



TECHNICAL DOCUMENTATION

SINAMICS G120X Power loss data at US / Canadian standard supply and motor voltage levels

This technical document provides energy efficiency and power loss data of SINAMICS G120X in compliance with the ecodesign standard IEC 61800-9-2 for the US and Canadian standard supply and motor voltages 3AC 230V, 3AC 460V and 3AC 575V.

The ecodesign standard IEC 61800-9-2 specifies the ecodesign requirements for low-voltage variable frequency drive systems and are based upon an electrically driven machine in frequency converter operation. This standard applies to low-voltage (100–1000V) AC/AC variable frequency drives without regenerative feedback functionality that are controlling 3-phase motors and rated from 0.12 kW to 1000 kW.

This IEC 61800-9-2 standard is in the process of being adopted by NEMA and is also referenced in the US Department of Energy's (DOE) documentation and guidelines related to energy efficiency rulemaking of certain electrical systems comprised of variable frequency drives. Therefore, it is highly likely that this standard will be adopted by the US DOE in its final rule for the ecodesign or energy efficiency of the electrical systems involving variable frequency drives similar to European ecodesign regulation (EU) 2019/1781.

With the publication of this document, Siemens continues to demonstrate that it is always ahead of upcoming technological and regulatory changes, and provides the necessary information, which is already in compliance with such upcoming requirements, thereby giving complete peace-of-mind to its product users.

SINAMICS G120X infrastructure drives for HVAC / Water / Wastewater—degree of protection IP20¹⁾

Voltage range 3AC 220 ... 240V²⁾ (Unfiltered)

Article number	Frame size	Rated Power Output ⁴⁾		Base load current ⁵⁾	Rated apparent power	Absolute losses in standby mode ⁶⁾	Partial load			
		kW	hp	I _L	S _{r, equ}		1 (0, 25) ⁷⁾	2 (0, 50) ⁷⁾	3 (0, 100) ⁷⁾	4 (50, 25) ⁷⁾
				A	kVA	W	W	W	W	W
6SL32*0-*YC10-*U*0	FSA	0.75	1	4.2	1.7	13.1	31.03	34.47	42.91	32.18
6SL32*0-*YC12-*U*0		1.1	1.5	6	2.4	13.1	39.12	44.76	58.94	40.85
6SL32*0-*YC14-*U*0		1.5	2	7.4	2.9	13.1	46.00	53.65	73.20	48.23
6SL32*0-*YC16-*U*0	FSB	2.2	3	10.4	4.1	14.6	59.94	69.39	92.77	62.68
6SL32*0-*YC18-*U*0		3	4	13.6	5.4	14.6	72.45	86.23	121.04	76.10
6SL32*0-*YC20-*U*0		4	5	17.5	7.0	14.6	89.50	109.48	160.93	94.32
6SL32*0-*YC22-*U*0	FSC	5.5	7.5	22	8.8	17.3	89.58	112.77	185.27	94.83
6SL32*0-*YC24-*U*0		7.5	10	28	11.2	17.3	107.77	140.10	243.79	114.65
6SL32*0-*YC26-*U*0	FSD	11	15	42	16.7	24.8	154.33	194.98	315.12	164.83
6SL32*0-*YC28-*U*0		15	20	54	21.5	24.8	187.73	243.40	411.74	201.80
6SL32*0-*YC30-*U*0		18.5	25	68	27.1	24.8	229.11	304.24	536.61	247.73
6SL32*0-*YC32-*U*0	FSE	22	30	80	31.9	27.6	283.11	371.81	636.40	302.58
6SL32*0-*YC34-*U*0		30	40	104	41.4	27.6	360.19	483.95	862.20	386.90
6SL32*0-*YC36-*U*0	FSF	37	50	130	51.8	63.7	428.40	560.15	959.56	457.90
6SL32*0-*YC38-*U*0		45	60	154	61.3	63.7	468.47	640.56	1168.11	505.76
6SL32*0-*YC40-*U*0		55	75	192	76.5	63.7	573.35	802.45	1520.45	622.52

¹⁾Power loss data of the Power Modules with integral DC choke and without external components such as the output reactor. Maximum ambient temperature without derating: 45° C.

²⁾Reference line voltage for loss data calculation: 230V 3AC/50 or 60 Hz.

³⁾In accordance with IEC 61800-9-2, the calculated data include a surcharge of 10%. All loss values refer to a converter output pulse frequency of 4 kHz.

⁴⁾Rated power output is based upon the base-load current I_L. The base-load current I_L is based upon the load cycle for low overload (LO) or Variable Torque (VT) i.e. 110% x I_L for 60s every 300s.

⁵⁾The base-load current I_L is based upon the load cycle for low overload (LO) or Variable Torque (VT) i.e. 110% x I_L for 60s every 300s. These current values apply for 220–240V and are indicated on the converter rating plate.

⁶⁾In standby mode, the converter does not supply power to the motor (pulse inhibit at the converter is active). The Control Unit can be supplied via an internal or external 24V electronics power supply. The stated values apply for an internal 24V electronics power supply. The power losses are lower with an external 24V electronics power supply. The losses of the external 24V electronics power supply must be considered additionally for control cabinet cooling.

⁷⁾Operating point with relative motor stator frequency in [%] and relative torque current in [%].

Power loss data³⁾ according to IEC 61800-9-2 at the individual load points

				Partial load								IE class according to IEC 61800-9-2
5 (50, 50) ⁷⁾	6 (50, 100) ⁷⁾	7 (90, 50) ⁷⁾	8 (90, 100) ⁷⁾	1 (0, 25) ⁷⁾	2 (0, 50) ⁷⁾	3 (0, 100) ⁷⁾	4 (50, 25) ⁷⁾	5 (50, 50) ⁷⁾	6 (50, 100) ⁷⁾	7 (90, 50) ⁷⁾	8 (90, 100) ⁷⁾	
W	W	W	W	%	%	%	%	%	%	%	%	
36.99	48.58	40.38	57.23	1.85	2.06	2.56	1.92	2.21	2.90	2.41	3.42	IE2
48.73	68.34	54.46	83.78	1.64	1.87	2.47	1.71	2.04	2.86	2.28	3.51	IE2
58.90	86.03	66.82	108.03	1.56	1.82	2.48	1.64	2.00	2.92	2.27	3.66	IE2
75.04	104.42	81.69	119.53	1.45	1.67	2.24	1.51	1.81	2.52	1.97	2.89	IE2
93.89	137.25	103.25	159.28	1.34	1.59	2.23	1.40	1.73	2.53	1.91	2.94	IE2
119.78	183.28	132.85	215.19	1.28	1.57	2.31	1.35	1.72	2.63	1.91	3.09	IE2
123.93	211.76	137.77	248.92	1.02	1.29	2.11	1.08	1.41	2.42	1.57	2.84	IE2
155.03	280.36	174.25	334.05	0.97	1.26	2.19	1.03	1.39	2.51	1.56	2.99	IE2
218.01	372.71	247.96	457.84	0.92	1.17	1.88	0.99	1.30	2.23	1.48	2.74	IE2
275.00	493.44	317.65	619.13	0.87	1.13	1.91	0.94	1.28	2.29	1.48	2.88	IE2
347.15	651.55	407.41	835.56	0.85	1.12	1.98	0.91	1.28	2.41	1.50	3.08	IE2
415.67	750.25	475.26	926.75	0.89	1.17	2.00	0.95	1.30	2.35	1.49	2.91	IE2
545.79	1028.86	633.38	1298.04	0.87	1.17	2.08	0.93	1.32	2.48	1.53	3.13	IE2
627.64	1138.06	722.70	1426.32	0.83	1.08	1.85	0.88	1.21	2.20	1.40	2.75	IE2
726.92	1399.70	852.44	1784.37	0.76	1.04	1.90	0.82	1.18	2.28	1.39	2.91	IE2
919.67	1846.12	1097.29	2407.80	0.75	1.05	1.99	0.81	1.20	2.41	1.43	3.15	IE2

SINAMICS G120X infrastructure drives for HVAC / Water / Wastewater—degree of protection IP20¹⁾

Voltage range 3AC 440 ... 480V ²⁾		Rated Power Output ⁴⁾		Base load current ⁵⁾ I _L	Rated apparent power S _{r, equ}	Absolute losses in standby mode ⁶⁾	Partial load			
Article number	Frame size	kW	hp	A	kVA	W	1 (0, 25) ⁷⁾	2 (0, 50) ⁷⁾	3 (0, 100) ⁷⁾	4 (50, 25) ⁷⁾
6SL32*0.*YE10.*A*0	FSA	0.75	1	2.1	1.67	15.1	30.41	32.30	36.80	30.93
6SL32*0.*YE10.*U*0							15.1	30.41	32.30	36.80
6SL32*0.*YE12.*A*0		1.1	1.5	3	2.39	15.1	33.74	36.70	43.90	34.52
6SL32*0.*YE12.*U*0								15.1	33.74	36.69
6SL32*0.*YE14.*A*0		1.5	2	3.4	2.71	15.1	35.27	38.77	47.37	36.18
6SL32*0.*YE14.*U*0								15.1	35.27	38.77
6SL32*0.*YE16.*A*0		2.2	3	4.8	3.82	15.1	41.53	46.23	57.65	42.88
6SL32*0.*YE16.*U*0								15.1	41.53	46.23
6SL32*0.*YE18.*A*0	3	4	6.2	4.94	15.1	50.10	56.70	73.02	51.92	
6SL32*0.*YE18.*U*0							15.1	50.10	56.69	73.01
6SL32*0.*YE20.*A*0	FSB	4	5	7.6	6.06	16.8	62.45	69.63	86.62	64.49
6SL32*0.*YE20.*U*0							16.8	62.45	69.62	86.61
6SL32*0.*YE22.*A*0		5.5	7.5	11	8.76	16.8	71.57	83.81	120.41	74.62
6SL32*0.*YE22.*U*0								16.8	71.57	83.81
6SL32*0.*YE24.*A*0		7.5	10	14	11.15	16.8	80.95	97.59	148.52	84.83
6SL32*0.*YE24.*U*0								16.8	80.94	97.58
6SL32*0.*YE26.*A*0		11	15	21	16.73	19.9	115.33	138.61	204.82	120.45
6SL32*0.*YE26.*U*0								19.9	115.33	138.60
6SL32*0.*YE28.*A*0	15	20	27	21.51	19.9	134.13	165.17	255.00	140.90	
6SL32*0.*YE28.*U*0							19.9	134.12	165.16	254.95
6SL32*0.*YE30.*A*0	18.5	25	34	27.09	28.4	212.29	260.94	401.73	221.11	
6SL32*0.*YE30.*U*0							28.4	212.29	260.92	401.66
6SL32*0.*YE32.*A*0	FSD	22	30	40	31.87	28.4	237.14	296.16	469.07	247.94
6SL32*0.*YE32.*U*0									28.4	237.13
6SL32*0.*YE34.*A*0		30	40	52	41.43	28.4	270.24	343.79	559.26	283.79
6SL32*0.*YE34.*U*0									28.4	270.24
6SL32*0.*YE36.*A*0	37	50	65	51.79	28.4	323.57	420.16	708.39	341.16	
6SL32*0.*YE36.*U*0								28.4	323.56	420.14
6SL32*0.*YE38.*A*0	FSE	45	60	77	61.35	33.5	392.23	520.53	888.86	412.03
6SL32*0.*YE38.*U*0									33.5	392.22
6SL32*0.*YE40.*A*0		55	75	96	76.49	33.5	472.54	638.95	1124.83	498.38
6SL32*0.*YE40.*U*0									33.5	472.53
6SL32*0.*YE42.*A*0	FSF	75	100	124	98.80	50.3	565.41	750.22	1286.38	594.84
6SL32*0.*YE42.*U*0									50.3	565.39
6SL32*0.*YE44.*A*0		90	125	156	124.29	50.3	686.47	930.12	1650.81	725.49
6SL32*0.*YE44.*U*0									50.3	686.44
6SL32*0.*YE46.*A*0		110	150	180	143.41	50.3	588.48	803.53	1448.39	632.00
6SL32*0.*YE46.*U*0									50.3	588.46
6SL32*0.*YE48.*A*0		132	200	240	191.22	50.3	767.35	1075.63	2024.71	829.21
6SL32*0.*YE48.*U*0									50.3	767.31
6SL32*0.*YE50.*A*0	FSG	160	250	302	240.62	56.6	921.66	1298.58	2418.36	996.24
6SL32*0.*YE50.*C*0									56.6	921.63
6SL32*0.*YE52.*A*0		200	300	361	287.62	62.7	1043.58	1536.85	3020.38	1129.24
6SL32*0.*YE52.*C*0									62.7	1043.53
6SL32*0.*YE54.*A*0	250	400	477	380.05	62.7	1394.67	2100.38	4289.74	1508.17	
6SL32*0.*YE54.*C*0								62.7	1394.60	2100.08
6SL3220.*YE56.*C*0	FSH	315	400	477	380.05	222.0	1385.47	2039.56	4134.74	1496.56
6SL3220.*YE58.*C*0		355	450	515	410.32	222.0	1499.89	2231.81	4603.19	1618.91
6SL3220.*YE60.*C*0									222.0	1745.23
6SL3220.*YE62.*C*0	FSJ	450	500	663	528.24	320.9	1934.02	2862.44	5826.51	2102.87
6SL3220.*YE64.*C*0		500	600	724	576.84	320.9	2089.75	3079.65	6228.43	2261.01
6SL3220.*YE66.*C*0									320.9	2394.92

¹⁾Power loss data of the Power Modules (with integral DC choke from FSA–FSG) and without external components such as the output reactor. Maximum ambient temperature without derating: 45° C.

²⁾Reference line voltage for loss data calculation: 460V 3AC/50 or 60 Hz.

³⁾In accordance with IEC 61800-9-2, the calculated data include a surcharge of 10%. All loss values refer to a converter output pulse frequency of 4 kHz up to 90 kW (125 hp) and 2 kHz from 110 kW (150 hp) and onwards.

⁴⁾Rated power output is based upon the base-load current I_L. The base-load current I_L is based upon the load cycle for low overload (LO) or Variable Torque (VT) i.e. 110% x I_L for 60s every 300s.

Power loss data ³⁾ according to IEC 61800-9-2 at the individual load points												IE class according to IEC 61800-9-2
5 (50, 50) ²⁾	6 (50, 100) ²⁾	7 (90, 50) ²⁾	8 (90, 100) ²⁾	Partial load								
W	W	W	W	1 (0, 25) ²⁾	2 (0, 50) ²⁾	3 (0, 100) ²⁾	4 (50, 25) ²⁾	5 (50, 50) ²⁾	6 (50, 100) ²⁾	7 (90, 50) ²⁾	8 (90, 100) ²⁾	
				%	%	%	%	%	%	%	%	
33.45	39.46	35.05	43.65	1.82	1.93	2.20	1.85	2.00	2.36	2.09	2.61	IE2
33.44	39.41	35.00	43.50	1.82	1.93	2.20	1.85	2.00	2.36	2.09	2.60	IE2
38.52	48.34	41.24	55.86	1.41	1.54	1.84	1.44	1.61	2.02	1.73	2.34	IE2
38.49	48.25	41.15	55.56	1.41	1.54	1.84	1.44	1.61	2.02	1.72	2.32	IE2
40.92	52.71	44.22	61.98	1.30	1.43	1.75	1.34	1.51	1.95	1.63	2.29	IE2
40.89	52.59	44.11	61.59	1.30	1.43	1.75	1.34	1.51	1.94	1.63	2.27	IE2
49.29	64.80	53.62	76.31	1.09	1.21	1.51	1.12	1.29	1.69	1.40	2.00	IE2
49.22	64.56	53.39	75.54	1.09	1.21	1.51	1.12	1.29	1.69	1.40	1.98	IE2
60.96	83.34	67.30	100.84	1.01	1.15	1.48	1.05	1.23	1.69	1.36	2.04	IE2
60.84	82.95	66.93	99.56	1.01	1.15	1.48	1.05	1.23	1.68	1.35	2.02	IE2
73.94	95.81	79.26	108.46	1.03	1.15	1.43	1.07	1.22	1.58	1.31	1.79	IE2
73.85	95.50	78.96	107.45	1.03	1.15	1.43	1.06	1.22	1.58	1.30	1.77	IE2
90.41	136.50	98.99	160.46	0.82	0.96	1.37	0.85	1.03	1.56	1.13	1.83	IE2
90.22	135.75	98.38	158.03	0.82	0.96	1.37	0.85	1.03	1.55	1.12	1.80	IE2
106.01	169.13	117.01	200.03	0.73	0.87	1.33	0.76	0.95	1.52	1.05	1.79	IE2
105.70	167.92	116.03	196.10	0.73	0.87	1.33	0.76	0.95	1.51	1.04	1.76	IE2
149.73	232.15	164.16	272.66	0.69	0.83	1.22	0.72	0.89	1.39	0.98	1.63	IE2
149.54	231.39	163.54	270.20	0.69	0.83	1.22	0.72	0.89	1.38	0.98	1.61	IE2
180.20	293.06	200.42	351.83	0.62	0.77	1.19	0.65	0.84	1.36	0.93	1.64	IE2
179.88	291.81	199.40	347.78	0.62	0.77	1.19	0.65	0.84	1.36	0.93	1.62	IE2
281.97	460.48	313.36	560.46	0.78	0.96	1.48	0.82	1.04	1.70	1.16	2.07	IE2
281.56	458.86	312.04	555.23	0.78	0.96	1.48	0.82	1.04	1.69	1.15	2.05	IE2
322.41	544.04	362.56	674.38	0.74	0.93	1.47	0.78	1.01	1.71	1.14	2.12	IE2
321.86	541.85	360.78	667.29	0.74	0.93	1.47	0.78	1.01	1.70	1.13	2.09	IE2
374.23	638.03	415.41	759.56	0.65	0.83	1.35	0.68	0.90	1.54	1.00	1.83	IE2
373.84	636.48	414.16	754.55	0.65	0.83	1.35	0.68	0.90	1.54	1.00	1.82	IE2
460.45	815.43	516.50	985.25	0.62	0.81	1.37	0.66	0.89	1.57	1.00	1.90	IE2
459.87	813.12	514.62	977.76	0.62	0.81	1.37	0.66	0.89	1.57	0.99	1.89	IE2
565.63	1007.43	629.05	1197.60	0.64	0.85	1.45	0.67	0.92	1.64	1.03	1.95	IE2
565.05	1005.17	627.18	1190.27	0.64	0.85	1.45	0.67	0.92	1.64	1.02	1.94	IE2
699.18	1288.00	786.78	1558.12	0.62	0.84	1.47	0.65	0.91	1.68	1.03	2.04	IE2
698.30	1284.57	783.93	1546.98	0.62	0.84	1.47	0.65	0.91	1.68	1.02	2.02	IE2
817.78	1465.35	914.83	1759.59	0.57	0.76	1.30	0.60	0.83	1.48	0.93	1.78	IE2
816.29	1459.52	910.00	1740.73	0.57	0.76	1.30	0.60	0.83	1.48	0.92	1.76	IE2
1022.22	1903.42	1160.08	2334.93	0.55	0.75	1.33	0.58	0.82	1.53	0.93	1.88	IE2
1019.86	1894.21	1152.44	2305.08	0.55	0.75	1.33	0.58	0.82	1.52	0.93	1.85	IE2
902.60	1708.01	1043.29	2130.29	0.41	0.56	1.01	0.44	0.63	1.19	0.73	1.49	IE2
900.35	1699.20	1036.00	2101.76	0.41	0.56	1.01	0.44	0.63	1.18	0.72	1.47	IE2
1221.43	2423.90	1439.56	3105.77	0.40	0.56	1.06	0.43	0.64	1.27	0.75	1.62	IE2
1217.43	2408.24	1426.59	3055.05	0.40	0.56	1.06	0.43	0.64	1.26	0.75	1.60	IE2
1478.26	2923.09	1756.18	3811.75	0.38	0.54	1.01	0.41	0.61	1.21	0.73	1.58	IE2
1475.26	2911.37	1746.46	3773.79	0.38	0.54	1.00	0.41	0.61	1.21	0.73	1.57	IE2
1748.03	3615.88	2069.91	4650.48	0.36	0.53	1.05	0.39	0.61	1.26	0.72	1.62	IE2
1743.81	3599.13	2056.23	4596.21	0.36	0.53	1.05	0.39	0.61	1.25	0.71	1.60	IE2
2379.54	5075.84	2801.17	6427.10	0.37	0.55	1.13	0.40	0.63	1.34	0.74	1.69	IE2
2372.17	5046.60	2777.29	6332.36	0.37	0.55	1.13	0.40	0.62	1.33	0.73	1.67	IE2
2286.96	4749.02	2602.79	5634.78	0.36	0.54	1.09	0.39	0.60	1.25	0.68	1.48	IE2
2494.94	5250.18	2825.18	6163.40	0.37	0.54	1.12	0.39	0.61	1.28	0.69	1.50	IE2
2872.53	5992.87	3244.12	7056.93	0.37	0.55	1.12	0.40	0.61	1.27	0.69	1.50	IE2
3237.87	6758.38	3711.44	8079.62	0.37	0.54	1.10	0.40	0.61	1.28	0.70	1.53	IE2
3455.03	7140.67	3916.23	8393.38	0.36	0.53	1.08	0.39	0.60	1.24	0.68	1.46	IE2
4027.95	8524.12	4579.77	10050.20	0.36	0.54	1.12	0.39	0.61	1.29	0.69	1.52	IE2

³⁾The base-load current IL is based upon the load cycle for low overload (LO) or Variable Torque (VT) i.e. 110% x IL for 60s every 300s. These current values apply for 440–480V and are indicated on the converter rating plate.

⁴⁾In standby mode, the converter does not supply power to the motor (pulse inhibit at the converter is active). The Control Unit can be supplied via an internal or external 24V electronics power supply. The stated values apply for an internal 24V electronics power supply. The power losses are lower with an external 24V electronics power supply. The losses of the external 24V electronics power supply must be considered additionally for control cabinet cooling.

²⁾Operating point with relative motor stator frequency in [%] and relative torque current in [%].

SINAMICS G120X infrastructure drives for HVAC / Water / Wastewater—degree of protection IP20¹⁾

Voltage range 3AC 550 ... 600V ²⁾										
Article number	Frame size	Rated Power Output ⁴⁾		Base load current ⁵⁾	Rated apparent power	Absolute losses in standby mode ⁶⁾	Partial load			
		kW	hp	I _L	S _{r, equ}		1 (0, 25) ⁷⁾	2 (0, 50) ⁷⁾	3 (0, 100) ⁷⁾	4 (50, 25) ⁷⁾
				A	kVA	W	W	W	W	W
6SL32*0-*YH18-*A*0	FSD	3	4	5	4.98	28.4	104.19	111.69	128.53	105.29
6SL32*0-*YH18-*U*0						28.4	104.19	111.69	128.53	105.29
6SL32*0-*YH20-*A*0		4	5	6.3	6.27	28.4	122.36	131.85	153.18	123.77
6SL32*0-*YH20-*U*0						28.4	122.36	131.85	153.18	123.76
6SL32*0-*YH22-*A*0		5.5	7.5	9	8.96	28.4	147.11	162.67	204.81	149.18
6SL32*0-*YH22-*U*0						28.4	147.11	162.67	204.80	149.17
6SL32*0-*YH24-*A*0		7.5	10	11	10.96	28.4	164.70	183.81	235.70	167.28
6SL32*0-*YH24-*U*0						28.4	164.70	183.81	235.69	167.27
6SL32*0-*YH26-*A*0		11	10	14	13.94	28.4	179.85	204.37	271.15	183.25
6SL32*0-*YH26-*U*0						28.4	179.85	204.36	271.13	183.23
6SL32*0-*YH28-*A*0		15	15	19	18.92	28.4	205.61	239.50	332.66	210.36
6SL32*0-*YH28-*U*0						28.4	205.61	239.49	332.64	210.33
6SL32*0-*YH30-*A*0		18.5	20	23	22.91	28.4	226.52	268.15	383.42	232.48
6SL32*0-*YH30-*U*0						28.4	226.52	268.15	383.39	232.43
6SL32*0-*YH32-*A*0		22	25	27	26.89	28.4	247.68	297.27	435.45	254.83
6SL32*0-*YH32-*U*0						28.4	247.68	297.26	435.41	254.76
6SL32*0-*YH34-*A*0		30	30	35	34.86	28.4	290.82	356.96	543.66	300.73
6SL32*0-*YH34-*U*0						28.4	290.81	356.94	543.58	300.61
6SL32*0-*YH36-*A*0	37	40	42	41.83	28.4	329.43	410.76	642.74	341.99	
6SL32*0-*YH36-*U*0					28.4	329.42	410.73	642.63	341.82	
6SL32*0-*YH38-*A*0	FSE	45	50	52	51.79	33.4	376.94	473.84	746.96	391.01
6SL32*0-*YH38-*U*0						33.4	376.93	473.82	746.87	390.85
6SL32*0-*YH40-*A*0		55	60	62	61.75	33.4	409.08	534.15	886.08	427.11
6SL32*0-*YH40-*U*0						33.4	409.07	534.11	885.95	426.88
6SL32*0-*YH42-*C*0	FSF	75	75	80	79.67	51.4	465.71	602.36	990.45	485.42
6SL32*0-*YH42-*U*0						51.4	465.71	602.33	990.34	485.22
6SL32*0-*YH44-*C*0		90	100	100	99.59	51.4	553.04	730.32	1242.21	578.65
6SL32*0-*YH44-*U*0						51.4	553.03	730.27	1242.03	578.35
6SL32*0-*YH46-*C*0		110	125	125	124.49	51.4	645.12	857.73	1460.30	678.79
6SL32*0-*YH46-*U*0						51.4	645.10	857.66	1460.03	678.31
6SL32*0-*YH48-*C*0		132	150	144	143.41	51.4	728.11	979.43	1700.03	768.35
6SL32*0-*YH48-*U*0						51.4	728.09	979.33	1699.67	767.72
6SL32*0-*YH50-*C*0	FSG	160	150	171	170.30	55.9	832.30	1128.45	1955.78	876.54
6SL32*0-*YH52-*C*0		200	200	208	207.15	55.9	996.02	1365.67	2411.06	1051.85
6SL32*0-*YH54-*C*0		250	250	250	248.98	55.9	1105.54	1586.84	2953.99	1173.56
6SL3220-*YH56-*C*0	FSH	315	350	345	343.60	266	1559.79	2218.82	4141.17	1663.85
6SL3220-*YH58-*C*0		355	400	388	386.42	266	1737.49	2495.84	4730.69	1856.32
6SL3220-*YH60-*C*0		400	450	432	430.24	332	1965.01	2832.09	5416.92	2098.49
6SL3220-*YH62-*C*0		450	500	487	485.02	332	2206.50	3215.45	6263.16	2355.62
6SL3220-*YH64-*C*0	FSJ	500	500	546	543.78	454	2428.55	3483.83	6600.96	2577.27
6SL3220-*YH66-*C*0		560	600	610	607.52	454	2699.49	3910.51	7529.16	2863.21
6SL3220-*YH68-*C*0		630	700	679	676.24	463	2994.12	4375.87	8553.93	3160.09

¹⁾Power loss data of the Power Modules (with integral DC choke from FSA–FSG) and without external components such as the output reactor. Maximum ambient temperature without derating: 45° C.

²⁾Reference line voltage for loss data calculation: 575V 3AC/50 or 60 Hz.

³⁾In accordance with IEC 61800-9-2, the calculated data include a surcharge of 10%. All loss values refer to a converter output pulse frequency of 2 kHz.

⁴⁾Rated power output is based upon the base-load current I_L. The base-load current I_L is based on the load cycle for low overload (LO) or Variable Torque (VT) i.e. 110% x I_L for 60s every 300s.

⁵⁾The base-load current I_L is based upon the load cycle for low overload (LO) or Variable Torque (VT) i.e. 110% x I_L for 60s every 300s. These current values apply for 550–600V and are indicated on the converter rating plate.

⁶⁾In standby mode, the converter does not supply power to the motor (pulse inhibit at the converter is active). The Control Unit can be supplied via an internal or external 24V electronics power supply. The stated values apply for an internal 24V electronics power supply. The power losses are lower with an external 24V electronics power supply. The losses of the external 24V electronics power supply must be considered additionally for control cabinet cooling.

⁷⁾Operating point with relative motor stator frequency in [%] and relative torque current in [%].

Power loss data ³⁾ according to IEC 61800-9-2 at the individual load points												IE class according to IEC 61800-9-2
5 (50, 50) ⁷⁾	6 (50, 100) ⁷⁾	7 (90, 50) ⁷⁾	8 (90, 100) ⁷⁾	Partial load								
W	W	W	W	1 (0, 25) ⁷⁾	2 (0, 50) ⁷⁾	3 (0, 100) ⁷⁾	4 (50, 25) ⁷⁾	5 (50, 50) ⁷⁾	6 (50, 100) ⁷⁾	7 (90, 50) ⁷⁾	8 (90, 100) ⁷⁾	
				%	%	%	%	%	%	%	%	
113.94	133.07	116.49	138.66	2.09	2.24	2.58	2.11	2.29	2.67	2.34	2.78	IE2
113.93	133.04	116.45	138.55	2.09	2.24	2.58	2.11	2.29	2.67	2.34	2.78	IE2
134.76	159.16	138.14	166.79	1.95	2.10	2.44	1.97	2.15	2.54	2.20	2.66	IE2
134.74	159.11	138.09	166.60	1.95	2.10	2.44	1.97	2.15	2.54	2.20	2.66	IE2
167.03	215.00	172.35	228.98	1.64	1.81	2.28	1.66	1.86	2.40	1.92	2.55	IE2
167.00	214.87	172.24	228.55	1.64	1.81	2.28	1.66	1.86	2.40	1.92	2.55	IE2
189.34	248.92	196.27	267.71	1.50	1.68	2.15	1.53	1.73	2.27	1.79	2.44	IE2
189.29	248.72	196.11	267.07	1.50	1.68	2.15	1.53	1.73	2.27	1.79	2.44	IE2
211.76	289.39	221.39	316.52	1.29	1.47	1.94	1.31	1.52	2.08	1.59	2.27	IE2
211.68	289.07	221.13	315.48	1.29	1.47	1.94	1.31	1.52	2.07	1.59	2.26	IE2
250.05	359.42	264.22	400.61	1.09	1.27	1.76	1.11	1.32	1.90	1.40	2.12	IE2
249.92	358.89	263.79	398.90	1.09	1.27	1.76	1.11	1.32	1.90	1.39	2.11	IE2
281.69	418.84	300.57	475.51	0.99	1.17	1.67	1.01	1.23	1.83	1.31	2.08	IE2
281.50	418.05	299.93	472.96	0.99	1.17	1.67	1.01	1.23	1.83	1.31	2.06	IE2
313.66	478.97	336.89	549.71	0.92	1.11	1.62	0.95	1.17	1.78	1.25	2.04	IE2
313.41	477.95	336.07	546.42	0.92	1.11	1.62	0.95	1.17	1.78	1.25	2.03	IE2
380.55	609.25	415.87	721.57	0.83	1.02	1.56	0.86	1.09	1.75	1.19	2.07	IE2
380.10	607.46	414.42	715.78	0.83	1.02	1.56	0.86	1.09	1.74	1.19	2.05	IE2
441.48	730.96	489.26	887.09	0.79	0.98	1.54	0.82	1.06	1.75	1.17	2.12	IE2
440.82	728.33	487.12	878.57	0.79	0.98	1.54	0.82	1.05	1.74	1.16	2.10	IE2
507.58	841.33	559.33	1007.40	0.73	0.91	1.44	0.76	0.98	1.62	1.08	1.95	IE2
506.98	838.95	557.40	999.72	0.73	0.91	1.44	0.75	0.98	1.62	1.08	1.93	IE2
577.98	1010.13	647.39	1234.14	0.66	0.87	1.44	0.69	0.94	1.64	1.05	2.00	IE2
577.12	1006.76	644.59	1223.21	0.66	0.86	1.43	0.69	0.93	1.63	1.04	1.98	IE2
646.64	1104.33	708.55	1287.11	0.58	0.76	1.24	0.61	0.81	1.39	0.89	1.62	IE2
645.91	1101.48	706.19	1277.86	0.58	0.76	1.24	0.61	0.81	1.38	0.89	1.60	IE2
789.19	1398.24	874.57	1657.86	0.56	0.73	1.25	0.58	0.79	1.40	0.88	1.66	IE2
788.08	1393.88	870.95	1643.74	0.56	0.73	1.25	0.58	0.79	1.40	0.87	1.65	IE2
937.31	1678.61	1057.64	2056.20	0.52	0.69	1.17	0.55	0.75	1.35	0.85	1.65	IE2
935.57	1671.80	1052.00	2034.14	0.52	0.69	1.17	0.54	0.75	1.34	0.85	1.63	IE2
1076.33	1971.84	1226.83	2453.12	0.51	0.68	1.19	0.54	0.75	1.37	0.86	1.71	IE2
1074.02	1962.80	1219.34	2423.84	0.51	0.68	1.19	0.54	0.75	1.37	0.85	1.69	IE2
1229.30	2220.17	1373.76	2654.96	0.49	0.66	1.15	0.51	0.72	1.30	0.81	1.56	IE2
1495.64	2760.95	1687.88	3354.29	0.48	0.66	1.16	0.51	0.72	1.33	0.81	1.62	IE2
1753.73	3421.06	2008.70	4237.51	0.44	0.64	1.19	0.47	0.70	1.37	0.81	1.70	IE2
2451.98	4722.76	2758.68	5596.10	0.45	0.65	1.21	0.48	0.71	1.37	0.80	1.63	IE2
2764.70	5410.79	3124.13	6450.21	0.45	0.65	1.22	0.48	0.72	1.40	0.81	1.67	IE2
3135.68	6190.64	3544.65	7382.42	0.46	0.66	1.26	0.49	0.73	1.44	0.82	1.72	IE2
3552.04	7112.47	3998.31	8396.91	0.45	0.66	1.29	0.49	0.73	1.47	0.82	1.73	IE2
3822.42	7464.82	4279.72	8799.58	0.45	0.64	1.21	0.47	0.70	1.37	0.79	1.62	IE2
4278.94	8454.78	4765.36	9848.43	0.44	0.64	1.24	0.47	0.70	1.39	0.78	1.62	IE2
4745.83	9471.79	5223.74	10817.89	0.44	0.65	1.26	0.47	0.70	1.40	0.77	1.60	IE2

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