

# SF3 Series AC Drives Energy Efficiency Report

(Release date: 20230519      Version: Ver1.00)

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

## 1. Product rated specifications

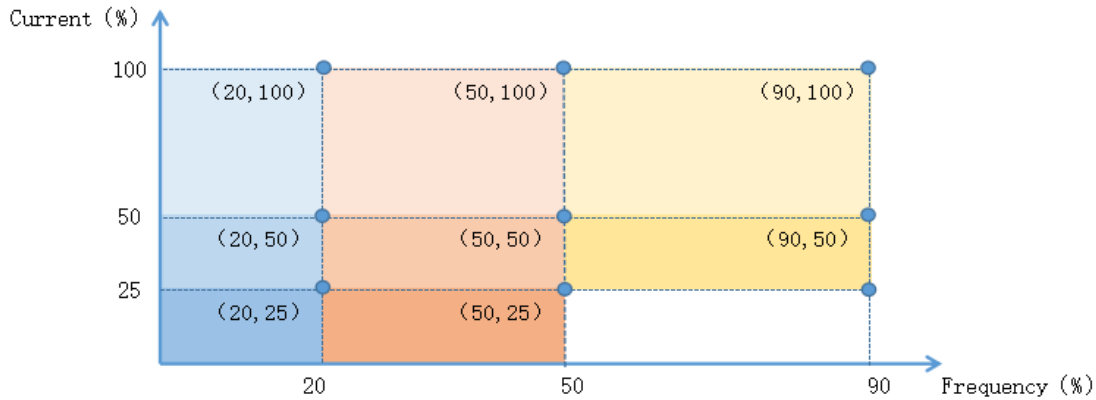
Model name	Input voltage (V)	Apparent output power (kVA)	Output power (kW)	Output current (A)	Standby loss (W)	Relative power loss (%)
SF3-043-5.5K/3.7KG	3PH 440V	10	5.5	13	13	0.13%
SF3-043-7.5K/5.5KG	3PH 440V	14	7.5	18	13	0.10%
SF3-043-11K/7.5KG	3PH 440V	18	11	24	17	0.09%
SF3-043-15K/11KG	3PH 440V	25	15	32	17	0.07%
SF3-043-18.5K/15KG	3PH 440V	29	18.5	38	17	0.06%
SF3-043-22K/18.5KG	3PH 440V	34	22	45	24	0.07%
SF3-043-30K/22KG	3PH 440V	46	30	60	24	0.05%
SF3-043-37K/30G	3PH 440V	56	37	73	25	0.04%
SF3-043-45K/37KG	3PH 440V	69	45	91	25	0.04%
SF3-043-55K/45KG	3PH 440V	84	55	110	30	0.04%
SF3-043-75K/55KG	3PH 440V	114	75	150	30	0.03%
SF3-043-90K/75KG	3PH 440V	137	90	180	30	0.02%
SF3-043-110K/90KG	3PH 440V	168	110	220	34	0.02%
SF3-043-132K/110KG	3PH 440V	198	132	260	34	0.02%
SF3-043-160K/132KG	3PH 440V	236	160	310	39	0.02%
SF3-043-185K/160KG	3PH 440V	295	185	340	39	0.01%
SF3-043-220K/185G	3PH 440V	367	220	425	43	0.01%
SF3-043-250K/220KG	3PH 440V	402	250	480	43	0.01%
SF3-043-280K/250KG	3PH 440V	438	280	530	43	0.01%
SF3-043-315K/280KG	3PH 440V	491	315	620	49	0.01%
SF3-043-355K/315KG	3PH 440V	544	355	683	49	0.01%

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

Note 2.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							
	(90, 100)	(90, 50)	(50, 100)	(50, 50)	(50, 25)	(20, 100)	(20, 50)	(20, 25)
SF3-043-5.5K/3.7KG	235	136	247	148	81	158	102	55
SF3-043-7.5K/5.5KG	294	166	277	164	106	222	124	71
SF3-043-11K/7.5KG	420	256	422	270	169	306	176	104
SF3-043-15K/11KG	500	285	480	287	203	389	206	126
SF3-043-18.5K/15KG	589	299	530	318	191	412	247	148
SF3-043-22K/18.5KG	896	439	806	484	290	627	376	226
SF3-043-30K/22KG	900	450	810	486	292	630	378	227
SF3-043-37K/30G	1,100	640	990	594	356	770	462	277
SF3-043-45K/37KG	1,650	680	1,485	891	535	1,155	693	416
SF3-043-55K/45KG	1,792	896	1,613	968	581	1,254	753	452
SF3-043-75K/55KG	2,250	1,070	2,025	1,215	729	1,575	945	567
SF3-043-90K/75KG	2,970	1,782	2,673	1,604	962	2,079	1,247	748
SF3-043-110K/90KG	3,226	1,935	2,903	1,742	1,045	2,258	1,355	813
SF3-043-132K/110KG	4,050	2,430	3,645	2,187	1,312	2,835	1,701	1,021
SF3-043-160K/132KG	5,000	3,000	4,500	2,700	1,620	3,500	2,100	1,260
SF3-043-185K/160KG	6,400	3,840	5,760	3,456	2,074	4,480	2,688	1,613
SF3-043-220K/185G	6,820	4,092	6,138	3,683	2,210	4,774	2,864	1,719
SF3-043-250K/220KG	7,750	4,430	6,975	4,185	2,511	5,425	3,255	1,953
SF3-043-280K/250KG	8,740	4,460	7,866	4,720	2,832	6,118	3,671	2,202
SF3-043-315K/280KG	9,000	8,100	8,100	4,860	2,916	6,300	3,780	2,268
SF3-043-355K/315KG	10,300	9,400	9,270	5,562	3,337	7,210	4,326	2,596

## 4. Power loss rate and efficiency level

loss rate (%)	Power loss rate with reference operation points(%)								IE class
	Model name	(90, 100)	(90, 50)	(50, 100)	(50, 50)	(50, 25)	(20, 100)	(20, 50)	
SF3-043-5.5K/3.7KG	2.35%	1.36%	2.47%	1.48%	0.81%	1.58%	1.02%	0.55%	IE2
SF3-043-7.5K/5.5KG	2.10%	1.19%	1.98%	1.17%	0.76%	1.59%	0.89%	0.51%	IE2
SF3-043-11K/7.5KG	2.33%	1.42%	2.34%	1.50%	0.94%	1.70%	0.98%	0.58%	IE2
SF3-043-15K/11KG	2.00%	1.14%	1.92%	1.15%	0.81%	1.56%	0.82%	0.50%	IE2
SF3-043-18.5K/15KG	2.03%	1.03%	1.83%	1.10%	0.66%	1.42%	0.85%	0.51%	IE2
SF3-043-22K/18.5KG	2.64%	1.29%	2.37%	1.42%	0.85%	1.84%	1.11%	0.66%	IE2
SF3-043-30K/22KG	1.96%	0.98%	1.76%	1.06%	0.63%	1.37%	0.82%	0.49%	IE2
SF3-043-37K/30G	1.96%	1.14%	1.77%	1.06%	0.64%	1.38%	0.83%	0.50%	IE2
SF3-043-45K/37KG	2.39%	0.99%	2.15%	1.29%	0.77%	1.67%	1.00%	0.60%	IE2
SF3-043-55K/45KG	2.13%	1.07%	1.92%	1.15%	0.69%	1.49%	0.90%	0.54%	IE2
SF3-043-75K/55KG	1.97%	0.94%	1.78%	1.07%	0.64%	1.38%	0.83%	0.50%	IE2
SF3-043-90K/75KG	2.17%	1.30%	1.95%	1.17%	0.70%	1.52%	0.91%	0.55%	IE2
SF3-043-110K/90KG	1.92%	1.15%	1.73%	1.04%	0.62%	1.34%	0.81%	0.48%	IE2
SF3-043-132K/110KG	2.05%	1.23%	1.84%	1.10%	0.66%	1.43%	0.86%	0.52%	IE2
SF3-043-160K/132KG	2.12%	1.27%	1.91%	1.14%	0.69%	1.48%	0.89%	0.53%	IE2
SF3-043-185K/160KG	2.17%	1.30%	1.95%	1.17%	0.70%	1.52%	0.91%	0.55%	IE2
SF3-043-220K/185G	1.86%	1.11%	1.67%	1.00%	0.60%	1.30%	0.78%	0.47%	IE2
SF3-043-250K/220KG	1.93%	1.10%	1.74%	1.04%	0.62%	1.35%	0.81%	0.49%	IE2
SF3-043-280K/250KG	2.00%	1.02%	1.80%	1.08%	0.65%	1.40%	0.84%	0.50%	IE2
SF3-043-315K/280KG	1.83%	1.65%	1.65%	0.99%	0.59%	1.28%	0.77%	0.46%	IE2
SF3-043-355K/315KG	1.89%	1.73%	1.70%	1.02%	0.61%	1.33%	0.80%	0.48%	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.