

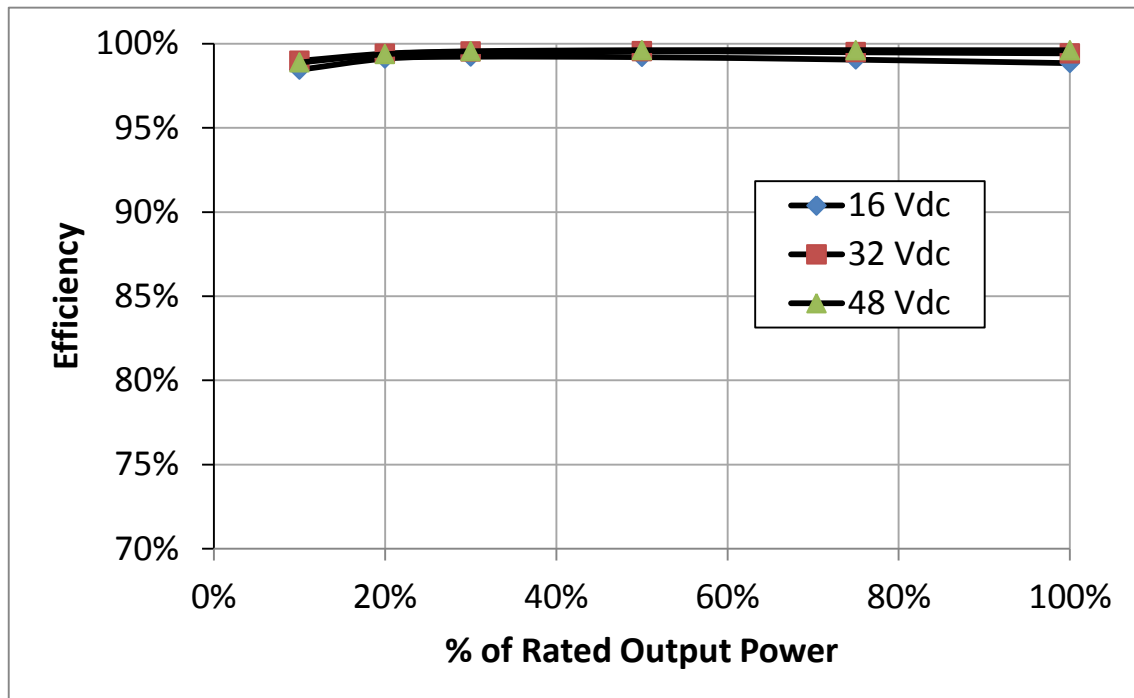


Abstract: While the Module Maximizer from Tigo Energy is not an inverter, its efficiency can be evaluated in a similar method to the CEC inverter efficiency standards. Voltage and load are varied at specific set points, five readings are taken, and weights are applied to each of the operating points for a weighted efficiency. The result is a 99.6% conversion efficiency for the device.

Manufacturer: Tigo Energy , Inc.		Rated continuous output power: 350W	
Model: Module Maximizer		Night tare loss: 0W	
Vmin: 16 Vdc	Vnom: 32 Vdc	Vmax: 48 Vdc	

Input Voltage (Vdc)	Power Level (% , W)						Wtd
	10% 35	20% 70	30% 105	50% 175	75% 263	100% 350	
Vmin 16	98.5	99.1	99.2	99.2	99.1	98.8	99.1
Vnom 32	99.0	99.4	99.5	99.6	99.5	99.4	99.5
Vmax 48	98.9	99.4	99.5	99.6	99.6	99.6	99.6

Weighted Efficiency (CEC weights) = 99.6%



Device Efficiency Data

Specified		Sample #1			Sample #2			Sample #3			Sample #4			Sample #5		
Output Power (% of rated)	Input Voltage (Vdc)	Output Current (I)	Input Voltage (Vdc)	Efficiency (%)	Output Current (I)	Input Voltage (Vdc)	Efficiency (%)	Output Current (I)	Input Voltage (Vdc)	Efficiency (%)	Output Current (I)	Input Voltage (Vdc)	Efficiency (%)	Output Current (I)	Input Voltage (Vdc)	Efficiency (%)
10%	Vmin	0.947708	15.96332	98.42865	0.947872	15.96309	98.4364	0.948119	15.96378	98.48708	0.948836	15.96515	98.51452	0.947994	15.9648	98.39089
20%	Vmin	1.898235	16.03167	99.11811	1.898056	16.0336	99.09661	1.898337	16.0336	99.11281	1.898253	16.03338	99.09219	1.898772	16.0352	99.12656
30%	Vmin	2.848653	15.99909	99.2436	2.848236	16.00126	99.21955	2.847775	16.00057	99.20312	2.848784	16.00194	99.24088	2.848374	16.00251	99.22092
50%	Vmin	4.749116	16.03167	99.21896	4.748545	16.0344	99.18787	4.748146	16.03497	99.19891	4.748688	16.03668	99.19053	4.74901	16.03885	99.21749
75%	Vmin	7.129559	16.04112	99.06638	7.129511	16.04602	99.06877	7.129804	16.04762	99.05818	7.129284	16.04898	99.03284	7.129118	16.05229	99.03558
100%	Vmin	9.49889	16.02666	98.84464	9.498921	16.05901	98.84302	9.500018	16.06117	98.84357	9.499925	16.06459	98.83637	9.499811	16.06504	98.85616
10%	Vnom	0.948359	31.96729	98.98492	0.948151	31.96752	98.94429	0.948722	31.96763	99.03975	0.948808	31.96843	99.06109	0.947681	31.96695	98.88351
20%	Vnom	1.897723	32.03598	99.38864	1.897931	32.03666	99.40086	1.898401	32.03632	99.41754	1.8987	32.03723	99.43535	1.897954	32.03746	99.39685
30%	Vnom	2.848158	32.00272	99.51651	2.848628	32.00408	99.54237	2.848925	32.00545	99.55184	2.848154	32.00511	99.51385	2.847895	32.00545	99.49203
50%	Vnom	4.749194	32.03677	99.56415	4.749094	32.03803	99.56619	4.748853	32.03962	99.55289	4.74845	32.03917	99.53431	4.749498	32.04042	99.56234
75%	Vnom	7.128788	32.04896	99.4882	7.129327	32.05033	99.49216	7.129974	32.05341	99.49337	7.128966	32.05113	99.48272	7.130193	32.05375	99.49356
100%	Vnom	8.699259	31.95795	99.43228	8.699499	31.9608	99.42524	8.700012	31.96421	99.4341	8.699125	31.96547	99.41583	8.69952	31.96775	99.41978
10%	Vmax	0.948817	47.96875	98.95944	0.947826	47.96818	98.82049	0.948062	47.96796	98.85745	0.948876	47.96909	98.95577	0.947779	47.96807	98.81051
20%	Vmax	1.898002	48.03687	99.37376	1.897552	48.03733	99.34596	1.898725	48.03767	99.42279	1.897872	48.03733	99.35749	1.897847	48.0379	99.36323
30%	Vmax	2.848898	48.00566	99.55874	2.848673	48.00623	99.5525	2.848544	48.00577	99.54061	2.848728	48.00703	99.5548	2.848533	48.00691	99.54257
50%	Vmax	4.749287	48.03995	99.62307	4.749461	48.04063	99.62916	4.748402	48.04108	99.59527	4.748477	48.04108	99.59976	4.749666	48.04245	99.62557
75%	Vmax	5.999749	48.03209	99.62468	5.999758	48.03231	99.62482	5.999484	48.03402	99.61512	5.998967	48.03459	99.60387	5.999611	48.03607	99.62055
100%	Vmax	5.999412	48.03163	99.62059	5.999761	48.03368	99.62013	5.999035	48.03482	99.60736	5.998815	48.03493	99.60376	5.999226	48.03539	99.60501