# iDC FlexiPower Online IoT Tower 1-20kW

A high performance IoT enabled double conversion online tower UPS



iDC FlexiPower Online IoT UPS is a high performance, true online conversion online UPS capable of supporting loads from 1 to 20kW. It comes with IoT compatibility automatically monitoring power quality and battery status, with easy access to your UPS status, offering protection to your crucial equipment.



#### IoT Compatibility

Easy to access your UPS and battery status and events on a real time basis through mobile APP



#### High Efficiency

A complete green solution with energy saving



#### **Unit Power Factor**

Enjoy more power in the same space with a power factor of 1



#### Flexibility

Adjustable charging current and flexible battery configuration





### **Key Features**

- True double conversion design online technology
- Power Capacity: 1-20kW
- Real output factor 1.0 offering more power in same space
- Green and high efficiency with energy and space saving
- Optimize charging method to maximize battery lifetime
- Adjustable charging current and flexible battery configuration
- Highly reliable with built-in OVCD protection, fan lock detection, over temperature detection and overload warning
- Programmable outlet group to increase back up time for the most critical equipment
- Hot swappable battery for UPS models
- Low audible noise at typical load
- LCD support up to 10 languages for easy installation and service
- Embedded Ethernet port solution & optional WLAN module for IoT connection
- Mobile APP, both Android and iOS, for monitoring
- Upgrade network card compliance with IEC standard cybersecurity
- Special enhancement features (20kW unit): 3 phase mode to meet utility and load wiring
- Special enhancement features (20kW unit): Alternative option with dual source input is available for utility and bypass



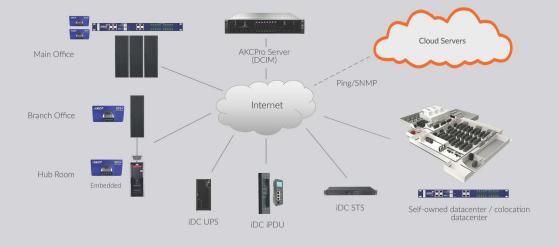
iDC FlexiPower Online IoT 1-3kW



iDC FlexiPower Online IoT 6-20kW

### DCIM Ready

Managing iDC UPS has never been more easier. Built-in template for monitoring real-time power consumption and operational status of iDC UPS has been engineered into our DCIM System which makes integration with DCIM System within seconds!





101-160/V derating to 50% and inearly load in lo	Model	FP-OT-IOT-1K	FP-OT-IOT-1KS	FP-OT-IOT-2K	FP-OT-IOT-2KS
Double conversion made	Power Rating	1000VA/1000W	1000VA/1000W	2000VA/2000W	2000VA/2000W
Double conversion mode					
Input Performance	Efficiency				
Injust Performance	Double conversion mode		89%		93%
Voltage range	ECO mode	96%	96%	97%	97%
101-160V derating to 50%   101-160V derating t	Input Performance				
Frequency range	Voltage range	110-160V derating to 50%	110-160V derating to 50%	110-160V derating to 50%	160-300V 100% load, 110-160V derating to 50% load linearly
Fecupiency range	Rated frequency	50Hz/60Hz	50Hz/60Hz	50Hz/60Hz	50Hz/60Hz
S4142-0612 (gload9-6U%)   S4142-0612 (gloa		40Hz-70Hz(45Hz-55Hz	40Hz-70Hz(45Hz-55Hz	40Hz-70Hz(45Hz-55Hz	40Hz-70Hz(45Hz-55Hz
PF	Frequency range	54Hz-66Hz @ load>60%)	54Hz-66Hz @ load>60%)	54Hz-66Hz @ load>60%)	54Hz-66Hz @ load>60%)
ThDI	PF	100 Maria 100 Ma	>0.99	>0.99	>0.99
Input Connection   IEC C14   IEC C14   IEC C20   IEC C20	THDI	<5%	<5%	<5%	<5%
Output Performance           Rated voltage         200/208/220/230/240VAC (derating 10% at 208V (derating 10% at 208V (derating 10% at 208V (derating 10% at 208V) (derating 20% at 200V) (derating 20% at 20% (derati					
Rated voltage	Input Connection	IEC C14	IEC C14	IEC C20	IEC C20
Rated voltage	Output Performance				
Maximum PF		(derating 10% at 208V,	(derating 10% at 208V,	(derating 10% at 208V,	200/208/220/230/240VAC (derating 10% at 208V, derating 20% at 200V)
Voltage accuracy         ±1%         ±1%         ±1%           THDV         <1% linear load	Rated frequency	50Hz/60Hz	50Hz/60Hz	50Hz/60Hz	50Hz/60Hz
THDV	Maximum PF	1	1	1	1
ThDV		±1%	±1%	±1%	±1%
S5% non linear load	,	<1% linear load	<1% linear load	<1% linear load	<1% linear load
Transfer time         10ms @ ECO<→Inverter)         10	THDv	<5% non linear load	<5% non linear load	<5% non linear load	<5% non linear load
Transfer time         10ms @ ECO<→Inverter)         10			Oms (4ms @ line <->bypass:	Oms (4ms @ line <->bypass:	Oms (4ms @ line <->bypass;
Crest Ratio         max 3:1         max 3:1         max 3:1         max 3:1           Overload (line mode)         100%	Transfer time		10ms @ ECO<->Inverter)	10ms @ ECO<->Inverter)	10ms @ ECO<->Inverter)
100%< oads105% continuous   105%< coads125% for 3mins   105%< coads150% for 30\$   125< oads150% for 500ms   125< oads150% for 500ms	Crest Ratio		max 3:1	max 3:1	max 3:1
Overload (line mode)       105% < load ≤125% for 3mins 125 < load ≤125% for 3mins 125 < load ≤125% for 30s 125 < load ≤150% for 500ms	or out it date		100% <load≤105% continuous<="" td=""><td>100%<load≤105% continuous<="" td=""><td>100%<load≤105% continuou<="" td=""></load≤105%></td></load≤105%></td></load≤105%>	100% <load≤105% continuous<="" td=""><td>100%<load≤105% continuou<="" td=""></load≤105%></td></load≤105%>	100% <load≤105% continuou<="" td=""></load≤105%>
Battery         Battery         Section of the working Mode         Section of the working to 60% load)         Yes (derating to 6	Overload (line mode)	125 <load≤150% 30s<="" for="" td=""><td>125<load≤150% 30s<="" for="" td=""><td>125<load≤150% 30s<="" for="" td=""><td>105%&lt; load ≤125% for 3min: 125<load≤150% 30s<br="" for="">&gt;150% for 500ms</load≤150%></td></load≤150%></td></load≤150%></td></load≤150%>	125 <load≤150% 30s<="" for="" td=""><td>125<load≤150% 30s<="" for="" td=""><td>105%&lt; load ≤125% for 3min: 125<load≤150% 30s<br="" for="">&gt;150% for 500ms</load≤150%></td></load≤150%></td></load≤150%>	125 <load≤150% 30s<="" for="" td=""><td>105%&lt; load ≤125% for 3min: 125<load≤150% 30s<br="" for="">&gt;150% for 500ms</load≤150%></td></load≤150%>	105%< load ≤125% for 3min: 125 <load≤150% 30s<br="" for="">&gt;150% for 500ms</load≤150%>
Battery         Battery         Section of the working Mode         Section of the working to 60% load)         Yes (derating to 6	Output Connection				
Voltage 36VDC 36VDC 72VDC 72VDC Capacity(AH) 3 x 12V/7Ah N/A 6 x 12V/7Ah N/A Backup time Typical value 3.0min 100% load by default battery capacity, PF=1 12.2min 50% load 12.9min 50% load 12.9min 50% load  Maximum connect external battery module quantity 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4		4 x IEC 13	4 x IEC 13	8 x IEC 13	8 x IEC 13
Voltage 36VDC 36VDC 72VDC 72VDC Capacity(AH) 3 x 12V/7Ah N/A 6 x 12V/7Ah N/A Backup time Typical value 3.0min 100% load by default battery capacity, PF=1 12.2min 50% load 12.9min 50% load 12.9min 50% load  Maximum connect external battery module quantity 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	Deltage				
Capacity(AH) 3 x 12V/7Ah N/A 6 x 12V/7Ah N/A  Backup time Typical value 3.0min 100% load by default battery capacity, PF=1 12.2min 50% load  Maximum connect external battery module quantity  Charger  Charging current 1.5A 8A 1.5A 8A  Recharging time 3h to 90% N/A  Other Working Mode  CVCF Yes (derating to 60% load)		2/\/DC	24VDC	72\/DC	72\/DC
Backup time Typical value 3.0min 100% load by default battery capacity, PF=1 12.2min 50% load 12.9min 50% lo	10.000				
by default battery capacity, PF=1 12.2min 50% load 12.9min 50% load 12.9min 50% load N/A  Maximum connect external battery module quantity 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	Control Contro		IN/A		IN/A
Maximum connect external battery module quantity  4  4  4  4  Charger  Charging current  1.5A  8A  1.5A  8A  Recharging time  3h to 90%  N/A  Other Working Mode  CVCF  Yes (derating to 60% load)			N/A		N/A
battery module quantity  Charger  Charging current  1.5A  8A  1.5A  8A  Recharging time  3h to 90%  N/A  Other Working Mode  CVCF  Yes (derating to 60% load)	by derault battery capacity, PF=1	TZ.ZIIIII DU% IOBO		12.7HIIII 30% 1080	
Charger Charging current 1.5A 8A 1.5A 8A Recharging time 3h to 90% N/A 3h to 90% N/A  Other Working Mode CVCF Yes (derating to 60% load)	Maximum connect external	,	И	Λ	1
Charging current 1.5A 8A 1.5A 8A Recharging time 3h to 90% N/A 3h to 90% N/A  Other Working Mode  CVCF Yes (derating to 60% load)	battery module quantity	4	4	4	+
Recharging time 3h to 90% N/A 3h to 90% N/A  Other Working Mode  CVCF Yes (derating to 60% load)					
Other Working Mode  CVCF Yes (derating to 60% load)	Charging current	1.5A	8A	1.5A	8A
CVCF Yes (derating to 60% load)	Recharging time	3h to 90%	N/A	3h to 90%	N/A
	Other Working Mode				
No. 11 No		Yes (derating to 60% load)	Yes (derating to 60% load)	Yes (derating to 60% load)	Yes (derating to 60% load)
Parallel No No No No No	Parallel	No	No	No	No



Model	FP-OT-IOT-1K	FP-OT-IOT-1KS	FP-OT-IOT-2K	FP-OT-IOT-2KS
HMI (Human Machine Interface)				
Display	Dot matrix LCD	Dot matrix LCD	Dot matrix LCD	Dot matrix LCD
Language	10 Languages	10 Languages	10 Languages	10 Languages
USB	USB 2.0 with HID			
RS232	Yes (DB9)	Yes (DB9)	Yes (DB9)	Yes (DB9)
Dry in/out	1 programmable dry in; 1 programmable dry out			
EPO	Yes	Yes	Yes	Yes
Intelligent slot	Yes (for long card)			
Network card	Optional, NMC long card	Optional, NMC long card	Optional, NMC long card	Optional, NMC long card
Modbus card	Optional, CMC/Modbus long card	Optional, CMC/Modbus long card	Optional, CMC/Modbus long card	Optional, CMC/Modbus long car
Dry contactor card	Optional, AS400 long card	Optional, AS400 long card	Optional, AS400 long card	Optional, AS400 long card
WLAN module	Optional, HDMI type	Optional, HDMI type	Optional, HDMI type	Optional, HDMI type
Ethernet port for IOT	RJ45	RJ45	RJ45	RJ45
DCIM connection	Ready	Ready	Ready	Ready
Physical Performance	4.45*007*000	4.45*007*000	4.0.5*4.0.4*0.4.0	405*404*040
Dimension (W*D*H) mm	145*397*220	145*397*220	195*421*318	195*421*318
IP protection level	IP20	IP20	IP20	IP20
Environment				
Operating temperature	0-45°C (power derating to 80% @40-45°C)	0-45°C (power derating to 80% @40-45°C)	0-45°C (power derating to 80% @40-45°C)	0-45°C (power derating to 809 @40-45°C)
Relative Humidity	0-95%	0-95%	0-95%	0-95%
Operating Altitude	0~3000m (the load derating 1 % every up 100m @1000~3000m)	0~3000m (the load derating 1 % every up 100m @1000~3000m)	0~3000m (the load derating 1 % every up 100m @1000~3000m)	0~3000m (the load derating 1 % every up 100m @1000~3000m)
Acoustic Noise	<45dB @ typical load with battery fully charged	<45dB @ typical load with battery fully charged	<50dB @ typical load with battery fully charged	<50dB @ typical load with battery fully charged
Certification	CE, IEC/EN 62040	CE, IEC/EN 62040	CE, IEC/EN 62040	CE, IEC/EN 62040
EMI				
Conduction/Radiation	C2	C2	C2	C2
EMS				
ESD	IEC/EN 61000-4-2	IEC/EN 61000-4-2	IEC/EN 61000-4-2	IEC/EN 61000-4-2
RS	IEC/EN 61000-4-3	IEC/EN 61000-4-3	IEC/EN 61000-4-3	IEC/EN 61000-4-3
EFT	IEC/EN 61000-4-4	IEC/EN 61000-4-4	IEC/EN 61000-4-4	IEC/EN 61000-4-4
Surge	IEC/EN 61000-4-5	IEC/EN 61000-4-5	IEC/EN 61000-4-5	IEC/EN 61000-4-5
Accessory				25.85
Maintenance bypass switch	N/A	N/A	N/A	N/A
Input power cable	Yes	Yes	Yes	Yes
Output power cable	Yes, 1*10A	Yes, 1*10A	Yes, 1*10A	Yes, 1*10A
EBM cable	Yes (in EBM)	Yes (in EBM)	Yes (in EBM)	Yes (in EBM)
USB cable	Yes	Yes	Yes	Yes
RS232 cable	Optional	Optional	Optional	Optional
Manual	Yes	Yes	Yes	Yes

 $<sup>^*</sup>$ Due to continuous product improvement programs, specifications are subject to change without notice.



Model	FP-OT-IOT-3K	FP-OT-IOT-3KS	FP-OT-IOT-6K	FP-OT-IOT-6KS
Power Rating	3000VA/3000W	3000VA/3000W	6000VA/6000W	6000VA/6000W
Efficiency				
Double conversion mode	93%	93%	95%	95%
ECO mode	97%	97%	98%	98%
Input Performance				
input renormance	4.00.0000.14.0007.1	4.00.0001/4.000/1	4.00.075\/4.000/.	4.0.075\./4.000/.1
Voltage range	160-300V 100% load, 110-160V derating to 50% load linearly	160-300V 100% load, 110-160V derating to 50% load linearly	160-275V 100% load, 110-160V derating to 50% load linearly	160-275V 100% load, 110-160V derating to 50% loa linearly
Rated frequency	50Hz/60Hz	50Hz/60Hz	50Hz/60Hz	50Hz/60Hz
Frequency range	40Hz-70Hz(45Hz-55Hz	40Hz-70Hz(45Hz-55Hz	40Hz-70Hz(45Hz-55Hz	40Hz-70Hz(45Hz-55Hz
Frequency range	54Hz-66Hz @ load>60%)	54Hz-66Hz @ load>60%)	54Hz-66Hz @ load>60%)	54Hz-66Hz @ load>60%)
PF	>0.99	>0.99	>0.995	>0.995
THDI	<5%	- = 9/	<3% linear load,	<3% linear load,
IHUI	<5%	<5%	<5% non linear load	<5% non linear load
Input Connection	IEC C20	IEC C20	L/N/PE hardware terminal connection	L/N/PE hardware terminal connection
			CONTROCTION	CONNECTION
Output Performance				
	200/208/220/230/240VAC	200/208/220/230/240VAC		
Rated voltage	(derating 10% at 208V, derating 20% at 200V)	(derating 10% at 208V, derating 20% at 200V)	220/230/240V	220/230/240V
Rated frequency	50Hz/60Hz	50Hz/60Hz	50Hz/60Hz	50Hz/60Hz
Maximum PF	1	1.	1	1
Voltage accuracy	±1%	±1%	±1%	±1%
TID.	<1% linear load	<1% linear load	<1% linear load	<1% linear load
THDv	<5% non linear load	<5% non linear load	<5% non linear load	<5% non linear load
	Oms (4ms @ line <-> bypass;	Oms (4ms @ line <-> bypass;	Oms	Oms
Transfer time	10ms @ ECO<->Inverter)	10ms @ ECO<->Inverter)	(10ms @ ECO->Inverter)	(10ms @ ECO->Inverter)
Crest Ratio	max 3:1	max 3:1	max 3:1	max 3:1
	100% <load≤105% continuous<="" td=""><td>100%<load≤105% continuous<="" td=""><td>100%<load≤105% continuous<="" td=""><td>100%<load≤105% continuous<="" td=""></load≤105%></td></load≤105%></td></load≤105%></td></load≤105%>	100% <load≤105% continuous<="" td=""><td>100%<load≤105% continuous<="" td=""><td>100%<load≤105% continuous<="" td=""></load≤105%></td></load≤105%></td></load≤105%>	100% <load≤105% continuous<="" td=""><td>100%<load≤105% continuous<="" td=""></load≤105%></td></load≤105%>	100% <load≤105% continuous<="" td=""></load≤105%>
	105%< load ≤125% for 3mins	105%< load ≤125% for 3mins	105%< load ≤125% for 10mins	105%< load ≤125% for 10mir
Overload (line mode)	125 <load≤150% 30s<="" for="" td=""><td>125<load≤150% 30s<="" for="" td=""><td>125<load≤150% 30s<="" for="" td=""><td>125<load≤150% 30s<="" for="" td=""></load≤150%></td></load≤150%></td></load≤150%></td></load≤150%>	125 <load≤150% 30s<="" for="" td=""><td>125<load≤150% 30s<="" for="" td=""><td>125<load≤150% 30s<="" for="" td=""></load≤150%></td></load≤150%></td></load≤150%>	125 <load≤150% 30s<="" for="" td=""><td>125<load≤150% 30s<="" for="" td=""></load≤150%></td></load≤150%>	125 <load≤150% 30s<="" for="" td=""></load≤150%>
	>150% for 500ms	>150% for 500ms	>150% for 500ms	>150% for 500ms
Output Connection				
Wiring/socket	8 x IEC C13 + hardwire terminal	8 x IEC C13 + hardwire terminal	L/N/PE hardware terminal connection	L/N/PE hardware terminal connection
	rentillidi	Citina	CONTROCTION	CONTINUEDION
Battery				
Voltage	72VDC	72VDC	192~240VDC adjustable	192~240VDC adjustable
Capacity(AH)	6 x 12V/9Ah	N/A	16*12V/7Ah, 16~20pcs adjustable	N/A
Backup time Typical value	2.5min 100% load		3.6min 100% load	A 1 7 A
by default battery capacity, PF=1	9.3min 50% load	N/A	9.6min 50% load	N/A
Maximum connect external	4	4	6	6
battery module quantity	,	ato		=
Charger				
Charging current	1.5A	8A	1.4A (0-4A adjustable)	4A (0-12A adjustable)
Recharging time	3h to 90%	N/A	3h to 90%	N/A
	5.1 60 7070	- 4a 3	0.03.00.0.0.0.0.	
Other Working Mode				
CVCF	Yes (derating to 60% load)	Yes (derating to 60% load)	Yes (derating to 60% load)	Yes (derating to 60% load)
Parallel	No	No	Optional (up to 3)	Optional (up to 3)



Model	FP-OT-IOT-3K	FP-OT-IOT-3KS	FP-OT-IOT-6K	FP-OT-IOT-6KS
HMI (Human Machine Interface)				
Display	Dot matrix LCD	Dot matrix LCD	Dot matrix LCD	Dot matrix LCD
Language	10 Languages	10 Languages	10 Languages	10 Languages
USB	USB 2.0 with HID			
RS232	Yes (DB9)	Yes (DB9)	Yes (DB9)	Yes (DB9)
Dry in/out	1 programmable dry in; 1 programmable dry out			
EPO	Yes	Yes	Yes	Yes
Intelligent slot	Yes (for long card)			
Network card	Optional, NMC long card	Optional, NMC long card	Optional, NMC long card	Optional, NMC long card
Modbus card	Optional, CMC/Modbus long card	Optional, CMC/Modbus long card	Optional, CMC/Modbus long card	Optional, CMC/Modbus long car
Dry contactor card	Optional, AS400 long card	Optional, AS400 long card	Optional, AS400 long card	Optional, AS400 long card
WLAN module	Optional, HDMI type	Optional, HDMI type	Optional, HDMI type	Optional, HDMI type
Ethernet port for IOT	RJ45	RJ45	RJ45	RJ45
DCIM connection	Ready	Ready	Ready	Ready
	,	,	,	
Physical Performance				
Dimension (W*D*H) mm	195*421*318	195*421*318	220*492*589	220*492*348
IP protection level	IP20	IP20	IP20	IP20
Environment				
Operating temperature	0-45°C (power derating to 80% @40-45°C)	0-45°C (power derating to 80% @40-45°C)	0-50°C (power derating to 50% @40-50°C)	0-50°C (power derating to 509 @40-50°C)
Relative Humidity	0-95%	0-95%	0-95%	0-95%
Operating Altitude	0~3000m (the load derating 1 % every up 100m @1000~3000m)	0~3000m (the load derating 1 % every up 100m @1000~3000m)	0~3000m (the load derating 1 % every up 100m @1000~3000m)	0~3000m (the load derating 1 % every up 100m @1000~3000m)
Acoustic Noise	<50dB @ typical load with battery fully charged	<50dB @ typical load with battery fully charged	<50dB @ typical load with battery fully charged	<50dB @ typical load with battery fully charged
Certification	CE, IEC/EN 62040	CE, IEC/EN 62040	CE, IEC/EN 62040	CE, IEC/EN 62040
FMI				
Conduction/Radiation	C2	C2	C3	C3
EMS				
ESD	IEC/EN 61000-4-2	IEC/EN 61000-4-2	IEC/EN 61000-4-2	IEC/EN 61000-4-2
RS	IEC/EN 61000-4-2	IEC/EN 61000-4-2	IEC/EN 61000-4-2	IEC/EN 61000-4-2
EFT	IEC/EN 61000-4-3	IEC/EN 61000-4-3	IEC/EN 61000-4-3	IEC/EN 61000-4-3
	IEC/EN 61000-4-4	IEC/EN 61000-4-4	IEC/EN 61000-4-4	IEC/EN 61000-4-4
Surge	IEC/ EN 01000-4-3	IEC/EN 01000-4-3	IEC/ EIN 01000-4-3	IEC/EIN 01000-4-3
Accessory				
Maintenance bypass switch	N/A	N/A	Standard offer	Standard offer
Input power cable	Yes	No	N/A	N/A
Output power cable	Yes, 1*10A	Yes, 1*10A	N/A	N/A
EBM cable	Yes (in EBM)	Yes (in EBM)	Yes (in EBM)	Yes (in EBM)
USB cable	Yes	Yes	Yes	Yes
RS232 cable	Optional	Optional	Optional	Optional
Manual	Yes	Yes	Yes	Yes

 $<sup>^{*}</sup>$ Due to continuous product improvement programs, specifications are subject to change without notice.



Model	FP-OT-IOT-10K	FP-OT-IOT-10KS	FP-OT-IOT-20K	FP-OT-IOT-20KS
Power Rating	10000VA/10000W	10000VA/10000W	20000VA/20000W	20000VA/20000W
Efficiency				
Double conversion mode	95%	95%	96%	96%
ECO mode	98%	98%	99%	99%
Input Performance				
Voltage range	160-275V 100% load, 110-160V derating to 50% load linearly	160-275V 100% load, 110-160V derating to 50% load linearly	273-520V 100% load, 173-273V derating to 50% load linearly	273-520V 100% load, 173-273V derating to 50% load linearly
Rated frequency	50Hz/60Hz	50Hz/60Hz	50Hz/60Hz	50Hz/60Hz
Frequency range	40Hz-70Hz(45Hz-55Hz 54Hz-66Hz @ load>60%)	40Hz-70Hz(45Hz-55Hz 54Hz-66Hz @ load>60%)	40Hz-70Hz(45Hz-55Hz 54Hz-66Hz @ load>60%)	40Hz-70Hz(45Hz-55Hz 54Hz-66Hz @ load>60%)
PF	>0.995	>0.995	>0.995	>0.995
	<3% linear load.	<3% linear load.	<3% linear load,	<3% linear load,
THDI	<5% non linear load	<5% non linear load	<5% non linear load	<5% non linear load
Input Connection	L/N/PE hardware terminal connection	L/N/PE hardware terminal connection	L1/L2/L3/N/PE hardware terminal connection (Optional) Dual input for line and bypass	L1/L2/L3/N/PE hardware terminal connection (Optional) Dual input for line and bypass
Output Performance				
Rated voltage	220/230/240V	220/230/240V	380/400/415V	380/400/415V
Rated frequency	50Hz/60Hz	50Hz/60Hz	50Hz/60Hz	50Hz/60Hz
Maximum PF	1	1	1	1
			±1%	±1%
Voltage accuracy	±1%	±1%		
THDv	<1% linear load	<1% linear load	<1% linear load	<1% linear load
	<5% non linear load	<5% non linear load	<5% non linear load	<5% non linear load
Transfer time	Oms	Oms	Oms	Oms
C	(10ms @ ECO->Inverter)	(10ms @ ECO->Inverter)	(2ms @ ECO->Inverter)	(2ms @ ECO->Inverter)
Crest Ratio	max 3:1	max 3:1	max 3:1	max 3:1
	100% <load≤105% continuous<="" td=""><td>100%<load≤105% continuous<="" td=""><td>100%<load≤105% continuous<="" td=""><td>100%<load≤105% continuous<="" td=""></load≤105%></td></load≤105%></td></load≤105%></td></load≤105%>	100% <load≤105% continuous<="" td=""><td>100%<load≤105% continuous<="" td=""><td>100%<load≤105% continuous<="" td=""></load≤105%></td></load≤105%></td></load≤105%>	100% <load≤105% continuous<="" td=""><td>100%<load≤105% continuous<="" td=""></load≤105%></td></load≤105%>	100% <load≤105% continuous<="" td=""></load≤105%>
Overload (line mode)	105%< load ≤125% for 10mins	105%< load ≤125% for 10mins	105%< load ≤125% for 10mins	105%< load ≤125% for 10mir
	125 <load≤150% 30s<="" for="" td=""><td>125<load≤150% 30s<="" for="" td=""><td>125<load≤150% 1min<="" for="" td=""><td>125<load≤150% 1min<="" for="" td=""></load≤150%></td></load≤150%></td></load≤150%></td></load≤150%>	125 <load≤150% 30s<="" for="" td=""><td>125<load≤150% 1min<="" for="" td=""><td>125<load≤150% 1min<="" for="" td=""></load≤150%></td></load≤150%></td></load≤150%>	125 <load≤150% 1min<="" for="" td=""><td>125<load≤150% 1min<="" for="" td=""></load≤150%></td></load≤150%>	125 <load≤150% 1min<="" for="" td=""></load≤150%>
	>150% for 500ms	>150% for 500ms	>150% for 500ms	>150% for 500ms
Output Connection				
Wiring/socket	L/N/PE hardware terminal connection	L/N/PE hardware terminal connection	L1/L2/L3/N/PE hardware terminal connection	L1/L2/L3/N/PE hardware terminal connection
Battery				
Voltage	192~240VDC adjustable	192~240VDC adjustable	384~480VDC adjustable	384~480VDC adjustable
Capacity(AH)	16*12V/9Ah, 16~20pcs adjustable	N/A	2*16*12V/9Ah, 32~40pcs adjustable	N/A
Backup time Typical value	2.1min 100% load		1.8min 100% load	
by default battery capacity, PF=1	8.0min 50% load	N/A	4.7min 50% load	N/A
Maximum connect external	,	,	,	
	6	6	6	6
battery module quantity				
Charger	2A (0-4A adiustable)	4A (0-12A adjustable)	2A (0-13A adjustable)	2A (0-13A adjustable)
	2A (0-4A adjustable) 3h to 90%	4A (0-12A adjustable) N/A	2A (0-13A adjustable) 3h to 90%	2A (0-13A adjustable) N/A
Charger Charging current Recharging time				
Charger Charging current				



Dry contactor card         Optional, AS400 long card         Pade           Coll Comment         Coll Coll Coll Coll Coll Coll Coll Coll	Model	FP-OT-IOT-10K	FP-OT-IOT-10KS	FP-OT-IOT-20K	FP-OT-IOT-20KS
Language	HMI (Human Machine Interface)				
USB 20 with HID         Ves (DB9)           EPO         Yes (DB9)         1 programmable dry int 1 programmable dry int 1 programmable dry out 1 programmable dry out 1 programmable dry out 1 programmable dry out 1 programmable dry int 1 programmable dry out 1	Display	Dot matrix LCD	Dot matrix LCD	Colour touch LCD	Colour touch LCD
RS232   Yes (D89)   Yes (D89	Language	10 Languages	10 Languages	10 Languages	10 Languages
Dry in/out         1 programmable dry int 1 programmable dry int 1 programmable dry int 1 programmable dry out 2 programmable d	USB	USB 2.0 with HID			
EPO	RS232	Yes (DB9)	Yes (DB9)	Yes (DB9)	Yes (DB9)
Intelligent slot	Dry in/out	1 programmable dry in; 1 programmable dry out			
Network card	EPO	Yes	Yes	Yes	Yes
Modbus card         Optional, CMC/Modbus long card         Optional, AS400 long card         Optional, HDMI type         Rul45	Intelligent slot	Yes (for long card)			
Dry contactor card         Optional, AS400 long card         Pade           Coll Comment         Coll Coll Coll Coll Coll Coll Coll Coll	Network card	Optional, NMC long card	Optional, NMC long card	Optional, NMC long card	Optional, NMC long card
WLAN module         Optional, HDMI type         Optional, HDMI type         Optional, HDMI type         Optional, HDMI type           Ethernet port for IOT         RV45         RV45         RV45         RV45         RV45           DICIM connection         Ready         Ready         Ready         Ready           Physical Performance           Dimension (W*D*H) mm         220*492*589         220*492*348         350*650*890         350*650*890           IP20         IP20         IP20         IP20         IP20           Environment           Operating temperature         0.50°C (power derating to 50% @40*50°C)	Modbus card	Optional, CMC/Modbus long card			
Ethernet port for IOT         RJ45         RJ45         RJ45         Ready         Person	Dry contactor card	Optional, AS400 long card	Optional, AS400 long card	Optional, AS400 long card	Optional, AS400 long card
DCIM connection   Ready   Re	WLAN module	Optional, HDMI type	Optional, HDMI type	Optional, HDMI type	Optional, HDMI type
Physical Performance	Ethernet port for IOT	RJ45	RJ45	RJ45	RJ45
Dimension (W*D*H) mm   220*492*589   220*492*348   350*650*890   350*650*890   1P20	DCIM connection	Ready	Ready	Ready	Ready
Dimension (W*D*H) mm   220*492*589   220*492*348   350*650*890   350*650*890   1P20	Dhusical Derformance				
P20		220*402*580	220*402*348	350*650*890	350*650*890
Environment					
Operating temperature         0-50°C (power derating to 50% @40-50°C)         0-50°C (power derating to 50% @40-50°C)         0-50°C (power derating to 50% @40-50°C)           Relative Humidity         0-95%         0-95000         0-95000         0-95000         0-95000         0-95000         0-95000         0-95000         0-95000         0-95000         0-95000	iP protection level	1720	1720	IPZU	IP20
Some and Service   Some and	Environment				
Operating Altitude         0~3000m (the load derating 1 % every up 100m @1000~3000m)         0~3000m (the load derating 1 % every up 100m @1000~4000m)         0~4000m (the load derating 1 % every up 100m @1000~4000m)         0~4000m (the load derating 1 % every up 100m @1000~4000m)         0~4000m (the load derating 1 % every up 100m @1000~4000m)         0~4000m (the load derating 1 % every up 100m @1000~4000m)         0~4000m (the load derating 1 % every up 100m @1000~4000m)         0~4000m (the load derating 1 % every up 100m @1000~4000m)         0~4000m (the load derating 1 % every up 100m @1000~4000m)         0~4000m (the load derating 1 % every up 100m @1000~4000m)         0~4000m (the load derating 1 % every up 100m @1000~4000m)         0~4000m (the load derating 1 % every up 100m @1000~4000m)         0~4000m (the load derating 1 % every up 100m @1000~4000m)         0~4000m (the load derating 1 % every up 100m @1000~4000m)         0~4000m (the load derating 1 % every up 100m @1000~400m)         0~4000m (the load derating 1 % every up 100m @1000~400m)         0~4000m (the load derating 1 % every up 100m @1000~400m)         0~4000m (the load derating 1 % every up 100m @1000~400m)         0~4000m	Operating temperature				0-50°C (power derating to 50% @40-50°C )
Acoustic Noise   S5dB @ typical load with battery fully charged   S5dB @ typical loa	Relative Humidity	0-95%	0-95%	0-95%	0-95%
Dattery Fully charged   Datt	Operating Altitude				0~4000m (the load derating 1 % every up 100m @1000~4000m)
EMI           Conduction/Radiation         C3         C3         C3         C3         C3         C3         EMS         EMS         EC/EN 61000-4-2         IEC/EN 61000-4-2         IEC/EN 61000-4-2         IEC/EN 61000-4-2         IEC/EN 61000-4-2         IEC/EN 61000-4-3         IEC/EN 61000-4-3         IEC/EN 61000-4-3         IEC/EN 61000-4-3         IEC/EN 61000-4-3         IEC/EN 61000-4-3         IEC/EN 61000-4-4         IEC/EN 61000-4-4         IEC/EN 61000-4-4         IEC/EN 61000-4-5         IEC/	Acoustic Noise				
Conduction/Radiation C3 C3 C3 C3 C3  EMS  ESD IEC/EN 61000-4-2 IEC/EN 61000-4-2 IEC/EN 61000-4-2 IEC/EN 61000-4-2 IEC/EN 61000-4-3 IEC/EN 61000-4-3  EFT IEC/EN 61000-4-4 IEC/EN 61000-4-4 IEC/EN 61000-4-4  Surge IEC/EN 61000-4-5 IEC/EN 61000-4-5 IEC/EN 61000-4-5  Maintenance bypass switch Standard offer Standard offer Standard offer Standard offer Input power cable N/A N/A N/A N/A N/A  Output power cable N/A N/A N/A N/A N/A  EBM cable Yes (in EBM) Yes (in EBM) Yes (in EBM) Yes (in EBM)  USB cable Yes Yes Yes Yes Yes  RS232 cable Optional Optional Optional Optional	Certification	CE, IEC/EN 62040	CE, IEC/EN 62040	CE, IEC/EN 62040	CE, IEC/EN 62040
Conduction/Radiation C3 C3 C3 C3 C3  EMS  ESD IEC/EN 61000-4-2 IEC/EN 61000-4-2 IEC/EN 61000-4-2 IEC/EN 61000-4-2 IEC/EN 61000-4-3 IEC/EN 61000-4-3  EFT IEC/EN 61000-4-4 IEC/EN 61000-4-4 IEC/EN 61000-4-4  Surge IEC/EN 61000-4-5 IEC/EN 61000-4-5 IEC/EN 61000-4-5  Maintenance bypass switch Standard offer Standard offer Standard offer Standard offer Input power cable N/A N/A N/A N/A N/A  Output power cable N/A N/A N/A N/A N/A  EBM cable Yes (in EBM) Yes (in EBM) Yes (in EBM) Yes (in EBM)  USB cable Yes Yes Yes Yes Yes  RS232 cable Optional Optional Optional Optional	ENT				
EMS           ESD         IEC/EN 61000-4-2         IEC/EN 61000-4-3         IEC/EN 61000		C3	C3	C3	C3
ESD         IEC/EN 61000-4-2         IEC/EN 61000-4-2         IEC/EN 61000-4-2         IEC/EN 61000-4-2         IEC/EN 61000-4-2         IEC/EN 61000-4-2         IEC/EN 61000-4-3         IEC/EN 61000-4-4         IEC/EN 61000-4-4         IEC/EN 61000-4-4         IEC/EN 61000-4-5					
RS         IEC/EN 61000-4-3         IEC/EN 61000-4-4         IEC/EN 61000-4-4         IEC/EN 61000-4-4         IEC/EN 61000-4-5         <	EMS				
EFT         IEC/EN 61000-4-4         IEC/EN 61000-4-4         IEC/EN 61000-4-4         IEC/EN 61000-4-4         IEC/EN 61000-4-4         IEC/EN 61000-4-5	ESD	IEC/EN 61000-4-2	IEC/EN 61000-4-2	IEC/EN 61000-4-2	IEC/EN 61000-4-2
SurgeIEC/EN 61000-4-5IEC/EN 61000-4-5IEC/EN 61000-4-5IEC/EN 61000-4-5AccessoryMaintenance bypass switchStandard offerStandard offerStandard offerInput power cableN/AN/AN/AN/AOutput power cableN/AN/AN/AN/AEBM cableYes (in EBM)Yes (in EBM)Yes (in EBM)Yes (in EBM)USB cableYesYesYesYesRS232 cableOptionalOptionalOptionalOptional	RS	IEC/EN 61000-4-3	IEC/EN 61000-4-3	IEC/EN 61000-4-3	IEC/EN 61000-4-3
Accessory  Maintenance bypass switch Standard offer N/A	EFT	IEC/EN 61000-4-4	IEC/EN 61000-4-4	IEC/EN 61000-4-4	IEC/EN 61000-4-4
Maintenance bypass switchStandard offerStandard offerStandard offerInput power cableN/AN/AN/AN/AOutput power cableN/AN/AN/AN/AEBM cableYes (in EBM)Yes (in EBM)Yes (in EBM)Yes (in EBM)USB cableYesYesYesYesRS232 cableOptionalOptionalOptionalOptional	Surge	IEC/EN 61000-4-5	IEC/EN 61000-4-5	IEC/EN 61000-4-5	IEC/EN 61000-4-5
Maintenance bypass switchStandard offerStandard offerStandard offerInput power cableN/AN/AN/AN/AOutput power cableN/AN/AN/AN/AEBM cableYes (in EBM)Yes (in EBM)Yes (in EBM)Yes (in EBM)USB cableYesYesYesYesRS232 cableOptionalOptionalOptionalOptional	Accessory				
Input power cable         N/A		Standard offer	Standard offer	Standard offer	Standard offer
Output power cableN/AN/AN/AN/AEBM cableYes (in EBM)Yes (in EBM)Yes (in EBM)Yes (in EBM)USB cableYesYesYesYesRS232 cableOptionalOptionalOptionalOptional					
EBM cableYes (in EBM)Yes (in EBM)Yes (in EBM)Yes (in EBM)USB cableYesYesYesYesRS232 cableOptionalOptionalOptionalOptional					
USB cableYesYesYesYesRS232 cableOptionalOptionalOptionalOptional					
RS232 cable Optional Optional Optional Optional Optional					
schools school					
	Manual	Yes	Yes	Yes	Yes

 $<sup>^{*}</sup>$ Due to continuous product improvement programs, specifications are subject to change without notice.



### Rear Panel Photo







FP-OT-IOT-2K/2KS



FP-OT-IOT-3K



FP-OT-IOT-3KS



FP-OT-IOT-6K



FP-OT-IOT-6KS



FP-OT-IOT-10K



FP-OT-IOT-10KS



FP-OT-IOT-20K