Manufacturer: Power-One, Inc.

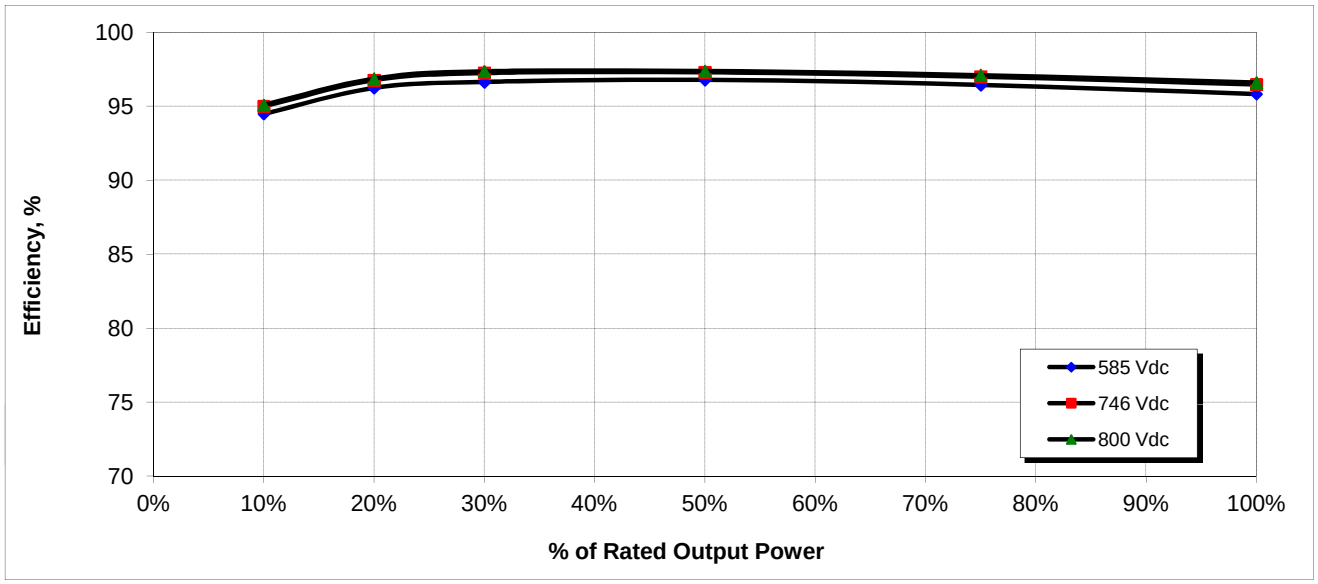
Model #: ULTRA-1100-TL-OUTD-4-US-690

Rated Maximum Continuous Output Power: 1000.00 kW Night Tare Loss: 382 W

Vmin: 585 Vdc Vnom: 746 Vdc Vmax: 800 Vdc

		Power Level (%; kW)						
		10%	20%	30%	50%	75%	100%	
Input Voltage (Vdc)		100.00	200.00	300.00	500.00	750.00	1000.00	Wtd
Vmin	585	94.49	96.23	96.63	96.77	96.44	95.82	96.41
Vnom	746	94.99	96.76	97.24	97.29	96.99	96.47	96.97
Vmax	800	95.08	96.87	97.36	97.38	97.11	96.60	97.08

CEC Efficiency of Inverter and MV TP1 Transformer = 97.0%



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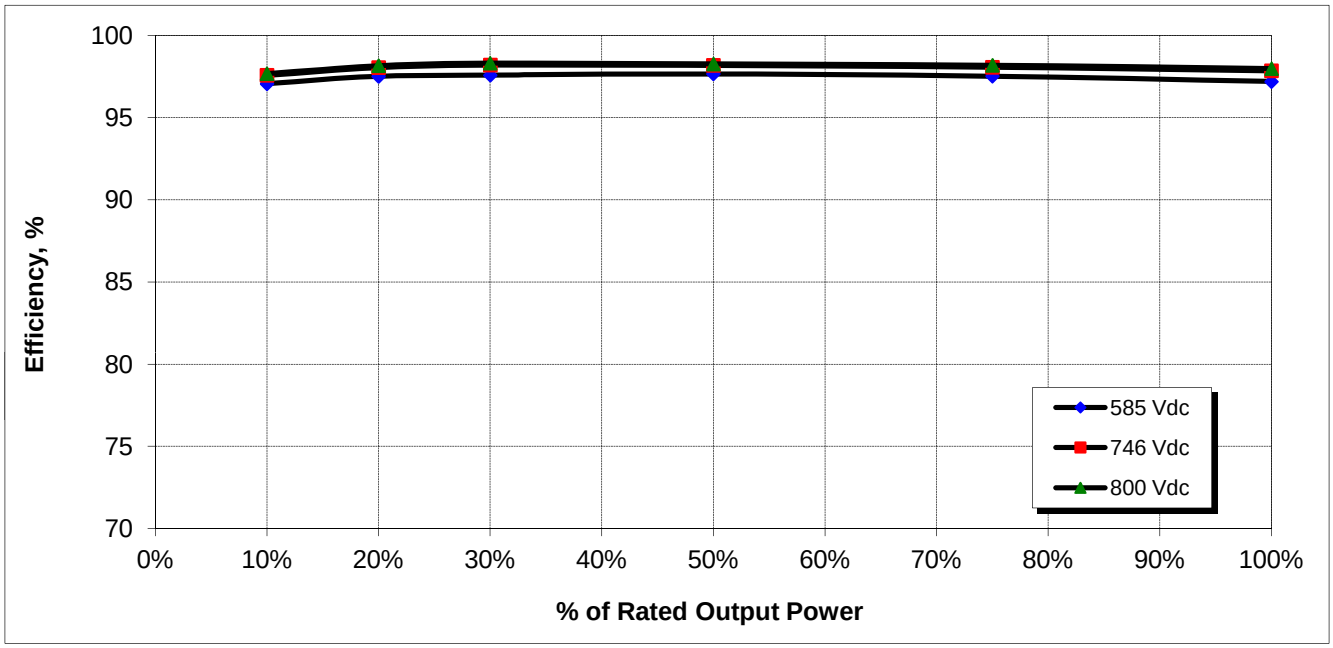
		Power Level (%; kW)						
		10%	20%	30%	50%	75%	100%	
Input Voltage (Vdc)		100.00	200.00	300.00	500.00	750.00	1000.00	Wtd
Vmin	585	97.06	97.51	97.58	97.65	97.51	97.19	97.52
Vnom	746	97.58	98.04	98.19	98.17	98.07	97.85	98.07
Vmax	800	97.67	98.15	98.31	98.27	98.19	97.98	98.19

Inverter Efficiency only = 98.0%



1000kVA TP1 Transformer Efficiency

		Power Level (%; kW)						
		10%	20%	30%	50%	75%	100%	
Input Voltage (Vdc)		100.00	200.00	300.00	500.00	750.00	1000.00	Wtd
Vmin	585	97.35	98.69	99.03	99.10	98.90	98.59	98.87
Vnom	746	97.35	98.69	99.03	99.10	98.90	98.59	98.87
Vmax	800	97.35	98.69	99.03	99.10	98.90	98.59	98.87

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	96372.6	585.6	97.1	96366.4	585.2	97.1	96374.0	585.7	97.1	96373.4	585.8	97.1	96356.1	585.7	97.1
20%	Vmin	210316.5	585.8	97.5	210284.5	585.6	97.5	210207.4	585.4	97.5	210327.4	585.6	97.5	210238.5	585.4	97.5
30%	Vmin	280934.3	585.6	97.6	280978.3	585.7	97.6	280971.0	585.3	97.6	281037.9	585.1	97.6	281031.6	585.3	97.6
50%	Vmin	452481.6	585.5	97.7	452447.5	585.4	97.7	452437.7	585.4	97.7	452429.8	585.7	97.7	452491.2	585.7	97.7
75%	Vmin	708906.2	585.4	97.5	708959.5	585.5	97.5	709040.8	585.7	97.5	709017.6	585.7	97.5	708898.6	585.5	97.5
100%	Vmin	953070.4	585.7	97.2	953097.4	585.4	97.2	952978.0	585.2	97.2	952977.3	585.2	97.2	953043.4	585.7	97.2
10%	Vnom	97113.9	745.3	97.6	97133.7	745.5	97.6	97160.1	745.4	97.6	97153.8	745.4	97.6	97153.5	745.8	97.6
20%	Vnom	219057.8	745.4	98.0	219123.7	745.5	98.0	219179.9	745.6	98.1	219158.9	745.4	98.0	219210.9	745.8	98.0
30%	Vnom	281829.0	745.9	98.2	281847.5	745.6	98.2	281855.8	745.5	98.2	281882.9	745.1	98.2	281855.5	745.3	98.2
50%	Vnom	451650.7	745.5	98.2	451728.0	745.3	98.2	451699.2	745.4	98.2	451606.5	745.5	98.2	451692.8	745.5	98.2
75%	Vnom	710968.0	745.7	98.1	710988.0	745.8	98.1	710866.5	745.4	98.1	710972.3	745.6	98.1	710925.5	745.4	98.1
100%	Vnom	967788.7	745.5	97.9	967786.2	745.7	97.8	967809.1	745.3	97.8	967745.4	745.3	97.9	967744.5	745.4	97.8
10%	Vmax	97237.8	800.2	97.7	97225.6	799.6	97.7	97235.5	800.8	97.7	97214.6	800.8	97.7	97247.0	801.2	97.7
20%	Vmax	219801.3	801.2	98.2	219792.8	801.0	98.2	219681.8	800.8	98.1	219711.1	801.0	98.2	219734.5	801.2	98.1
30%	Vmax	282285.8	801.6	98.3	282213.3	801.6	98.3	282296.3	801.2	98.3	282300.1	801.3	98.3	282219.1	801.7	98.3
50%	Vmax	451835.7	800.0	98.3	451836.6	799.9	98.3	451763.1	800.0	98.3	451778.8	800.7	98.3	451824.2	800.4	98.3
75%	Vmax	711040.9	801.6	98.2	711069.7	800.4	98.2	710998.7	800.8	98.2	711003.4	801.3	98.2	711105.4	801.2	98.2
100%	Vmax	968787.8	801.5	98.0	968764.9	801.6	98.0	968812.3	800.4	98.0	968803.5	801.6	98.0	968852.7	800.5	98.0

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	96371.8	585.5	97.1	96352.0	585.5	97.0									
20%	Vmin	210283.6	585.6	97.5	210287.1	585.7	97.5									
30%	Vmin	281060.5	585.4	97.6	281017.0	585.4	97.6									
50%	Vmin	452360.8	585.3	97.7	452461.9	585.2	97.7									
75%	Vmin	708834.2	585.6	97.5	708947.8	585.6	97.5									
100%	Vmin	953005.4	585.5	97.2	953100.1	585.7	97.2									
10%	Vnom	97134.1	745.6	97.6	97158.4	745.6	97.6									
20%	Vnom	219183.8	745.6	98.1	219247.2	745.3	98.1									
30%	Vnom	281853.4	745.7	98.2	281856.8	745.7	98.2									
50%	Vnom	451706.1	745.3	98.2	451703.4	745.5	98.2									
75%	Vnom	710845.4	745.4	98.1	710962.7	745.4	98.1									
100%	Vnom	967905.8	745.2	97.9	967826.1	745.7	97.9									
10%	Vmax	97243.2	800.5	97.7	97222.9	801.5	97.7									
20%	Vmax	219717.2	801.6	98.2	219706.0	802.2	98.2									
30%	Vmax	282289.3	801.6	98.3	282272.4	801.6	98.3									
50%	Vmax	451823.7	800.4	98.3	451776.3	799.9	98.3									
75%	Vmax	710987.7	800.9	98.2	711028.8	801.2	98.2									
100%	Vmax	968719.2	800.4	98.0	968831.5	800.0	98.0									