We Create Clean and Smart Energy to the World



iKran series
ePøwercube

Residential

# superstate

Superstate AB Nybohovsbacken 97, 117 64 Stockholm Sweden

superstate



# Hello, my name is iKran

iKran, Superstate's latest updated residential BESS(Battery Energy Storage System) series, was designed in Sweden and selects to use the safest battery cells, advanced hybrid energy storage PCS(Power Converter System). Integrated with a patented EMS(Energy Management System) and BMS(Battery Management System), iKran monitors the loads in real time, and provides safe and clean power supply solutions that match with your electricity usage habits to minimize your electricity bill. Meanwhile, it helps you to enjoy a low carbon lifestyle and independent power supply.

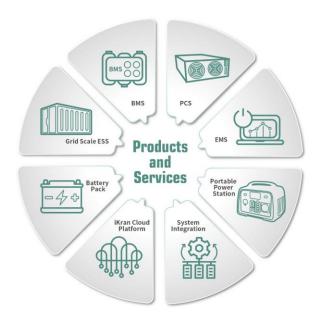
# What is my background?

The founder of Superstate, Göran Bolin, is an inventor and business leader with over 40 years of experience in the European market for Solar and Energy Storage. Göran was awarded the Swedish Engineer of the year in 2019 and is the founder of several successful cleantech businesses. His vision is to create clean and intelligent energy for the world and accelerate the sustainable development of global energy. Adhering to this vision, Superstate focuses on scientific and technological innovation, and we are committed to providing our customers with safe, clean, intelligent energy, power products, and services.

### 'Peace of mind' solution

#### safe, smart and clean

ikran provides an intelligent auto response within 10 ms when the grid is cut off. By maintaining your energy supply without any power flickers, ikran keeps your home warm and your appliances running at all times. As quiet as efficient, ikran operates below 25 dB, a level equivalent to the sound of a mosquito.





### Optimize your home for a clean and smart energy consumption

You can count on Superstate iKran series ePowercube. Our storage systems include the latest and highest quality Lithium battery cells, the Superstate smart Battery Management system(BMS) and integrated with Superstate Power Conversation System(PCS). The Battery system also comes with an industry leading warranty covering 80% of battery capacity after 10 years of daily cycling.



### Maximum Solar Power Self-Consumption

The extra electricity generated from a home solar system is typically exported to the grid. However, most homes use a significant amount of electricity in the evening, after their solar systems stop producing for the day. With Superstate iKran series ePowercube, the excess power will be stored and more clean energy can be used on-site even when the sun is not shining.



#### Clean&Smart Backup Power

Backup power is a key benefit of iKran ePowercube. Solar systems cannot be used alone during a power outage. With our ePowercube, you can use your solar power when there is an outage, and the backup power will be recharged every day. With sustainable backup power, you rely less on the grid and have an eco-friendly alternative to a fossil fuel driven generator.



#### Optimize Energy Value

iKran ePowercube is highly cost-effective and allows you to get the best return of your investment in solar PV. With solar plus storage, you have protection against rising costs from Time-of-Use(TOU) rates and can avoid buying power from the grid when the price is high. Solar cannot reduce the cost of purchased electricity for a household after the sun goes down without the help of energy storage.



#### **EV Charging**

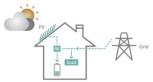
EV is becoming more and more popular. Our plug-in hybrid vehicles are often charged at night, after solar systems have stopped producing for the day. With iKran ePowercube, you can charge your car with self-produced clean energy at any time of the day or night. iKran ePowercube storage not only reduces your carbon footprint, but also helps to alleviate stress on the grid from EVs and overall reliance on fossil fuels.

### iKran ePowercube working modes



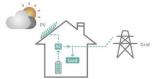
### FULL SUNSHINE, LOW BATTERY STATE OF CHARGE

The PV will charge the battery, meanwhile the excess PV energy will feed into the grid.



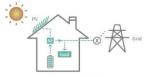
#### LESS SUNSHINE, LOW BATTERY STATE OF CHARGE

The grid will supply the power to the loads, and charge the battery. In this mode, the iKr ePowercube will guarantee the emergency power supply.



#### HIGH BATTERY STATE OF CHARGE, LESS SUNSHINE

iKran ePowercube will supply the power t the loads when there is less sunshine.



#### GRID POWER FAILURE

When grid power is goes out, iKran ePowercub will automatically respond to the Emergency Power Supply working mode within 10ms.





## Why SUPERSTATE:



High quality and safety
High quality and safe cell supplier+Superstate
intelligent BMS.



#### Remote control

iKran cloud platform, remote monitor and control.



#### High efficiency with integrated PCS solution

Hybrid energy complementarity, High Efficiency, Bidirectional energy flow design.



#### All in One Slim design

Easy to install, cost saving, space Looks just like a home appliance.



Active detection to prevent failures and danger















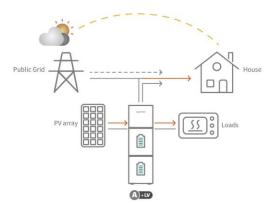












# iKran AOI A Specifications

MODEL	A+LV-3.0/5.38kWh		A+LV-4.0/5.38kWh	A+LV-SL/10.76kWh
PCS UNIT				
PV INPUT(DC)				
Max.PV array power(Wp)	6000	6680	7000	7500
Max.DC voltage(V)			550	
Nominal DC operating Voltage(V)			380	
Max.input current(input A/input B)			12+12 17+17	
Max.short circuit current(input A/input B)			17+17 100 to 530 / 380	
MPPT voltage range(V) Start operating voltage(V)			100 to 530 / 380	
No. of MPP trackers/Strings per MPPT tracker			2/1+1	
AC OUTPUT ( Grid output/input)			38.000	
Nomial AC power(VA)	3000	3680	4000	5000*1
Max.apparent AC power(VA)	3000	3680	4000	5000 *2
Nominal grid voltage(AC voltage range)(V)			180 to 280 / 230	
Nominal grid frequence/range(Hz)			50/60Hz	
Max.AC current(A)	13.6	16	18.2	22.7 *1
Power factor			0.8 leading to 0.8 lagging	
THDI(%)			3	
Max.grid input parrent power(VA)			6000	
Max.grid input current (A)			a.c.27.3	
DUTPUT DC(BATTERY)				
Battery type			Lithium Iron Phosphate	
Battery voltage range(V)			40~60	
Recommended battery voltage(V)			60	
Max.continuous charge/discharge current(A)	90			120
Communication interfaces			RS485/CAN	
EPS OUTPUT(WITH BATTERY)				
EPS Max.continuious apparent power(VA)			3000	
Peak output apparent power (VA)			4500 ,10s	
EPS rated voltage(V),Frequency(Hz)			230,50/60	
EPS Max.continuious current(A)			a.c.13.7A	
EPS peak appparent power(Rated)%,Duration(s)			200%, 10s	
Switching time(ms)			<10ms	
THDv,linear load(%)			<3	
EFFICIENCY				
MPPT efficiency(%)			99.90	
Euro efficiency(%)			96.50	
Max.efficiency(%)			97.60	
max-em-retricy(zii)				
Battery charge/discharge efficiency(%)	4		94.7	
Battery charge/discharge efficiency(%) POWER CONSUMPTION				
Battery charge/discharge efficiency(%) POWER CONSUMPTION Standby consumption(Night)(W)			94.7 10	
Battery charge/discharge efficiency(%) POWER CONSUMPTION			10	
Battery charge/discharge efficiency(%) POWER CONSUMPTION Standby consumption(Night)(W) STANDARD	E		10 , IEC62116, IEC60068, IEC61683, ABNT NBR 1	
Battery charge/discharge efficiency(%) POWER CONSUMPTION Standby consumption(Night)(W)	Е	AS4777.2, VDE 4105, XP C15	10 , IEC62116, IEC60068, IEC61683, ABNT NBR 1 -712-3, RD1699, UNE 206006 IN, UNE 20600	7-1 IN ,IEC62109-1/-2
Battery Charge (discharge efficiency)(k) POWER CONSUMPTION Randby consumption(Night)(W) STANDARD Safety		AS4777.2, VDE 4105, XP C15 IEC62040-1,IEC6	10 , IEC62116, IEC60068, IEC61683, ABNT NBR 1 -712-3, RD1699, UNE 206006 IN, UNE 20600 1000-6-1,IEC61000-6-3,IEC61000-3-11; IEC61	7-1 IN ,IEC62109-1/-2
Battery charge(discharge efficiency(N))  OVAYE (COSSUMPT (TON)  Standby consumption(Night)(W)  TANDAMO  Safety  EMC	: 6	AS4777.2, VDE 4105, XP C15 IEC62040-1,IEC6	10 , IEC62116, IEC60068, IEC61683, ABNT NBR 1 -712-3, RD1699, UNE 206006 IN, UNE 20600	7-1 IN ,IEC62109-1/-2
Augustian (Augustian (	E	AS4777.2, VDE 4105, XP C15 IEC62040-1,IEC6	10 , IEC62116, IEC60088, IEC61683, ABNT NBR 1 -712-3, IB1689, UNE 206006 IN, UNE 20600 1000-6-1,IEC61000-6-3,IEC61000-3-11, IEC61 1000-4-16,IEC61000-4-18,IEC61000-4-29	7-1 IN ,IEC62109-1/-2
Listency charge difficiency(%) OVEX ECONSAUTION Standby consumption(bight)(W) STAND-MOD Standby consumption(bight)(W) Standby Consumption(bight)(W) Standby EMC	8	AS4777.2, VDE 4105, XP C15 IEC62040-1,IEC6	10 , IEC62116, IEC60068, IEC61683, ABNT NBR 1 -712-3, B01699, UNE 206006 IN, UNE 20600 0000-6-1LEC61000-6-3, IEC61003-3-1, IEC61 1000-4-16, IEC61000-4-18, IEC61000-4-29 IP65	7-1 IN ,IEC62109-1/-2
Battery charge discharge efficiency(%) POWEX CONSUMPTION  Standby consumption(Night)(W)  SAROBAN STANDBOOM	3	AS4777.2, VDE 4105, XP C15 IEC62040-1,IEC6	10 . EC62116, IEC50068, IEC51683, ABNT NBR 1 -712-3, RD1699, UNE 206006 IN, UNE 20600 1000-6-1, IEC51000-6-3, IEC61000-3-11, IEC61 1000-4-16, IEC61000-4-18, IEC61000-4-19 IP65 -1055 (~45°C, Derating)	7-1 IN ,IEC62109-1/-2
Islantery charge difficiency(%) OWNEX CONSAMPT(IN) Standby consumption(hight)(W) STANDBARD STAND	Е	AS4777.2, VDE 4105, XP C15 IEC62040-1,IEC6	10 .EC62116, IEC60068, IEC61683, ABNT NBR 1: -712-3, R01699, UNE 206006 N, UNE 20600 .EC61000-4-15, IEC61000-4-3, IEC61000-4-16, IEC61000-4-1	7-1 IN ,IEC62109-1/-2
Illustrency charge difficiency(%) POWEX CONSUMPTION  Standby consumption(Night)(W)  SAROBAN CONSUMPTION  SAROBAN CONSUMPTION(Night)(W)  SAROBAN CONSUMPTION (Night)(W)  SAROBAN CONSUMPTION (Night)  SAROBAN CONSUMPTION (Night)  SAROBAN CONSUMPTION (Night)  Max operation altitude(m)  Max operation altitude(m)	8	AS4777.2, VDE 4105, XP C15 IEC62040-1,IEC6	10 .IFC62116, IFC50068, IFC61683, ABNT NBB 1-712-3, RD1699, UNF 206000 NI, UNE 20600 NI,	7-1 IN ,IEC62109-1/-2
illustrey charge/discharge efficiency/(S) POWEX CONSUMPTION Describly consumption/Staght/(SV) Safety Safety Safety Safety Safety SAMONAMENT EMRT SAMONAMENT EM	8	AS4777.2, VDE 4105, XP C15 IEC62040-1,IEC6	10 .REG2116, HC65068, HC51683, ABNT NBR 1 -712-3, R01699, UNC 200006 N, UNC 20000 .ROW-1-RC651000 -5-RC651000 -5-RC651000 +29 .R006-1-RC651000 -5-RC651000 +29 .P65 .10-55 (-345°C, Derating) .00-60 .00-60 .00-60	7-1 IN ,IEC62109-1/-2
Islateny charge discharge efficiency(%) POWEX CONSUMPTION  Brandby consumption(high:1)(W)  SAROBUS CONSUMPTION  SA	E	AS4777.2, VDE 4105, XP C15 IEC62040-1,IEC6	10 .IFC62116, IFC50068, IFC61683, ABNT NBB 1-712-3, RD1699, UNF 206000 NI, UNE 20600 NI,	7-1 IN ,IEC62109-1/-2
Islateny charge discharge efficiency(%) POWEX CONSUMPTION  Brandby consumption(high:1)(W)  SAROBUS CONSUMPTION  SA	ε	AS4777.2, VDE 4105, XP C15 IEC62040-1,IEC6	10 .REG2116, HC65068, HC51683, ABNT NBR 1 -712-3, R01699, UNC 200006 N, UNC 20000 .ROW-1-RC651000 -5-RC651000 -5-RC651000 +29 .R006-1-RC651000 -5-RC651000 +29 .P65 .10-55 (-345°C, Derating) .00-60 .00-60 .00-60	7-1 IN ,IEC62109-1/-2
Islantery charge difficiency(%) POWER CONSUMPTION Brandby consumption(Dilght)(W) STAND-MOD CONSUMPTION Safety  EMPLOY CONSUMPTION SAFETY  EMPLOYED SAFETY  EMPLOY  EM	e	AS4777.2, VDE 4105, XP C15 IEC62040-1,IEC6	10 ,HC62116, HC60068, HC61683, ABNT NBB 17-12-3, NB1099, UNE 20000 ,HC60006-4, HC60006-4, HC60006-4, HC60006-4, HC60006-4, HC60006-4 ,HC60006-4, HC60006-4, HC60006-4 ,HC60006-4, HC60006-4, HC6006-4, HC6006-4 ,HC6006-4, HC6006-4 ,HC6006-4 ,HC6006-	7-1 IN ,IEC62109-1/-2
illustreny charge difficiency(%) POWEX CONSUMPTION Standby consumption(high th)(W) SANDBAND CONSUMPTION STANDBAND CONSUMPTION STANDB	8	AS4777.2, VDE 4105, XP C15 IEC62040-1,IEC6	10 , IEG2116, IEG5068, IEG51683, ABNT NBB 7-71-2-3, BIO1990, UNE 20000 NUM 2	7-1 IN ,IEC62109-1/-2
islation charge/dischange efficiency/(S) POWER CONSUMPTION Dearnily consumption/Sight/(SV) Safety Sa		AS4777.2, VDE 4105, XP C15 IEC62040-1,IEC6	10 ,IEG2116, IEG6068, IEG61683, ABNT NBB 17-12-3, BIO199, UNE 20000 Feb. (ECG1000-4-18, IEG61000-4-2)  10000-4-16, IEG61000-4-18, IEG61000-4-29  10000-4-16, IEG61000-4-29  10000-6-16, IEG61	7-1 IN ,IEC62109-1/-2
illustreny charge difficiency(%) POWEX CONSUMPTION Controlly consumption(high st)(W) SARMEN CONSUMPTION SARM	e	AS4777.2, VDE 4105, XP C15 IEC62040-1,IEC6	10 HCG2115, HCG5068, HCG1583, ABNT NBR 1712-3, NDISHB, UHZ DG000 RU, UHZ DG0000 RU,	7-1 IN ,IEC62109-1/-2
islation; charge/dischange efficiency/(S) POWEX CONSUMPTION  Claracity consumption/Sight/(SV)  Safety  Low  EMAC  NOVIROMMENT EMIT  Progress protection/according to IEC (50529)  Operating temporary and the Consumption of Consumption of Consumption (Consumption Consumption (Consumption Consumption Consumption (Consumption (Consumption Consumption (Consumption Consumption (Consumption Consumption (Consumption (Consum		AS4777.2, VDE 4105, XP C15 IEC62040-1,IEC6	10 IEG2116, IEG5068, IEG51683, ABNT NBB 17-12-3, BID199, UNE 20000 NUM 2000 NUM 20000	7-1 IN ,IEC62109-1/-2
islateny charge discharge efficiency(%) POWEX CONSUMPTION  Standby consumption(high thi)(W)  SAROBAN CONSUMPTION  Safety  SAROBAN CONSUMPTION  SAROBAN CONSU	ē	AS4777.2, VDE 4105, XP C15 IEC62040-1,IEC6	10 ,HC62116, HC65068, HC61683, ABNT NBB 1712-3, RD1098, UHC 20000 N, U	7-1 IN ,IEC62109-1/-2
islation chargedischarge efficiency(%) POWEX CONSUMPTION  Standby consumption(hight)(W)  SANOBACO STANOBACO STANOBAC	E	AS4777.2, VDE 4105, XP C15 IEC62040-1,IEC6	10 IEG2116, IEG5068, IEG51683, ANYT NBB 17-12-3, BIO590, UNE 20060 N,	7-1 IN ,IEC62109-1/-2
Islantery charge difficiency (N) POWER CONSUMPTION Brandby consumption(N) islandby Sandby consumption(N) islandby Safety  MACHAN SANDBOM Safety  MACHAN Safety  MACHAN Safety  MACHAN Safety Sa	E	AS4777.2, VDE 4105, XP C15 IEC62040-1,IEC6	10 ,IICG2116, IICG5068, IICG1588, ABNT NBB 1712-3, BIO199, UNE 20000 ,UNE 20000-6-LUCG5000-6-LUCG5000-6-LUCG5000-6-LUCG5000-6-LUCG5000-6-18, IICG1500-6-18,	7-1 IN ,IEC62109-1/-2
islatery charge/discharge efficiency(%) POWEX CONSUMPT(IN) Standby consumption/high(1)(W) SANOBAC STANDBY (SANOBAC STANDBY STA	c	AS4777.2, VDE 4105, XP C15 IEC62040-1,IEC6	10 1050116, IEC50068, IEC51683, ANY NBB 7-72-3, BIOSBO, IEC51683, ANY NBB 7-72-3, BIOSBO, UNI 20000 NUM 20000 000-0-1EC50000-0-1EC50000-1EC50000-1EC50000-1EC50000-1EC50000-1EC50000-1EC50000-1EC50000-1EC50000-1EC50000-1EC50000-1EC500000-1EC500000-1EC500000-1EC5000000-1EC5000000000000000000000000000000000000	7-1 IN ,IEC62109-1/-2
illustrey charge/discharge efficiency/(S) POVEX CONSUMPTION  brandly consumption/Sight/(Sight)  brandly consumption/Sight/(Sight)  safety  INV  INV  INV  INV  INV  INV  INV  IN	6	AS4777.2, VDE 4105, XP C15 IEC62040-1,IEC6	10	7-1 IN ,IEC62109-1/-2
islatery charge/discharge efficiency(%) POWEX CONSUMPTION Standby consumption/hight(1)(W) SANDBAND STANDBAND STANDBAND STANDBAND SANDBAND	e	AS4777.2, VDE 4105, XP C15 IEC62040-1,IEC6	10 HCG2115, HCG0068, HCG15883, ABNT NBR 1712-3, NDIOSE, UHZ DOGGO RU, UHZ DOGGO PER NBLEGO PER	7-1 IN ,IEC62109-1/-2
islation; charge/discharge efficiency(N) POWEX CONSUMPTION PARTICLES (PARTICLES (PARTICL	c	AS4777.2, VDE 4105, XP C15 IEC62040-1,IEC6	10	7-1 IN ,IEC62109-1/-2
islateny charge discharge efficiency(%) POWEX CONSUMPTION Cannibly consumption(hight)(N) Sandby consumption(hight)(N) Safety EMC  NOURCEMENT BLUE Ingress profestion faccording to IEC(0523) Operating temperature (c) Max. operation altitude(m) Humindry(%) Sorrage temperature(*C) Kokice emission(d) SANTERY UNIT  Formisel Voltage(N) Justice (Lagachy)(W) Justice (Lagachy) Justi	e	AS4777.2, VDE 4105, XP C15 IEC62040-1,IEC6	100  HCG2116, HCG5068, HCG1683, ABNT NBB 1712-3, RD1098, UHC 20000 RULE 200000 RULE 20000 RULE 2000	7-1 IN ,IEC62109-1/-2
islation charge/discharge efficiency/(S)  POWEX CONSUMPICION  Standby consumption/Night/(W)  SANOBAS (Night	E	AS4777.2, VDE 4105, XP C15 IEC62040-1,IEC6	10	7-1 IN ,IEC62109-1/-2
islatery charge/discharge efficiency/(S) POWER CONSUMPTION  John Control of the C		AS4777.2, VDE 4105, XP C15 IEC62040-1,IEC6	10  IEG2116, IEG6068, IEG61683, ANYT NBB 1712-3, RD1099, UNE 20000 NUM 20000	7-1 IN ,IEC62109-1/-2
islation; charge/discharge efficiency(%) POWEX CONSUMPT(IN) Standby consumption(hight)(W) SANOBACON STANOBACON		AS4777.2, VDE 4105, XP C15 IEC62040-1,IEC6	10	7-1 IN ,IEC62109-1/-2
islateny charge/discharge efficiency/(s)  POWEX CONSUMPTION  Formative consumption/(s)  Formative cons		AS4777.2, VDE 4105, XP C15 IEC62040-1,IEC6	10  HCG2116, HCG5068, HCG1683, ABNT NBB 1712-3, BIO199, UNI 20000 NUM 20000	7-1 IN ,IEC62109-1/-2
islation chargedischarge efficiency(%) POWER CONSUMPTION Standby consumption(hight)(W) SANOBAC STANDBY (SANOBAC STANDBY STANDB		AS4777.2, VDE 4105, XP C15 IEC62040-1,IEC6	100 III.G62116, III.G60068, III.G615683, ABNT NBR 1712-3, R01099, UNE 200000 RU	7-1 IN ,IEC62109-1/-2
islateny chargedischarge efficiency(NS)  OVERX CONSUMPTION  Formative consumption(Night)(NV)  SAROMSO  SIMPLE CONSUMPTION  SAROMSO  SIMPLE CONSUMPTION  SAROMSO  SARO		AS4777.2, VDE 4105, XP C15 IEC62040-1,IEC6	10	7-1 IN ,IEC62109-1/-2
islation charge discharge efficiency(%) POWCR CONSUMPTION Standby consumption(hight)(W) SANDBAD STANDBAD STANDB		AS4777.2, VOE 4106, 3P C15 EECE2004-LECC EECE2004-LECC	100 IEC62116, IEC60068, IEC61683, ABNT NBB 1712-3, RIDDING, IEC62168, IEC61683, ABNT NBB 1712-3, RIDDING, IEC60068, IEC621684, IEC61600-4-18, IEC616000-4-18, IEC6	7-1 IN ,IEC62109-1/-2
islation chargedischarge efficiency(NS)  OVEX CONSUMPTION  Formative consumption(Night)(N)  Safety  Sa		AS4777.2, VOE 4106, 3P C15 EECE2004-LECC EECE2004-LECC	100	7-1 IN ,IEC62109-1/-2
islateny charge/discharge efficiency/(S)  POWER CONSUMPTION  Formation of the consumption/Sight(V)(V)  Formation of the consumption/Sight(V)(V)  Formation of the consumption/Sight(V)(V)  Formation of the consumption/Sight(V)(V)  Formation of the consumption of the CoSO29)  Formation of the cost of the CoSO29  Formation	6	AS4777.2, VOE 4106, 3P C15 EECE2004-LECC EECE2004-LECC	100 III.G.2116, III.G.60068, II.G.61683, ANNT NBB II.712.3, RD1099, UNIT 20000 RUN 200	7-1 IN ,IEC62109-1/-2
islation chargedischarge efficiency(%) POWER CONSUMPTION PARTICIPATION P		AS4777.2, VOE 4106, 3P C15 EECE2004-LECC EECE2004-LECC	100 HCG2115, HCG5068, HCG15883, ABNT NBR 1712-3, NBC1590, UNE 20000 RULE 2000	7-1 IN ,IEC62109-1/-2
islatiney charge/discharge efficiency/(s)  POWEX CONSUMPTION  Formation or consumption/(s)(4)(V)(V)  Safety  S		AS4777.2, VOE 4106, 3P C15 EECE2004-LECC EECE2004-LECC	100	7-1 IN ,IEC62109-1/-2
islation chargedischarge efficiency(%) POWER CONSUMPTION PARTICLE (**)  Standby consumption(hight)(W)  SANOBACO STANDBY (**)  Safety  EMC  **NNBOMMENT EIMET  **Impress protection(according to IEC/05/29)  Deparising temperature(**)  Max.operation altitude(in)  **Immiding(%)  Storage temperature(**)  Storage temperature(*		AS4777.2, VOE 4106, 3P C15 EECE2004-LECC EECE2004-LECC	100 HCG2115, HCG5068, HCG15883, ABNT NBR 1712-3, NBC1590, UNE 20000 RULE 2000	7-1 IN ,IEC62109-1/-2
islatiney charge/discharge efficiency/(s)  POWEX CONSUMPTION  Formation or consumption/(s)(4)(V)(V)  Safety  S		AS4777.2, VOE 4106, 3P C15 EECE2004-LECC EECE2004-LECC	100	7-1 IN ,IEC62109-1/-2
islateny chargedischarge efficiency(%)  POWER CONSUMPTION  FOUR CONSUMPTION  Four and the consumption (high (1)(W)  Safety  Safety  INVC  NNNBOMENT EIMIT  NNNBOMENT EIMIT  SAFETY  SA		ASA777.2, VOE 4106, 3P C15 EECE2004-LECC EECE2004-LECC	100 IEG2116, IEG5068, IEG51683, ANNT NBB 1712-3, RD1099, UNE 20000 NUM 20000	7-1 M (RCG109-1/-2 0003-12)
islatery chargefulcharge efficiency(%) POWEX CONSUMPT(IN) POWEX CONSUM	550°240°1250	AS4777.2, VOE 4105, 3P C15 EEG2049-LEC EEG2049-LEC EEG2049-LEC EEG2049-LEC EEG2049-LEC EEG2049-LEC EEG2049-LEC	100 IRCG2115, IRCG0068, IRCG1583, ABNT NBR 1712-3, NDIOSID, UNIZ 20000 RULE 2	7-1 M (RCG109-1/-2 0003-12).
islateny chargedischarge efficiency(%)  POWER CONSUMPTION  FOUR CONSUMPTION  Four and the consumption (high (1)(W)  Safety  Safety  INVC  NNNBOMENT EIMIT  NNNBOMENT EIMIT  SAFETY  SA		ASA777.2, VOE 4106, 3P C15 EECE2004-LECC EECE2004-LECC	100 IEG2116, IEG5068, IEG51683, ANNT NBB 1712-3, RD1099, UNE 20000 NUM 20000	7-1 M (RCG109-1/-2 0003-12)

<sup>\*1</sup> Nominal AC power set to 4600 W for VDE-AR-4105 grid code
\*2 Apparent power set to 4600 W for VDE-AR-4105 grid code
\*3 Max. output current limited to 21.7 A when set to the AS/NZS 4777.2 grid code. Version: July, 2022























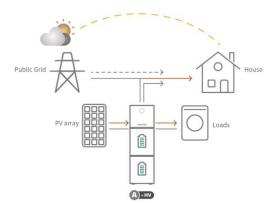












# iKran AIO A +HV Specifications

MODEL	A+HV-3.6H/5.12kWh A+HV-3.6H/10.24kWh	A+HV-4.6H/5.12kWh A+HV-4.6H/10.24kWh*	A+HV-5.0H/5.12kWh A+HV-5.0H/10.24kWh	A+HV-6.0H/5.12kWh A+HV-6.0H/10.24kWh		
PCS UNIT	A+NV-3.6H/10.24kWh	A+HV-4.6H/10.24kWh*	A+HV-5.0H/10.24kWh	A+HV-6.0H/10.24kWh		
PCS UNIT PV INPUT(DC)						
Max.PV array power(Wp)	4800	6200	6650	8000		
Max.DC voltage(V)	27,550		500			
Nominal DC operating Voltage(V)			160			
Max.input current(input A/input B)			5/12.5			
Max.short circuit current(input A/input B)			1/18			
MPPT voltage range(V)			P550 90			
Start operating voltage(V) No. of MPP trackers/Strings per MPPT tracker			2/1			
INPUT(AC)			200			
Max.apparent AC power(VA)	7200	9200	10000	12000		
Max.AC current(A)	31.2	40	43.4	52.2		
Nominal grid voltage(AC voltage range)(V)			30/240			
Nominal grid frequence/range(Hz)		50	0/60			
OUTPUT AC			5000			
Nomial AC power(VA)	3600 3600	4600 4600	5000	6000		
Max.apparent AC power(VA) Nominal grid voltage(AC voltage range)(V)	3600		130/240	8000		
Nominal grid voitage(AL voitage range)(V)  Nominal grid frequence/range(Hz)			0/60			
Max.AC current(A)	17.2	22	23.9	28.7		
Displacement power factor	47.6		8 adjustable)	40.7		
THDi, rated power(%)			c 3			
OUTPUT DC(BATTERY)						
Battery type		Lithium Iro	n Phosphate			
Battery voltage range(V)		227.2		320~454.4		
Recommended battery voltage(V) Max.continuous charge/discharge current(A)	22			454.4		
Max.continuous charge/discharge current(A)			5/25			
Communication interfaces			IS/CAN			
Reverse connect protection			fes			
EPS OUTPUT(WITH BATTERY)  EPS Max.continulous apparent power(VA)	4320	5520	6000	7200		
(PS rated voltage(V), Frequency(Hz)	4320			7200		
PS Max.continuious current(A)	230 (29k),50/60 (0.29k) 28.7					
Switching time(ms)			10			
THDv,linear load(%)			: 2			
FFICIENCY						
MPPT efficiency(%)			9.9			
Euro efficiency(%)			97			
Max.efficiency(%)			7.6			
Battery charge/discharge efficiency(%)		98	/96.7			
POWER CONSUMPTION						
Standby consumption(Night)(W) STANDARD			< 5			
		IEC62040 1/2010 A5/N75	1777.2:2020 IEC 62109-1&-2			
Safety		IEC62619 UN3	18.3 IEC60730-1			
EMC		EN IEC 61000-6-2:2019	EN IEC 61000-6-3:2021			
ENVIRONMENT LIMIT			-1-			
Ingress protection(according to IEC60529)			P65			
Operating temperature range(°C)		-10~55 ( >45	S*C, Derating)			
Max.operation altitude(m)						
Humidity(%)	0°95 (no condensation)					
Storage temperature(°C) Noise emission(dB)	-20°-60 < 25					
voise emission(day)						
BATTERY UNIT						
Nominal Voltage(V)			14.8			
Operating voltage range(V)			-227.2			
Total Capacity(kWh)			.12			
Jsable Capacity(kWh)			1.6			
Rated capacity(Ah) Standard power(KW)	25 1.69					
	1.69 5.68					
Max charge/discharge power(kW) Recommend charge/discharge current(A)			(25			
Vax.charge/discharge current(A)			25			
200(%)	90					
Expected life time/Warranty(Year)	10					
Operating temperature range(°C)	10 -10*55					
	-20~60					
Storage temperature(°C)	0°95 (no condensation)					
storage temperature("C) sumidity(%)						
Storage temperature(°C) Humidity(%) Altitude(m)		2	000			
Storage temperature("C) **Lumidity(%) **Distude(m) **ngress protection		2	765			
Storage temperature("C) sumidity(%) Alcitude(m) Alcitude(m) system to inverter communication/Communication with BMS		2 II RS	965 485			
Storage temperature("C) sumidity(%) Alcitude(m) Alcitude(m) system to inverter communication/Communication with BMS		2 8 85	965 6485 PV2			
Storage temperature("C) stunding("R) stunde(m)		2 II RS DC IECG2040.1:2019 AS/NZS	765 i485 iPV2 f777.2:2020 IEC 62109-18-2			
Storage temperature(**C) stumstid(**N) stude(m) ngress protection rights as protection system to inverter communication/Communication with BMS system to switch(on) off) safty certificate		85 BEC62040.1:2019 AS/NZS BEC62049.11:2019 AS/NZS	765 1485 IPV2 1777.2:2020 IEC 62109-18-2 IB 3 IEC60730-1			
Corage temperature(**C) tunnistiny(%) tunnis		EC62040.1:2019 AS/NZS- IEC62040.1:2019 AS/NZS- IEC62619 UNI EN IEC 61000-6-2:2019	765 i485 iPV2 f777.2:2020 IEC 62109-18-2			
Storage temperature("C) ************************************		2 8 90 8EC62040,1:2019 AS/NIZ- 1EC62519 UNI EN IEC 61000-6-2:2019 3 550*5	765 485 -PV2 7777-2-2020 IEC 62109-18-2 IB-3 IEC60730-1 IEN IEC 61000-6-3-2021 480 55*233			
Storage temperature("C)  ***tempting("I)  **tempting("I)  **tempting("I)  **tempting serieschich  **te		2 8 90 8EC62040,1:2019 AS/NIZ- 1EC62519 UNI EN IEC 61000-6-2:2019 3 550*5	765 1485 1777 2:2020 IEC 62109-18-2 IES 3 IEC60730-1 IEN IEC 61000-6-3:2021			
Storage temperature("C)  ***tempting("I)  **tempting("I)  **tempting("I)  **tempting serieschich  **te		2 8 90 8EC62040,1:2019 AS/NIZ- 1EC62519 UNI EN IEC 61000 6-2:2019 3 550*5	765 485 -PV2 7777-2-2020 IEC 62109-18-2 IB-3 IEC60730-1 IEN IEC 61000-6-3-2021 480 55*233			
Storage temperature(**)  **Preventing(**)  **Annualem)  *		2 H RECE2040.1:2013 AS/M25* (ECE2619 UNI EN IEC 61000-6-2:2033 550*1	765 4485 -PV2 1777-2-200 HC 62109-18-2 18-3 HC60730-1 EN HC 61000-6-3-3021 480 555*233	TTOOTO MANNO AUTO		
Storage temperature("C) inventibility(1) Attraude(n) A	550*283*1120	2 8 R1 80 CC 8CC62040.1:2013 ASVIST- 11 CC62040 1:10 EN IEC 61006-6 2:2013 3 550°5 (5.124WH AIO)	765 4485 -PV2 1777-2-200 HC 62109-18-2 18-3 HC60730-1 EN HC 61000-6-3-3021 480 555*233	1750(10.24kWh AlO) 115		
Storage Immeriator("C) terministry(1) Anticulation) Anticulation (I) Anticulation) Anticulation (I) Anticula	550*232*122	2 8 8 90 1EC62040.1:2019.AS/NEZ- 1EC63619 UNI EN IEC 61000-6-2:2019 3 550*1	765 4485 -PV2 1777-2-200 HC 62109-18-2 18-3 HC60730-1 EN HC 61000-6-3-3021 480 555*233	1750(10.24kWh AlO) 115		



### The master of your home energy

The iKran Cloud platform will let you know more about how your home energy is consumed, supporting you to optimize your home for a clean and smart energy consumption.



**Energy Flow** 



**Energy Consumption** 



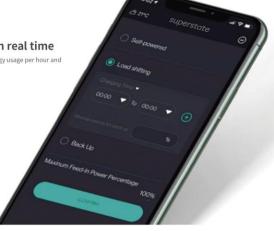
Energy usage



Notice

### View your energy usage in real time

Real time usage information to track your energy usage per hour and understand the costs associated to that usage.







### Customize as you like.

Self Powered Mode, Load Shifting Mode or Back-Up Mode, choose the best mode for you.

# **C**ontact Us

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