

SE3 Series AC Drives Energy Efficiency Report

(Release date: 20230223 Version: Ver1.00)

According to GB/T 12668.902-2021/IEC 61800-9-2:2017

1. Product rated specifications

Model name	Input voltage (V)	Apparent output power (kVA)	Output power (kW)	Output current (A)	Standby loss (W)	Relative power loss (%)
SE3-021-0.4K	1PH 220V	1	0.4	2.7	6	0.60%
SE3-021-0.75K	1PH 220V	1.5	0.75	4.5	6	0.40%
SE3-023-0.4K	3PH 220V	1.2	0.4	3	8	0.67%
SE3-023-0.75K	3PH 220V	2	0.75	5	8	0.40%
SE3-023-1.5K	3PH 220V	3.2	1.5	8	8	0.25%
SE3-043-0.4K	3PH 440V	1	0.4	1.5	6	0.60%
SE3-043-0.75K	3PH 440V	2	0.75	2.7	8	0.40%
SE3-043-1.5K	3PH 440V	3	1.5	4.2	8	0.27%
SE3-021-1.5K	1PH 220V	3.2	1.5	8	8	0.25%
SE3-021-2.2K	1PH 220V	4.2	2.2	11	8	0.19%
SE3-023-2.2K	3PH 220V	4.2	2.2	11	8	0.19%
SE3-023-3.7K	3PH 220V	6.7	3.7	17.5	8	0.12%
SE3-043-2.2K	3PH 440V	4.6	2.2	6	11	0.24%
SE3-043-3.7K	3PH 440V	6.9	3.7	9	11	0.16%
SE3-023-5.5K	3PH 220V	9.5	5.5	25	12	0.13%
SE3-023-7.5K	3PH 220V	12.5	7.5	33	12	0.10%

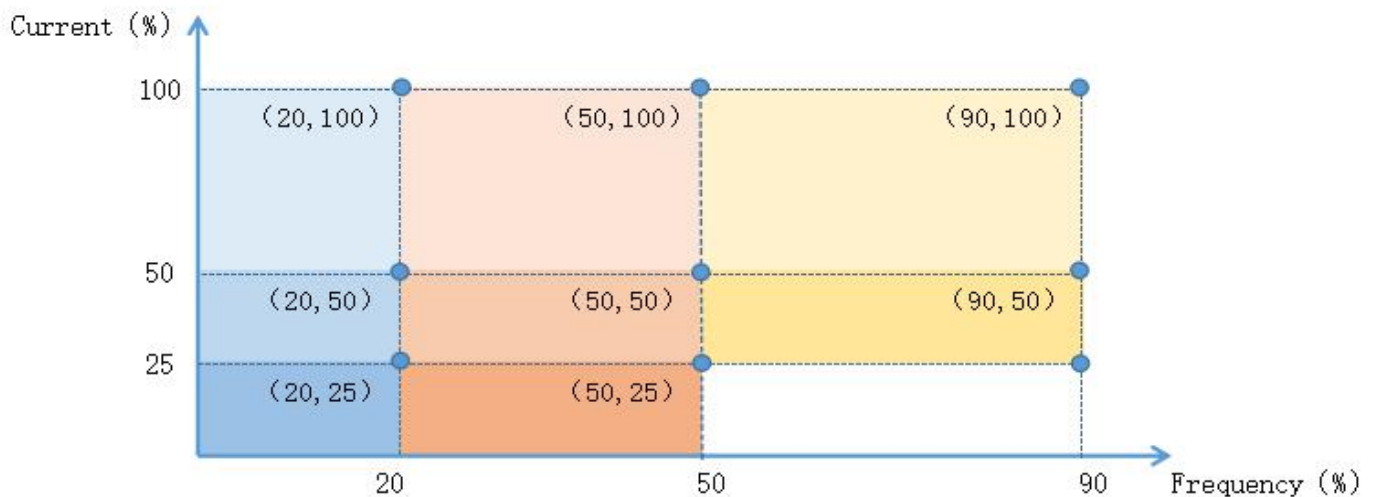
SE3-043-5.5K	3PH 440V	10	5.5	12	13	0.13%
SE3-043-7.5K	3PH 440V	14	7.5	17	13	0.09%
SE3-043-11K	3PH 440V	18	11	24	14	0.08%
SE3-023-11K	3PH 220V	18.3	11	49	12	0.07%
SE3-023-15K	3PH 220V	24.7	15	65	14	0.06%
SE3-043-15K	3PH 440V	25	15	32	14	0.06%
SE3-043-18.5K	3PH 440V	29	18.5	38	14	0.05%
SE3-043-22K	3PH 440V	34	22	45	14	0.04%

Note 1.The input power frequency of all the above models are 50/60HZ.

Note 2.The ambient temperature should be within 50°C, and for side-by-side installation, the ambient temperature should be within 40°C.

2. Reference operation points

Below are the 8 reference operation points by using 60HZ as 100% frequency and rated current as 100% current :



3. Power loss

Loss(W)	Reference operation points							
Model name	(90, 100)	(90, 50)	(50, 100)	(50, 50)	(50, 25)	(20, 100)	(20, 50)	(20, 25)
SE3-021-0.4K	34	21	31	19	14	26	16	12

SE3-021-0.75K	47	33	45	27	22	38	23	18
SE3-023-0.4K	35	22	33	20	17	26	18	14
SE3-023-0.75K	56	33	49	30	22	40	24	19
SE3-023-1.5K	92	49	81	46	25	61	34	21
SE3-043-0.4K	41	30	38	27	22	33	24	20
SE3-043-0.75K	56	38	52	35	29	47	29	25
SE3-043-1.5K	85	49	79	43	31	61	36	27
SE3-021-1.5K	98	46	82	44	27	65	39	23
SE3-021-2.2K	136	67	113	58	34	84	46	27
SE3-023-2.2K	127	65	110	61	38	89	50	31
SE3-023-3.7K	205	94	177	89	50	138	68	37
SE3-043-2.2K	102	72	94	71	37	74	60	32
SE3-043-3.7K	142	88	137	79	56	105	66	49
SE3-023-5.5K	321	154	267	138	77	213	107	59
SE3-023-7.5K	446	210	364	174	96	308	142	76
SE3-043-5.5K	209	115	189	106	67	158	83	52
SE3-043-7.5K	312	171	262	162	107	207	127	77
SE3-043-11K	366	203	351	202	127	271	141	96
SE3-023-11K	510	250	408	245	135	357	200	110
SE3-023-15K	610	290	488	249	129	427	189	104
SE3-043-15K	620	308	503	272	153	385	207	114
SE3-043-18.5K	623	336	561	269	215	436	240	144
SE3-043-22K	766	417	689	334	267	536	295	177

4. Power loss rate and efficiency level

loss rate Model name	Power loss rate with reference operation points(%)								IE class
	(90, 100)	(90, 50)	(50, 100)	(50, 50)	(50, 25)	(20, 100)	(20, 50)	(20, 25)	
SE3-021-0.4K	3.40%	2.10%	3.10%	1.93%	1.39%	2.55%	1.61%	1.22%	IE2
SE3-021-0.75K	3.13%	2.20%	3.00%	1.80%	1.45%	2.50%	1.53%	1.20%	IE2
SE3-023-0.4K	2.89%	1.83%	2.75%	1.65%	1.38%	2.18%	1.49%	1.19%	IE2
SE3-023-0.75K	2.80%	1.65%	2.45%	1.50%	1.09%	2.00%	1.20%	0.93%	IE2
SE3-023-1.5K	2.88%	1.53%	2.53%	1.44%	0.78%	1.91%	1.06%	0.67%	IE2
SE3-043-0.4K	4.07%	2.95%	3.80%	2.71%	2.17%	3.30%	2.38%	2.01%	IE2
SE3-043-0.75K	2.80%	1.90%	2.60%	1.73%	1.46%	2.33%	1.44%	1.26%	IE2
SE3-043-1.5K	2.83%	1.63%	2.63%	1.42%	1.04%	2.03%	1.19%	0.91%	IE2
SE3-021-1.5K	3.06%	1.44%	2.56%	1.38%	0.84%	2.02%	1.22%	0.71%	IE2
SE3-021-2.2K	3.24%	1.60%	2.69%	1.38%	0.81%	2.00%	1.10%	0.64%	IE2
SE3-023-2.2K	3.02%	1.55%	2.62%	1.45%	0.90%	2.13%	1.19%	0.74%	IE2
SE3-023-3.7K	3.06%	1.40%	2.64%	1.33%	0.75%	2.05%	1.01%	0.55%	IE2
SE3-043-2.2K	2.22%	1.57%	2.04%	1.54%	0.80%	1.61%	1.30%	0.68%	IE2
SE3-043-3.7K	2.06%	1.28%	1.99%	1.15%	0.81%	1.52%	0.96%	0.71%	IE2
SE3-023-5.5K	3.38%	1.62%	2.81%	1.45%	0.81%	2.24%	1.13%	0.62%	IE2
SE3-023-7.5K	3.57%	1.68%	2.91%	1.39%	0.77%	2.46%	1.14%	0.61%	IE2
SE3-043-5.5K	2.09%	1.15%	1.89%	1.06%	0.67%	1.58%	0.83%	0.52%	IE2
SE3-043-7.5K	2.23%	1.22%	1.87%	1.16%	0.76%	1.48%	0.91%	0.55%	IE2
SE3-043-11K	2.03%	1.13%	1.95%	1.12%	0.71%	1.51%	0.78%	0.53%	IE2
SE3-023-11K	2.79%	1.37%	2.23%	1.34%	0.74%	1.95%	1.09%	0.60%	IE2
SE3-023-15K	2.47%	1.17%	1.98%	1.01%	0.52%	1.73%	0.76%	0.42%	IE2
SE3-043-15K	2.48%	1.23%	2.01%	1.09%	0.61%	1.54%	0.83%	0.46%	IE2
SE3-043-18.5K	2.15%	1.16%	1.93%	0.93%	0.74%	1.50%	0.83%	0.50%	IE2
SE3-043-22K	2.25%	1.23%	2.03%	0.98%	0.78%	1.58%	0.87%	0.52%	IE2

Note 1. All of the above inverter loss data are tested by adopting the " Input-output loss determination method for complete drive modules (CDM) "and are under a typical factory laboratory environment.

Note 2. The loss value of the inverter will be affected by the following factors: the inverter parameter settings (such as carrier frequency setting, torque boost, etc.), factory power voltage fluctuations, voltage harmonics, the type of motor used, the actual wiring, etc.