

Eaton Power Xpert 9395P 1200kVA/1100kW UPS Technical Specification

Manufacturer's declaration in accordance with IEC 62040-3

IEC 62040-3 Subclause	MODEL RATING (0,9 p.f.)	1200kVA
	Model catalogue reference	9395P-1200
	UPS options	External battery cabinets System Bypass Module (SBM)
	External paralleling (HotSync technology)	Up to 5 units with distributed bypass Up to 7 units with centralized bypass
5.1.1	UPS topology	Double conversion, IGBT converters
5.3.4	UPS performance classification	VFI-SS-111

MECHANICAL

	UPS dimensions (width x depth x height)	4450 x 880 x 1880 mm
	Weight, UPS	3120kg
	Large External Battery Cabinet dimensions (width x depth x height)	1125 x 808x 1879 mm
	UPS Cable entry	Top and Bottom entry
	UPS Degree of protection	IP 20
	UPS colour	Black; RAL 9005

ENVIRONMENTAL

6.5.5	Acoustic noise at 1 m, in 25 °C ambient temperature	< 85dBA in double conversion, full load < 77 dBA in double conversion, <60% load
4.1.4	Ambient UPS storage temperature range	- 25 °C to + 60 °C in the protective package
4.2.1.1 and 5.4.2.2 h	Ambient operating temperature range UPS Battery	0 °C to + 40 °C <i>No output power derating required.</i> The maximum rate of temperature change shall be limited to 1.67 °C over 5 minutes (20 °C/hour), based on the ASHRAE standard 90.1-2013 + 20 °C to + 25 °C recommended for optimized battery life time
4.2.1.1	Relative humidity range	5 to 95%, no condensation allowed There shall be at least a 1.0 °C difference between the dry bulb temperature and the wet bulb temperature, at all times, to maintain a non-condensing environment
4.2.1.2	Maximum service altitude	1000 m (3300 ft) above sea level Maximum 2000 m (6600 ft) with 1% derating per each add 100m

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EFFICIENCY

5.3.2 r and 6.4.1.6	Efficiency in double-conversion, rated linear load	100% load	95,6 %
		75% load	96,1 %
		50% load	96,3 %
		25% load	95,7 %
	Heat dissipation in double conversion	100% load	50,6 kW
		75% load	33,4kW
		50% load	21,1 kW
		25% load	12,3kW
		No load	8,4 kW
	Efficiency in ESS, rated linear load	100% load	99,2 %
		75% load	99,3 %
		50% load	99,2 %
		25% load	99,0 %

ELECTRICAL CHARACTERISTICS

INPUT

5.2.1.a and 5.2.1 b	Rated input voltage	220/380V; 230/400 V; 240/415 V	
	Voltage tolerance	Rectifier input	230 V -15% / +15%
		Bypass input	230 V -10% / +10%
5.2.1 c and 5.2.1 d	Rated input frequency	50 or 60 Hz, user configurable	
	Frequency tolerance	45 to 65 Hz	
5.2.2 a and 5.2.2 b	Number of input phases	3 phases	
		Rectifier input	3 phases + neutral
		Bypass input	
5.2.2 d	Input power factor, double conversion mode	25-100% load	> 0,99
		10-25% load	> 0,97
5.2.2 c	Rated input current	1680 A r.m.s (400V)	

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5.2.2 f	Maximum input current	2000 A
5.2.2 h and 5.2.2. i	Input current distortion at rated input current	< 3%
5.2.2 k	AC power distribution system compatibility	TN-S, TN, TT and IT
	Backfeed protection	Yes, internal as standard

ELECTRICAL CHARACTERISTICS

OUTPUT

5.3.2 f	Number of output phases	3 phases + neutral
5.3.2 b	Rated output voltage	220/380 V; 230/400 V; 240/415 V, configurable
5.3.2 b	Output voltage variation, steady state	< +/-1,5%
5.3.2 i	Total voltage harmonic distortion 100% linear load 100% non-linear load	≤ 2% < 5%
5.3.2 q	Voltage unbalance at reference unbalanced load Phase displacement at reference unbalanced load	< +/-2,5% < +/-1,0°
5.3.2 c	Rated output frequency Slew rate	50 or 60 Hz, configurable 0,7 Hz/s
5.3.2 k	Rated output power	1200 kVA/ 1100 kW
5.3.2 l	Overload capability On inverter	10 min 110% load 30 sec 125% load 10 sec 150% load 300 ms >150% load
	Overload capability On bypass	Continuous < 115% load 20 ms 1000% load
5.3.2 m	Output current limitation, short-circuit capability	2930 A, 300 ms L-N 2930 A, 300 ms L-L
5.3.2 o and 5.3.2 p	Load power factor Rated Permitted range	0.9 0.7 lagging to 0.8 leading

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ESS MODE CHARACTERISTICS

	Transfer time to double-conversion Mains available Mains failure	No break Typically <2 ms
	Output voltage variation setting	±10% of nominal voltage, default
	Storm detection	UPS locks into double-conversion mode when three power line disturbances have forced the unit to double-conversion three times (user adjustable) within a one-hour period (user adjustable).
	High Alert mode	UPS will stay on double-conversion for one hour (user adjustable), after which the unit will automatically return to operate on ESS.

BYPASS

	Type of bypass	Static
	Bypass rating	1200 kVA
	Bypass voltage range	220/380 V; 230/400 V; 240/415 V tolerance -10% / +10%
	Transfer time break	No break
	Maintenance bypass	N/A
	Rated conditional short-circuit current, I_{cc} Static Bypass	100 kA
	Internal static bypass ultra-rapid fuse	Bussmann, 170M7084, 3000A 690V/ac

BATTERY CHARACTERISTICS

5.4.2.2 d	Battery technology	12 V, VRLA
5.4.2.2 b	Battery quantity	40 blocks, 240 cells per battery string
5.4.2.2 c	Battery voltage	480V (40 blocks)
5.4.2.2 o	Recharge profile	ABM or float
5.4.2.2 q	End of discharge voltage	1.67 VPC to 1.75 VPC Configurable or automatic (load adaptive)
5.4.2.2 r	Charging current limit	480 A

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COMMUNICATION CIRCUITS

5.6	Complete list of indications and interface devices	See User's Manual
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COMPLIANCE WITH STANDARDS

IEC 62040-1	Safety Degree of protection	Access Operator access IP 20; protection against medium sized foreign matter (incl. finger)
IEC 62040-2	Electromagnetic Compatibility Immunity Emissions	EMC Category C3 EMC Category C3