

# FN2 On-line UPS 4.5, 6, 8 & 10kVA Rackmount & Tower





#### **FN2 On-line UPS Advantages:**

- Advanced DSP technology
   The FN2 On-line UPS features advanced Digital Signal Processing (DSP) technology with a unity output power factor. It also offers N+1 redundancy and scalability up to 40kVA.
- Versatile options
  - Power Distribution Unit (PDU) with or without Maintenance Bypass Switch (MBS)
  - Extended battery banks
- User-friendly LCD display
   The FN2 has an easy-to-use display to monitor the UPS and battery status.

- Extended battery banks
   The hot-swappable battery banks are easily expandable for minutes to hours of extra battery runtime.
- Advanced communications
   The FN2's software supports unattended shutdown and UPS management. An optional SNMP/HTTP agent board is available.
- Falcon is recognized for quality and reliability

Falcon Electric is a recognized authority in on-line UPS solutions. Our technical expertise assures you find the right solution – the first time.

#### **FN2 On-line UPS**

### Rackmount 4.5, 6, 8 & 10kVA

Nominal VA	Model Number	ar	FN2-4.5KRM-2TXI	FN2-6KRM-2TXI	FN2-8KRM-2TXI	FN2-10KRM-2TXI		
Blackford Injust		01						
Naminal AC Voltage   Seased on applied load percentage: 175 - 280 No. 2 100 No. 100 - 100 No. 10 - 100 No. 2 10 No. 10 No			1000	1 0000	1 0000	10000		
AS Voltage Flampe   Based on applied load percentage: 176 - 20/Was 5 90% load, 150 - 170 Was < 75% load, 110 - 160 Was < 50% load, 150 - 167 Was < 75% load, 110 - 160 Was < 50% load, 150 - 167 Was < 75% load, 110 - 160 Was < 50% load, 150 - 167 Was < 75% load, 150 - 160 Was < 50% load, 150 Was < 50%	•		208Vac or 240Vac					
Frequency   Range			Based on applied load pe	rcentage: 176 - 280Vac ≤ 100%	load, 160 - 176Vac < 75% load,	110 - 160Vac < 50% load.		
Efficiency (Typ.)   90% Normal Mode, 94% ECO Mode   91% Normal Mode, 95% ECO Mode   26A   85A   52A   85A   65A   85A   85A	U U							
Current   SAA	. , ,							
Harmonic Distortion			90% Normal Mode, 94% ECO Mode 91% Normal Mode, 95% ECO Mode					
	Current		30A	36A	52A	62A		
Watts   4500   6000   8000   10000   10000	Harmonic Distortion			≤5% (at ful	ll linear load)			
Power Factor	Electrical Output							
102/03/19/19/19/19/19/19/19/19/19/19/19/19/19/	Watts		4500		!	10000		
Figure					•			
Frequency   Note: UPS output capacity deriate to 75% when programmed for fixed output frequency.	AC Voltage							
Frequency Stability	Frequency		, , ,					
Voltage Regulation	Frequency Window							
Harmonic Distortion	Frequency Stability							
110% for 480 seconds, 125% for 30 seconds, 150% immediate	Voltage Regulation							
See Load Change	Harmonic Distortion		≤ 3% (at full linear load)					
Step Load Change	Overload		110% for 480 seconds, 125% for 30 seconds, 150% immediate					
Output   Presention   Overload, Over-temperature, Short Circuit, Over-charge			· · · · · · · · · · · · · · · · · · ·					
Battery	· ·							
DC Bus Voltage (nominal)			Overload, Over-temperature, Short Circuit, Over-charge					
Battery Type		-			0) (4 -			
Battery Nype								
Battery Runtime								
Full/Haft Load in Minutes				Maintenance-Free, Sealed	VRLA Batteries, 12vdc, 9An	Г		
Recharge Time	· ·		9.5 / 26	5.5 / 17	4 / 11.5	2 / 8.5		
Transfer Time			6 Hours to 000/.					
Transfer Time								
Line Fails/Recovers   Line Fails/Recovers   Electrical Connections   Line Fails/Recovers   Electrical Connections   Line Fails/Recovers   Electrical Connections   Line Fails/Recovers   Line Fails				1.77 (Two Otep, Constant Cun	rent / constant voltage charger)			
UPS to Bypass or Reverse   Electrical Connections   Electrical Connections   Electrical Connections   Electrical Connections   Environmental   Environmenta				_				
Electrical Connections				0	ms			
Battery   Servisonmental   Storage   Operational   Storage   Operational   Storage   Operational								
Pervisionmental			Hardwire Terminal Block					
Temperature	Battery							
Humidity	Environmental							
Humidity	Temperature	Operational		0°C to 40°C (	(32°F to 104°F)			
Altitude		Storage	-10°C to 40°C (14°F to 104°F)					
Cooling	Humidity		20% to 95% Non – Condensing					
Heat Dissipation								
Audible Noise         (® 1 Meter)         <60dBA           Controls & Indicators           LCD Display         Utility Voltage / Frequency, Bypass Voltage / Frequency, Inverter Voltage / Frequency / Current Load %, Battery Voltage, Internal Temperature, Battery Quantity           LED Indicators         Utility Input, Bypass Input, N+1 Parallel Mode, ECO Mode & UPS Fault           Audible Alarms         USB Port, RS-232 Serial Port, Optional SNMP/HTTP Agent Board (UPS Bundled UPSilon Software)           Remote Emergency Power Off         Two Position, Normally Open Connector           Parallel Redundancy         UP to 4 UPSs for Parallel Operation (Scalable up to 40kVA)           Parallel Redundancy         UPS Inverter Dimensions         H x W x D inches (mm)         (2U) 3.5 x 17.3 x 26.8 (3U) 5.2 x 17.3 x 27						·		
Controls & Indicators           LCD Display         Utility Voltage / Frequency, Bypass Voltage / Frequency, Inverter Voltage / Frequency / Current Load %, Battery Voltage, Internal Temperature, Battery Quantity           LED Indicators         Utility Input, Bypass Input, N+1 Parallel Mode, ECO Mode & UPS Fault           Audible Alarms         Utility Loss, Low Battery, Transfer to Bypass & UPS Fault           Communications         USB Port, RS-232 Serial Port, Optional SNMP/HTTP Agent Board (UPS Bundled UPSilon Software)           Remote Emergency Power Off         Two Position, Normally Open Connector           Parallel Capacity         Up to 4 UPSs for Parallel Operation (Scalable up to 40kVA)           Parallel Redundancy         3 + 1           Mechanical           UPS Inverter Dimensions         H x W x D inches (mm)         (2U) 3.5 x 17.3 x 26.8         (3U) 5.2 x 17.3 x 26.8           Transformer Dimensions         (88 x 440 x 680)         (132 x 440 x 680)         (132 x 440 x 680)           Battery Bank Dimensions         (3U) 5.2 x 17.3 x 27         (132 x 440 x 685)         (132 x 440 x 685)           UPS Inverter Weight         Ib. (kg)         252 (114.5)         314 (142.5)           UPS Inverter Weight         Ib. (kg)         41 (18.5)         47 (21.5)           Battery Bank Weight         Ib. (kg)         93 (42)         128 (58)			2559			4777		
LCD Display         Utility Voltage / Frequency, Bypass Voltage / Frequency, Inverter Voltage / Frequency / Current Load %, Battery Voltage, Internal Temperature, Battery Quantity           LED Indicators         Utility Input, Bypass Input, N+1 Parallel Mode, ECO Mode & UPS Fault           Audible Alarms         Us Port, Rs-232 Serial Port, Optional SNMP/HTTP Agent Board (UPS Bundled UPSilon Software)           Remote Emergency Power Off		(@ 1 Meter)		<60	nary			
Load %, Battery Voltage, Internal Temperature, Battery Quantity           LED Indicators         Utility Input, Bypass Input, N+1 Parallel Mode, ECO Mode & UPS Fault           Audible Alarms         Utility Loss, Low Battery, Transfer to Bypass & UPS Fault           Communications         USB Port, RS-232 Serial Port, Optional SNMP/HTTP Agent Board (UPS Bundled UPSilon Software)           Remote Emergency Power Off         Two Position, Normally Open Connector           Parallel Capacity         Up to 4 UPSs for Parallel Operation (Scalable up to 40kVA)           Parallel Redundancy           Wechanical           UPS Inverter Dimensions         H x W x D         (2U) 3.5 x 17.3 x 26.8         (3U) 5.2 x 17.3 x 26.8         (3U) 5.2 x 17.3 x 27           Fastery Bank Dimensions         H x W x D         (132 x 440 x 685)         UPS System Weight         Ib. (kg)         252 (114.5)         314 (142.5)           UPS Inverter Weight         Ib. (kg)         41 (18.5)         47 (21.5)           Battery Bank Weight         Ib. (kg)         41 (18.5)         47 (21.5)           Battery Bank Weight         Ib. (kg)         49 (30 (30 (30 (30 (30 (30 (30 (30 (30 (30	Controls & Indicators		1 14014 - 3 7 - 14 - 3 - 3	Fraguanay Dimaga Vallaga / E	roquonou Invertor Vellege / Free	Honor / Current		
LED Indicators         Utility Input, Bypass Input, N+1 Parallel Mode, ECO Mode & UPS Fault           Audible Alarms         Utility Loss, Low Battery, Transfer to Bypass & UPS Fault           Communications         USB Port, RS-232 Serial Port, Optional SNMP/HTTP Agent Board (UPS Bundled UPSilon Software)           Remote Emergency Power Off         Two Position, Normally Open Connector           Parallel Capacity         Up to 4 UPSs for Parallel Operation (Scalable up to 40kVA)           Parallel Redundancy         3 + 1           Mechanical           UPS Inverter Dimensions         H x W x D inches (mm)         (2U) 3.5 x 17.3 x 26.8 (3U) 5.2 x 17.3 x 27           H x W x D inches (mm)         (3U) 5.2 x 17.3 x 27         H x W x D inches (mm)         (132 x 440 x 685)           UPS System Weight         lb. (kg)         252 (114.5)         314 (142.5)           UPS Inverter Weight         lb. (kg)         47 (21.5)           Battery Bank Weight         lb. (kg)         93 (42)         128 (58)	LCD Display							
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Battery Bank Weight         lb. (kg)         139 (63)           Transformer Weight         lb. (kg)         93 (42)         128 (58)		lb. (kg)	252 (	,		142.5)		
Transformer Weight         Ib. (kg)         93 (42)         128 (58)								
	Battery Bank Weight	lb. (kg)			9 (63)			
Agency Approvals  UL1778, cUL, FCC Class A, CE		lb. (kg)	93	(42)	128	(58)		
	Agency Approvals			UL1778, cUL,	FCC Class A, CE			



# FN2 On-line UPS

## Tower 4.5, 6, 8 &10kVA

Model Number	FN2-4.5K-2TXI	FN2-6K-2TXI	FN2-8K-2TXI	FN2-10K-2TXI			
Nominal VA	4500	6000	8000	10000			
Electrical Input							
Nominal AC Voltage		208Vac	or 240Vac				
AC Voltage Range	Based on applied load pe	Based on applied load percentage: 176 - 280Vac ≤ 100% load, 160 - 176Vac < 75% load, 110 - 160Vac < 50% load.					
Frequency Range	45 - 70Hz						
Power Factor Correction	0.99 (at full linear load)						
Efficiency (Typ.)	90% Normal Mod	90% Normal Mode, 94% ECO Mode 91% Normal Mode, 95% ECO Mode					
Current	30A	36A	52A	62A			
Harmonic Distortion		≤5% (at fu	Il linear load)				
Electrical Output							
Watts	4500	6000	8000	10000			
Power Factor		•	1				
AC Voltage	1	120/208Vac, 110/220Vac, 115/230Vac, 120/240Vac (Isolated Output)					
		50/60 Hz (Auto Tracking) or Fixed 50/60 Hz					
Frequency	Note: UPS output capacity derated to 75% when programmed for fixed output frequency.						
Frequency Window	± 1Hz or ± 3Hz (Programmable Synchronized Range)						
Frequency Stability	± 0.2% (Fixed Frequency Operation)						
Voltage Regulation		± 3%					
Harmonic Distortion		≤ 3% (at full linear load)					
Overload		110% for 480 seconds, 125% for 30 seconds, 150% immediate					
Crest Ratio		3:1					
Step Load Change		3.1 ≤ 10% within 60ms for 10% - 100% load variation					
Output Protection		Overload, Over-temperature, Short Circuit, Over-charge					
Battery		everious, ever temperatur	o, chort ondat, over onarge				
DC Bus Voltage (nominal)	T	24	0Vdc				
Battery Pack Type	User-Replaceable, Hot-Swappable Packs (5)						
Battery Type		User-Replaceable, Hot-Swappable Packs (5)  Maintenance-Free, Sealed VRLA Batteries, 12Vdc, 9Ah					
Battery Runtime		Ividintendinee i ree, dedied	VILLY CEALCINGS, 12 VGC, 57 (1)				
Full/Half Load in Minutes	9.5 / 26	5.5 / 17	4 / 11.5	2 / 8.5			
Recharge Time		6 Hour	s to 90%				
Charger Current	6 Hours to 90%  1.7A (Two Step, Constant Current / Constant Voltage Charger)						
Transfer Time		1.7A (Two Step, Constant Cun	Terit / Coristant Voltage Charger)				
Line Fails/Recovers	1						
UPS to Bypass or Reverse	-	0ms					
Electrical Connections							
Input / Output		Handadas Transferd Blood					
· · · · ·		Hardwire Terminal Block					
Battery  Futornal Charger		Anderson Power Pole (6 Position)  Anderson Power Pole (3 Position)					
External Charger Environmental		Anderson Powe	1 Pole (3 Position)				
		000 1 - 1000	(2005 1: 40405)				
Temperature Operations							
Storag	-10°C to 40°C (14°F to 104°F)						
Humidity	20% to 95% Non – Condensing 3,280 Feet (1,000 meters)						
Altitude	· · · · · · · · · · · · · · · · · · ·						
Cooling	0550		Air Fans	4777			
Heat Dissipation BTU/Hou		3412	4095	4777			
Audible Noise (@ 1 Meter	7	<60	OdBA				
Controls & Indicators							
LCD Display	Utility Voltage / Frequency, Bypass Voltage / Frequency, Inverter Voltage / Frequency / Current						
. ,	Load %, Battery Voltage, Internal Temperature, Battery Quantity						
LED Indicators	Ut	Utility Input, Bypass Input, N+1 Parallel Mode, ECO Mode & UPS Fault					
Audible Alarms	Utility Loss, Low Battery, Transfer to Bypass & UPS Fault						
Communications	USB Port, RS-232 Serial Port, Optional SNMP/HTTP Agent Board (UPS Bundled UPSilon Software)						
Remote Emergency Power Off	Two Position, Normally Open Connector						
Parallel Operation		Up to 4 UPSs for Parallel Operation (Scalable up to 40kVA)					
Parallel Redundancy		3	+ 1				
Mechanical							
UPS Dimensions	26 x 9.	26 x 9.4 x 27.6 26 x 11.3 x 27.6					
H x W x D inches (mn	(661 x 240 x 700) (661 x 288 x 70						
UPS Weight lb. (kg	267	267 (121) 298 (135)		(135)			
Agency Approvals			FCC Class A, CE				

