

## Protector 10-160KVA Series - 33 UPS

Protector UPS uses the latest DSP technology to be programmed to suit a wide variety of electrical environments without affecting its performance.

With the Protector Series UPS range, efficiency, reliability and functionality are enhanced to levels unattainable with the old analog technology.

This technology does not only create significant increase in MTBF, but the capability of DSP to accurately manipulate signals at very high speed permits all the UPS subsystems to be controlled with greatly increased precision.

### Features:

- True double conversion On line UPS
- High efficiency up to 94%
- Output power factor 0.9
- DSP (Digital Signal Processor) controlled Transformrless topology
- Low input current total harmonic distortion (THDi)
- Input power factor correction PFC (>0.98)
- N+1 (or more) Parallel redundancy – Up to 8 units
- Fewer electronic components
- Small physical dimensions requires little floor space.
- Eco mode operation for energy saving (ECO)
- Output current limiting
- Advanced diagnostics for the input
- Selectable input/output voltage/frequency range
- Split by-pass input (second input)
- Output DC leakage protection
- Separate DSP for inverter control
- Separate DSP for the PFC
- 3-stage extendable charging design for optimized battery performance
- High charge current capacity
- Charge/discharge current indicator
- Advanced remote control features
- Cold start function
- Static and maintenance by-pass switch
- Output short circuit and overload protection
- External REPO (Remote Emergency Power Off)
- 512 events memory (512 events 46.000 alarms)
- Clock and calendar (battery supported)
- Automatic battery test, remaining battery time indicator
- Temperature controlled charge system
- 2 RS232 serial ports and 12 dry contact outputs
- Optional SNMP and MODBUS adaptors
- Manufactured according to EC Directive; EN62040



Model	P3310	P3315	P3320	P3330	P3340	P3360	P3380	P33100	P33120	P33160
Power (KVA)	10	15	20	30	40	60	80	100	120	160
Power (Kw)	9	13.5	18	27	36	54	72	90	108	144
<b>Input</b>										
Voltage	380/400/415 VAC three-phase + N $\pm$ 20% (415VAC +15%-25%)									
Frequency	50Hz / 60Hz selectable , +/- 5Hz									
Power factor	> 0,98									
Harmonic current distortion	< 5% (< 3% optional)									
Protection	fuses, voltage tolerance, frequency tolerance, input power limit, input PFC									
By-pass Voltage	380/400/415 VAC three-phase + N, +/- 10%									
By-pass Protection	short circuit, voltage tolerance, frequency tolerance, VAT transfer									
<b>Output</b>										
Power factor	0.9									
Voltage	380/400/415 VAC three-phase + N, +/- 1%									
Frequency	50Hz or 60Hz (selectable)									
Frequency tolerance	line synchronized: +/- 2% / Free running: +/- 0,1% (adjustable)									
Efficiency	up to 94%									
Crest Factor	3:1									
Overload Protection	100-125% for 10min, 125-150% for 1min, >150% load: by-pass									
Other Protections	Advanced short circuit, voltage tolerance, DC balance, regenerative load, current limiting									
THD (at 100% linear load)	< 3%									
<b>Batteries</b>										
Type	Maintenance free lead acid batteries									
Nominal Voltage	'+/- 360VDC									
Float / End of discharge voltage	'+/- 405VDC / +/-300VDC									
Battery housing	Internal						Battery cabinet			
Battery ambient temp. °C	25 °C									
Protections	3 level alarm, battery fuses, charging current limit, temperature compensation(opt.)									
Automatic testing	Standard every 72 hours(adjustable)									
<b>General</b>										
Standards	EMC(2004/108/EC) / LVD(2006/95/EC) - EN62040-1, EN62040-2, EN60950									
User interface	4 lines LCD panel, Mimic leds, 5 vector buttons, Buzzer, graphical touch-panel (opt.)									
Indicators	P-N voltage, P-P voltage, Current, Power, Crest factor, Frequency ,PF, Service time									
Advanced	Self diagnostics, 4 maintenance time indicators, Calibration over RS232									
Communication	2 x RS232 serial ports, 4 standard and 8 optional DRY contact alarm relays									
Inputs	EPO input, Interactive battery panel input, Genset input									
Genset kit	Standard (programmable)									
Software	Standard T-Mon UPS Management Software (3 clients + 1 server management for win)									
Alarm logging	Standard; with time & date 192 events, (optional 512 events)									
Protections	Power module over-temperature, Over current, Temperature high alarm									
Temperature range	0 °C - 40 °C									
Protection Degree	IP20 (other, on request)									
Humidity / Altitude	90% max (noncondensed) / <1000m above sea level									
Acoustic noise	< 57 dBA		< 62 dBA			< 64 dBA		< 68 dBA		
Weight (kg.) without battery	87	91	100	173	180	194	216	258		
Dimensions (mm) HxWxD:	1035x400x810				1440x515x850					
<b>Options</b>										
Input / Output voltage	110/208 VAC (up to 80KVA)									
Transformer	Galvanic isolation transformer at the input & output									
Software	T-Mon Admin Multi UPS monitoring, T-Mon Server 50-100-200 clients, DLOG log loader									
Comm. Adaptors	SNMP, MODBUS, RS485, Remote Panel									
Parallel Operation	Up to 8 UPS									

\* Product specifications are subject to change without further notice