

MODEL	DSY010TM	DSY015TM	DSY020TM	DSY010TT	DSY015TT	DSY020TT	DSY030TT	DSY040TT	DSY060TT
Nominal Power	10 kVA / 10 kW	15 kVA / 15 kW	20 kVA / 20 kW	10 kVA / 10 kW	15 kVA / 15 kW	20 kVA / 20 kW	30 kVA / 30 kW	40 kVA / 40 kW	60 kVA / 60 kW
<b>MAIN INPUT</b>									
Grid system	3F+N+PE / 1F+N+PE			3F+N+PE					
Rated voltage / Frequency	380/400/415 VAC (3 $\phi$ ), 220/230/240 VAC (1 $\phi$ ), 50/60 Hz			380/400/415 VAC, 50/60 Hz					
Voltage range	320~480 VAC full load, 240~480 VAC at 50% load (3 $\phi$ ) 184~276 VAC full load, 140~276 VAC at 50% load (1 $\phi$ )			320~480 VAC full load 240~480 VAC at 50% carico					
Frequency range	40~72 Hz (rectifier operating range)								
Power factor	$\geq 0.99$								
Current THDi	$\leq 2.5\%$ (1 $\phi$ ), $\leq 3\%$ (3 $\phi$ )			$\leq 3\%$					
<b>BYPASS INPUT</b>									
Grid system	1F+N+PE			3F+N+PE					
Rated voltage / Frequency	220/230/240 VAC, 50/60 Hz			380/400/415 VAC, 50/60 Hz					
Voltage range	230 V, -22% ~ +15%								
Frequency range	$\pm 5$ (selectable from $\pm 0.10$ to $\pm 10$ )								
Bypass overload	110% long term operation 110-125%, 60 minutes 125-150%, 10 minutes 150-200%, 1 minute >200%, 20 seconds								
<b>OUTPUT</b>									
Grid system	1F+N+PE			3F+N+PE					
Rated voltage / Frequency	200 V (Pn-11%), 208 V (Pn-8%), 220 V (Pn-2%), 230 V, 240 V; 50/60 Hz			380 V (Pn-2%), 400 V, 415 V; 50/60 Hz					
Power factor	1								
Voltage THDv	$< 1\%$ (linear load) $\leq 1.5\%$ (non-linear load)								
Voltage precision	$\pm 0.5\%$								
Transient response	$\pm 1\%$ for step resistive load (20->100% e 100->20%)								
Transient recovery	$< 20$ ms for step resistive load (20->100% e 100->20%)								
Inverter overload	103% long term operation 103-110%, 60 minutes 110-125%, 10 minutes 125-150%, 1 minute 150-200%, 0.5 seconds >200%, 0.2 seconds								
Frequency regulation	50/60 Hz $\pm 0.01\%$ (battery mode)								
Synchronized range	Default $\pm 5\%$ ; (selectable $\pm 0.10\%$ ~ $\pm 10\%$ )								
Synchronized slew rate	Selectable (0.5 Hz/S ~ 2 Hz/S), default 1 Hz/S								
Crest Factor	3:1								
<b>BATTERIES</b>									
Battery type	VRLA / AGM sealed lead acid batteries, open-vented batteries, NiCd batteries, lithium batteries								
Number of batteries in series	Default 40 (20+20), selectable from 15 to 22 (if $< 20$ a power derating must be applied)								
Nominal voltage	$\pm 240$ VDC								
Batteries arrangement	Internal and/or external								External
Maximum number and capacity of internal batteries	2 x 40 12 V / 9 Ah								-
External battery capacity	Selectable								
<b>SYSTEM</b>									
Efficiency - Normal operation	95.8	96.0	95.7	96.1	96.2	95.9	96.1	96.1	95.9
Efficiency - Eco Mode operation	99.0	98.9	98.9	99.3	99.5	99.5	99.6	99.8	99.1
Efficiency - Battery operation	95.9	95.9	95.9	95.9	96.4	96.4	96.5	96.5	96.7
Display	LED + LCD Touch Screen								
Protection degree	IP20 *								
Interface	Standard equipment: RS232, USB, dry contacts, Cold Start, EPO Optional: RS485, SNMP, parallel kit								
<b>ENVIRONMENT</b>									
Operating temperature	0 ~ 40 °C								
Storage temperature	-25 ~ 60 °C (UPS), -15 ~ 40 °C (batteries)								
Relative humidity	5 ~ 95% (no condensing)								
Noise (dBA at 1 meter far) - 100% load / 50% load	$< 52 / < 45$	$< 56 / < 50$	$< 56 / < 50$	$< 52 / < 45$	$< 56 / < 50$	$< 56 / < 50$	$< 52 / < 45$	$< 56 / < 50$	$< 68 / < 50$
Altitude	$< 1000$ m; load derated 0.5% per 100 m from 1000 ~ 4000 m								
<b>MECHANICAL DATA</b>									
Dimensions W*D*H (mm)	380*850*1025								
Weight (Kg)	72	74	76	72	74	76	78	82	87
Colour	RAL 7016								

Note: technical specifications and data could be changed without notification

\* IP21/31 protection degree and Dust Filter are available on request for DISCOVERY EXTRA version (DSX)

MODEL	DSY080TT	DSY100TT	DSY120TT
Nominal Power	80 kVA / 80 kW	100 kVA / 100 kW	120 kVA / 120 kW
<b>MAIN INPUT</b>			
Grid system	3F+N+PE		
Rated voltage / Frequency	380/400/415 VAC, 50/60 Hz		
Voltage range	320~480 VAC full load 240~480 VAC at 50% load		
Frequency range	40~72 Hz (rectifier operating range)		
Power factor	≥ 0.99		
Current THDi	≤ 3%		
<b>BYPASS INPUT</b>			
Grid system	3F+N+PE		
Rated voltage / Frequency	380/400/415 VAC, 50/60 Hz		
Voltage range	230 V, -22% ~ +15% (adjustable)		
Frequency range	±5% (adjustable from ±0.10% to ±10%)		
Bypass overload	110% long term operation 110-125%, 60 minutes 125-150%, 10 minutes 150-200%, 1 minute >200%, 20 seconds		
<b>OUTPUT</b>			
Grid system	3F+N+PE		
Rated voltage / Frequency	380 V (Pn-2%), 400 V, 415 V; 50/60 Hz		
Power factor	1		
Voltage THDv	<1% (linear load) ≤1.5% (non-linear load)		
Voltage precision	±0.5%		
Transient response	±1% for resistive step load (20->100% and 100->20%)		
Transient recovery	<20 ms for resistive step load (20->100% and 100->20%)		
Inverter overload	103% long term operation 103-110%, 60 minutes 110-125%, 10 minutes 125-150%, 1 minute 150-200%, 0.5 seconds >200%, 0.2 seconds		
Frequency regulation	50/60 Hz ±0.01% (battery mode)		
Synchronized range	Default ±5%; (adjustable ±0.10% ~ ±10%)		
Synchronized slew rate	Adjustable (0.5 Hz/S ~ 2 Hz/S), default 1 Hz/S		
Crest Factor	3:1		
<b>BATTERIES</b>			
Battery type	VRLA / AGM sealed lead acid batteries, open-vented batteries, NiCd batteries, lithium batteries		
Number of batteries in series	Default 40 (20+20), selectable from 15 to 22 (if <20 a power derating must be applied)		
Nominal voltage	±240 VDC		
Batteries arrangement	External		
External battery capacity	Selectable		
<b>SYSTEM</b>			
Efficiency - Normal operation	95.2		
Efficiency - Eco Mode operation	98.7	99.1	99.2
Efficiency - Battery operation	94.1	95.4	94.1
Display	LED + LCD Touch Screen		
Protection degree	IP20 *		
Interface	Standard equipment: RS232, USB, dry contacts, Cold Start, EPO Optional: RS485, SNMP, parallel kit		
<b>ENVIRONMENT</b>			
Operating temperature	0 ~ 40 °C		
Storage temperature	-25 ~ 60 °C (UPS), -15 ~ 40 °C (batteries)		
Relative humidity	5 ~ 95% (no condensing)		
Noise (dBA at 1 meter far) - 100% load / 50% load	<62 / <54	<63 / <54	<68 / <54
Altitude	<1000 m; load derated 0.5% per 100 m from 1000 ~ 4000 m		
<b>MECHANICAL DATA</b>			
Dimensions W*D*H (mm)	500*830*1600		
Weight (Kg)	172	180	198
Colour	RAL 7016		

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\* IP21/31 protection degree and Dust Filter are available on request