z						
Motor protection (bearing protection)						
Prepared for mounting a SIPLUS CMS 1000 vibration sensor	Q05	All	All	✓	✓	
3 PTC thermistors – for tripping (2 terminals) ¹⁾	Q11	All, cannot be combined with identification letter for motor protection (15th position of the Article No.) B		✓	✓	
2 PTC thermistors – for warning and tripping (4 terminals) ¹⁾	Q12	All, cannot be combined with identification letter for motor protection (15th position of the Article No.) C		✓	✓	
1KTY84-130 temperature sensor (2 terminals) ¹⁾	Q23	All, cannot be combined with identification letters for motor protection (15th position of the Article No.) F		✓	✓	
2 KTY84-130 temperature sensors (4 terminals) ¹⁾	Q25	All, cannot be combined with identification letter for motor protection (15th position of the Article No.) G		✓	✓	
3 bimetal sensors (NC contact) for tripping (2 terminals)	Q31	All	All	✓	✓	
6 bimetal sensors (NC contact) for warning and tripping (4 terminals)	Q32	All	All	✓	✓	
3 bimetal sensors (NC contact) for tripping (6 terminals)	Q33	All	All	✓	✓	

Article No. supplements and special versions

Options

Cast-iron series 1LE55 Basic Line, 1LE56 Performance Line

6 bimetal sensors (NC contact) for warning and tripping (12 terminals)	Q34	All	All	✓	✓	
1Pt1000 resistance thermometer (2 terminals)	Q35	All	All	✓	✓	
2 Pt1000 resistance thermometers (4 terminals)	Q36	All	All	✓	✓	
3 Pt100 resistance thermometers – 2-wire input (6 terminals) ¹⁾	Q60	All, cannot be combined with identification letter for motor protection (15th position of the Article No.) H		✓	✓	
6 Pt100 resistance thermometers – 2-wire input (12 terminals) ²⁶⁾	Q61	All, cannot be combined with identification letter for motor protection (15th position of the Article No.) J		✓	✓	
1Pt100 resistance thermometer – 2-wire input (2 terminals)	Q62	All	All	✓	✓	
3 Pt100 resistance thermometers – 3-wire input (9 terminals)	Q63	All	All	✓	✓	
6 Pt100 resistance thermometers – 3-wire input (18 terminals)	Q64	All	All	✓	✓	
2 Pt100 screw-in thermometers in basic configuration for bearings (2 terminals)	Q72	All	All	✓	✓	
2 Pt100 screw-in thermometers in 3-wire input for bearings (6 terminals)	Q78	All	All	✓	✓	
2 Pt100 double screw-in thermometers in 3-wire input for bearings (12 terminals)	Q79	All	All	✓	✓	

Article No. supplements and special versions

Options

Cast-iron series 1LE55 Basic Line, 1LE56 Performance Line

Motor connection and terminal box					
Terminal box on NDE ²⁶⁾	H 08	All	All	✓	✓
Second external grounding	H 70	All	All	✓	✓
Rotation of the terminal box through 90°, entry from DE	R 10	All, not possible in combination with identification letter for type of construction (14th position of the Article No.) F, G, H and J		✓	✓
Rotation of the terminal box through 90°, entry from NDE	R 11	All	All	✓	✓
Rotation of the terminal box through 180°	R 12	All	All	✓	✓
One EMC cable gland	R 14	All, not possible in combination with order code R51 and R53		✓	✓
One metal cable gland	R 15	All, not possible in combination with order code R51 and R53		✓	✓
EMC cable gland, maximum configuration	R 16	All, not possible in combination with order code R51 and R53		✓	✓
Stud terminal for cable connection, accessories pack (3 items)	R 17	All, not possible in combination with order code R51 and R53		✓	✓
Metal cable gland, maximum configuration	R 18	All, not possible in combination with order code R51 and R53		✓	✓
Saddle terminal for connection without cable lug, accessories pack	R 19	All, not possible in combination with order code R21, R23 and R24		✓	✓
3 cables protruding, 15 m long	R 21	All, not possible in combination with order code R 17, R 19 and R 50		a. A.	a. A.
6 cables protruding, 15 m long	R 23	All, not possible in combination with order code R 17, R 19 and R 50		a. A.	a. A.
6 cables protruding, 3 m long	R 24	All, not possible in combination with order code R 17, R 19 and R 50		a. A.	a. A.
Larger terminal box	R 50	All, not possible in combination with order code R21, R23 and R24		✓	✓
Terminal box without cable entry opening	R 51	All, not possible in combination with order code R 14, R 15, R 16 and R 18		○	○
Drilled removable entry plate	R 52	All	All	✓	✓

Article No. supplements and special versions

Options

Cast-iron series 1LE55 Basic Line, 1LE56 Performance Line

Undrilled removable entry plate	R 53	alle, nicht möglich in Kombination mit Kurzangabe R 14, R 15, R 16 und R 18		✓	✓
Cast-iron auxiliary terminal box (small)	R 62	All	All	✓	✓
Cast-iron auxiliary terminal box (large)	R 63	All	All	✓	✓
Silicon-free version	R 74	All	All	✓	✓
Non-standard threaded through hole (NPT or G thread) ²⁾	Y61 • and customer specifications	All	All	✓	✓
Windings and insulation					
Temperature class 155 (F), utilized acc. to 155 (F), with service factor	N 01	All	All	✓	✓
Temperature class 155 (F), utilized acc. to 155 (F), with increased power	N 02	All	All	✓	✓
Temperature class 155 (F), utilized acc. to 155 (F), with increased coolant temperature	N 03	All	All	✓	✓
Temperature class 155 (F), utilized acc. to 130 (B), coolant temperature 45 °C, derating approx. 4 %	N 05	All	All	✓	✓
Temperature class 155 (F), utilized acc. to 130 (B), coolant temperature 50 °C, derating approx. 8 %	N 06	All	All	✓	✓
Temperature class 155 (F), utilized acc. to 130 (B), coolant temperature 55 °C, derating approx. 13 %	N 07	All	All	✓	✓
Temperature class 155 (F), utilized acc. to 130 (B), coolant temperature 60 °C, derating approx. 18 %	N 08	All	All	✓	✓

Article No. supplements and special versions

Options

Cast-iron series 1LE55 Basic Line, 1LE56 Performance Line

Temperature class 180 (H)	N 10	All	All	✓	✓
Temperature class 180 (H) at rated power and max. CT 60 °C ^{3/4)}	N 11	All	All	✓	✓
Increased air humidity/temperature with 30 to 60 g water per m ³ of air	N 30	All	All		
Increased air humidity/temperature with 60 to 100 g water per m ³ of air	N 31	All	All		
Temperature class 155 (F), utilized acc. to 130 (B), with higher coolant temperature and/or installation altitude	Y 50 • and specified output, CT .. °C or IA ... m above sea level	All	All	✓	✓
Temperature class 155 (F), utilized acc. to 155 (F), other requirements ⁴⁾	Y 52 • and specified output, CT .. °C or IA ... m above sea level	All	All	✓	✓
Temperature class 180 (H), utilized acc. to 155 (F)	Y 75 • and specified output, CT .. °C or IA ... m above sea level	All	All	✓	✓
Colors and paint finish					
Standard paint finish in RAL 7030 stone gray		All	All	□	□
Unpainted (only cast-iron parts primed)	S 00	All	All	○	○
Unpainted, only primed	S 01	All	All	✓	✓
Special paint finish C3	S 02	All	All	✓	✓
Special paint finish sea air resistant	S 03	All	All	✓	✓
Special paint finish for use offshore	S 04	All	All	✓	✓
Internal coating	S 05	All	All	✓	✓

Article No. supplements and special versions

Options

Cast-iron series 1LE55 Basic Line, 1LE56 Performance Line

Top coat polyurethane ³¹⁾	S06	All	All	✓	✓
Paint finish in other standard RAL colors: RAL 1002, 1013, 1015, 1019, 2003, 2004, 3000, 3007, 5007, 5009, 5010, 5012, 5015, 5017, 5018, 5019, 6011, 6019, 6021, 7000, 7001, 7004, 7011, 7016, 7022, 7031, 7032, 7033, 7035, 9001, 9002, 9005 (see Catalog D 81.1 · Section 1 "Introduction")	Y53 • and standard paint finish RAL...	All	All	✓	✓
Modular technology – Basic versions ⁵⁾					
Mounting of holding brake (standard assignment) ⁶⁾²⁹⁾³⁰⁾	F01	All, only possible for 4-pole motors, not possible in combination with order codes D02, F40, F41,L05, L30 und L52		✓	✓
Mounting of separately driven fan ²⁷⁾	F70	All, not possible in combination with order code L05 and Y59		✓	✓
Mounting of 1XP8012-10 (HTL) rotary pulse encoder ⁷⁾⁸⁾	G01	All, not possible in combination with order codes D02 and L05		✓	✓
Mounting of 1XP8012-20 (TTL) rotary pulse encoder ⁷⁾⁸⁾	G02	All, not possible in combination with order codes D02 and L05		✓	✓
Modular technology – Additional versions					
Brake supply voltage 24 V DC	F10	All, only possible for 4-pole motors, not possible in combination with order codes D02, F40, F41,L05, L30 und L52		✓	✓
Brake supply voltage 230 V AC, 50/60 Hz	F11	All, only possible for 4-pole motors, not possible in combination with order codes D02, F40, F41,L05, L30 und L52		○	○
Brake supply voltage 400 V AC, 50/60 Hz	F12	All, only possible for 4-pole motors, not possible in combination with order codes D02, F40, F41,L05, L30 und L52		✓	✓

Article No. supplements and special versions

Options

Cast-iron series 1LE55 Basic Line, 1LE56 Performance Line

Backstop, counter-clockwise motion blocked, clockwise direction of rotation	F 40	All, not possible in combination with order codes F 01, F 10, F 11 and F 12	✓	✓	
Backstop, clockwise motion blocked, counter-clockwise direction of rotation	F 41	All, not possible in combination with order codes F 01, F 10, F 11 and F 12	✓	✓	
Special technology ⁵⁾					
Mounting of rotary pulse encoder LL 861900 220 ⁹⁾	G 04	All, not possible in combination with order codes D 02 and L 05	✓	✓	
Mounting of rotary pulse encoder HOG 9 D 1024 I ⁹⁾	G 05	All, not possible in combination with order codes D 02 and L 05	✓	✓	
Mounting of rotary pulse encoder HOG 10 D 1024 I ⁹⁾	G 06	All, not possible in combination with order codes D 02 and L 05	✓	✓	
Mounting of POG 10 D rotary pulse encoder (only in combination with separately driven fan or brake) ¹⁰⁾	G 07	All, not possible in combination with order codes D 02 and L 05	✓	✓	
Mounting of POG 9 rotary pulse encoder (only in combination with separately driven fan or brake) ¹⁰⁾	G 08	All, not possible in combination with order codes D 02 and L 05	✓	✓	
Mounting of HOG 10 DN 1024 I rotary pulse encoder, terminal box moisture protection	G 15	All, not possible in combination with order codes D 02 and L 05	✓	✓	
Mounting of HOG 10 DN 1024 I rotary pulse encoder, terminal box dust protection	G 16	All, not possible in combination with order codes D 02, L 04 and L 05	✓	✓	
Mounting of HOG 10 DN 1024 I + FSL rotary pulse encoder, (integrated centrifugal switch, speed rpm), terminal box moisture protection	Y 74 • and specified speed rpm	All, not possible in combination with order codes D 02 and L 05	✓	✓	
Mounting of HOG 10 DN 1024 I + FSL rotary pulse encoder, (integrated centrifugal switch, speed rpm), terminal box dust protection	Y 76 • and specified speed rpm	All, not possible in combination with order codes D 02 and L 05	✓	✓	

Article No. supplements and special versions

Options

Cast-iron series 1LE55 Basic Line, 1LE56 Performance Line

Mounting of HOG 10 DN 1024 I + ESL 93 rotary pulse encoder, (integrated electronic speed switch, speed rpm), terminal box dust protection	Y79 • and specified speed (max 3) rpm	All, not possible in combination with order codes D02 and L05	✓	✓
Mechanical version and degrees of protection				
Low-noise version for 2-pole motors with clockwise direction of rotation	F77	All, only possible for 2-pole motors, not possible in combination with order code L05 and F90	✓	✓
Low-noise version for 2-pole motors with counter-clockwise direction of rotation	F78	All, only possible for 2-pole motors, not possible in combination with order code L05 and F90	✓	✓
Prepared for mountings with D 12 shaft	G41	All, not possible in combination with order codes D02 and L05	✓	✓
Prepared for mountings with D 16 shaft	G42	All, not possible in combination with order code L05	✓	✓
Protective cover for encoder (pre-assembled or supplied loose depending on frame size)	G43	All, not possible in combination with order code L05	✓	✓
Protective cover ⁷⁾⁹⁾¹¹⁾	H00	All, not possible in combination with order code L05	✓	✓
Vibration-proof version; vibration resistance to Class 3M 4 according to IEC 60721-3-3:1994	H02	All All	✓	✓
Condensation drainage holes ³⁴⁾	H03	All All	a. A.	a. A.
Rust-resistant screws (externally)	H07	All All	✓	✓
IP65 degree of protection ¹³⁾	H20	All All	✓	✓
IP54 degree of protection	H21	All All	✓	✓
IP56 degree of protection ¹⁴⁾	H22	All All	✓	✓
Drive-end seal for flange-mounting motors, oil-tight to 0.1bar ¹²⁾²⁸⁾	H23	All, not possible in combination with identification letter for type of construction (14th position of the Article No.) T, U and V	✓	✓

Article No. supplements and special versions

Options

Cast-iron series 1LE55 Basic Line, 1LE56 Performance Line

Shaft sealing rings in viton	H25	All, not possible in combination with order codes D02, D03, and D04	✓	✓	
Grounding brush for converter operation	L52	All, not possible in combination with order codes F01, F10, F11, and F12	✓	✓	
Coolant temperature and installation altitude					
Coolant temperature –50 to +40 °C (degree of protection IP54)	D02	All, not possible in combination with order codes F01, F10, F11, F12, G01, G02, G04, G05, G06, G07, G11, G12, G15, G16; H25, Y74, Y76, and Y79	✓	✓	
Coolant temperature –40 to +40 °C ¹⁵⁾	D03	All, not possible in combination with order code H25	✓	✓	
Coolant temperature –30 to +40 °C ¹⁶⁾	D04	All, not possible in combination with order code H25	✓	✓	
Versions in accordance with standards and specifications					
Motor without CE marking for export outside EEA (see EU Directive 640/2009)	D22	All	All	○	○
Motors exclusively to EVPG P.1 from 27.02.08 for use in transport of persons and goods	D23	All	All	○	○
Electrical according to NEMA MG1-12 ¹⁷⁾	D30	All	All	✓	✓
Bearings and lubrication					
Regreasing device with M 10 × 1 grease nipple according to DIN 71412-A	L19	All	All	○	○
Fixed bearing DE	L20	All	All	✓	✓
Bearing design for increased cantilever forces ³³⁾	L22	All	All	✓	✓
High temperature grease	L24	All	All	a. A.	a. A.
Outlet for old grease	L30	All	All	✓	□
Increased maximal speed	L37	All	All	a. A.	a. A.

Article No. supplements and special versions

Options

Cast-iron series 1LE55 Basic Line, 1LE56 Performance Line

Bearing insulation DE	L50	All	All	✓	✓
Bearing insulation NDE	L51	All	All	✓	✓
Measuring nipple for SPM shock pulse measurement for bearing inspection	Q01	All	All	✓	✓
Balance and vibration quantity					
Half-key balancing (standard)		All	All	□	□
Vibration quantity level B ¹⁹⁾	L00	All, only possible for 4-pole motors		✓	✓
Vibration quantity level A		All	All	□	□
Balancing without feather key, feather key is supplied	L01	All, not possible in combination with order codes L04		✓	✓
Full-key balancing	L02	All, not possible in combination with order codes L04		✓	✓
Shaft and rotor					
Shaft extension with standard dimensions, without feather keyway	L04	All, not possible in combination with order codes L01 and L02		✓	✓
Standard cylindrical shaft extension NDE acc. to EN 50347	L05	All, not possible in combination with order codes F01, F10, F11, F12, F70, F77, F78, G01, G02, G04, G05, G06, G07, G15, G16, G41, G42, G43, H00, Y74, Y76, and Y79		✓	✓
Standard shaft made of stainless steel	L06	All	All	✓	✓
Concentricity of shaft extension in accordance with DIN 42955 Tolerance R	L07	All	All	✓	✓
Concentricity of shaft extension, coaxiality, and linear movement in accordance with DIN 42955 Tolerance R for flange-mounting motors	L08	All, not possible in combination with identification letter for type of construction (14th position of the Article No.) A, T, U, V		✓	✓
Non-standard shaft extension, DE ²⁰⁾	Y58 • and customer specifications	All	All	✓	✓

Article No. supplements and special versions

Options

Cast-iron series 1LE55 Basic Line, 1LE56 Performance Line

Non-standard shaft extension, NDE ²⁰⁾	Y59 • and customer specifications	All, not possible in combination with order codes F70		✓	✓
Special shaft steel as requested by customer	Y60 • and customer specifications	All	All	a. A.	a. A.
Heating and ventilation					
Sheet metal fan cover	F74	All, not possible in combination with order codes F90		✓	○
Without external fan and without fan cover	F90	All, not possible in combination with order codes F74, F77 and F78		✓	✓
Anti-condensation heating for 230 V (2 terminals)	Q02	All	All	✓	✓
Anti-condensation heating for 115 V (2 terminals)	Q03	All	All	✓	✓
Separately driven fan with non-standard voltage and/or frequency	Y81 • and customer specifications	All	All	✓	✓
Rating plate and additional rating plates					
Additional rating plate for voltage tolerance ²²⁾	B07	All	All	✓	✓
Second rating plate, loose	M10	All	All	✓	✓
Rating plate, stainless steel	M11	All	All	✓	✓
Additional rating plate with deviating rating plate data	Y80 • and customer specifications	All	All	✓	✓
Additional rating plate with customer specifications	Y82 • and customer specifications	All	All	✓	✓
Additional information on rating plate and on package label (max. 20 characters possible)	Y84 • and customer specifications	All	All	✓	✓
Adhesive label, supplied loose (printed with: Article No., Serial No.; 2 lines of text)	Y85 • and customer specifications	All	All	✓	✓

Article No. supplements and special versions

Options

Cast-iron series 1LE55 Basic Line, 1LE56 Performance Line

Extension of the liability for defects					
Extension of the liability for defects by 12 months to a total of 24 months (2 years) from delivery ²⁴⁾	Q80	All	All	✓	✓
Extension of the liability for defects by 18 months to a total of 30 months (2.5 years) from delivery ²⁴⁾	Q81	All	All	✓	✓
Extension of the liability for defects by 24 months to a total of 36 months (3 years) from delivery ²⁴⁾	Q82	All	All	✓	□
Extension of the liability for defects by 30 months to a total of 42 months (3.5 years) from delivery ²⁴⁾	Q83	All	All	✓	✓
Extension of the liability for defects by 36 months to a total of 48 months (4 years) from delivery ²⁴⁾	Q84	All	All	✓	✓
Extension of the liability for defects by 42 months to a total of 60 months (5 years) from delivery ²⁴⁾	Q85	All	All	✓	✓
Packaging, safety notes, documentation and test certificates					
Acceptance test certificate 3.1 acc. to EN 10204 ²⁴⁾	B02	All	All	✓	✓
Printed German/English Operating Instructions enclosed ²⁵⁾	B04	All	All	✓	✓
Without marking "made in home country"	B13	All	All	○	○
Equivalent circuit diagram	B51	All	All	✓	✓
Starting curve (torque-speed and current-speed curve)	B52	All	All	✓	✓
Document - Electrical data sheet	B60	All	All	✓	✓

Article No. supplements and special versions

Options

Cast-iron series 1LE55 Basic Line, 1LE56 Performance Line

Document - Order dimensional drawing	B 61	All	All	✓	✓
Normal tests (routine test) with acceptance	B 65	All	All	✓	✓
Temperature rise test without acceptance	B 67	All	All	✓	✓
Temperature rise test with acceptance	B 68	All	All	✓	✓
Type test with heat run for vertical motors, without acceptance	B 80	All	All	✓	✓
Type test with heat run for vertical motors, with acceptance	B 81	All	All	✓	✓
Type test with heat run for horizontal motors, without acceptance	B 82	All	All	✓	✓
Packaging, safety notes, documentation and test certificates (continued)					
Type test with heat run for horizontal motors, with acceptance	B 83	All	All	✓	✓
Documentation "Basic"	B 90	All	All	a. A.	a. A.
Documentation "Advanced"	B 91	All	All	a. A.	a. A.
Documentation "Projects"	B 92	All	All	a. A.	a. A.
Connected in star for dispatch	M 01	All	All	✓	✓
Connected in delta for dispatch	M 02	All	All	✓	✓
Standard delivery times in work days					
		25	30		
		50	60		
<input checked="" type="checkbox"/> Standard version <input type="checkbox"/> Without additional charge <ul style="list-style-type: none"> This order code only determines the price of the version – additional plain text is required. O.R. Possible on request					

Article No. supplements and special versions

Options

Cast-iron series 1LE55 Basic Line, 1LE56 Performance Line

- 1) Evaluation with appropriate tripping unit (see Catalog IC 10) is recommended.
- 2) Parallel Whitworth threaded pipe DIN ISO 228 (DIN 259) BSPP (British Standard Pipe Parallel) threaded pipe for connections not sealed in the thread (cylindrical), external = G.
- 3) The grease lifetime specified in Catalog D 81.1 Part 1 "Introduction" refers to CT 40 °C. If the coolant temperature is increased by 10 K, the grease lifetime or regreasing interval is halved.
- 4) Not possible for 1LE5 motors with increased output.
- 5) A second shaft extension is not possible. Please inquire for mounted brakes.
- 6) For order codes F10, F11, and F12, the brake supply voltage must be specified or ordered.
- 7) The 1XP8 rotary pulse encoders are fitted with a protective cover as standard. The protective cover is omitted at the factory when a rotary pulse encoder is combined with a separately driven fan, because in this case the rotary pulse encoder is installed under the fan cover.
- 8) In combination with a separately driven fan (order code F70) the 1XP8032-10 rotary pulse encoder is used instead of 1XP8012-10 or the 1XP8032-20 is used instead of 1XP8012-20.
- 9) For frame sizes 315 and 355, LL and HOG rotary pulse encoders are fitted with a protective cover as standard. The protective cover is omitted at the factory when a rotary pulse encoder is combined with a separately driven fan, because in this case the rotary pulse encoder is installed under the fan cover. Protective cover (order code G43) possible.
- 10) Option (encoder mounting) is only possible for motors with a mounted separately driven fan or for naturally cooled motors (without an external fan). This option can be used in combination with brakes of type KFB and SFB. This option cannot be used in combination with brakes of type 2LM8.
- 11) Order code H00 provides mechanical protection for encoders.
- 12) Not possible for type of construction IM V3.
- 13) Not possible in combination with HOG 9 D 1024 I rotary pulse encoder (order code G05) and/or 2LM8 brake (order code F01).
- 14) Not possible in combination with 2LM8 brake (order code F01).
- 15) In connection with mounted components, the respective technical specifications must be observed, please inquire before ordering.
- 16) The rated voltage is indicated on the rating plate without voltage range. Order code D40 does not authorize import to Canada.
- 17) Possible up to 600 V max. The rated voltage is indicated on the rating plate without voltage range. Order codes D30 and D31 do not authorize import to USA and Mexico.
- 18) For Performance Line motors (all frame sizes) and Basic Line motors (from frame size 280) in the standard version.
- 19) On request for 2-pole motors.

Article No. supplements and special versions

Options

Cast-iron series 1LE55 Basic Line, 1LE56 Performance Line

- 20) When motors are ordered that have a longer or shorter shaft extension than normal, the required position and length of the feather keyway must be specified in a sketch. It must be ensured that only feather keys in accordance with EN 50347 are used. The feather keyway is positioned centrally on the shaft extension. The length is defined by the manufacturer in accordance with the appropriate standard. Not valid for:
 Conical shafts, non-standard threaded journals, non-standard shaft tolerances, friction welded journals, extremely "thin" shafts, special geometry dimensions (e.g. square journals), hollow shafts. Valid for non-standard shaft extensions DE or NDE. The feather key is always supplied.
 For order codes Y58, Y59 and L05 the following applies:
 – Dimensions D and $DA \leq$ inner diameter of roller bearing (see dimension tables under "Dimensions")
 – Dimensions E and $EA \leq 2 \times$ length E (normal) of the shaft extension.
- 21) Converter operation is permitted for 1LE5 motors with metal external fans.
- 22) Can be ordered for 230V Δ /400VY or 400V Δ /690VY (voltage code "22" or "34").
- 23) Wearing parts (bearings) are excluded from the warranty extension.
- 24) The delivery time for the factory test certificate may differ from the delivery time for the motor.
- 25) The compact operating instructions are available in PDF format for all official EU languages at
<http://support.automation.siemens.com/WW/view/en/10803948/133300>
- 26) With H08, feet dimensions C and CA differ from EN 50347! You will find further information in DT Configurator (see Appendix, "Tools and Configuring").
- 27) Order codes F70 and F76 cannot be combined.
- 28) Not possible in combination with order codes Q72 and Q78.
- 29) Not possible in combination with order codes N05, N06, N07, N08, and N11.
- 30) For frame sizes 315 and 355, when combining order codes F01 and F12, the rectifier for the brake will be supplied separately as a single part.
- 31) Order code S06 cannot be combined with order code S00, S01 and S10. It can be combined with Y51, Y53 and Y54 on request.
- 32) Please note the additional use of order code D22 "Motor without CE marking for export outside the EEA" (see EU Regulation 640/2009).
- 33) For NU bearings (cylindrical roller bearings), in contrast to ball bearings, a minimum cantilever force of $0.5 F_{max}$ is required. Cylindrical roller bearings are not suitable for coupling output or for brief periods of no-load operation without cantilever force.
- 34) Supplied with the condensation drainage holes sealed at the drive end DE and non-drive end NDE (IP55, IP56, IP65). If the condensation drainage holes are ordered for motors of the IM B6, IM B7 or IM B8 type of construction (feet on side or top), the motors must be ordered in the respective type of construction and with order code H03, so that the condensation drainage holes will be placed in the correct position.

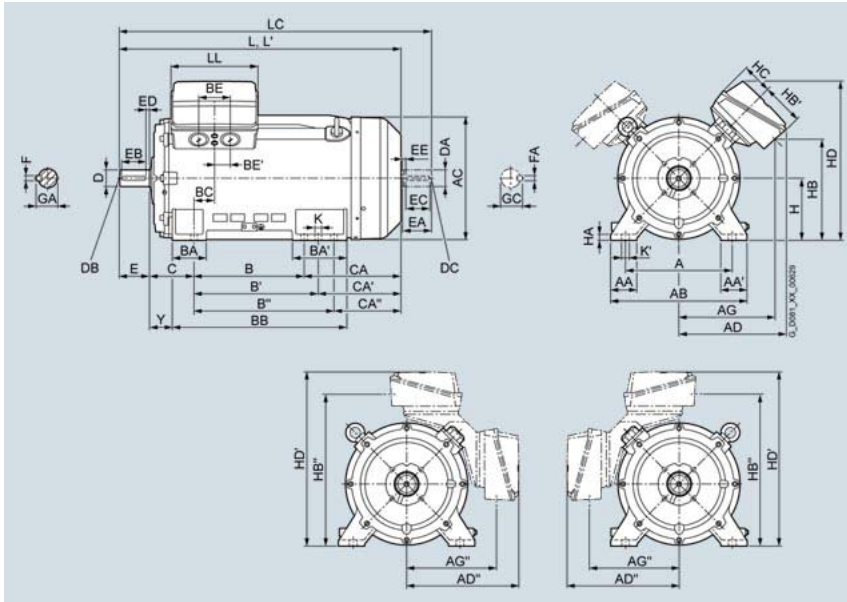
Dimensions

SIMOTICS SD 1LE5 standard motors

Cast-iron series, self-ventilated, IE3, IE4, frame sizes 315 L to 355 L

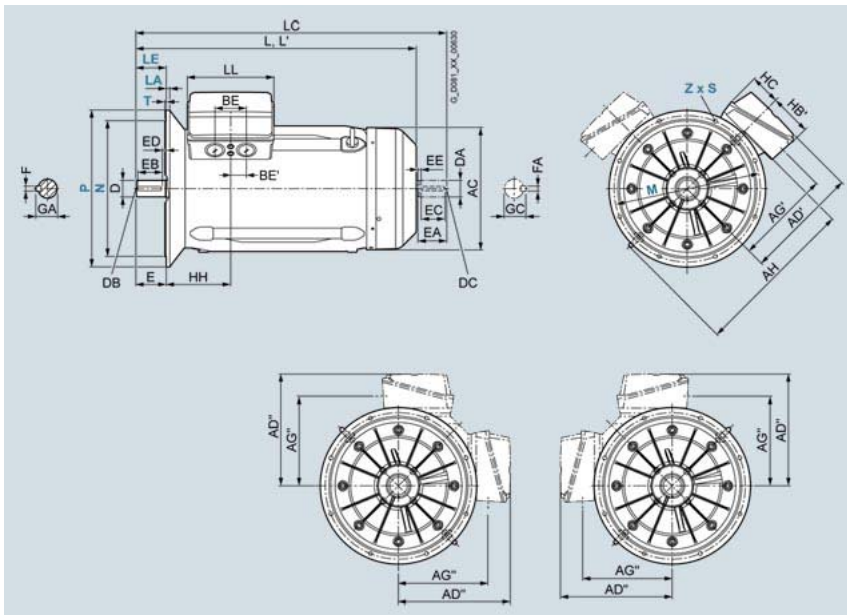
Dimensional drawings

Type of construction IM B3



Types of construction IM B5 and IM V1

For flange dimensions, see page 1/34 (Z = the number of retaining holes)



For motor		Dimension designation acc. to IEC																											
Frame size	Motor type	No. of poles	AA	AB	AC	AD	AD'	AD''	AG	AG'	AG''	AH	B	B'	B''	BA	BA'	BB	BC	BE	BE'	C	CA	CA'	CA''	H	HA	Y	
315 L	3AA6	2	508	120	610	641	590	570	540	564	480	448	890	457	508	-	176	227	648	139	120	60	216	469	418	-	315	50	146
	3AB6	4													630													406	
	3AA7	2											508	560			298	770						498	446			376	
	3AB7	4																					528	476			406		
355 M/L	3BA3, 3BA4, 3BA5	2	610	150	780	718	615	652	644	550	547	535	940	630	710	800	194	311	998	118	240	120	254	553	473	383	355	35	130
	3BB3, 3BB4, 3BB5	4																											

Dimensions

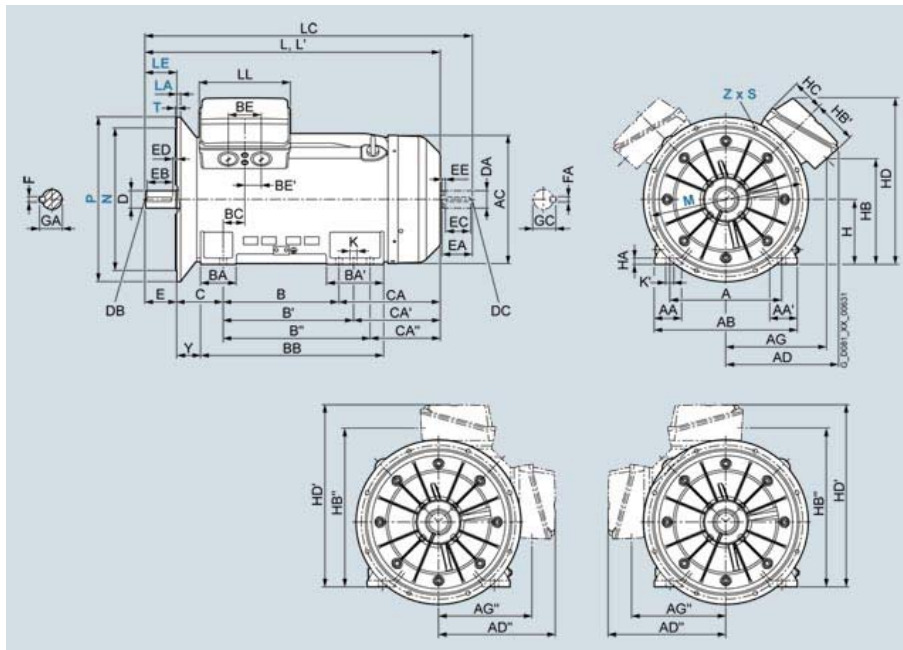
SIMOTICS SD 1LE5 standard motors

Cast-iron series, self-ventilated, IE3, IE4, frame sizes 315 L to 355 L

Dimensional drawings (continued)

Type of construction IM B35

For flange dimensions, see page 1/34 (Z = the number of retaining holes)

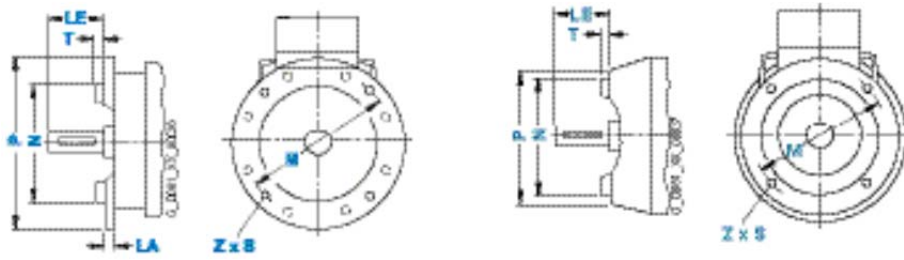


For motor		Dimension designation acc. to IE													DE shaft extension				NDE shaft extension									
Frame size	Motor type	No. of poles	HH	HB	HB'	HB''	HC	HD	HD'	K	K'	L	LC	LL	D	DB	E	EB	ED	F	GA	DA	DC	EA	EC	EE	FA	GC
315 L	3AA6	2	355	421	336	763	167	804	855	28	35	1282	1427	327	65	M20	140	125	10	18	69	60	M20	140	125	10	18	64
	3AB6	4										1312	1457		85		170	140	25	22	90	70				20	74.5	
	3AA7	2										1362	1507				140	125	10	18	69	60				18	64	
	3AB7	4										1422	1567				170	140	25	22	90	70				20	74.5	
355 M/L	3BA3, 3BA4, 3BA5,	2	372	578	240	890	175	911	999	38	45	1577	1722	497	75	M20	140	125	10	20	79.5	60	M20	140	125	10	18	64
	3BB3, 3BB4, 3BB5	4										1607	1782		95	M24	170	140	25	25	100	80		170	140	25	22	85.5

SIMOTICS SD 1LE5 standard motors

Cast-iron series, self-ventilated, IE3, IE4, frame sizes 315 L to 355 L

Flange dimensions



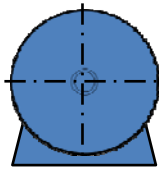
In DIN EN 50347, flanges FF with through holes and flanges FT with tapped holes are assigned to frame sizes. The designation of flanges A and C according to DIN 42948 (invalid since 09/2003) are also listed for information purposes. See the table below.
(Z = the number of retaining holes)

Frame size	Type of construction	Flange type	Flange with		Maßbezeichnung nach IEC							
			Through holes (FF/A)	Tapped holes (FT/C)	LA	LE	M	N	P	S	T	Z
315 2-pole 315 4-pole	IM B5, IM B35, IM V1, IM V3	Standard flange	FF740	Acc. to DIN 42948 A 800	25	140	740	680	800	24	6	8
355 2-pole 355 4-pole	IM B5, IM B35, IM V1, IM V3	Standard flange	FF840	A 900	25	140	840	780	900	24	6	8

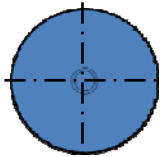
Dimensions

SIMOTICS SD 1LE5 standard motors

Cast-iron series, self-ventilated, IE3, IE4, frame sizes 315 L to 355 L



Type of construction B3



Type of construction B5



Terminal box



Adapter



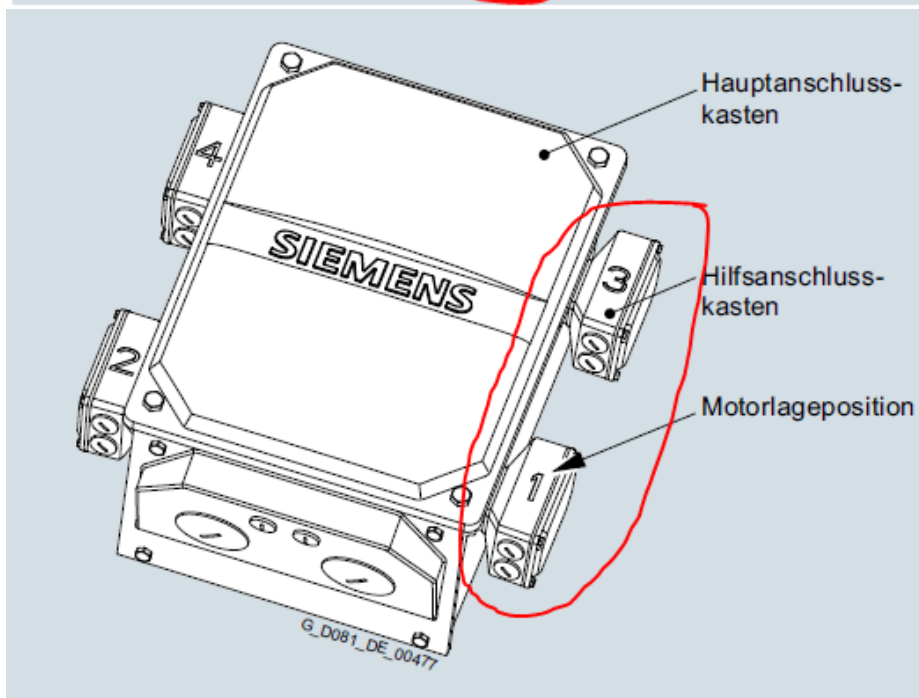
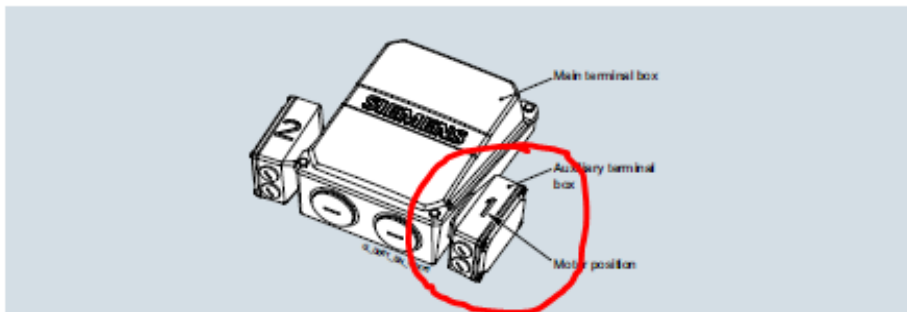
Auxiliary terminal box 1 (& 3)



Auxiliary terminal box 2 (& 4)



Cable entry

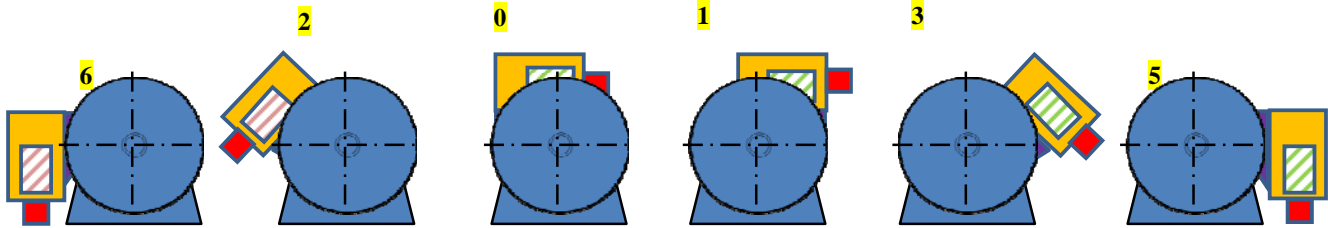


Dimensions

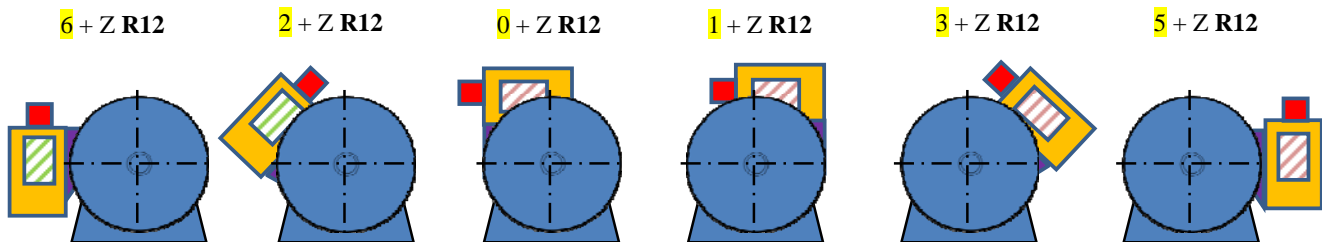
SIMOTICS SD 1LE5 standard motors

Cast-iron series, self-ventilated, IE3, IE4, frame sizes 315 L to 355 L

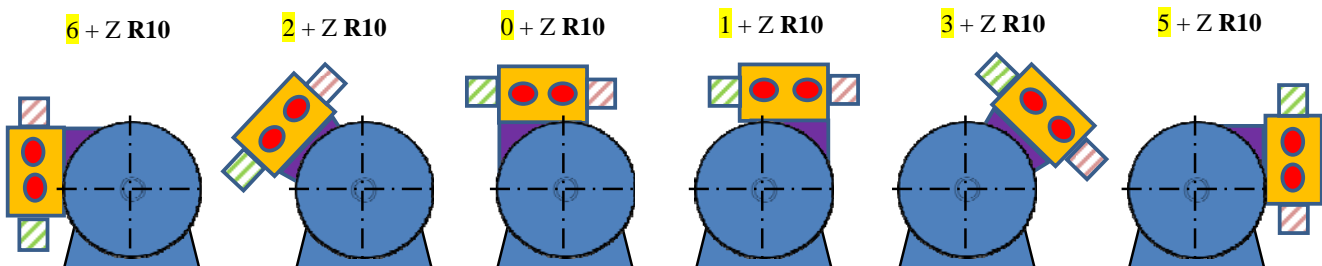
Standard positions



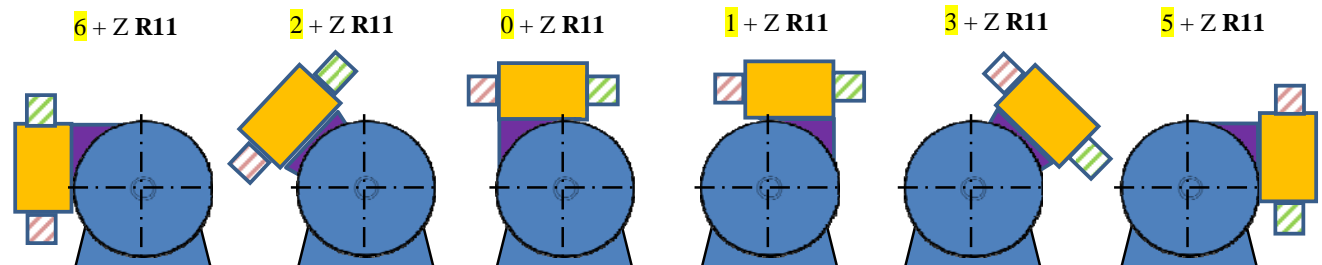
Rotation of the terminal box through 180°



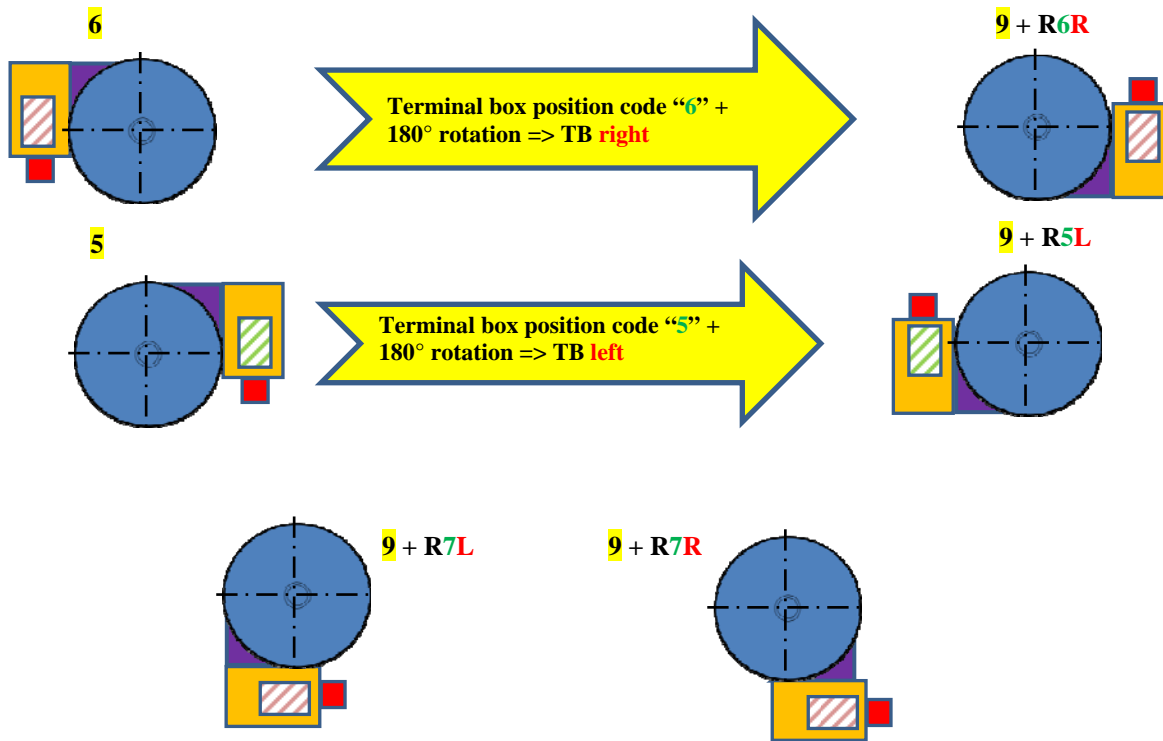
Rotation of the terminal box through 90°, entry from DE



Rotation of the terminal box through 90°, entry from NDE



■
For flange mounting only



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