Features:

- True on-line operation.
- High frequency 20KHz inverter.
- Low distortion less than 3%.
- High crest ratio is 3:1.
- Manual by-pass switch.
- Front I/O access, minimum maintenance space.
- Modular structure, easy maintenance.
- Fast transient response.
- Over load and short circuit protection.
- Automatic retransfer or static transfer switch (STS) after overload.
- Most advance IGBT component.
- Range from 1KVA to 20KVA.

Model	Model	**M1010**	**M1020**	**M1030**	**M1050**	**MS1075/MS3075**	**MS1100/MS3100**	**MS1120/MS3120**	**MS3150**	**MS3200**
Rated power	At p. f. = 0.7	1KVA	2KVA	3KVA	5KVA	7.5KVA	10KVA	12KVA	15KVA	20KVA
Input	Voltage	100V/110V/120V+/-15% or 220V/230V/240V+/-15%	100V/110V/120V+/-15% or 220V/230V/240V+/-15%	100V/110V/120V +/- 15% or 220V/230V/240V +/- 15%	100V/110V/120V +/- 15% or 220V/230V/240V +/- 15%	220V/230V/240V +/- 15% or 380V/220V, 400V/230V/415V/240 +/- 15%	220V/230V/240V +/- 15% or 380V/220V, 400V/230V/415V/240 +/- 15%	220V/230V/240V +/- 15% or 380V/220V, 400V/230V/415V/240 +/- 15%	220V/230V/240V +/- 15% or 380V/220V, 400V/230V/415V/240 +/- 15%	220V/230V/240V +/- 15% or 380V/220V, 400V/230V/415V/240 +/- 15%
Input	Frequency	50Hz or 60Hz +/- 5%	50Hz or 60Hz +/- 5%	50Hz or 60Hz +/- 5%	50Hz or 60Hz +/- 5%	50Hz or 60Hz +/- 5%	50Hz or 60Hz +/- 5%	50Hz or 60Hz +/- 5%	50Hz or 60Hz +/- 5%	50Hz or 60Hz +/- 5%

Input	Phase	1 phase 2W + G	1 phase 2W + G	1 phase 2W + G	1 phase 2W + G	1 phase 2W + G or 3 phase 3W + G or 3 phase 4W + G	1 phase 2W + G or 3 phase 3W + G or 3 phase 4W + G	1 phase 2W + G or 3 phase 3W + G or 3 phase 4W + G	1 phase 2W + G or 3 phase 3W + G or 3 phase 4W + G	1 phase 2W + G or 3 phase 3W + G or 3 phase 4W + G
Output	Voltage	100V/110V/120V or 220V/230V/240V	100V/110V/120V or 220V/230V/240V	100V/110V/120V or 220V/230V/240V	100V/110V/120V or 220V/230V/240V	220V/230V/240V	220V/230V/240V	220V/230V/240V	220V/230V/240V	220V/230V/240V
Output	Phase	1 phase 2W + G	1 phase 2W + G	1 phase 2W + G	1 phase 2W + G	1 phase 2W + G	1 phase 2W + G	1 phase 2W + G	1 phase 2W + G	1 phase 2W + G
Output	Voltage regulation	+/-1%	+/-1%	+/-1%	+/-1%	+/-1%	+/-1%	+/-1%	+/-1%	+/-1%
Output	Frequency	50Hz or 60Hz	50Hz or 60Hz	50Hz or 60Hz	50Hz or 60Hz	50Hz or 60Hz	50Hz or 60Hz	50Hz or 60Hz	50Hz or 60Hz	50Hz or 60Hz
Output	Frequency stability	+/-0.5%	+/-0.5%	+/-0.5%	+/-0.5%	+/-0.5%	+/-0.5%	+/-0.5%	+/-0.5%	+/-0.5%
Output	Transient condition	+/-4% for 100% instantaneous load variation recovers to +/-1% after 25ms	+/-4% for 100% instantaneous load variation recovers to +/-1% after 25ms	+/-4% for 100% instantaneous load variation recovers to +/-1% after 25ms	+/-4% for 100% instantaneous load variation recovers to +/-1% after 25ms	+/-4% for 100% instantaneous load variation recovers to +/-1% after 25ms	+/-4% for 100% instantaneous load variation recovers to +/-1% after 25ms	+/-4% for 100% instantaneous load variation recovers to +/-1% after 25ms	+/-4% for 100% instantaneous load variation recovers to +/-1% after 25ms	+/-4% for 100% instantaneous load variation recovers to +/-1% after 25ms
Output	Harmonic distortion	<= 3% at 100% linear load	<= 3% at 100% linear load	<= 3% at 100% linear load	<= 3% at 100% linear load	<= 3% at 100% linear load	<= 3% at 100% linear load	<= 3% at 100% linear load	<= 3% at 100% linear load	<= 3% at 100% linear load
Output	Waveform	Sineware	Sineware	Sineware	Sineware	Sineware	Sineware	Sineware	Sineware	Sineware

Output	Crest ratio	3:1	3:1	3:1	3:1	3:1	3:1	3:1	3:1	3:1
Output	Overload capability	150% for 25 seconds	150% for 25 seconds	150% for 25 seconds	150% for 25 seconds	150% for 25 seconds	150% for 25 seconds	150% for 25 seconds	150% for 25 seconds	150% for 25 seconds
Efficiency	Complete unit	> 73%	> 80%	> 82%	> 83%	> 84%	> 84%	> 84%	> 84%	> 84%
Efficiency	Inverter	> 85%	> 90%	> 90%	> 90%	> 90%	> 90%	> 90%	> 90%	> 90%
Battery	DC voltage	84VDC	144VDC	192VDC	192VDC	192VDC	192VDC	192VDC	192VDC	192VDC
Battery	Type	12V7AH	12V7AH	12V7AH	12V7AH	12V17AH	12V26AH	12V26AH	12V40AH	12V40AH
Battery	Type	Rechargeable, sealed maintenance free	Rechargeable, sealed maintenance free	Rechargeable, sealed maintenance free	Rechargeable, sealed maintenance free	Rechargeable, sealed maintenance free	Rechargeable, sealed maintenance free	Rechargeable, sealed maintenance free	Rechargeable, sealed maintenance free	Rechargeable, sealed maintenance free
Battery	Back-up time at full load	15 min.	15 min.	12 min.	17 min.	10 min.	12 min.	10 min.	12 min.	8 min.
Battery	Recharge time	10 hours to 90% after fully discharged	10 hours to 90% after fully discharged	10 hours to 90% after fully discharged	10 hours to 90% after fully discharged	10 hours to 90% after fully discharged	10 hours to 90% after fully discharged	10 hours to 90% after fully discharged	10 hours to 90% after fully discharged	10 hours to 90% after fully discharged
Battery	Battery completely discharge	Auto cut-off invent auto-restart when line recovers	Auto cut-off invent auto-restart when line recovers	Auto cut-off invent auto-restart when line recovers	Auto cut-off invent auto-restart when line recovers	Auto cut-off invent auto-restart when line recovers	Auto cut-off invent auto-restart when line recovers	Auto cut-off invent auto-restart when line recovers	Auto cut-off invent auto-restart when line recovers	Auto cut-off invent auto-restart when line recovers

Transfer time	Line fails or recovers	Zero	Zero	Zero	Zero	Zero	Zero	Zero	Zero	Zero
Transfer time	UPS to by-pass or reverse	< 2ms. at full load	< 2ms. at full load	< 2ms. at full load	< 2ms. at full load	< 2ms. at full load	< 2ms. at full load	< 2ms. at full load	< 2ms. at full load	< 2ms. at full load
Transfer time	UPS fault	< 2ms. transfer to by-pass	< 2ms. transfer to by-pass	< 2ms. transfer to by-pass	< 2ms. transfer to by-pass	< 2ms. transfer to by-pass	< 2ms. transfer to by-pass	< 2ms. transfer to by-pass	< 2ms. transfer to by-pass	< 2ms. transfer to by-pass
Transfer time	Overload	< 2ms. transfer to by-pass, auto-transfer to inverter 25secs after decreasing load	< 2ms. transfer to by-pass, auto-transfer to inverter 25secs after decreasing load	< 2ms. transfer to by-pass, auto-transfer to inverter 25secs after decreasing load	< 2ms. transfer to by-pass, auto-transfer to inverter 25secs after decreasing load	< 2ms. transfer to by-pass, auto-transfer to inverter 25secs after decreasing load	< 2ms. transfer to by-pass, auto-transfer to inverter 25secs after decreasing load	< 2ms. transfer to by-pass, auto-transfer to inverter 25secs after decreasing load	< 2ms. transfer to by-pass, auto-transfer to inverter 25secs after decreasing load	< 2ms. transfer to by-pass, auto-transfer to inverter 25secs after decreasing load
Audible noise	At one meter	<= 55dBA	<= 55dBA	<= 55dBA	<= 55dBA	<= 60dBA	<= 60dBA	<= 60dBA	<= 60dBA	<= 60dBA
Indicators	Five LED's	Line input (green), battery (green) inverter (green), bypass (amber), fault (red)	Line input (green), battery (green) inverter (green), bypass (amber), fault (red)	Line input (green), battery (green) inverter (green), bypass (amber), fault (red)	Line input (green), battery (green) inverter (green), bypass (amber), fault (red)	Line input (green), battery (green) inverter (green), bypass (amber), fault (red)	Line input (green), battery (green) inverter (green), bypass (amber), fault (red)	Line input (green), battery (green) inverter (green), bypass (amber), fault (red)	Line input (green), battery (green) inverter (green), bypass (amber), fault (red)	Line input (green), battery (green) inverter (green), bypass (amber), fault (red)
Indicators	Two levels	Battery capacity level & load capacity level	Battery capacity level & load capacity level	Battery capacity level & load	Battery capacity level & load	Battery capacity level & load capacity	Battery capacity level & load capacity	Battery capacity level & load capacity	Battery capacity level & load capacity	Battery capacity level & load capacity

				capacity level	capacity level	level	level	level	level	level
Audible alarm	Battery discharge	Sounding every four seconds after line fails (alarm can be silenced by pushing the reset button)	Sounding every four seconds after line fails (alarm can be silenced by pushing the reset button)	Sounding every four seconds after line fails (alarm can be silenced by pushing the reset button)	Sounding every four seconds after line fails (alarm can be silenced by pushing the reset button)	Sounding every four seconds after line fails (alarm can be silenced by pushing the reset button)	Sounding every four seconds after line fails (alarm can be silenced by pushing the reset button)	Sounding every four seconds after line fails (alarm can be silenced by pushing the reset button)	Sounding every four seconds after line fails (alarm can be silenced by pushing the reset button)	Sounding every four seconds after line fails (alarm can be silenced by pushing the reset button)
Audible alarm	Battery discharge	Sounding once every one second as battery approaches final discharge (alarm can not be silenced)	Sounding once every one second as battery approaches final discharge (alarm can not be silenced)	Sounding once every one second as battery approaches final discharge (alarm can not be silenced)	Sounding once every one second as battery approaches final discharge (alarm can not be silenced)	Sounding once every one second as battery approaches final discharge (alarm can not be silenced)	Sounding once every one second as battery approaches final discharge (alarm can not be silenced)	Sounding once every one second as battery approaches final discharge (alarm can not be silenced)	Sounding once every one second as battery approaches final discharge (alarm can not be silenced)	Sounding once every one second as battery approaches final discharge (alarm can not be silenced)
Environment	Temperature	0 Celsius ~ 40 Celsius (32 Fahrenheit ~ 104 Fahrenheit)	0 Celsius ~ 40 Celsius (32 Fahrenheit ~ 104 Fahrenheit)	0 Celsius ~ 40 Celsius (32 Fahrenheit ~ 104 Fahrenheit)	0 Celsius ~ 40 Celsius (32 Fahrenheit ~ 104 Fahrenheit)	0 Celsius ~ 40 Celsius (32 Fahrenheit ~ 104 Fahrenheit)	0 Celsius ~ 40 Celsius (32 Fahrenheit ~ 104 Fahrenheit)	0 Celsius ~ 40 Celsius (32 Fahrenheit ~ 104 Fahrenheit)	0 Celsius ~ 40 Celsius (32 Fahrenheit ~ 104 Fahrenheit)	0 Celsius ~ 40 Celsius (32 Fahrenheit ~ 104 Fahrenheit)
Environment	Humidity	30% ~ 90% (non-condensing)	30% ~ 90% (non-condensing)	30% ~ 90% (non-cond	30% ~ 90% (non-cond	30% ~ 90% (non-condensing)	30% ~ 90% (non-condensing)	30% ~ 90% (non-condensing)	30% ~ 90% (non-condensing)	30% ~ 90% (non-condensing)

				ensing)	ensing)					
Weight (kgs)	Without battery	455	61	81	102.5	141	173	173	212.5	282.5
Weight (kgs)	Internal battery	18.5	32	43	N/A	100	N/A	N/A	N/A	N/A
Weight (kgs)	ISO. TX.	N/A	N/A	N/A	47	39	65	66	61	N/A
Weight (kgs)	Total (kgs)	64	93	124	149.5	280	238	239	273.5	282.5
Dimen sion	L x W x H (mm)	520 x 250 x 510	520 x 250 x 530	655 x 270 x 700	655 x 270 x 700	700 x 490 x 883	700 x 490 x 883	700 x 490 x 883	700 x 490 x 883	700 x 490 x 883

Ordering information:

- **Minimum Order:** Negotiable