

# Power

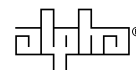
## Alpha TRI-Power X33

Three Phase UPS 100 to 600kVA



- Online, VFI-SS-111
- Static and maintenance bypass
- THD below 3%
- Efficiency up to 99%
- LCD panel with back lighting
- Interface card
- Up to 8 systems in parallel

The TRI-POWER X33 is a high performance 100-600kVA UPS system with redundant processor controlling and modern fibre optic data transfer. The integrated intelligent Energie Management provides optimised efficiency operation. The TRI-POWER X33 protects all loads and is up to 99% efficient. This UPS is specially designed for telecom, industry and fire protecting applications.



# Alpha TRI-Power X33

## Nominal Specifications

Size in kVA at cos phi = 0,8	100	120	160	200	250	300	400	600
<b>Rectifier</b>								
Nominal Input Voltage (V):	400V three phase (380V, 415V on request), 50/60Hz selectable							
Tolerance of Voltage (float charge) (%):	±15	±15	±15	±15	±15	±15	±15	±15
Tolerance of Voltage (without battery charge) (%):	-25	-25	-25	-25	-25	-25	-25	-25
Frequency Range (Hz):	45 to 65	45 to 65	45 to 65	45 to 65	45 to 65	45 to 65	45 to 65	45 to 65
THD at Input, Incl. Filter + 12pulse Rectifier (Option) (%):	≤3	≤3	≤3	≤3	≤3	≤3	≤3	≤3
Medium Power Factor, Including THD-filter (cos phi):	≥0,95	≥0,95	≥0,95	≥0,95	≥0,95	≥0,95	≥0,95	≥0,95
Softstart Adjustable (in sec.):	0,10,20,30	0,10,20,30	0,10,20,30	0,10,20,30	0,10,20,30	0,10,20,30	0,10,20,30	0,10,20,30
Battery Charging Current Min. (A):	5	5	5	5	10	10	10	30
Battery Charging Current Max. (A):	216	252	342	414	522	536	860	1055
<b>Battery</b>								
Recommended Power of Battery Needed, Total (kW):	83.9	100.7	134.3	167.9	210.5	252.1	333.3	495.9
Power of Battery in Watt Per Each Cell (W) (1 line):	424.0	508.8	678.3	847.9	1063.3	1050.4	1388.9	2066.1
Recommended Nos. of Pb Cells:	198.0	198.0	198.0	198.0	198.0	240.0	240.0	240.0
End of Discharge Voltage (V):	316.8	316.8	316.8	316.8	316.8	384.0	384.0	384.0
<b>Inverter</b>								
Nominal Power at P. F. 0,8 Inductive:	100	120	160	200	250	300	400	600
Nominal Power at P. F. 1,0 (kW):	80	96	128	160	200	240	320	480
Nominal Output Current at 400VAC and 0,8 P. F. (A):	145	174	231	289	361	434	578	867
Nominal Voltage (V):	400V three phase (380V, 415V on request) + Neutral 50/60Hz							
Crest factor at 100% Balanced Load:	5	5	5	5	5	5	5	5
Inverter Efficiency at Full Nominal Load (%):	95.3%	95.3%	95.3%	95.3%	95.0%	95.2%	96.0%	96.8%
Overload at 400VAC, 0.8 P. F. 150% Pn x 20 (min):	20	20	20	20	20	20	20	20
Overload at 400VAC, 0.8 P. F. 125% Pn x 90 (sec.):	90	90	90	90	90	90	90	90
3 ph. Short Circuit Current 5sec. (%)	180	180	180	180	180	180	180	180
1 ph. Short Circuit Current 5sec. (%)	220	220	220	220	220	220	220	220
<b>Reserve Line (static switch):</b>								
Nominal Input Voltage (V):	400V three phase (380V, 415V on request) + Neutral 50/60Hz							
Nominal Frequency (Hz):	45 to 65	45 to 65	45 to 65	45 to 65	45 to 65	45 to 65	45 to 65	45 to 65
<b>Internal Manual Bypass (service bypass):</b>								
	Standard integrated							
<b>General System Data</b>								
Radio Interference Suppression and Immunity, Acc. To:	EN 50091-2	EN 50091-2	EN 50091-2	EN 50091-2	EN 50091-2	EN 50091-2	EN 50091-2	EN 50091-2
Operating Mode:	Online, double conversion, acc. to VFI-SS-111 class A							
Efficiency, High Efficiency Plus Mode (%):	99.3	99.3	99.3	99.3	99.2	99.2	99.2	99.3
Efficiency, High Efficiency Quality Mode (%):	97.3	97.3	97.5	97.5	97.5	97.5	97.5	97.5
Efficiency, Acc. To VFI-SS-111 (opt. load) (%):	93.8	93.6	94.4	94.7	93.8	94.03	94.5	94.9
Norms, Acc. To:	EN 50091 - 1 - 2 - 3 ; IEC 62040 - 1 - 2 - 3 ; VDE 0558, VFI-SS-111 class A							
MTBF (mean time between failure):	120.000Hrs							
Parallel Mode, n+1 Systems, Up To:	8	8	8	8	8	8	8	8
Cabinet Type:	Industry steel cabinet, RAL 7035							
Cooling:	Self cooling, redundancy fans							
<b>Dimensions + Weights (standard system)</b>								
Height (mm):	1900	1900	1900	1900	1950	1900	1900	1900
Width (mm):	800	800	800	800	1100	1630	1630	3200
Depth (mm):	800	800	800	800	800	800	1000	1000
Weight UPS (kg):	640	650	770	810	1650	2200	2600	4000
Footprint (m²):	0.88	0.88	0.88	1.50	2.70	2.70	2.70	2.70
Load Capacity (kg/m²):	1045	1591	1875	1200	1074	1148	1444	1778
<b>Interfaces</b>								
1. Serial RS 232, Sub-D 9pin, standard protocol, Male	X	X	X	X	X	X	X	X
2. Serial RS 232, Sub-D 9pin, J-BUS, Male	X	X	X	X	X	X	X	X
3. Serial RS 232, Sub-D 9pin, MOD-BUS, Male	X	X	X	X	X	X	X	X
4. Serial RS 232, Sub-D 9pin, PROFIBUS-Connector, Male	X	X	X	X	X	X	X	X
5. IBM AS400, Sub-D 9pin, Female	X	X	X	X	X	X	X	X
6. Potential free Relays, 10 + 5 Indications, programmable	X	X	X	X	X	X	X	X
7. GenSet operation, stop battery charging, input	X	X	X	X	X	X	X	X
8. GenSet operation, synchronising free running	X	X	X	X	X	X	X	X
9. EPO emergency power off, potential free input	X	X	X	X	X	X	X	X
10.EPO emergency power off, potential free output	X	X	X	X	X	X	X	X
11. Fibre optic for remote control (potential free) TX	X	X	X	X	X	X	X	X
12. Fibre optic up to 8-systems parallel (pot. free) RX/TX	X	X	X	X	X	X	X	X
13. SNMP-connector RS232, Sub-D 9pin for SNMP-Module	X	X	X	X	X	X	X	X

## Backuptime on request

For contact information visit [www.alpha.com](http://www.alpha.com)

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## Model, Dimensions, Backup Time and Weight

Power kVA	Model	Code	THD %	Dimensions W x D x H (mm)	Weight kg	Comment
100	X33 100-0	TRI-306PES100X33 S	≤5	800 x 800 x 1900	640	6-pulse-rectifier
100	X33 100-0	TRI-306PES100X33 F	≤5	1070 x 800 x 1900	820	6-pulse-rectifier + filter
100	X33 100-0	TRI-306PEP100X33 S	≤5	800 x 800 x 1900	640	6-pulse-rectifier, parallel kit
100	X33 100-0	TRI-306PEP100X33 F	≤5	1070 x 800 x 1900	820	6-pulse-rectifier + filter, parallel kit
100	X33 100-0	TRI-312PES100X33 S	≤5	1070 x 800 x 1900	910	12-pulse-rectifier
100	X33 100-0	TRI-312PES100X33 F	≤3	1070 x 800 x 1900	970	12-pulse-rectifier + filter
100	X33 100-0	TRI-312PEP100X33 S	≤5	1070 x 800 x 1900	910	12-pulse-rectifier, parallel kit
100	X33 100-0	TRI-312PEP100X33 F	≤3	1070 x 800 x 1900	970	12-pulse-rectifier + filter, parallel kit
120	X33 120-0	TRI-306PES120X33 S	≤5	800 x 800 x 1900	650	6-pulse-rectifier
120	X33 120-0	TRI-306PES120X33 F	≤5	1070 x 800 x 1900	830	6-pulse-rectifier + filter
120	X33 120-0	TRI-306PEP120X33 S	≤5	800 x 800 x 1900	650	6-pulse-rectifier, parallel kit
120	X33 120-0	TRI-306PEP120X33 F	≤5	1070 x 800 x 1900	830	6-pulse-rectifier + filter, parallel kit
120	X33 120-0	TRI-312PES120X33 S	≤5	1200 x 800 x 1900	1000	12-pulse-rectifier
120	X33 120-0	TRI-312PES120X33 F	≤3	1200 x 800 x 1900	1080	12-pulse-rectifier + filter
120	X33 120-0	TRI-312PEP120X33 S	≤5	1200 x 800 x 1900	1000	12-pulse-rectifier, parallel kit
120	X33 120-0	TRI-312PEP120X33 F	≤3	1200 x 800 x 1900	1080	12-pulse-rectifier + filter, parallel kit
160	X33 160-0	TRI-306PES160X33 S	≤5	800 x 800 x 1900	770	6-pulse-rectifier
160	X33 160-0	TRI-306PES160X33 F	≤5	1070 x 800 x 1900	941	6-pulse-rectifier + filter
160	X33 160-0	TRI-306PEP160X33 S	≤5	800 x 800 x 1900	770	6-pulse-rectifier, parallel kit
160	X33 160-0	TRI-306PEP160X33 F	≤5	1070 x 800 x 1900	941	6-pulse-rectifier + filter, parallel kit
160	X33 160-0	TRI-312PES160X33 S	≤5	1200 x 800 x 1900	1200	12-pulse-rectifier
160	X33 160-0	TRI-312PES160X33 F	≤3	1200 x 800 x 1900	1310	12-pulse-rectifier + filter
160	X33 160-0	TRI-312PEP160X33 S	≤5	1200 x 800 x 1900	1200	12-pulse-rectifier, parallel kit
160	X33 160-0	TRI-312PEP160X33 F	≤3	1200 x 800 x 1900	1310	12-pulse-rectifier + filter, parallel kit
200	X33 200-0	TRI-306PES200X33 S	≤5	800 x 800 x 1900	810	6-pulse-rectifier
200	X33 200-0	TRI-306PES200X33 F	≤5	1070 x 800 x 1900	1000	6-pulse-rectifier + filter
200	X33 200-0	TRI-306PEP200X33 S	≤5	800 x 800 x 1900	810	6-pulse-rectifier, parallel kit
200	X33 200-0	TRI-306PEP200X33 F	≤5	1070 x 800 x 1900	1000	6-pulse-rectifier + filter, parallel kit
200	X33 200-0	TRI-312PES200X33 S	≤5	1200 x 800 x 1900	1350	12-pulse-rectifier
200	X33 200-0	TRI-312PES200X33 F	≤3	1200 x 800 x 1900	1480	12-pulse-rectifier + filter
200	X33 200-0	TRI-312PEP200X33 S	≤5	1200 x 800 x 1900	1350	12-pulse-rectifier, parallel kit
200	X33 200-0	TRI-312PEP200X33 F	≤3	1200 x 800 x 1900	1480	12-pulse-rectifier + filter, parallel kit
250	X33 250-0	TRI-312PES250X33 S	≤5	1630 x 850 x 1900	2200	12-pulse-rectifier
250	X33 250-0	TRI-312PES250X33 F	≤3	1630 x 1000 x 1900	2350	12-pulse-rectifier + filter
250	X33 250-0	TRI-312PEP250X33 S	≤5	1630 x 850 x 1900	2200	12-pulse-rectifier, parallel kit
250	X33 250-0	TRI-312PEP250X33 F	≤3	1630 x 1000 x 1900	2350	12-pulse-rectifier + filter, parallel kit
300	X33 300-0	TRI-312PES300X33 S	≤5	1630 x 850 x 1900	2200	12-pulse-rectifier
300	X33 300-0	TRI-312PES300X33 F	≤3	1630 x 1000 x 1900	2350	12-pulse-rectifier + filter
300	X33 300-0	TRI-312PEP300X33 S	≤5	1630 x 850 x 1900	2200	12-pulse-rectifier, parallel kit
300	X33 300-0	TRI-312PEP300X33 F	≤3	1630 x 1000 x 1900	2350	12-pulse-rectifier + filter, parallel kit
400	X33 400-0	TRI-312PES400X33 S	≤5	1630 x 1000 x 1900	2600	12-pulse-rectifier
400	X33 400-0	TRI-312PES400X33 F	≤3	1630 x 1000 x 1900	2770	12-pulse-rectifier + filter
400	X33 400-0	TRI-312PEP400X33 S	≤5	1630 x 1000 x 1900	2600	12-pulse-rectifier, parallel kit
400	X33 400-0	TRI-312PEP400X33 F	≤3	1630 x 1000 x 1900	2770	12-pulse-rectifier + filter, parallel kit
600	X33 600-0	TRI-312PES600X33 S	≤5	3200 x 1000 x 1900	4000	12-pulse-rectifier
600	X33 600-0	TRI-312PES600X33 F	≤3	3200 x 1000 x 1900	4250	12-pulse-rectifier + filter
600	X33 600-0	TRI-312PEP600X33 S	≤5	3200 x 1000 x 1900	4000	12-pulse-rectifier, parallel kit
600	X33 600-0	TRI-312PEP600X33 F	≤3	3200 x 1000 x 1900	4250	12-pulse-rectifier + filter, parallel kit

### Note:

S = standard system      F = system with filter

For contact information visit [www.alpha.com](http://www.alpha.com)

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