Manufacturer: Fronius International GmbH

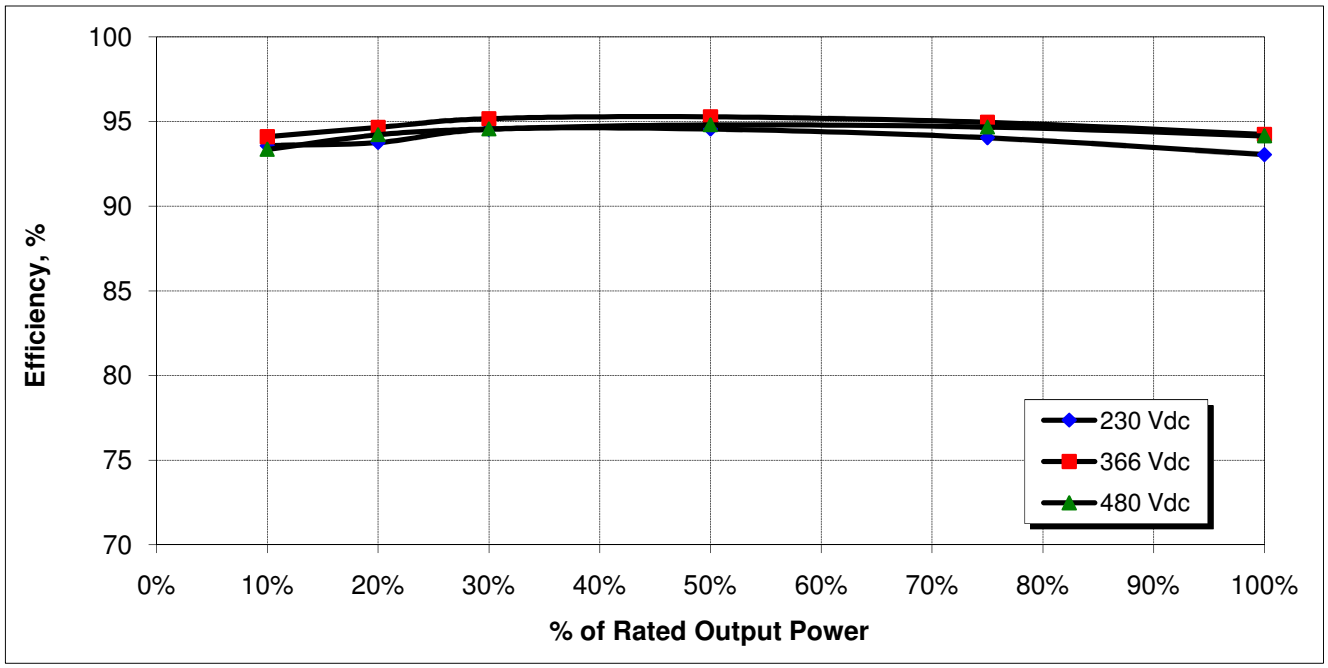
Model #: Fronius CL 33.3 Delta (208 V)

Rated Maximum Continuous Output Power: 33.30 kW Night Tare Loss: 2.85 W

Vmin: 230 Vdc Vnom: 366 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	93.6	93.8	94.5	94.6	94.0	93.0	94.1
Vnom	366	94.1	94.7	95.2	95.3	95.0	94.2	95.0
Vmax	480	93.4	94.2	94.6	94.8	94.7	94.2	94.6

CEC Efficiency = 94.5%



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	3313.8	230.06	93.602	3310	230.06	93.583	3311	230.06	93.526	3313	230.07	93.583	3311	230.06	93.539
20%	Vmin	7286.5	229.79	93.822	7283	229.78	93.753	7282	229.79	93.744	7280	229.8	93.749	7280	229.79	93.730
30%	Vmin	10835	230.09	94.593	10836	230.09	94.583	10830	230.09	94.536	10825	230.09	94.520	10828	230.08	94.509
50%	Vmin	18268	230.1	94.556	18271	230.11	94.562	18274	230.1	94.554	18269	230.1	94.551	18269	230.1	94.554
75%	Vmin	23456	229.95	94.041	23456	229.95	94.044	23456	229.95	94.046	23456	229.95	94.034	23456	229.95	94.036
100%	Vmin	31676	229.93	93.006	31686	229.93	93.036	31696	229.96	93.062	31676	229.92	93.014	31681	229.89	93.022
10%	Vnom	3294.2	366.31	94.108	3300	366.31	94.200	3301	366.31	94.110	3299	366.31	94.028	3297	366.31	94.055
20%	Vnom	7259.7	366.14	94.688	7260	366.13	94.695	7256	366.14	94.688	7249	366.15	94.589	7248	366.15	94.604
30%	Vnom	10719	366.29	95.191	10716	366.3	95.160	10716	366.32	95.173	10716	366.3	95.158	10719	366.29	95.176
50%	Vnom	18249	366.27	95.251	18250	366.27	95.277	18256	366.27	95.283	18255	366.27	95.285	18250	366.27	95.281
75%	Vnom	23715	366.21	94.982	23717	366.21	94.974	23716	366.21	94.973	23715	366.21	94.980	23708	366.21	94.932
100%	Vnom	31756	366.17	94.258	31746	366.17	94.241	31753	366.19	94.261	31743	366.17	94.229	31743	366.17	94.223
10%	Vmax	3279.8	480.53	93.455	3280	480.53	93.386	3277	480.53	93.319	3274	480.54	93.322	3277	480.53	93.374
20%	Vmax	7206.5	480.44	94.241	7206	480.44	94.243	7210	480.44	94.222	7208	480.44	94.212	7208	480.43	94.202
30%	Vmax	10806	480.56	94.563	10804	480.56	94.584	10802	480.56	94.558	10802	480.56	94.572	10804	480.56	94.589
50%	Vmax	18274	480.64	94.819	18275	480.64	94.802	18275	480.65	94.805	18277	480.65	94.815	18274	480.64	94.805
75%	Vmax	23788	480.58	94.686	23785	480.58	94.686	23783	480.58	94.666	23785	480.58	94.673	23783	480.58	94.671
100%	Vmax	31718	480.51	94.158	31716	480.52	94.154	31717	480.53	94.174	31721	480.54	94.158	31715	480.52	94.148

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	3312.3	230.07	93.533	3312	230.06	93.593									
20%	Vmin	7281.6	229.79	93.733	7277	229.79	93.731									
30%	Vmin	10830	230.08	94.511	10828	230.08	94.513									
50%	Vmin	18272	230.1	94.554	18272	230.09	94.557									
75%	Vmin	23455	229.96	94.038	23452	229.96	94.023									
100%	Vmin	31703	229.99	93.092	31678	229.96	93.022									
10%	Vnom	3301.1	366.31	94.109	3300	366.31	94.146									
20%	Vnom	7248.9	366.15	94.618	7255	366.16	94.684									
30%	Vnom	10716	366.31	95.175	10717	366.3	95.157									
50%	Vnom	18252	366.27	95.274	18254	366.27	95.281									
75%	Vnom	23704	366.21	94.928	23702	366.21	94.924									
100%	Vnom	31748	366.19	94.249	31749	366.18	94.258									
10%	Vmax	3273.1	480.53	93.200	3283	480.53	93.429									
20%	Vmax	7208.6	480.43	94.189	7213	480.43	94.227									
30%	Vmax	10804	480.57	94.575	10796	480.57	94.529									
50%	Vmax	18274	480.65	94.791	18277	480.64	94.809									
75%	Vmax	23782	480.58	94.672	23788	480.58	94.675									
100%	Vmax	31714	480.54	94.140	31715	480.54	94.155									