CLASS D



Features

Cold-start function

SCR rectifier design

IGBT inverter design

Pure sine wave output

IEC 62040-3 compliant

User friendly, informative LCD

Unstable generator compatible

Excellent electrical performance

High MTBF and heavy-duty design

Fully digitized microprocessor control

Automatic and manual internal by-pass

Galvanic isolation with iron transformer

Parallel load sharing and redundancy capability

Three-phase input and output double-conversion UPS

LAN support and remote managed via SNMP (optional)

Battery under voltage, Overload, Output short circuit and UPS powers overheat protections

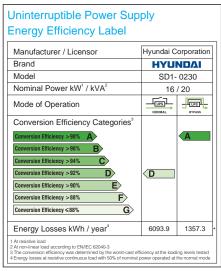
Galvanic isolated industrial double-conversion Hyundai UPS is the best choice for large offices where high reliability is required. This UPS can be connected in parallel, providing the customer with up to 720KVA concentrated UPS. An optional advanced efficiency optimizer circuit can bring you 98% of efficiency during 30 years lifetime.

Till now, the general approach of existing equipment that, in stable conditions of the mains electricity, aimed to increase the efficiency of UPS has consisted in transforming a double-conversion UPS into a passive-standby operation (off-line) UPS.

For the first time, we offer an optional efficiency optimizer, based on rapidswitching circuits and voltage-stabilizer, that, in the same stable conditions, transforms the UPS, instead of passive-standby operation (off-line), into a UPS with a line-interactive performance.

Applications

- Automation equipment
- Telecommunications
- Process machinery
- Industrial controls
- Broadcasting
- Data centers
- Banking



*Energy losses for: \$01,0330 Normal mode: 9140.7 W/My; By-pass mode: 2036 W/M \$01,0430 Normal mode: 12187.8 W/My; By-pass mode: 2714.6 W/M \$01,0530 Normal mode: 12817.8 W/My; By-pass mode: 2019 W/M \$01,0530 Normal mode: 24375.7 W/My; By-pass mode: 5726.5 W/M \$1,11100 Normal mode: 3049.6 W/My; By-pass mode: 2786.5 W/M

Technical data sheet (Class D)

Model catalogue reference	SD1-0230	SD1-0330	SD1-0430	SD1-0630	SD1-0830	SD1-1030	SD1-1230	Unit	
Power rating	16/20	24/30	32/40	48/60	64/80	80/100	96/120	KW/KVA	
Dimensions W*D*H	660*850*1430 950*850*1600 1200*850*1600						mm		
Weight (approx.)	250	300	350	450	560	650	750	kg	
Environmental									
Storage temperature				-20 to 70				°C	
Operating temperature		0 to 40							
Altitude		<3000							
Relative humidity	0 to 95 Without condensation								
Degree of protection (IEC 60529)	20								
Normal mode acoustic noise at 1 m	<65								
Stored energy mode acoustic noise at 1 m	<65								
Electrical input characteristics									
Rated input voltage	380/400								
Input voltage range	± 20								
Rated input frequency	50/60 Hz (selectable)							Hz	
Input frequency range	50/60 Hz ± 5%							Hz	
Number of input phases				3				Phase (s	
Rated input current	33	50	67	101	134	168	202	A r.m.s.	
Maximum continuous input current	45	69	92	139	184	231	278	A r.m.s.	
Rectifier			3	Phases 6 puls	ses				
Output waveform									
Normal mode waveform				Sinusoidal					
Stored energy mode waveform	Sinusoidal								
Transfer normal mode/stored energy				No break					
Electrical output characteristics - s	static chara	cteristics - ı	normal mod						
Rated output voltage		380/400							
Output voltage variation	±1								
Nominal output frequency	50/60								
Synchronized frequency variation		±3							
Synchronized input to output phase error			I	<6				degrees	
Rated output apparent power	20000	30000	40000	60000	80000	100000	120000	VA	
Linear load rated active power	16000	24000	32000	48000	64000	80000	96000	W	
Non-linear load rated active power	16000	24000	32000	48000	64000	80000	96000	W	
Linear load total voltage distortion	<3								
Non-Linear load total voltage distortion	<5							%THD	
Output short circuit current capability	200							%	
1 min overload capability				150				%	
10 min overload capability		120							
Range of load power factor permitted			No lir	mit (0 Lead to	0 Lag)				
Number of output phases				3				Phase (s	
Electrical output characteristics - o	-	aracteristics	s - normal n						
Mode changes dynamic output voltage var				<3				%	
Load changes dynamic output voltage varia				<10				%	
Electrical output characteristics - s	static chara	cteristics - s	stored ener	•				1/ =	
Rated output voltage				380/400V				V r.m.s.	
Output voltage variation				± 1				%	
Output frequency				50/60				Hz	
Output frequency variation (free running)	00000	00000	40000	± 0.05	00000	100000	100000	%	
Rated output apparent power	20000	30000	40000	60000	80000	100000	120000	VA	
Linear load rated active power	16000	24000	32000	48000	64000	80000	96000	W	
Non-linear load rated active power	16000	24000	32000	48000	64000	80000	96000	W	
Linear load total voltage distortion				<3				%THD %THD	
Non-Linear load total voltage distortion	<5								
Output short circuit current capability	200							%	
1 min overload capability	150							%	
10 min overload capability	120								
Range of load power factor permitted	No limit (0 lead to 0 lag)								

Mode changes dynamic output voltage variation	0.00							%
Load changes dynamic output voltage variation	<10							
Efficiency								
Efficiency input/output	>92 (>98 in the optional efficiency optimizer mode)							
Synchronization								
Range of frequency Synchronization	±3							
Acceptable voltage difference	20							%
Maximum phase error	6							degrees
Battery characteristics								
DC voltage	384 432				480	VDC		
Charging profile	Advanced IU plus WA characteristics							
Maximum charging current	12			20		25		А
Galvanic isolation								
DC to AC isolation type	Magnetic with iron transformer							
By-pass characteristics								
By-pass	Built-in static by-pass & built-in manual maintenance by-pass							
Continues current	30	45	61	91	121	152	182	A r.m.s.
Circuit breaker current rating	40	63	100	125	160	200	250	
Electromagnetic compatibility								
Immunity & emission	IEC 62040-2							
Parallel operation								
Parallel availability for load sharing and redundancy	Up to six unit							