



DISCOVERY

10-120 kVA - Three-phase Stand Alone UPS



DISCOVERY

10-120 kVA

1:1

3:1

3:3

DISCOVERY is the medium power three-phase UPS with **extremely compact size**, and state of the art technology at the same time.

DISCOVERY can reach up to 120 kVA and ensures top performance like **Power Factor 1** and **efficiency up to 96,2%**.



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Product range



DISCOVERY 10-60 kVA

The system is available in sizes 10, 15, 20, 30, 40 and 60 kVA.

The UPS is configurable in 1/1, 3/1 (10-20 kVA) and 3/3 modes (10-60 kVA).

All power sizes provide rated output power (Power Factor 1).



DISCOVERY 80-120 kVA

The system is available in sizes 80, 100 and 120 kVA.

The UPS is configurable in 3/3 mode and provides rated output power (Power Factor 1).

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Product range: DISCOVERY 10-60 kVA models on request

ON REQUEST



DISCOVERY SLIM

STANDARD



DISCOVERY

ON REQUEST



DISCOVERY EXTRA

RANGE	10-15-20 kVA	10-15-20-30-40-60 kVA	10-15-20-30-40-60 kVA
DIMENSION	280 x 840 x 700 mm	380 x 850 x 1025 mm	440 x 840 x 1320 mm
FOOTPRINT	0.24 m ²	0.32 m ²	0.37 m ²
BATTERIES	Up to 1x40 internal string	Up to 2x40 internal strings*	Up to 3x40 internal strings
DOUBLE INPUT	No	Optional	Standard

* Up to 40 kVA (60 kVA only external batteries)

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Main features



- Output Power Factor 1
- Efficiency up to 96,2%
- Up to 3 internal battery strings in the power sizes from 10 to 60 kVA
- Parallel operation available, up to 8 units

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Compact size



- 0,33 m³ volume (10 - 60 kVA power range) and 0.66 m³ volume (80 - 120 kVA power range)
- Ground dimensions are only **0.32 m²** on **10 – 60 kVA**

↳ **-13,6%** Less than the previous generation

- **The weight of the UPS is very low**, thus bringing additional advantages related to the transport phases and in terms of the amount of material to be disposed of.

DISCOVERY Technology



- **High frequency (18 kHz) three-level IGBT inverter**
- **Digital Signal Processor (DSP)**
dual core microprocessor
- **Internal manual bypass**
- **Integrated dry contact board** with 5 programmable inputs and 4 programmable outputs
- **EPO Emergency System**
- Built-in standard COLD START function
- **Speed-controlled fans** with speed and flow management based on ambient temperature and load level
- **Programmable intelligent sockets** that can be activated under certain conditions according to the user's settings (optional)

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Battery management

DISCOVERY 10-60 kVA is designed to contain from **1 to 3 strings of 40 batteries** each.

On the entire range (10-120 kVA) the UPS can also be equipped with **an increased battery charger** capable of delivering up to 30 Ampere, so as to also meet the demands for greater autonomy.



**OPTIMISED
CHARGER**



**EXTENDED
DURATION**



**WIDE
COMPATIBILITY**



**DIAGNOSTIC
TESTS**

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Advanced communication

- 5-inch colour Touch Screen display
- 3 levels of access and protection
- Configurable in 9 different languages
- Intuitive led bar show mode and operating conditions
- Monitoring software is also available



DISCOVERY 10-60 kVA									
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
MAIN INPUT									
Grid system	3F+N+PE / 1F+N+PE			3F+N+PE					
Rated voltage / Frequency	380/400/415 VAC (3 ϕ), 220/230/240 VAC (1 ϕ), 50/60 Hz			380/400/415 VAC, 50/60 Hz					
Voltage range	320~480 VAC full load, 240~480 VAC at 50% load (3 ϕ) 184~276 VAC full load, 140~276 VAC at 50% load (1 ϕ)			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	$\leq 2.5\%$ (1 ϕ), $\leq 3\%$ (3 ϕ)			$\leq 3\%$					
BYPASS INPUT									
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% (adjustable)								
Frequency range	-5 (selectable 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								

DISCOVERY 10-60 kVA									
MODEL	DSY010TM	DSY015TM	DSY020TM	DSY010TT	DSY015TT	DSY020TT	DSY030TT	DSY040TT	DSY060TT
OUTPUT									
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) ≤1.5% (non-linear load)								
Voltage precision	±0.5%								
Transient response	—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 ±0.01% (battery mode)								
Synchronized range	Default ±5%; (selectable ±0.10% ~ ±10%)								
Synchronized slew rate	Selectable (0.5 Hz/S ~ 2 Hz/S), default 1 Hz/S								
Crest Factor	3:1								

DISCOVERY 10-60 kVA									
MODEL	DSY010TM	DSY015TM	DSY020TM	DSY010TT	DSY015TT	DSY020TT	DSY030TT	DSY040TT	DSY060TT
BATTERIES									
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	Internal and/or external								External
Maximum number and capacity of internal batteries	2 x 40 12 V / 9 Ah								-
External batteries capacity	Selectable								
SYSTEM									
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								

DISCOVERY 10-60 kVA									
MODEL	DSY010TM	DSY015TM	DSY020TM	DSY010TT	DSY015TT	DSY020TT	DSY030TT	DSY040TT	DSY060TT
ENVIRONMENT									
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								
MECHANICAL DATA									
Dimensions L*P*A (mm)	380*850*1025								
Weight (Kg)	72	74	76	72	74	76	78	82	87
Colour	RAL 7016								
<p>Note: technical specifications and data could be changed without notification</p> <p>* IP21/31 protection degree and Dust Filter are available on request for DISCOVERY EXTRA version (DSX)</p>									

DISCOVERY 80-120 kVA			
MODEL	DSY080TT	DSY100TT	DSY120TT
Nominal Power	80 kVA / 80 kW	100 kVA / 100 kW	120 kVA / 120 kW
MAIN INPUT			
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%		
BYPASS INPUT			
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		

DISCOVERY 80-120 kVA			
MODEL	DSY080TT	DSY100TT	DSY120TT
OUTPUT			
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		

DISCOVERY

Technical Specification 80-120 kVA

DISCOVERY 80-120 kVA			
MODEL	DSY080TT	DSY100TT	DSY120TT
BATTERIES			
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		
SISTEMA			
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		

DISCOVERY

Technical Specification Discovery 80-120 kVA

DISCOVERY 80-120 kVA			
MODEL	DSY080TT	DSY100TT	DSY120TT
ENVIRONMENT			
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		
MECHANICAL DATA			
Dimensions L*P*A (mm)	500*830*1600		
Weight (Kg)	172	180	198
Colour	RAL 7016		
Note: technical specifications and data could be changed without notification * IP21/31 protection degree and Dust Filter are available on request			



Thanks for your attention.

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