



ENERGY DIRECTORATE

TYPE TESTED INVERTERS/EQUIPMENT IN TERMS OF NRS 097-2-1

2018 06 05

Make	Model	Test House	Certificate date	Valid until	Report number	Certificate Compliance number	NRS 097-2-1: 2010 Certification	NRS 097-2-1: 2017 Certification	Comments
ABB	UNO-3.0-TL-OUTD	TUV Rheinland	2016/05/30	2018/12/31	28109345001	AK 60111169 0001	Yes	No	
ABB	UNO-3.0-TL-OUTD-S	TUV Rheinland	2016/05/30	2018/12/31	28109345001	AK 60111169 0001	Yes	No	
ABB	UNO-2.0-TL-OUTD	TUV Rheinland	2016/05/30	2018/12/31	28109345001	AK 60111169 0001	Yes	No	
ABB	UNO-2.0-TL-OUTD-S	TUV Rheinland	2016/05/30	2018/12/31	28109345001	AK 60111169 0001	Yes	No	
ABB	PRO-33.0-TL-OUTD-400	Bureau Veritas	2014/10/10	2018/12/31	13TH0463-NRS 097-2-1	U14-0530	Yes	No	The unit must be provided with an external RCMU type B
ABB	PRO-33.0-TL-OUTD-S-400	Bureau Veritas	2014/10/10	2018/12/31	13TH0463-NRS 097-2-1	U14-0530	Yes	No	The unit must be provided with an external RCMU type B
ABB	PRO-33.0-TL-OUTD-SX-400	Bureau Veritas	2014/10/10	2018/12/31	13TH0463-NRS 097-2-1	U14-0530	Yes	No	The unit must be provided with an external RCMU type B
ABB	PVI-13.8-TL-OUTD	TUV Rheinland	2015/02/08	2018/12/31	28107377001	AK 60099744 0001	Yes	No	
ABB	PVI-13.8-TL-OUTD-S	TUV Rheinland	2015/02/08	2018/12/31	28107377001	AK 60099744 0001	Yes	No	
ABB	PVI-13.8-TL-OUTD-FS	TUV Rheinland	2015/02/08	2018/12/31	28107377001	AK 60099744 0001	Yes	No	
ABB	PVI-13.8-TL-OUTD-W	TUV Rheinland	2015/02/08	2018/12/31	28107377001	AK 60099744 0001	Yes	No	
ABB	PVI-12.5-TL-OUTD	TUV Rheinland	2015/02/08	2018/12/31	28107377001	AK 60099744 0001	Yes	No	
ABB	PVI-12.5-TL-OUTD-S	TUV Rheinland	2015/02/08	2018/12/31	28107377001	AK 60099744 0001	Yes	No	
ABB	PVI-12.5-TL-OUTD-FS	TUV Rheinland	2015/02/08	2018/12/31	28107377001	AK 60099744 0001	Yes	No	
ABB	PVI-12.5-TL-OUTD-W	TUV Rheinland	2015/02/08	2018/12/31	28107377001	AK 60099744 0001	Yes	No	
ABB	PVI-11-TL-OUTD	TUV Rheinland	2015/02/08	2018/12/31	28107377001	AK 60099744 0001	Yes	No	
ABB	PVI-11-TL-OUTD-S	TUV Rheinland	2015/02/08	2018/12/31	28107377001	AK 60099744 0001	Yes	No	
ABB	PVI-11-TL-OUTD-FS	TUV Rheinland	2015/02/08	2018/12/31	28107377001	AK 60099744 0001	Yes	No	
ABB	PVI-11-TL-OUTD-W	TUV Rheinland	2015/02/08	2018/12/31	28107377001	AK 60099744 0001	Yes	No	
ABB	PVI-10-TL-OUTD	TUV Rheinland	2015/02/08	2018/12/31	28107377001	AK 60099744 0001	Yes	No	
ABB	PVI-10-TL-OUTD-S	TUV Rheinland	2015/02/08	2018/12/31	28107377001	AK 60099744 0001	Yes	No	
ABB	PVI-10-TL-OUTD-FS	TUV Rheinland	2015/02/08	2018/12/31	28107377001	AK 60099744 0001	Yes	No	
ABB	PVI-8-TL-OUTD	TUV Rheinland	2015/02/08	2018/12/31	28107377001	AK 60099744 0001	Yes	No	
ABB	PVI-8-TL-OUTD-S	TUV Rheinland	2015/02/08	2018/12/31	28107377001	AK 60099744 0001	Yes	No	
ABB	PVI-8-TL-OUTD-FS	TUV Rheinland	2015/02/08	2018/12/31	28107377001	AK 60099744 0001	Yes	No	
ABB	PVI-6-TL-OUTD	TUV Rheinland	2015/02/08	2018/12/31	28107377001	AK 60099744 0001	Yes	No	
ABB	PVI-6-TL-OUTD-S	TUV Rheinland	2015/02/08	2018/12/31	28107377001	AK 60099744 0001	Yes	No	
ABB	PVI-6-TL-OUTD-FS	TUV Rheinland	2015/02/08	2018/12/31	28107377001	AK 60099744 0001	Yes	No	
ABB	TRIO-8.5-TL-OUTD-400	TUV Rheinland	2013/11/28	2018/12/31	28106226001	AK 60090280 0001	Yes	No	
ABB	TRIO-8.5-TL-OUTD-S-400	TUV Rheinland	2013/11/28	2018/12/31	28106226001	AK 60090280 0001	Yes	No	
ABB	TRIO-7.5-TL-OUTD-400	TUV Rheinland	2013/11/28	2018/12/31	28106226001	AK 60090280 0001	Yes	No	
ABB	TRIO-7.5-TL-OUTD-S-400	TUV Rheinland	2013/11/28	2018/12/31	28106226001	AK 60090280 0001	Yes	No	
ABB	TRIO-5.8-TL-OUTD-400	TUV Rheinland	2013/11/28	2018/12/31	28106226001	AK 60090280 0001	Yes	No	
ABB	TRIO-5.8-TL-OUTD-S-400	TUV Rheinland	2013/11/28	2018/12/31	28106226001	AK 60090280 0001	Yes	No	
ABB	TRIO-27.6-TL-OUTD-400	TUV Rheinland	2015/03/23	2018/12/31	28107485001	AK 60100657 0001	Yes	No	
ABB	TRIO-27.6-TL-OUTD-S2-400	TUV Rheinland	2015/03/23	2018/12/31	28107485001	AK 60100657 0001	Yes	No	
ABB	TRIO-27.6-TL-OUTD-S2X-400	TUV Rheinland	2015/03/23	2018/12/31	28107485001	AK 60100657 0001	Yes	No	
ABB	TRIO-27.6-TL-OUTD-S2F-400	TUV Rheinland	2015/03/23	2018/12/31	28107485001	AK 60100657 0001	Yes	No	
ABB	TRIO-27.6-TL-OUTD-S1J-400	TUV Rheinland	2015/03/23	2018/12/31	28107485001	AK 60100657 0001	Yes	No	
ABB	TRIO-27.6-TL-OUTD-S2J-400	TUV Rheinland	2015/03/23	2018/12/31	28107485001	AK 60100657 0001	Yes	No	
ABB	TRIO-27.6-TL-OUTD-W	TUV Rheinland	2015/03/23	2018/12/31	28107485001	AK 60100657 0001	Yes	No	
ABB	TRIO-20.0-TL-OUTD-400	TUV Rheinland	2015/03/23	2018/12/31	28107485001	AK 60100657 0001	Yes	No	
ABB	TRIO-20.0-TL-OUTD-S2-400	TUV Rheinland	2015/03/23	2018/12/31	28107485001	AK 60100657 0001	Yes	No	
ABB	TRIO-20.0-TL-OUTD-S2X-400	TUV Rheinland	2015/03/23	2018/12/31	28107485001	AK 60100657 0001	Yes	No	
ABB	TRIO-20.0-TL-OUTD-S2F-400	TUV Rheinland	2015/03/23	2018/12/31	28107485001	AK 60100657 0001	Yes	No	
ABB	TRIO-20.0-TL-OUTD-S1J-400	TUV Rheinland	2015/03/23	2018/12/31	28107485001	AK 60100657 0001	Yes	No	
ABB	TRIO-20.0-TL-OUTD-S2J-400	TUV Rheinland	2015/03/23	2018/12/31	28107485001	AK 60100657 0001	Yes	No	
ABB	TRIO-20.0-TL-OUTD-W	TUV Rheinland	2015/03/23	2018/12/31	28107485001	AK 60100657 0001	Yes	No	
ABB	TRIO-50.0-TL-OUTD	TUV Rheinland	2016/04/15	2018/12/31	28109115001	AK 60110141 0001	Yes	No	
ABB	CM-UFD.M31 relay	TUV SÜD	2014/11/06	2018/12/31	44254-48401-0126-01	D8 14 10 44254 006	No	No	Network and system grid protection voltage and frequency relay only in accordance with DIN VDE 0126-1-1:2013 and VDE-AR-N 4105:2011
AEI Power	803R008	Bureau Veritas	2014/06/03	2018/12/31	09TH0301-NRS 097-2-1	U14-0318	Yes	No	
AEI Power	803R010	Bureau Veritas	2014/06/03	2018/12/31	09TH0301-NRS 097-2-1	U14-0318	Yes	No	
AEI Power	808R013	Bureau Veritas	2014/06/03	2018/12/31	09TH0301-NRS 097-2-1	U14-0318	Yes	No	
AEI Power	808R017	Bureau Veritas	2014/06/03	2018/12/31	09TH0301-NRS 097-2-1	U14-0318	Yes	No	
AEI Power	808R020	Bureau Veritas	2014/06/03	2018/12/31	09TH0301-NRS 097-2-1	U14-0318	Yes	No	
AEI Power	867R008	Bureau Veritas	2014/10/31	2018/12/31	14TH0086-NRS 097-2-1	U14-0581	Yes	No	
AEI Power	867R010	Bureau Veritas	2014/10/31	2018/12/31	14TH0086-NRS 097-2-1	U14-0581	Yes	No	
AEI Power	867R013	Bureau Veritas	2014/10/31	2018/12/31	14TH0086-NRS 097-2-1	U14-0581	Yes	No	
AEI Power	867R017	Bureau Veritas	2014/10/31	2018/12/31	14TH0086-NRS 097-2-1	U14-0581	Yes	No	
AEI Power	867R020	Bureau Veritas	2014/10/31	2018/12/31	14TH0086-NRS 097-2-1	U14-0581	Yes	No	
AEI Power	840R040	Bureau Veritas	2014/12/05	2018/12/31	14TH0128-NRS 097-2-1	U14-0652	Yes	No	

APsystems	YC 500 I	Bureau Veritas	2016/03/18	2018/12/31	ZEM-16FE0239FTSP-NRS 097-2-1	U16-0160	Yes	No	
APsystems	YC 1000 - 3	Bureau Veritas	2016/06/08	2018/12/31	ZEM-16AP0985FTSP	U16-0301	Yes	No	
Beijing Kinglong New Energy	Solartec D 15000	TUV Rheinland	2013/04/19	2018/12/31	16802129001	AK502525870001	Yes	No	RCD or RCM Type B required on supply side
Beijing Kinglong New Energy	Solartec D 12000	TUV Rheinland	2013/04/19	2018/12/31	16802129001	AK502525870001	Yes	No	RCD or RCM Type B required on supply side
Beijing Kinglong New Energy	Solartec D 10000	TUV Rheinland	2013/04/19	2018/12/31	16802129001	AK502525870001	Yes	No	RCD or RCM Type B required on supply side
Canadian Solar	CSI-20, 25 and 30KTL-GI-FL	TUV Rheinland	2018/05/07		50128276 002	AK 50406933 0001	No	Yes	
Canadian Solar	CSI-40KTL-GI-FL	TUV Rheinland	2018/05/03		50131287 002	AK 50406675 0001	No	Yes	The maximum DC voltage is depended on PV array and may not exceed 1000V when this inverter is used.
Canadian Solar	CSI-50KTL-GI	TUV Rheinland	2018/05/03		50131287 002	AK 50406675 0001	No	Yes	The maximum DC voltage is depended on PV array and may not exceed 1000V when this inverter is used.
Danfoss	FLX Pro 5	Bureau Veritas	2014/03/28	2018/12/31	13TH0158-NRS 097-2-1	U14-0210	Yes	No	The unit must be provided with an external RCMU type B
Danfoss	FLX Pro 6	Bureau Veritas	2014/03/28	2018/12/31	13TH0158-NRS 097-2-1	U14-0210	Yes	No	The unit must be provided with an external RCMU type B
Danfoss	FLX Pro 7	Bureau Veritas	2014/03/28	2018/12/31	13TH0158-NRS 097-2-1	U14-0210	Yes	No	The unit must be provided with an external RCMU type B
Danfoss	FLX Pro 8	Bureau Veritas	2014/03/28	2018/12/31	13TH0158-NRS 097-2-1	U14-0210	Yes	No	The unit must be provided with an external RCMU type B
Danfoss	FLX Pro 9	Bureau Veritas	2014/03/28	2018/12/31	13TH0158-NRS 097-2-1	U14-0210	Yes	No	The unit must be provided with an external RCMU type B
Danfoss	FLX Pro 10	Bureau Veritas	2014/03/28	2018/12/31	13TH0158-NRS 097-2-1	U14-0210	Yes	No	The unit must be provided with an external RCMU type B
Danfoss	FLX Pro 12.5	Bureau Veritas	2014/03/28	2018/12/31	13TH0158-NRS 097-2-1	U14-0210	Yes	No	The unit must be provided with an external RCMU type B
Danfoss	FLX Pro 15	Bureau Veritas	2014/03/28	2018/12/31	13TH0158-NRS 097-2-1	U14-0210	Yes	No	The unit must be provided with an external RCMU type B
Danfoss	FLX Pro 17	Bureau Veritas	2014/03/28	2018/12/31	13TH0158-NRS 097-2-1	U14-0210	Yes	No	The unit must be provided with an external RCMU type B
Delta	RPI-M15A	Primara	2015/04/20	2018/12/31	13KFS043-12	15-072-00	Yes	No	
Delta	RPI-M20A	Primara	2015/04/20	2018/12/31	13KFS043-12	15-072-00	Yes	No	
Delta	RPI-M30A_xxx	Bureau Veritas	2015/11/20		PV151023C12-NRS 097-2-1	U15-0417	Yes	No	1st 'x' denote DC switch ['1' - with and '0' - without]; 2nd 'x' denote for number of MPPT; 3rd 'x' denote option accessories and protection components ['0' - with SPD & fuse and have 8 DC input strings, '1' - without SPD & fuse and have 6 DC input strings]
Delta	RPI-M50A_xxx	Bureau Veritas	2015/11/20	2018/12/31	PVZA151023C13-NRS 097-2-1	U15-0416	Yes	No	1st 'x' denote DC switch ['1' - with and '0' - without]; 2nd 'x' denote for number of MPPT; 3rd 'x' denote option accessories and protection components ['0' - with SPD & fuse, '1' - without SPD & fuse and '2' - without SPD & with fuse]
Friem	RECon S3-10	TUV Rheinland	2014/01/06	2018/12/31	16802129002	AK50273615 0001	Yes	No	RCD or RCM Type B required on supply side
Friem	RECon S3-12	TUV Rheinland	2014/01/06	2018/12/31	16802129002	AK50273615 0001	Yes	No	RCD or RCM Type B required on supply side
Friem	RECon S3-15	TUV Rheinland	2014/01/06	2018/12/31	16802129002	AK50273615 0001	Yes	No	RCD or RCM Type B required on supply side
Fronius	SYMO 10.0-3-M	TUV Rheinland	2014/10/14	2018/12/31	28106966001	AK 60097128 0001	Yes	No	
Fronius	SYMO 12.5-3-M	TUV Rheinland	2014/10/14	2018/12/31	28106966001	AK 60097128 0001	Yes	No	
Fronius	SYMO 15.0-3-M	TUV Rheinland	2014/10/14	2018/12/31	28106966001	AK 60097128 0001	Yes	No	
Fronius	SYMO 17.5-3-M	TUV Rheinland	2014/10/14	2018/12/31	28106966001	AK 60097128 0001	Yes	No	
Fronius	SYMO 20.0-3-M	TUV Rheinland	2014/10/14	2018/12/31	28106966001	AK 60097128 0001	Yes	No	
Fronius	SYMO 8.2-3-M	TUV Rheinland	2014/09/23	2018/12/31	28106964001	AK 60096700 0001	Yes	No	
Fronius	SYMO 8.0-3-M	TUV Rheinland	2014/09/23	2018/12/31	28106964001	AK 60096700 0001	Yes	No	
Fronius	SYMO 7.0-3-M	TUV Rheinland	2014/09/23	2018/12/31	28106964001	AK 60096700 0001	Yes	No	
Fronius	SYMO 6.7-3-M	TUV Rheinland	2014/09/23	2018/12/31	28106964001	AK 60096700 0001	Yes	No	
Fronius	SYMO 6.0-3-M	TUV Rheinland	2014/09/23	2018/12/31	28106964001	AK 60096700 0001	Yes	No	
Fronius	SYMO 5.5-3-M	TUV Rheinland	2014/09/23	2018/12/31	28106964001	AK 60096700 0001	Yes	No	
Fronius	SYMO 5.0-3-M	TUV Rheinland	2014/09/23	2018/12/31	28106964001	AK 60096700 0001	Yes	No	
Fronius	SYMO 4.5-3-M	TUV Rheinland	2014/09/23	2018/12/31	28106964001	AK 60096700 0001	Yes	No	
Fronius	SYMO 3.7-3-M	TUV Rheinland	2014/09/23	2018/12/31	28106964001	AK 60096700 0001	Yes	No	
Fronius	SYMO 3.0-3-M	TUV Rheinland	2014/09/23	2018/12/31	28106964001	AK 60096700 0001	Yes	No	
Fronius	SYMO 4.5-3-S	TUV Rheinland	2014/09/23	2018/12/31	28106930001	AK 60096699 0001	Yes	No	
Fronius	SYMO 3.7-3-S	TUV Rheinland	2014/09/23	2018/12/31	28106930001	AK 60096699 0001	Yes	No	
Fronius	SYMO 3.0-3-S	TUV Rheinland	2014/09/23	2018/12/31	28106930001	AK 60096699 0001	Yes	No	
Fronius	SYMO HYBRID 3.0-3-S	TUV Rheinland	2016/03/11	2018/12/31	28108910001	AK 60109324 0001	Yes	No	
Fronius	SYMO HYBRID 4.0-3-S	TUV Rheinland	2016/03/11	2018/12/31	28108910001	AK 60109324 0001	Yes	No	
Fronius	SYMO HYBRID 5.0-3-S	TUV Rheinland	2016/03/11	2018/12/31	28108910001	AK 60109324 0001	Yes	No	
Fronius	GALVO 3.1-1	TUV Rheinland	2014/09/26	2018/12/31	28106965001	AK 60096769 0001	Yes	No	
Fronius	GALVO 3.0-1	TUV Rheinland	2014/09/26	2018/12/31	28106965001	AK 60096769 0001	Yes	No	
Fronius	GALVO 2.5-1	TUV Rheinland	2014/09/26	2018/12/31	28106965001	AK 60096769 0001	Yes	No	
Fronius	GALVO 2.0-1	TUV Rheinland	2014/09/26	2018/12/31	28106965001	AK 60096769 0001	Yes	No	
Fronius	GALVO 1.5-1	TUV Rheinland	2014/09/26	2018/12/31	28106965001	AK 60096769 0001	Yes	No	
Fronius	Primo 3.0-1	TUV Rheinland	2015/06/09	2018/12/31	28107823001	AK 60102213 0001	Yes	No	
Fronius	Primo 3.5-1	TUV Rheinland	2015/06/09	2018/12/31	28107823001	AK 60102213 0001	Yes	No	
Fronius	Primo 3.6-1	TUV Rheinland	2015/06/09	2018/12/31	28107823001	AK 60102213 0001	Yes	No	
Fronius	Primo 4.0-1	TUV Rheinland	2015/06/09	2018/12/31	28107823001	AK 60102213 0001	Yes	No	
Fronius	Primo 4.6-1	TUV Rheinland	2015/06/09	2018/12/31	28107823001	AK 60102213 0001	Yes	No	
Fronius	Primo 5.0-1	TUV Rheinland	2015/06/09	2018/12/31	28107823001	AK 60102213 0001	Yes	No	
Fronius	Primo 5.0-1 AUS	TUV Rheinland	2015/06/09	2018/12/31	28107823001	AK 60102213 0001	Yes	No	
Fronius	Primo 6.0-1	TUV Rheinland	2015/06/09	2018/12/31	28107823001	AK 60102213 0001	Yes	No	
Fronius	Primo 8.2-1	TUV Rheinland	2015/06/09	2018/12/31	28107823001	AK 60102213 0001	Yes	No	
Fronius	ECO 25.0-3-S	TUV Rheinland	2015/10/30	2018/12/31	28108445001	AK 60105872 0001	Yes	No	
Fronius	ECO 27.0-3-S	TUV Rheinland	2015/10/30	2018/12/31	28108445001	AK 60105872 0001	Yes	No	
Goodwe	GW 3648S-ES	TUV SÜD	2015/04/09	2018/12/31	704091503805-00	D150483373011	Yes	No	
Goodwe	GW3648D-ES	TUV SÜD	2015/04/09	2018/12/31	704091503805-00	D150483373011	Yes	No	
Goodwe	GW4248D-ES	TUV SÜD	2015/04/09	2018/12/31	704091503805-00	D150483373011	Yes	No	
Goodwe	GW5048D-ES	TUV SÜD	2015/04/09	2018/12/31	704091503805-00	D150483373011	Yes	No	
Goodwe	GW3048-EM	TUV Rheinland	2017/07/14		50085060 001	AK 50383738 0001	No	Yes	
Goodwe	GW3648-EM	TUV Rheinland	2017/07/14		50085060 001	AK 50383738 0001	No	Yes	
Goodwe	GW5048-EM	TUV Rheinland	2017/07/14		50085060 001	AK 50383738 0001	No	Yes	

Growatt	Growatt 7000UE	Bureau Veritas	2014/03/21	2018/12/31	12TH0124-NRS 097-2-1	U14-0190	Yes	No	
Growatt	Growatt 8000UE	Bureau Veritas	2014/03/21	2018/12/31	12TH0124-NRS 097-2-1	U14-0190	Yes	No	
Growatt	Growatt 9000UE	Bureau Veritas	2014/03/21	2018/12/31	12TH0124-NRS 097-2-1	U14-0190	Yes	No	
Growatt	Growatt 10000UE	Bureau Veritas	2014/03/21	2018/12/31	12TH0124-NRS 097-2-1	U14-0190	Yes	No	
Growatt	Growatt 12000UE	Bureau Veritas	2014/03/21	2018/12/31	12TH0124-NRS 097-2-1	U14-0190	Yes	No	
Growatt	Growatt 18000UE	Bureau Veritas	2014/03/21	2018/12/31	12TH0124-NRS 097-2-1	U14-0190	Yes	No	
Growatt	Growatt 20000UE	Bureau Veritas	2014/03/21	2018/12/31	12TH0124-NRS 097-2-1	U14-0190	Yes	No	
Huawei	SUN 2000-8KTL	Bureau Veritas	2015/03/16	2018/12/31	PV141230N007	U15-0085	Yes	No	
Huawei	SUN 2000-10KTL	Bureau Veritas	2015/03/16	2018/12/31	PV141230N007	U15-0085	Yes	No	
Huawei	SUN 2000-12KTL	Bureau Veritas	2015/03/16	2018/12/31	PV141230N007	U15-0085	Yes	No	
Huawei	SUN 2000-15KTL	Bureau Veritas	2015/03/16	2018/12/31	PV141230N007	U15-0085	Yes	No	
Huawei	SUN 2000-17KTL	Bureau Veritas	2015/03/16	2018/12/31	PV141230N007	U15-0085	Yes	No	
Huawei	SUN 2000-20KTL	Bureau Veritas	2015/03/16	2018/12/31	PV141230N007	U15-0085	Yes	No	
Huawei	SUN 2000-23KTL	Bureau Veritas	2015/03/16	2018/12/31	PV141230N007	U15-0085	Yes	No	
Huawei	SUN 2000-33KTL	TÜV SÜD	2015/10/29	2018/12/31	70 409 15 062 16-00	D 15 10 80793 039	Yes	No	A type B RCD should be used between the inverter and grid according to user manual.
Huawei	SUN 2000-36KTL	Bureau Veritas	2016/08/02	2018/12/31	PVZA160707N051	U16-0442	Yes	No	
Icon	EPHS-ICON-1P-01A	Eurofins	2016/06/15	2018/12/31	EF5H16040660-IE-01-L01	S3M21605-0050-31698	Yes	No	
I-Energy	GT 260	Bureau Veritas	2014/03/28	2018/12/31	PV140226C14-NRS-2-1	U14-0211	Yes	No	I-Energy GT 260 micro inverter is not equipped with an automatic disconnection device and an external City listed network and system grid protection voltage and frequency relay must be provided in the photovoltaic system with appropriately sized two in series contactors according to NRS 097-2-1 requirements and default settings. The unit must be provided with an external RCMU type A.
Imeon Energy	Imeon 3.6	TUV Rheinland	2015/07/24	2018/12/31	17048970001	AK 50316832 0001	Yes	No	
Imeon Energy	Imeon 9.12	TUV Rheinland	2016/02/25	2018/12/31	17048968001	AK 50330983 0001	Yes	No	
Ingeteam	Ingecon Sun 2.5 TL M	SGS	2015/04/16	2018/04/16	2614/0337-B21	2614/0337/B21-CER	Yes	No	
Ingeteam	Ingecon Sun 2.7 TL M	SGS	2015/04/16	2018/04/16	2614/0337-B21	2614/0337/B21-CER	Yes	No	
Ingeteam	Ingecon Sun 3 TL M	SGS	2015/04/16	2018/04/16	2614/0337-B21	2614/0337/B21-CER	Yes	No	
Ingeteam	Ingecon Sun 3.3 TL M	SGS	2015/04/16	2018/04/16	2614/0337-B21	2614/0337/B21-CER	Yes	No	
Ingeteam	Ingecon Sun 3.68 TL M	SGS	2015/04/16	2018/04/16	2614/0337-B21	2614/0337/B21-CER	Yes	No	
Ingeteam	Ingecon Sun 4.6 TL M	SGS	2015/04/16	2018/04/16	2614/0337-B21	2614/0337/B21-CER	Yes	No	
Ingeteam	Ingecon Sun 5 TL M	SGS	2015/04/16	2018/04/16	2614/0337-B21	2614/0337/B21-CER	Yes	No	
Ingeteam	Ingecon Sun 5.5 TL M	SGS	2015/04/16	2018/04/16	2614/0337-B21	2614/0337/B21-CER	Yes	No	
Ingeteam	Ingecon Sun 6 TL M	SGS	2015/04/16	2018/04/16	2614/0337-B21	2614/0337/B21-CER	Yes	No	
Ingeteam	Ingecon Sun 2.5 TL	SGS	2015/06/12	2018/04/17	2615/0254/1	2615/0254/11-CER/E1	Yes	No	
Ingeteam	Ingecon Sun 3 TL	SGS	2015/06/12	2018/04/17	2615/0254/1	2615/0254/11-CER/E1	Yes	No	
Ingeteam	Ingecon Sun 3.3 TL	SGS	2015/06/12	2018/04/17	2615/0254/1	2615/0254/11-CER/E1	Yes	No	
Ingeteam	Ingecon Sun 3.68 TL	SGS	2015/06/12	2018/04/17	2615/0254/1	2615/0254/11-CER/E1	Yes	No	
Ingeteam	Ingecon Sun 4.6 TL	SGS	2015/06/12	2018/04/17	2615/0254/1	2615/0254/11-CER/E1	Yes	No	
Ingeteam	Ingecon Sun 5 TL	SGS	2015/06/12	2018/04/17	2615/0254/1	2615/0254/11-CER/E1	Yes	No	
Ingeteam	Ingecon Sun 6 TL	SGS	2015/06/12	2018/04/17	2615/0254/1	2615/0254/11-CER/E1	Yes	No	
Ingeteam	Ingecon Sun 7.5 TL	SGS	2015/06/12	2018/04/17	2615/0254/1	2615/0254/11-CER/E1	Yes	No	
Ingeteam	Ingecon Sun 8.2 TL	SGS	2015/06/12	2018/04/17	2615/0254/1	2615/0254/11-CER/E1	Yes	No	
Ingeteam	Ingecon Sun 8.6 TL	SGS	2015/06/12	2018/04/17	2615/0254/1	2615/0254/11-CER/E1	Yes	No	
Ingeteam	Ingecon Sun Storage 3 TL	SGS	2015/06/12	2018/04/17	2615/0254/1	2615/0254/12-CER/E1	Yes	No	
Ingeteam	Ingecon Sun Storage 6 TL	SGS	2015/06/12	2018/04/17	2615/0254/1	2615/0254/12-CER/E1	Yes	No	
Ingeteam	Ingecon Sun Storage 3	SGS	2015/06/12	2018/04/17	2615/0254/2	2615/0254/22-CER/E2	Yes	No	
Ingeteam	Ingecon Sun Storage 6	SGS	2015/06/12	2018/04/17	2615/0254/2	2615/0254/22-CER/E2	Yes	No	
Ingeteam	Ingecon Sun 2.5	SGS	2015/06/12	2018/04/20	2615/0254/2	2615/0254/21-CER/E1	Yes	No	
Ingeteam	Ingecon Sun 3	SGS	2015/06/12	2018/04/20	2615/0254/2	2615/0254/21-CER/E1	Yes	No	
Ingeteam	Ingecon Sun 3.3	SGS	2015/06/12	2018/04/20	2615/0254/2	2615/0254/21-CER/E1	Yes	No	
Ingeteam	Ingecon Sun 3.68	SGS	2015/06/12	2018/04/20	2615/0254/2	2615/0254/21-CER/E1	Yes	No	
Ingeteam	Ingecon Sun 4.6	SGS	2015/06/12	2018/04/20	2615/0254/2	2615/0254/21-CER/E1	Yes	No	
Ingeteam	Ingecon Sun 5	SGS	2015/06/12	2018/04/20	2615/0254/2	2615/0254/21-CER/E1	Yes	No	
Ingeteam	Ingecon Sun 6	SGS	2015/06/12	2018/04/20	2615/0254/2	2615/0254/21-CER/E1	Yes	No	
Ingeteam	Ingecon Sun 7.5	SGS	2015/06/12	2018/04/20	2615/0254/2	2615/0254/21-CER/E1	Yes	No	
Ingeteam	Ingecon Sun 8.2	SGS	2015/06/12	2018/04/20	2615/0254/2	2615/0254/21-CER/E1	Yes	No	
Ingeteam	Ingecon Sun 8.6	SGS	2015/06/12	2018/04/20	2615/0254/2	2615/0254/21-CER/E1	Yes	No	
Ingeteam	Ingecon Sun 10	SGS	2015/06/12	2018/04/20	2615/0254/2	2615/0254/21-CER/E1	Yes	No	
Ingeteam	Ingecon Sun 10 TL M	SGS	2015/12/22	2018/04/16	2614/0337-B23-E2	2614/0337/B23/E2-CER	Yes	No	
Ingeteam	Ingecon Sun 12.5 TL M	SGS	2015/12/22	2018/04/16	2614/0337-B23-E2	2614/0337/B23/E2-CER	Yes	No	
Ingeteam	Ingecon Sun 15 TL M	SGS	2015/12/22	2018/04/16	2614/0337-B23-E2	2614/0337/B23/E2-CER	Yes	No	
Ingeteam	Ingecon Sun 20 TL M	SGS	2015/12/22	2018/04/16	2614/0337-B23-E2	2614/0337/B23/E2-CER	Yes	No	
Ingeteam	Ingecon Sun 28 TL M	SGS	2015/12/22	2018/04/16	2614/0337-B23-E2	2614/0337/B23/E2-CER	Yes	No	
Ingeteam	Ingecon Sun 33 TL M	SGS	2015/12/22	2018/04/16	2614/0337-B23-E2	2614/0337/B23/E2-CER	Yes	No	
Ingeteam	Ingecon Sun 24 TL M480	SGS	2015/12/22	2018/04/16	2614/0337-B23-E2	2614/0337/B23/E2-CER	Yes	No	
Ingeteam	Ingecon Sun 40 TL M480	SGS	2015/12/22	2018/04/16	2614/0337-B23-E2	2614/0337/B23/E2-CER	Yes	No	
Ingeteam	Ingecon Sun 10 TL	SGS	2015/12/22	2018/04/16	2614/0337-B23-E2	2614/0337/B23/E2-CER	Yes	No	
Ingeteam	Ingecon Sun 12.5 TL	SGS	2015/12/22	2018/04/16	2614/0337-B23-E2	2614/0337/B23/E2-CER	Yes	No	
Ingeteam	Ingecon Sun 15 TL	SGS	2015/12/22	2018/04/16	2614/0337-B23-E2	2614/0337/B23/E2-CER	Yes	No	
Ingeteam	Ingecon Sun 20 TL	SGS	2015/12/22	2018/04/16	2614/0337-B23-E2	2614/0337/B23/E2-CER	Yes	No	
Ingeteam	Ingecon Sun 28 TL	SGS	2015/12/22	2018/04/16	2614/0337-B23-E2	2614/0337/B23/E2-CER	Yes	No	
Ingeteam	Ingecon Sun 33 TL	SGS	2015/12/22	2018/04/16	2614/0337-B23-E2	2614/0337/B23/E2-CER	Yes	No	
JFY	Suntree 5000TL	Bureau Veritas	2016/01/21	2018/12/31	PV151204N028-NRS 097-2-1	U16-0012	Yes	No	
JFY	Suntree 6000TL	Bureau Veritas	2016/01/21	2018/12/31	PV151204N028-NRS 097-2-1	U16-0012	Yes	No	
JFY	Suntree 8000TL	Bureau Veritas	2016/01/21	2018/12/31	PV151204N028-NRS 097-2-1	U16-0012	Yes	No	

JFY	Suntree 10000TL	Bureau Veritas	2016/01/21	2018/12/31	PV151204N028-NRS 097-2-1	U16-0012	Yes	No
JFY	Suntree 12000TL	Bureau Veritas	2016/01/21	2018/12/31	PV151204N028-NRS 097-2-1	U16-0012	Yes	No
JFY	Suntree 15000TL	Bureau Veritas	2016/01/21	2018/12/31	PV151204N028-NRS 097-2-1	U16-0012	Yes	No
JFY	Suntree 17000TL	Bureau Veritas	2016/01/21	2018/12/31	PV151204N028-NRS 097-2-1	U16-0012	Yes	No
JFY	Suntree 20000TL	Bureau Veritas	2016/01/21	2018/12/31	PV151204N028-NRS 097-2-1	U16-0012	Yes	No
JFY	Suntree 30000TL	Bureau Veritas	2016/01/21	2018/12/31	PV151204N028-NRS 097-2-1	U16-0012	Yes	No
KACO	blueplanet 5.0 TL3 M2 WM OD IIG0	Bureau Veritas	2016/09/22	2018/12/31	14TH0348-NRS 097-2-1_1	U16-0545	Yes	No
KACO	blueplanet 6.5 TL3 M2 WM OD IIG0	Bureau Veritas	2016/09/22	2018/12/31	14TH0348-NRS 097-2-1_1	U16-0545	Yes	No
KACO	blueplanet 7.5 TL3 M2 WM OD IIG0	Bureau Veritas	2016/09/22	2018/12/31	14TH0348-NRS 097-2-1_1	U16-0545	Yes	No
KACO	blueplanet 8.6 TL3 M2 WM OD IIG0	Bureau Veritas	2016/09/22	2018/12/31	14TH0348-NRS 097-2-1_1	U16-0545	Yes	No
KACO	blueplanet 9.0 TL3 M2 WM OD IIG0	Bureau Veritas	2016/09/22	2018/12/31	14TH0348-NRS 097-2-1_1	U16-0545	Yes	No
KACO	blueplanet 10.0 TL3 M2 WM OD IIG0	Bureau Veritas	2016/09/22	2018/12/31	14TH0348-NRS 097-2-1_1	U16-0545	Yes	No
KACO	blueplanet 2.0 TL 1M1	Primara	2015/10/19	2018/12/31	14PP047-17	15-202-00	Yes	No
KACO	blueplanet 2.6 TL 1M1	Primara	2015/10/19	2018/12/31	14PP047-17	15-202-00	Yes	No
KACO	blueplanet 3.0 TL 1M1	Primara	2015/10/19	2018/12/31	14PP047-17	15-202-00	Yes	No
KACO	blueplanet 3.0 TL 1M2	Primara	2015/10/19	2018/12/31	14PP047-17	15-202-00	Yes	No
KACO	blueplanet 3.5 TL 1M2	Primara	2015/10/19	2018/12/31	14PP047-17	15-202-00	Yes	No
KACO	blueplanet 3.7 TL 1M2	Primara	2015/10/19	2018/12/31	14PP047-17	15-202-00	Yes	No
KACO	blueplanet 4.0 TL 1M2	Primara	2015/10/19	2018/12/31	14PP047-17	15-202-00	Yes	No
KACO	blueplanet 4.6 TL 1M2	Primara	2015/10/19	2018/12/31	14PP047-17	15-202-00	Yes	No
KACO	blueplanet 5.0 TL 1M2	Primara	2015/10/19	2018/12/31	14PP047-17	15-202-00	Yes	No
KACO	blueplanet 50.0 TL3 M1 WM OD IIGM	Bureau Veritas	2016/02/26	2018/12/31	15TH0250-NRS 097-2-1	U16-0057	Yes	No
KACO	blueplanet 50.0 TL3 M1 WM OD IIGB	Bureau Veritas	2016/02/26	2018/12/31	15TH0250-NRS 097-2-1	U16-0057	Yes	No
KACO	blueplanet 50.0 TL3 M1 WM OD IIGX	Bureau Veritas	2016/02/26	2018/12/31	15TH0250-NRS 097-2-1	U16-0057	Yes	No
KACO	Powador 60.0 TL3	Bureau Veritas	2016/04/11	2018/12/31	12TH0351-NRS 097-2-1	U16-0204	Yes	No
KACO	Powador 12.0 TL3-INT	Bureau Veritas	2016/08/24	2018/12/31	10TH0306-NRS 097-2-1_0	U16-0472	Yes	No
KACO	Powador 14.0 TL3-INT	Bureau Veritas	2016/08/24	2018/12/31	10TH0306-NRS 097-2-1_0	U16-0472	Yes	No
KACO	Powador 18.0 TL3-INT	Bureau Veritas	2016/08/24	2018/12/31	10TH0306-NRS 097-2-1_0	U16-0472	Yes	No
KACO	Powador 20.0 TL3-INT	Bureau Veritas	2016/08/24	2018/12/31	10TH0306-NRS 097-2-1_0	U16-0472	Yes	No
KACO	blueplanet 20.0 TL3 M2 WM OD IIGO	Bureau Veritas	2016/08/24	2018/12/31	10TH0306-NRS 097-2-1_0	U16-0472	Yes	No
Omnik New Energy	Omniksol-13k-TL	Bureau Veritas	2016/06/16	2018/12/31	12TH0315-NRS 097-2-1	U16-0344	Yes	No
Omnik New Energy	Omniksol-17k-TL	Bureau Veritas	2016/06/16	2018/12/31	12TH0315-NRS 097-2-1	U16-0344	Yes	No
Omnik New Energy	Omniksol-20k-TL	Bureau Veritas	2016/06/16	2018/12/31	12TH0315-NRS 097-2-1	U16-0344	Yes	No
Omnik New Energy	Omniksol-1k-TL2	Bureau Veritas	2015/05/06	2018/12/31	OMK-15MA2119FTSP-NRS 097-2-1	U15-0150	Yes	No
Omnik New Energy	Omniksol-1.5k-TL2	Bureau Veritas	2015/05/06	2018/12/31	OMK-15MA2119FTSP-NRS 097-2-1	U15-0150	Yes	No
Omnik New Energy	Omniksol-2k-TL2	Bureau Veritas	2015/05/06	2018/12/31	OMK-15MA2119FTSP-NRS 097-2-1	U15-0150	Yes	No
Omnik New Energy	Omniksol-2.5k-TL2-S	Bureau Veritas	2015/05/06	2018/12/31	OMK-15MA2119FTSP-NRS 097-2-1	U15-0150	Yes	No
Omnik New Energy	Omniksol-3k-TL2-S	Bureau Veritas	2015/05/06	2018/12/31	OMK-15MA2119FTSP-NRS 097-2-1	U15-0150	Yes	No
Omnik New Energy	Omniksol-3k-TL2	Bureau Veritas	2015/05/06	2018/12/31	OMK-15MA2119FTSP-NRS 097-2-1	U15-0150	Yes	No
Omnik New Energy	Omniksol-4k-TL2	Bureau Veritas	2015/05/06	2018/12/31	OMK-15MA2119FTSP-NRS 097-2-1	U15-0150	Yes	No
Omnik New Energy	Omniksol-5k-TL2	Bureau Veritas	2015/05/06	2018/12/31	OMK-15MA2119FTSP-NRS 097-2-1	U15-0150	Yes	No
Omron	KP100L-OD-EU	Primara	2015/10/29	2018/12/31	13KFS042-04	15-200-01	Yes	No
ReneSola	Replus SineOn IH3KW-48-V	Eurofins	2015/07/16	2018/12/31	EFSH15051932-IE-01-L05	S3D21507-0003	Yes	No
Samil Power	Solar River 1100 TL-S	Eurofins	2017/02/27	2018/12/31	EFSH16010328-IE-01-L01	S3M21605-0046-35676	Yes	No
Samil Power	Solar River 1600 TL-S	Eurofins	2017/02/27	2018/12/31	EFSH16010328-IE-01-L01	S3M21605-0046-35676	Yes	No
Samil Power	Solar River 2100 TL-S	Eurofins	2017/02/27	2018/12/31	EFSH16010328-IE-01-L01	S3M21605-0046-35676	Yes	No
Samil Power	Solar River 2600 TL-S	Eurofins	2017/02/27	2018/12/31	EFSH16010328-IE-01-L01	S3M21605-0046-35676	Yes	No
Samil Power	Solar River 3200 TL-S	Eurofins	2017/02/27	2018/12/31	EFSH16010328-IE-01-L01	S3M21605-0046-35676	Yes	No
Samil Power	Solar River 3400 TL-D	Eurofins	2017/02/27	2018/12/31	EFSH16010328-IE-01-L02	S3M21605-0049-35677	Yes	No
Samil Power	Solar River 4000 TL-D	Eurofins	2017/02/27	2018/12/31	EFSH16010328-IE-01-L02	S3M21605-0049-35677	Yes	No
Samil Power	Solar River 4500 TL-D	Eurofins	2017/02/27	2018/12/31	EFSH16010328-IE-01-L02	S3M21605-0049-35677	Yes	No
Samil Power	Solar River 5000 TL-D	Eurofins	2017/02/27	2018/12/31	EFSH16010328-IE-01-L02	S3M21605-0049-35677	Yes	No
Samil Power	Solar River 5200 TL-D	Eurofins	2017/02/27	2018/12/31	EFSH16010328-IE-01-L02	S3M21605-0049-35677	Yes	No
Samil Power	SolarLake 5500TL-PM	Eurofins	2017/02/27	2018/12/31	EFSH16010328-IE-01-L03	S3M21605-0052-35678	Yes	No
Samil Power	SolarLake 7000TL-PM	Eurofins	2017/02/27	2018/12/31	EFSH16010328-IE-01-L03	S3M21605-0052-35678	Yes	No
Samil Power	SolarLake 8500TL-PM	Eurofins	2017/02/27	2018/12/31	EFSH16010328-IE-01-L03	S3M21605-0052-35678	Yes	No
Samil Power	SolarLake 10000TL-PM	Eurofins	2017/02/27	2018/12/31	EFSH16010328-IE-01-L03	S3M21605-0052-35678	Yes	No
Schneider	Conext CL 20000E	Bureau Veritas	2014/11/21	2018/12/31	PVZA141106C14-NRS 097-2-1	U14-0636	Yes	No
Schneider	Conext CL 25000E	Bureau Veritas	2014/11/21	2018/12/31	PVZA141106C14-NRS 097-2-1	U14-0636	Yes	No
Schneider	Conext TL 15000E	Bureau Veritas	2014/12/12	2018/12/31	PV141204C06-NRS 097-2-1	U14-0671	Yes	No
Schneider	Conext TL 20000E	Bureau Veritas	2014/12/12	2018/12/31	PV141204C06-NRS 097-2-1	U14-0671	Yes	No
Schneider	Conext CL-60E	TÜV SÜD	2018/02/09		701261703501-01	D 18 01 98208 006	No	Yes
SMA	SB5.0-1AV-40	Bureau Veritas	2016/06/20	2018/12/31	160408N064-3	U16-0354	Yes	No
SMA	SB4.0-1AV-40	Bureau Veritas	2016/06/20	2018/12/31	160408N064-3	U16-0354	Yes	No
SMA	SB3.6-1AV-40	Bureau Veritas	2016/06/20	2018/12/31	160408N064-3	U16-0354	Yes	No
SMA	SB3.0-1AV-40	Bureau Veritas	2016/06/20	2018/12/31	160408N064-3	U16-0354	Yes	No
SMA	SB 1.5 - 1VL - 40	Bureau Veritas	2015/08/04	2018/12/31	14TH0397-NRS 097-2-1	U15-0270	Yes	No
SMA	SB 2.5 - 1VL - 40	Bureau Veritas	2015/08/04	2018/12/31	14TH0397-NRS 097-2-1	U15-0270	Yes	No
SMA	STP 5000 TL-20	Bureau Veritas	2014/07/23	2018/12/31	12TH0259-NRS 097-2-1	U14-0387	Yes	No
SMA	STP 6000 TL-20	Bureau Veritas	2014/07/23	2018/12/31	12TH0259-NRS 097-2-1	U14-0387	Yes	No
SMA	STP 7000 TL-20	Bureau Veritas	2014/07/23	2018/12/31	12TH0259-NRS 097-2-1	U14-0387	Yes	No
SMA	STP 8000 TL-20	Bureau Veritas	2014/07/23	2018/12/31	12TH0259-NRS 097-2-1	U14-0387	Yes	No
SMA	STP 9000 TL-20	Bureau Veritas	2014/07/23	2018/12/31	12TH0259-NRS 097-2-1	U14-0387	Yes	No
SMA	STP 10000 TL-20	Bureau Veritas	2014/07/23	2018/12/31	12TH0259-NRS 097-2-1	U14-0387	Yes	No
SMA	STP 12000 TL-20	Bureau Veritas	2014/07/23	2018/12/31	12TH0259-NRS 097-2-1	U14-0387	Yes	No
SMA	STP 25000 TL-30	Bureau Veritas	2016/10/19	2018/12/31	14TH0304-NRS 097-2-1_2	U16-0579	Yes	No

SMA	STP 20000 TL-30	Bureau Veritas	2016/10/19	2018/12/31	14TH0304-NRS 097-2-1_2	U16-0579	Yes	No	
SMA	STP 17000 TL-30	Bureau Veritas	2016/10/19	2018/12/31	14TH0304-NRS 097-2-1_2	U16-0579	Yes	No	
SMA	STP 15000 TL-30	Bureau Veritas	2016/10/19	2018/12/31	14TH0304-NRS 097-2-1_2	U16-0579	Yes	No	
SMA	STP 8000TL-10	Bureau Veritas	2015/07/08	2018/12/31	10TH0052-NRS 097-2-1	U15-0245	Yes	No	
SMA	STP 10000TL-10	Bureau Veritas	2015/07/08	2018/12/31	10TH0052-NRS 097-2-1	U15-0245	Yes	No	
SMA	STP 12000TL-10	Bureau Veritas	2015/07/08	2018/12/31	10TH0052-NRS 097-2-1	U15-0245	Yes	No	
SMA	STP 15000TL-10	Bureau Veritas	2015/07/08	2018/12/31	10TH0052-NRS 097-2-1	U15-0245	Yes	No	
SMA	STP 15000TLHE-10	Bureau Veritas	2015/07/08	2018/12/31	10TH0052-NRS 097-2-1	U15-0245	Yes	No	
SMA	STP 15000TLEE-10	Bureau Veritas	2015/07/08	2018/12/31	10TH0052-NRS 097-2-1	U15-0245	Yes	No	
SMA	STP 17000TL-10	Bureau Veritas	2015/07/08	2018/12/31	10TH0052-NRS 097-2-1	U15-0245	Yes	No	
SMA	STP 20000TLHE-10	Bureau Veritas	2015/07/08	2018/12/31	10TH0052-NRS 097-2-1	U15-0245	Yes	No	
SMA	STP 20000TLEE-10	Bureau Veritas	2015/07/08	2018/12/31	10TH0052-NRS 097-2-1	U15-0245	Yes	No	
SMA	SB 3000TL-21	Bureau Veritas	2015/08/19	2018/12/31	11TH0290-NRS 097-2-1	U15-0289	Yes	No	
SMA	SB 3600TL-21	Bureau Veritas	2015/08/19	2018/12/31	11TH0290-NRS 097-2-1	U15-0289	Yes	No	
SMA	SB 4000TL-21	Bureau Veritas	2015/08/19	2018/12/31	11TH0290-NRS 097-2-1	U15-0289	Yes	No	
SMA	SB 5000TL-21	Bureau Veritas	2015/08/19	2018/12/31	11TH0290-NRS 097-2-1	U15-0289	Yes	No	
SMA	SB 2500TLST-21	Bureau Veritas	2015/08/19	2018/12/31	11TH0290-NRS 097-2-1	U15-0289	Yes	No	
SMA	SB 3000TLST-21	Bureau Veritas	2015/08/19	2018/12/31	11TH0290-NRS 097-2-1	U15-0289	Yes	No	
SMA	STP 60-10 / MLX 60	Bureau Veritas	2015/02/20	2018/12/31	14TH0075-NRS 097-2-1	U15-0066	Yes	No	The unit must be provided with an external RCMU type B
Socomec	SUN-PR24KTL65M	Primara	2015/02/11	2018/12/31	14PP012-04	15-045-00	Yes	No	
SolarEdge	SE 2200H	Primara	2016/12/06	2018/12/31	16PP115-09	16-084-01	Yes	No	Internal RCMU and RCD Type B required.
SolarEdge	SE 3000H	Primara	2016/12/06	2018/12/31	16PP115-09	16-084-01	Yes	No	Internal RCMU and RCD Type B required.
SolarEdge	SE 3500H	Primara	2016/12/06	2018/12/31	16PP115-09	16-084-01	Yes	No	Internal RCMU and RCD Type B required.
SolarEdge	SE 3680H	Primara	2016/12/06	2018/12/31	16PP115-09	16-084-01	Yes	No	Internal RCMU and RCD Type B required.
SolarEdge	SE 4000H	Primara	2016/12/06	2018/12/31	16PP115-09	16-084-01	Yes	No	Internal RCMU and RCD Type B required.
SolarEdge	SE 5000H	Primara	2016/12/06	2018/12/31	16PP115-09	16-084-01	Yes	No	Internal RCMU and RCD Type B required.
SolarEdge	SE 6000H	Primara	2016/12/06	2018/12/31	16PP115-09	16-084-01	Yes	No	Internal RCMU and RCD Type B required.
SolarEdge	SE 2200	Primara	2015/09/02	2018/12/31	11KFS055-15	15-101-01	Yes	No	Internal RCMU and RCD Type B required.
SolarEdge	SE 3000	Primara	2015/09/02	2018/12/31	11KFS055-15	15-101-01	Yes	No	
SolarEdge	SE 3300	Primara	2015/09/02	2018/12/31	11KFS055-15	15-101-01	Yes	No	
SolarEdge	SE 3500	Primara	2015/09/02	2018/12/31	11KFS055-15	15-101-01	Yes	No	
SolarEdge	SE 4000	Primara	2015/09/02	2018/12/31	11KFS055-15	15-101-01	Yes	No	
SolarEdge	SE 5000	Primara	2015/09/02	2018/12/31	11KFS055-15	15-101-01	Yes	No	
SolarEdge	SE 6000	Primara	2015/09/02	2018/12/31	11KFS055-15	15-101-01	Yes	No	
SolarEdge	SE 5000-RWS	Primara	2016/02/04	2018/12/31	15PP125-03	16-015-00	Yes	No	
SolarEdge	SE 6000-RWS	Primara	2016/02/04	2018/12/31	15PP125-03	16-015-00	Yes	No	
SolarEdge	SE 5000-ZAS	Primara	2016/02/04	2018/12/31	15PP125-03	16-015-00	Yes	No	
SolarEdge	SE 6000-ZAS	Primara	2016/02/04	2018/12/31	15PP125-03	16-015-00	Yes	No	
SolarEdge	SE25K	Primara	2015/08/05	2018/12/31	15PP010-22	15-152-00	Yes	No	
SolarEdge	SE27.6K	Primara	2015/08/05	2018/12/31	15PP010-22	15-152-00	Yes	No	
SolarEdge	SE4K	Bureau Veritas	2015/05/05	2018/12/31	10TH0222-NRS 097-2-1	U15-0146	Yes	No	
SolarEdge	SE6K	Bureau Veritas	2015/05/05	2018/12/31	10TH0222-NRS 097-2-1	U15-0146	Yes	No	
SolarEdge	SE7K	Bureau Veritas	2015/05/05	2018/12/31	10TH0222-NRS 097-2-1	U15-0146	Yes	No	
SolarEdge	SE8K	Bureau Veritas	2015/05/05	2018/12/31	10TH0222-NRS 097-2-1	U15-0146	Yes	No	
SolarEdge	SE9K	Bureau Veritas	2015/05/05	2018/12/31	10TH0222-NRS 097-2-1	U15-0146	Yes	No	
SolarEdge	SE10K	Bureau Veritas	2015/05/05	2018/12/31	10TH0222-NRS 097-2-1	U15-0146	Yes	No	
SolarEdge	SE12.5K	Bureau Veritas	2015/05/05	2018/12/31	10TH0222-NRS 097-2-1	U15-0146	Yes	No	
SolarEdge	SE15K	Bureau Veritas	2015/05/05	2018/12/31	10TH0222-NRS 097-2-1	U15-0146	Yes	No	
SolarEdge	SE16K	Bureau Veritas	2015/05/05	2018/12/31	10TH0222-NRS 097-2-1	U15-0146	Yes	No	
SolarEdge	SE17K	Bureau Veritas	2015/05/05	2018/12/31	10TH0222-NRS 097-2-1	U15-0146	Yes	No	
SolarWorld	Sunplug eco 1.2 TL1i	Bureau Veritas	2015/08/19	2018/12/31	10TH0241-NRS 097-2-1	U15-0325	Yes	No	If used for multiphase phase installations above 3kW, the following requirements shall be complied with as stipulated in the Bureau Veritas Test Report 10TH0241-NRS097-2-1 "The single-phase embedded generators are not able to communicate with each other for disconnection. Therefore for connection above 3kW an external 3 phase monitoring will be necessary to realize an out-of-bound detection for all phases". Detail thereof must be provided to the City with the commissioning approval documentation. Alternatively, the inverter must only be used for multiphase installations ≤ 3kW.
SolarWorld	Sunplug eco 1.2 TL1x	Bureau Veritas	2015/08/19	2018/12/31	10TH0241-NRS 097-2-1	U15-0325	Yes	No	
SolarWorld	Sunplug eco 2.0 TL1i	Bureau Veritas	2015/08/19	2018/12/31	10TH0241-NRS 097-2-1	U15-0325	Yes	No	
SolarWorld	Sunplug eco 2.0 TL1x	Bureau Veritas	2015/08/19	2018/12/31	10TH0241-NRS 097-2-1	U15-0325	Yes	No	
SolarWorld	Sunplug eco 3.0 TL1i	Bureau Veritas	2015/08/19	2018/12/31	10TH0241-NRS 097-2-1	U15-0325	Yes	No	
SolarWorld	Sunplug eco 3.0 TL1x	Bureau Veritas	2015/08/19	2018/12/31	10TH0241-NRS 097-2-1	U15-0325	Yes	No	
SolarWorld	Sunplug eco 3.6 TL1i	Bureau Veritas	2015/08/19	2018/12/31	10TH0241-NRS 097-2-1	U15-0325	Yes	No	
SolarWorld	Sunplug eco 3.6 TL1x	Bureau Veritas	2015/08/19	2018/12/31	10TH0241-NRS 097-2-1	U15-0325	Yes	No	
SolarWorld	Sunplug eco 4.2 TL1i	Bureau Veritas	2015/08/19	2018/12/31	10TH0241-NRS 097-2-1	U15-0325	Yes	No	
SolarWorld	Sunplug eco 4.2 TL1x	Bureau Veritas	2015/08/19	2018/12/31	10TH0241-NRS 097-2-1	U15-0325	Yes	No	
SolaX Power	SK-TL3000 E/C/R	TUV Rheinland	2015/05/15	2018/12/31	15082168002	AK 50311067 0001	Yes	No	
SolaX Power	SK-TL3700 E/C/R	TUV Rheinland	2015/05/15	2018/12/31	15082168002	AK 50311067 0001	Yes	No	
SolaX Power	SK-TL5000 E/C/R	TUV Rheinland	2015/05/15	2018/12/31	15082168002	AK 50311067 0001	Yes	No	
SolaX Power	SK-SU3000 E/C	TUV Rheinland	2015/05/15	2018/12/31	15082168002	AK 50311067 0001	Yes	No	
SolaX Power	SK-SU3700 E/C	TUV Rheinland	2015/05/15	2018/12/31	15082168002	AK 50311067 0001	Yes	No	
SolaX Power	SK-SU5000 E/C	TUV Rheinland	2015/05/15	2018/12/31	15082168002	AK 50311067 0001	Yes	No	
SolaX Power	SK-TL 3000 E/E-S/C-S/R/R-S	TUV SÜD	2018/03/29		70.409.18.010.02-00	D 18 03 85769 043	No	Yes	
SolaX Power	SK-TL 3700 E/C/R	TUV SÜD	2018/03/29		70.409.18.010.02-00	D 18 03 85769 043	No	Yes	
SolaX Power	SK-TL 5000 E/C/R	TUV SÜD	2018/03/29		70.409.18.010.02-00	D 18 03 85769 043	No	Yes	
SolaX Power	SK-SU3000 E/E-S/C/C-S	TUV SÜD	2018/03/29		70.409.18.010.02-00	D 18 03 85769 043	No	Yes	
SolaX Power	SK-SU3700 E/C	TUV SÜD	2018/03/29		70.409.18.010.02-00	D 18 03 85769 043	No	Yes	
SolaX Power	SK-SU5000 E/C	TUV SÜD	2018/03/29		70.409.18.010.02-00	D 18 03 85769 043	No	Yes	
SolaX Power	X3-30.0-T-N	TUV SÜD	2017/08/04		70.409.17.128.02-01	D 17 08 85769 026	No	Yes	
SolaX Power	X3-30.0-T-D	TUV SÜD	2017/08/04		70.409.17.128.02-01	D 17 08 85769 026	No	Yes	
SolaX Power	X3-36.0-T-N	TUV SÜD	2017/08/04		70.409.17.128.02-01	D 17 08 85769 026	No	Yes	
SolaX Power	X3-36.0-T-D	TUV SÜD	2017/08/04		70.409.17.128.02-01	D 17 08 85769 026	No	Yes	
Solis	Solis-mini-700-4G	Dekra	2017/11/17		6018912.51	6018912.02AOC	No	Yes	
Solis	Solis-mini-1000-4G	Dekra	2017/11/17		6018912.51	6018912.02AOC	No	Yes	

Solis	Solis-mini-1500-4G	Dekra	2017/11/17		6018912.51	6018912.02AOC	No	Yes		
Solis	Solis-mini-2000-4G	Dekra	2017/11/17		6018912.51	6018912.02AOC	No	Yes		
Solis	Solis-mini-2500-4G	Dekra	2017/11/17		6018912.51	6018912.02AOC	No	Yes		
Solis	Solis-mini-3000-4G	Dekra	2017/11/17		6018912.51	6018912.02AOC	No	Yes		
Solis	Solis-mini-3600-4G	Dekra	2017/11/17		6018912.51	6018912.02AOC	No	Yes		
Solis	Solis-1P1K-4G	Dekra	2017/11/10		6018912.50	6018912.01AOC	No	Yes		
Solis	Solis-1P1.5K-4G	Dekra	2017/11/10		6018912.50	6018912.01AOC	No	Yes		
Solis	Solis-1P2K-4G	Dekra	2017/11/10		6018912.50	6018912.01AOC	No	Yes		
Solis	Solis-1P2.5K-4G	Dekra	2017/11/10		6018912.50	6018912.01AOC	No	Yes		
Solis	Solis-1P2.5K2-4G	Dekra	2017/11/10		6018912.50	6018912.01AOC	No	Yes		
Solis	Solis-1P3K-4G-ST	Dekra	2017/11/10		6018912.50	6018912.01AOC	No	Yes		
Solis	Solis-1P3K-4G	Dekra	2017/11/10		6018912.50	6018912.01AOC	No	Yes		
Solis	Solis-1P3.6K-4G	Dekra	2017/11/10		6018912.50	6018912.01AOC	No	Yes		
Solis	Solis-1P4K-4G	Dekra	2017/11/10		6018912.50	6018912.01AOC	No	Yes		
Solis	Solis-1P4.6K-4G	Dekra	2017/11/10		6018912.50	6018912.01AOC	No	Yes		
Steca Elektronik	StecaGrid 4200	Bureau Veritas	2015/08/19	2018/12/31	10TH0241-NRS 097-2-1	U15-0323	Yes	No	If used for multiphase phase installations above 3kW, the following requirements shall be complied with as stipulated in the Bureau Veritas Test Report 10TH0241-NRS097-2-1 "The single-phase embedded generators are not able to communicate with each other for disconnection. Therefor for connection above 3kW an external 3 phase monitoring will be necessary to realize an out-of-bound detection for all phases". Detail thereof must be provided to the City with the commissioning approval documentation. Alternatively, the inverter must only be used for multiphase installations ≤ 3kW.	
Steca Elektronik	StecaGrid 4200x	Bureau Veritas	2015/08/19	2018/12/31	10TH0241-NRS 097-2-1	U15-0323	Yes	No		
Steca Elektronik	StecaGrid 3600	Bureau Veritas	2015/08/19	2018/12/31	10TH0241-NRS 097-2-1	U15-0323	Yes	No		
Steca Elektronik	StecaGrid 3600x	Bureau Veritas	2015/08/19	2018/12/31	10TH0241-NRS 097-2-1	U15-0323	Yes	No		
Steca Elektronik	StecaGrid 3010	Bureau Veritas	2015/08/19	2018/12/31	10TH0241-NRS 097-2-1	U15-0323	Yes	No		
Steca Elektronik	StecaGrid 3010x	Bureau Veritas	2015/08/19	2018/12/31	10TH0241-NRS 097-2-1	U15-0323	Yes	No		
Steca Elektronik	StecaGrid 3000	Bureau Veritas	2015/08/19	2018/12/31	10TH0241-NRS 097-2-1	U15-0323	Yes	No		
Steca Elektronik	StecaGrid 2500	Bureau Veritas	2015/08/19	2018/12/31	10TH0241-NRS 097-2-1	U15-0323	Yes	No		
Steca Elektronik	StecaGrid 2500x	Bureau Veritas	2015/08/19	2018/12/31	10TH0241-NRS 097-2-1	U15-0323	Yes	No		
Steca Elektronik	StecaGrid 2300	Bureau Veritas	2015/08/19	2018/12/31	10TH0241-NRS 097-2-1	U15-0323	Yes	No		
Steca Elektronik	StecaGrid 2300x	Bureau Veritas	2015/08/19	2018/12/31	10TH0241-NRS 097-2-1	U15-0323	Yes	No		
Steca Elektronik	StecaGrid 2000	Bureau Veritas	2015/08/19	2018/12/31	10TH0241-NRS 097-2-1	U15-0323	Yes	No		
Steca Elektronik	StecaGrid 2000x	Bureau Veritas	2015/08/19	2018/12/31	10TH0241-NRS 097-2-1	U15-0323	Yes	No		
Steca Elektronik	StecaGrid 1800	Bureau Veritas	2015/08/19	2018/12/31	10TH0241-NRS 097-2-1	U15-0323	Yes	No		
Steca Elektronik	StecaGrid 1800x	Bureau Veritas	2015/08/19	2018/12/31	10TH0241-NRS 097-2-1	U15-0323	Yes	No		
Steca Elektronik	StecaGrid 1500	Bureau Veritas	2015/08/19	2018/12/31	10TH0241-NRS 097-2-1	U15-0323	Yes	No		
Steca Elektronik	StecaGrid 1500x	Bureau Veritas	2015/08/19	2018/12/31	10TH0241-NRS 097-2-1	U15-0323	Yes	No		
Sungrow	SH5K	Dekra	2016/12/22	2018/12/31	6000500.5	6000500.01AOC	Yes	No		
Sungrow	SG36KTL-M	TÜV SÜD	2017/03/14	2018/12/31	704091708604-00	D170373342162	Yes	No		
Sungrow	SG60KTL	TÜV SÜD	2018/02/08		704091708605-01	D180173342198	No	Yes		
Sungrow	SG80KTL	Dekra	2018/03/05		6025450.50	6025450.01AOC	No	Yes	The maximum DC voltage is depended on PV array and may not exceed 1000V when this inverter is used.	
Victron	MultiGrid 12/3000/120-50	Primara	2017/11/20		16PP183-06 1	17-303-00	No	Yes	Battery inverter	
Victron	MultiGrid 24/3000/70-50	Primara	2017/11/20		16PP183-06 1	17-303-00	No	Yes		
Victron	MultiGrid 48/3000/35-50	Primara	2017/11/20		16PP183-06 1	17-303-00	No	Yes		
Voltronic	InfiniSolar 3kW Plus xx	Eurofins	2015/07/14	2018/12/31	EFSH15051932-IE-01-L05	S3M21507-0033	Yes	No	'xx' would be 01 to 09, denote appearance and terminal difference	
Voltronic	InfiniSolar 4kW	Bureau Veritas	2016/09/14	2018/12/31	PVZA160624N005	U16-0520	Yes	No	Note: The inverter has single-phase mains surveillance and is not able to communicate with each other to detect an out-of-bound voltage on all three phases. According to NRS 097-2-1 an external three phase mains surveillance unit is necessary for installations above 3 kW to detect an out-of-bound voltage condition on a three phase system. The inverter is intended to be used for single phase installations only.	
Voltronic	InfiniSolar E 5.5kW	Bureau Veritas	2017/03/27	2018/12/31	PVZA170301N060	U17-0125	Yes	No		
Voltronic	InfiniSolar 10k	Bureau Veritas	2015/12/15	2018/12/31	PV151102N012-NRS 097-2-1	U15-0470	Yes	No		
Ziehl	UFR1001E relay	Bureau Veritas	2015/07/09	2018/12/31	11TH0501-NRS 097-2-1	U15-0246	Yes	No	Network and system grid protection voltage and frequency relay only.	

RCMU - residual current monitoring unit

RCD - residual current device

RCM - residual current monitoring

SPD - surge protection device

Notes:

- The City shall not incur any liability of any nature whatsoever arising out of the publication by it of this list, or arising out of the selection by the user of a particular device. This includes liability for any losses incurred as a result of safety issues or negligence relating to the design, construction, installation, commissioning, operation and maintenance of any device listed on the list.
- This list is for information purposes only and the use thereof as a guideline for the selection of a device is at the sole risk of the user.
- The City does not guarantee the functionality or suitability of any device listed on the list.
- NRS 097-2-1: 2010 type test certification is accepted until 31 December 2018 or the specific expiry date of the accredited body certificate, if the date is before 31 December 2018. The commissioned inverter settings shall be in accordance with the new NRS 097-2-1: 2017 version.
- All the existing NRS097-2-1: 2010 type tested inverters must be SANAS re-certified in accordance with NRS097-2-1: 2017 with effect from 1 January 2019, if the inverter is considered for an embedded generation application.
- All grid-tied hybrid inverters shall be equipped with a separate suitably interlocked change-over switch as specified in the Requirements for small scale embedded generation (SSEG) document.

[http://teamsites.capetown.gov.za/sites/esprotelmeas/SitePages/Home/.aspx/reference/ryno/vorms/Approved inverter and equipment ito NRS 097-2-1](http://teamsites.capetown.gov.za/sites/esprotelmeas/SitePages/Home/.aspx/reference/ryno/vorms/Approved%20inverter%20and%20equipment%20to%20NRS%20097-2-1)

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