



STARLET M UPS SYSTEM



From **10 to 40Kva**

- > *Online Double Conversion (VFI)*
- > *Low Impact on Mains Supply*
- > *0.9 leading to 0.9 lagging loads*
- > *Parallel Capability for up to 6 units*
- > *"Hot System Expansion" facility*
- > *Four Configurable Operating Modes*
- > *Power "Walk-in" & "Delay" features*
- > *Optional Long Autonomy Charger*
- > *Integral Battery Capability*
- > *External Cubicles for larger batteries*
- > *Variety of Remote Comms options*

The 'Starlet M' incorporates the benefits of on-line double conversion (VFI) technology with the attributes of a high frequency **transformer-less** inverter. The design has a very low impact on the mains with an Input THDi <3%* and an Input PF of 0.99

Performance with more Power...

The range has been designed to deliver maximum protection for critical loads from 0.9 leading to 0.9 lagging without de-rating of the unit, thus offering 15% more active power than traditional UPS designs.

High input performance helps reduce running costs and enables mains supply, cabling and associated switchgear to be downsized without any de-rating of output power. Selecting the 'Starlet M' helps to ensure that site conditions remain within the recommendations of G5/4 for input distortion and also provides the sensible choice for combined UPS and Generator packages.

Parallel Systems...

For even higher levels of integrity these units offer a '**plug & play - auto configuration**' parallel capability (up to 6 units, using 3ph) to increase system resilience or increase load capacity. Additional UPS modules can be incorporated into the system at a later date with the "**Hot System Expansion**" facility allowing the existing units to remain online to support the load.



UPS Display...

The 'Starlet M' UPS incorporates a user friendly, multi-language alphanumeric graphic display. Full system operating status, alarm conditions, measurement values can be displayed and are automatically stored into an events memory providing a history of up to a maximum of 960 entries.

Technical Specification Starlet M (10-40)

UPS Power (kVA)	10	15	20	30	40
Dimensions (mm)	930h x 320w x 840d			1320h x 440w x 850d	
UPS Weight/with Batts (kg)	80/165	90/175	95/180	100/270	110/280
Efficiency (AC - AC)	94% (online) >98% (eco)			96% (online) >98% (eco)	
Integral Battery Runtime (min)	15	8	5	7	5
Input Frequency (Hz)	+/- 20% (40-72Hz)				
Input Power Factor	0.99 (@ full load)				
Input Harmonic Distortion	<3% (@ full load)				
Audible Noise Level (dB)	<48 @ 1m	<52 @ 1m		<48 @ 1m	
Heat Dissipation (kW)	0.63	0.86	1.10	1.15	1.50
Ambient Temperature (°C)	0 - 40 (batteries 25°C optimum)				
Inverter Overload Capability (0.8pf)	115% Cont, 125% 10min, 150% 1min, 168% 5sec				
Design Standards	EN50091-2, EN62040-1, 2 & 3				
Single Phase Input/Output					
Active Power (kVA/kW)	10/8	15/12	20/16	-	-
Volts (Vac) Input / Output	230V (+/- 20%) / 230V Nominal				
Max Input (Amps)	55	77	99	-	-
Nominal Output (Amps)	33	50	67	-	-
Three Phase Input/Single Phase Output					
Active Power (kVA/kW)	10/8	15/12	20/16	-	-
Volts (Vac) Input / Output	400V (+/- 20%) / 230V Nominal				
Max Input (Amps)	18 (3ph)	26 (3ph)	33 (3ph)	-	-
Nominal Output (Amps)	33 (1ph)	50 (1ph)	67 (1ph)	-	-
Three Phase Input/Output					
Active Power (kVA/kW)	10/9	15/13.5	20/18	30/27	40/36
Volts (Vac) Input / Output	400V (+/-20%) / 400V Nominal				
Max Input (Amps)	20	29	38	58	70
Nominal Output (Amps)	15	22	29	43	58

Standard Features

Online Double Conversion using IGBT	Back feed Protection
Integral Static and Manual Bypass Switch	Automatic Battery Test Facilities
Integral Battery Circuit Isolator	Temperature Compensated Charger
Integral Battery Capability	Two Comms Slots & DB15 Serial for BMS
	User friendly, menu driven LCD display

Options

Wall mounted Maintenance Bypass Switch (**Recommended**)
 Parallel Cards for higher capacity systems or N+1 redundancy
 Long Autonomy Battery Charger
 Dual Input Facility (same source supply)
 SNMP Network Card, Relay Contacts, Remote LCD Panel