Manufacturer: Fronius International GmbH

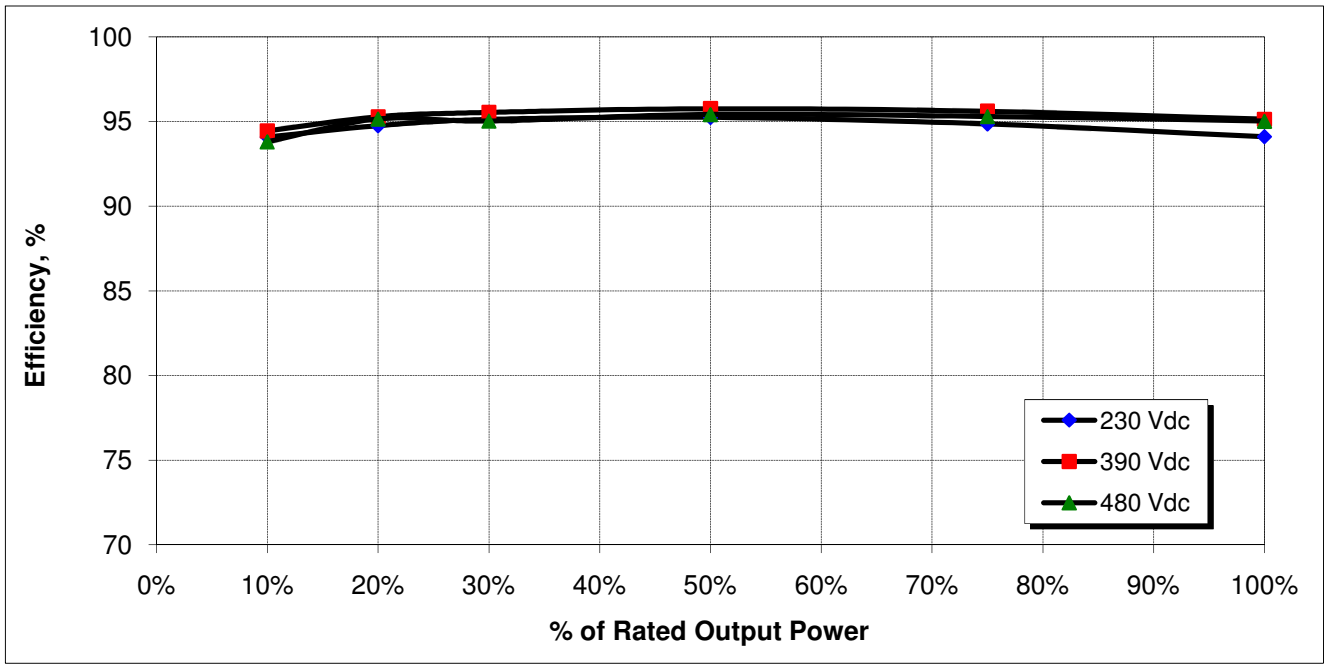
Model #: Fronius CL 33.3 Delta (240 V)

Rated Maximum Continuous Output Power: 33.30 kW Night Tare Loss: 3.53 W

Vmin: 230 Vdc Vnom: 390 Vdc Vmax: 480 Vdc

		Power Level (%; kW)						
		10%	20%	30%	50%	75%	100%	
Input Voltage (Vdc)		3.33	6.66	9.99	16.65	24.98	33.30	Wtd
Vmin	230	94.1	94.8	95.1	95.2	94.9	94.1	94.9
Vnom	390	94.4	95.3	95.5	95.8	95.6	95.1	95.5
Vmax	480	93.8	95.2	95.0	95.4	95.3	95.0	95.2

CEC Efficiency = 95.0%



Inverter Efficiency Data

Minimum of 5 samples required

Specified		Sample #1			Sample #2			Sample #3			Sample #4			Sample #5		
Output Power	Input Voltage	Output Power	Input Voltage	Efficiency	Output Power	Input Voltage	Efficiency	Output Power	Input Voltage	Efficiency	Output Power	Input Voltage	Efficiency	Output Power	Input Voltage	Efficiency
(% of rated)	(Vdc)	(W)	(Vdc)	(%)	(W)	(Vdc)	(%)	(W)	(Vdc)	(%)	(W)	(Vdc)	(%)	(W)	(Vdc)	(%)
10%	Vmin	3355.8	230.58	94.177	3351	230.57	94.025	3351	230.57	94.040	3351	230.58	94.000	3356	230.57	94.095
20%	Vmin	7228.6	230.39	94.865	7223	230.39	94.836	7221	230.39	94.809	7212	230.38	94.690	7213	230.38	94.695
30%	Vmin	10689	235.72	95.126	10688	235.71	95.124	10688	235.72	95.135	10686	235.72	95.127	10686	235.71	95.118
50%	Vmin	18287	229.29	95.254	18287	229.29	95.254	18286	229.29	95.237	18287	229.29	95.255	18285	229.29	95.241
75%	Vmin	23426	229.21	94.837	23429	229.21	94.851	23437	229.21	94.897	23434	229.21	94.872	23430	229.21	94.843
100%	Vmin	31714	229.14	94.118	31714	229.16	94.116	31705	229.15	94.084	31712	229.14	94.109	31716	229.14	94.111
10%	Vnom	3321.4	391.22	94.460	3323	391.22	94.438	3321	391.22	94.461	3320	391.22	94.353	3324	391.22	94.462
20%	Vnom	7254.2	395.66	95.316	7254	395.66	95.341	7253	395.67	95.313	7248	395.66	95.224	7250	395.67	95.295
30%	Vnom	10734	389.09	95.601	10733	389.1	95.556	10728	389.1	95.523	10727	389.08	95.524	10725	389.09	95.532
50%	Vnom	18289	389.15	95.777	18286	389.15	95.767	18281	389.15	95.747	18278	389.14	95.750	18280	389.14	95.743
75%	Vnom	23509	389.11	95.577	23511	389.1	95.590	23520	389.11	95.625	23519	389.1	95.608	23521	389.1	95.626
100%	Vnom	31893	389.12	95.124	31889	389.1	95.103	31908	389.11	95.159	31913	389.11	95.160	31905	389.09	95.157
10%	Vmax	3250.3	481.56	93.811	3255	481.57	93.770	3256	481.56	93.837	3251	481.56	93.866	3252	481.56	93.810
20%	Vmax	7275.5	479.75	95.135	7278	479.75	95.171	7275	479.74	95.156	7276	479.71	95.166	7274	479.7	95.178
30%	Vmax	10659	478.91	95.022	10663	478.91	95.038	10659	478.9	95.040	10660	478.9	95.017	10659	478.9	95.038
50%	Vmax	18286	478.98	95.421	18282	478.99	95.414	18277	478.98	95.379	18281	478.99	95.399	18286	478.99	95.425
75%	Vmax	26570	478.92	95.294	26570	478.92	95.285	26572	478.92	95.298	26570	478.92	95.297	26569	478.92	95.292
100%	Vmax	31881	478.93	95.026	31883	478.91	95.015	31882	478.92	95.018	31877	478.93	95.009	31881	478.92	95.015

Specified		Sample #6			Sample #7			Sample #8			Sample #9			Sample #10		
Output Power	Input Voltage	Output Power	Input Voltage	Efficiency	Output Power	Input Voltage	Efficiency	Output Power	Input Voltage	Efficiency	Output Power	Input Voltage	Efficiency	Output Power	Input Voltage	Efficiency
(% of rated)	(Vdc)	(W)	(Vdc)	(%)	(W)	(Vdc)	(%)	(W)	(Vdc)	(%)	(W)	(Vdc)	(%)	(W)	(Vdc)	(%)
10%	Vmin	3355.1	230.57	94.114	3355	230.57	94.153									
20%	Vmin	7213.6	230.38	94.675	7216	230.37	94.691									
30%	Vmin	10687	235.71	95.113	10687	235.72	95.136									
50%	Vmin	18284	229.29	95.242	18285	229.29	95.245									
75%	Vmin	23427	229.21	94.851	23427	229.21	94.839									
100%	Vmin	31710	229.16	94.103	31710	229.14	94.100									
10%	Vnom	3327.4	391.22	94.480	3324	391.22	94.419									
20%	Vnom	7249.5	395.67	95.256	7249	395.66	95.252									
30%	Vnom	10724	389.1	95.508	10723	389.09	95.544									
50%	Vnom	18282	389.15	95.744	18293	389.14	95.792									
75%	Vnom	23522	389.11	95.619	23519	389.11	95.620									
100%	Vnom	31891	389.11	95.120	31898	389.11	95.127									
10%	Vmax	3251.6	481.56	93.789	3254	481.56	93.755									
20%	Vmax	7274.8	479.69	95.120	7272	479.69	95.126									
30%	Vmax	10659	478.91	95.020	10662	478.9	95.003									
50%	Vmax	18285	478.98	95.430	18281	478.98	95.412									
75%	Vmax	26572	478.92	95.290	26573	478.92	95.307									
100%	Vmax	31877	478.92	95.013	31883	478.92	95.028									