	X1-Hybrid HV (SINGLE PHASE)				X3-Hybrid HV (THREE PHASE)			
	X1-HYBRID-3.0T	X1-HYBRID-3.7T	X1-HYBRID-4.6T	X1-HYBRID-5.0T	X3-Hybrid-5.0T	X3-Hybrid-6.0T	X3-Hybrid-8.0T	X3-Hybrid-10.0T
INPUT (DC)								
Max.recommended DC power[w]	4000	5000	6000	6000	6000	8000	10000	13000
Max.DC voltage[V]	600	600	600	600	1000	1000	1000	1000
Nominal DC operating voltage[V]	360	360	360	360	720	720	720	720
Max.input current[A]	10/10	10/10	10/10	10/10	11/11	11/11	11/11	20/11
Max. short circuit current[A]	14/14	14/14	14/14	14/14	14/14	14/14	14/14	23/14
MPPT voltage range[V]	125-550	125-550	125-550	125-550	230-800	280-800	370-800	330-800
No. of MPP trackers	2	2	2	2	2	2	2	2
Strings per MPP tracker	1	1	1	1	1	1	1	2/1
OUTPUT AC								
Nominal AC power [VA]	3000	3680	4600	4999	5000	6000	8000	10000
Max. AC power [VA]	3000	3680	4600	4999	5000	6000	8000	10000
Rated grid voltage(AC voltage range) [V]	230(180 to 270)	230(180 to 270)	230(180 to 270)	230(180 to 270)	400(360 to 440)	400(360 to 440)	400(360 to 440)	400(360 to 440)
Rated grid frequency [Hz]	50/60	50/60	50/60	50/60	50/60	50/60	50/60	50/60
Nominal AC current [A]	13	16	20	21.7	7.6	9	12.2	15
Max. AC current [A]	14.4	16	21	21.7	8.5	10	13.5	16
Displacement power factor	0.8 leading ... 0.8 lagging	0.8 leading ... 0.8 lagging	0.8 leading ... 0.8 lagging	0.8 leading ... 0.8 lagging	0.8 leading ... 0.8 lagging	0.8 leading ... 0.8 lagging	0.8 leading ... 0.8 lagging	0.8 leading ... 0.8 lagging
Total harmonic distortion(THD, rated power) [%]	<2	<2	<2	<2	<2	<2	<2	<2
Parallel operation	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Load control	Yes (optional)	Yes (optional)	Yes (optional)	Yes (optional)	Yes (optional)	Yes (optional)	Yes (optional)	Yes (optional)
OUTPUT DC (BATTERY)								
Battery voltage range [V]	85-400	85-400	85-400	85-400	170-500	170-500	170-500	170-500
Recommended battery voltage [V]	300	300	300	300	200	240	320	400
Max.charging/discharging power [W]	6000	6000	6000	6000	6000	8000	10000	10000
Max.charging/discharging current [A]	20	20	20	20	25	25	25	25
Communication interfaces	CAN/RS485	CAN/RS485	CAN/RS485	CAN/RS485	CAN/RS485	CAN/RS485	CAN/RS485	CAN/RS485
Reverse connect protection	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
EPS OUTPUT (WITH BATTERY)								
EPS rated power [VA]	4000	4000	5000	5000	5000	6000	8000	10000
EPS rated voltage [V], Frequency [Hz]	230, 50/60	230, 50/60	230, 50/60	230, 50/60	400/380, 50/60	400/380, 50/60	400/380, 50/60	400/380, 50/60
EPS rated current [A]	17.4	17.4	21.7	21.7	7.2	8.7	11.6	14.5
EPS peak power[W];Duration [s]	8000,10	8000,10	8000,10	8000,10	7500,60	9000,60	12000,60	14000,60
Switch time[s]	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Total harmonic distortion(THD, linear load) [%]	<2	<2	<2	<2	<2	<2	<2	<2
Parallel operation	Being developed	Being developed	Being developed	Being developed	Being developed	Being developed	Being developed	Being developed
EFFICIENCY								
MPPT efficiency [%]	99.90	99.90	99.90	99.90	99.90	99.90	99.90	99.90
Euro efficiency [%]	97.00	97.00	97.00	97.00	97.00	97.00	97.00	97.00
Max. efficiency [%]	97.80	97.80	97.80	97.80	97.80	97.80	97.80	97.80
Battery charge/discharge efficiency [%]	96.5 (PV-BAT) 97.0 (BAT-AC)	96.5 (PV-BAT) 97.0 (BAT-AC)	96.5 (PV-BAT) 97.0 (BAT-AC)	96.5 (PV-BAT) 97.0 (BAT-AC)	97.8 (PV-BAT) 96.0 (BAT-AC)	97.8 (PV-BAT) 96.0 (BAT-AC)	97.8 (PV-BAT) 96.0 (BAT-AC)	97.8 (PV-BAT) 96.0 (BAT-AC)
POWER CONSUMPTION								
Standby consumption(night) [W]	<7	<7	<7	<7	<7	<7	<7	<7
Idle mode	YES	YES	YES	YES	YES	YES	YES	YES
STANDARD								
Safety	IEC62109-1-2 / IEC62040				IEC62109-1-2 / IEC62040/ AS3100			
EMC	EN61000-6-1/EN61000-6-2/EN61000-6-3				EN61000-6-1/EN61000-6-2/EN61000-6-3			
Certification	VDE0126-1-1 A1:2012/VDE-AR-N4105/G83/G59/AS4777/EN50438/CEI0-21/VDE2510				VDE0126-1-1 A1:2012/VDE-AR-N4105/G59-3/AS4777/EN50438/CEI 0-21/IEC62040/IEC62619/ISO13849-2/SN29500/IEC615086			
ENVIRONMENT LIMIT								
Protection class	IP65	IP65	IP65	IP65	IP65	IP65	IP65	IP65
Operating temperature range [C]	-20 to+60 (derating at+45)	-20 to+60 (derating at+45)	-20 to+60 (derating at+45)	-20 to+60 (derating at+45)	-20 to+60 (derating at+45)	-20 to+60 (derating at+45)	-20 to+60 (derating at+45)	-20 to+60 (derating at+45)
Altitude[m]	<2000	<2000	<2000	<2000	<2000	<2000	<2000	<2000
Storage temperature[C]	-20 to+60	-20 to+60	-20 to+60	-20 to+60	-20 to+60	-20 to+60	-20 to+60	-20 to+60
Noise emission(typical) [dB]	<30	<30	<30	<30	<30	<30	<30	<30
Over voltage category	III (electric supply side), II (PV side)	III (electric supply side), II (PV side)	III (electric supply side), II (PV side)	III (electric supply side), II (PV side)	III (electric supply side), II (PV side)	III (electric supply side), II (PV side)	III (electric supply side), II (PV side)	III (electric supply side), II (PV side)
DIMENSION AND WEIGHT								
Dimensions(WxHxD) [mm]	482*464*182	482*464*182	482*464*182	482*464*182	456*655*228	456*655*228	456*655*228	456*655*228
Weight[kg]	26.9	26.9	26.9	26.9	40	40	40	40
Cooling concept	Natural	Natural	Natural	Natural	Natural	Natural	Natural	Natural
Topology	Transformerless	Transformerless	Transformerless	Transformerless	Transformerless	Transformerless	Transformerless	Transformerless
Communication	Ethernet, Meter, WIFI (optional), RF(optional), DRM, USB, ISO alarm, Parallel operation	Ethernet, Meter, WIFI (optional), RF(optional), DRM, USB, ISO alarm, Parallel operation	Ethernet, Meter, WIFI (optional), RF(optional), DRM, USB, ISO alarm, Parallel operation	Ethernet, Meter, WIFI (optional), RF(optional), DRM, USB, ISO alarm, Parallel operation	Ethernet, Meter, WIFI (optional), RF(optional), DRM, USB, ISO alarm, Parallel operation	Ethernet, Meter, WIFI (optional), RF(optional), DRM, USB, ISO alarm, Parallel operation	Ethernet, Meter, WIFI (optional), RF(optional), DRM, USB, ISO alarm, Parallel operation	Ethernet, Meter, WIFI (optional), RF(optional), DRM, USB, ISO alarm, Parallel operation
LCD display	Backlight 20*4 character	Backlight 20*4 character	Backlight 20*4 character	Backlight 20*4 character	Backlight 20*4 character	Backlight 20*4 character	Backlight 20*4 character	Backlight 20*4 character
Standard warranty [years]	5-10	5-10	5-10	5-10	5-10	5-10	5-10	5-10