

# LIEBERT® ITA2 3-PHASE UPS: 30KVA, 50/60Hz, 380/400/415VAC - SITE PLANNING DATA

Liebert®ITA2 is a monolithic transformer-free rack/ tower mounted UPS which brings exceptional features for mission-critical applications. Its extraordinary double conversion efficiency up to 96.5% ensures remarkable operational cost savings, reducing both the Total Cost of Ownership (TCO) and the environmental impact.



## General Specifications

INPUT	
Voltage	380/400/415VAC, 50/60Hz, three phase and sharing neutral with bypass input
Voltage Range w/o derating	176Vac ~ 288Vac, at full load, 100Vac ~ 176Vac, linear derating, 100Vac, at half load
Frequency Range	40-70Hz
Current Distortion <sup>1</sup>	<3%: Linear full load; <5%: Non-linear full load
Current Limit	105% of full load input current
Power Factor	>0.99 lagging at full load; >0.98 lagging at half load
Surge Protection	Sustains input surges without damage, per criteria listed in IEC/EN62040-2
OUTPUT	
Voltage	380/400/415VAC (three-phase) 50/60Hz,
Voltage Adjustment Range	±5%
Voltage Regulation	±1% for balanced three phase load; ±2% for unbalanced load
Dynamic Regulation	±5% deviation for 0-100% linear load step; ±5% deviation for 0-100% non-linear load step
Transient Response Time	40msec
Voltage Distortion	<2% THD for linear loads; < 4% THD for 100% nonlinear loads
Phasing Balance	120° ± <1° for balanced loads and 100% unbalanced loads
Frequency Regulation	±0.25% (Synchronized with internal clock or with bypass)
Load Power Factor Range	0.5 lagging to unity
Overload	<125, ≤10min; <150, ≤1min
ENVIRONMENTAL	
Operating Temperature	0°C ~ 50°C (0-40°C full performance, 0.7 derating factor will be applicable above 40°C)
Non-Operating Temperature	-40°C ~ +70°C (battery excluded); -25°C ~ +55°C (battery included)
Relative Humidity	0-95% non-condensing
Operating Altitude	≤3000m; derating when higher than 3000m
Acoustical Noise (full load)	≤60dBA
STANDARDS	
General and safety requirements for UPS used in operator access areas	EN62040-1/IEC62040-1
EMC requirements for UPS	EN62040-2/IEC62040-2/AS62040-2 (Category C3)
Method of specifying the performance and test requirements of UPS	EN62040-3/IEC62040-3/AS62040-3 (VFI SS 111)
Note: 1. Calculated @ Input THDv <1% & 100% linear loads	



## Site Planning Data, 30kVA, 50Hz, 400VAC

UPS Rating	Voltage		AC Input			Battery		AC Output		Dimensions W X D X H (mm)	Weight (kg)	Heat Losses @ Normal Load & Battery charged	
	kVA	Input Nom.	Output Nom.	Current (A)		Rec. OCPD (3Pole) *	Max. Discharge	Battery Disconnect Rating	Nom. Current (A)			Rec. OCPD	KW
				Nom.	Max.								
30	400V	400V	45.3	59	63A (3P)	86	100A (3P)	43.3	63A(4P) – if the load is linear load. 100A (4P)- if the load is 1-phase nonlinear loads.	430*500*130 (3U)	23.5	1.08kW	

## Notes for Table

- Nominal (Nom) input current is calculated @ Nominal load, 400V input voltage, and full charged battery.
- Maximum (Max) input current is calculated @ the worst-case scenario that includes charging the battery and continuous overload at 305V input voltage.
- UPS input cables must be run in separate conduit from output cables.
- The battery discharging current is calculated based on the lowest battery voltage (@ 32 no of battery cells, 1.6V@ EOD, and 100% Load)
- OCPD = Over current Protection Device. Recommended AC input and AC output over current protection represents 125% of nominal full load current (continuous) plus 100% of recharge current (non-continuous) per NEC 215.
- Minimum-sized grounding conductors to be per NEC 250-122. Parity-sized ground conductors are recommended.
- Wiring requirements: AC Input: 3-phase, 4-wire, plus ground  
AC Output: 3-phase, 4-wire, plus ground

- All wiring is to be in accordance with national and local electric codes.
- Cable entry is located at the back of the UPS.
- Control wiring and power wiring must be run in separate conduit.
- Weights mentioned in table does not include internal battery weight.
- Recommended incoming breaker capacities are based on common input configuration.
- IT configuration is achievable with the use of 4P breakers upstream and downstream the UPS

## Additional Notes

- If site configuration includes a backup emergency generator, it is recommended that the engine generator set be properly sized and equipped for a UPS application
- If site configuration requires an external isolated maintenance bypass circuit, it should be noted that utility AC input might not be in phase with the UPS AC output. Consult Vertiv sales representative or application engineer

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