Technical Specifications

Newave SA - Via Luserte Sud 9 - CH-6572 Quartino
Tel. +41 (0)91 850 29 29 - Fax +41 (0)91 840 12 54
info@newave.ch, www.newave-ups.com

1. MECHANICAL CHARACTERISTICS D1M-FRAMES AND MODULES

CONCEPTPOWER DPA		CLASSIC DPA-25	TRIPLE DPA-75	UPGRADE DPA-125
D1M - FRAMES				
Configuration accommodates:	Max.	1 module (10-25kVA) and 200 x 7/9Ah batteries	3 modules (10-25kVA) and 180 x 7/9Ah batteries	5 modules (10-25kVA) and no batteries
Max. Power connection	kVA	25	75	125
Dimensions (WxHxD)	mm	550x1650x792.5	550x1975x792.5	550x1975x792.5
Weight of Empty Frame w/o modules and w/o batteries	kg	200	220	160
Weight of Frame with modules and w/o batteries	kg	224 up to 233 (with 1 Module)	292 up to 319 (with 3 Modules)	280 up to 325 (with 5 Modules)
Colours		Front : RAL 9007 + NEWAVE black (inlets) Side walls: Graffito grey		

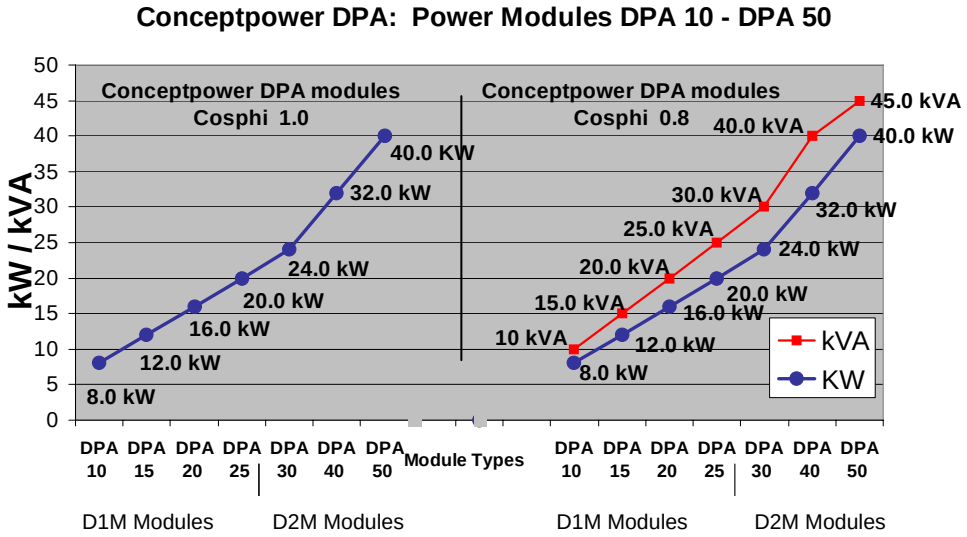
D1M MODULES		DPA 10	DPA 15	DPA 20	DPA 25
Output Apparent Rated Power	KVA	10	15	20	25
Output Active Rated Power	KW	8	12	16	20
Output Power with Load PF=1	KVA / KW	8 / 8	12 / 12	16 /16	20 /20
Variable Number of 12V Battery Blocks	No.	30 – 50	30 – 50	30 – 50	40 – 50
Total Dimensions (WxHxD)	mm	483 x 225 x 753			
Weight UPS Module	kg	24		33	
Colours		Front : RAL 9007			

2. MECHANICAL CHARACTERISTICS D2M-FRAMES AND MODULES

CONCEPTPOWER DPA		CLASSIC DPA-50	TRIPLE DPA-150	UPGRADE DPA-250
D2M - FRAMES				
Configuration accommodates:	Max.	1 module (30-45kVA) and 280 x 7/9Ah batteries	3 modules (30-45kVA) and 240x 7/9Ah batteries	5 modules (30-45kVA) and no batteries
Max. Power connection	kVA	50	150	250
Dimensions (WxHxD)	mm	730x1650x815	730x1975x815	730x1975x815
Weight of Empty Frame w/o modules and w/o batteries	kg	250	270	190
Weight of Frame with modules and w/o batteries	kg	300 up to 310 (with 1 Module)	420 up to 450 (with 3 Modules)	440 up to 490 (with 5 Modules)
Colours		Front : RAL 9007 + NEWAVE black (inlets) Sidewalls: Graffito grey		

D2M MODULES		DPA 30	DPA 40	DPA 50
Output Apparent Rated Power	KVA	30	40	45 [1)]
Output Active Rated Power	KW	24	32	40
Output Power with Load PF=1	KVA / KW	24 / 24	32 / 32	40 /40
Variable Number of 12V Battery Blocks	No.	40-50	40-50	40-50
Total Dimensions (WxHxD)	mm	663 x 225 x 775		
Weight UPS Module	kg	50	57	60
Colours		Front : RAL 9007		
1) On Inverter mode 50 KVA/40kW on Bypass mode 45 KVA/40kW				

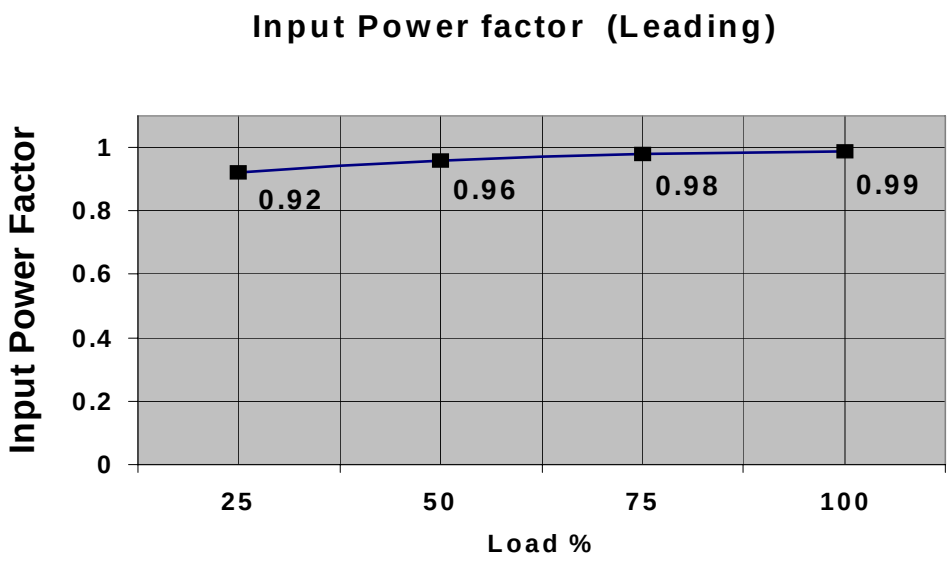
3. POWER SELECTION TABLE CONCEPTPOWER DPA MODULES



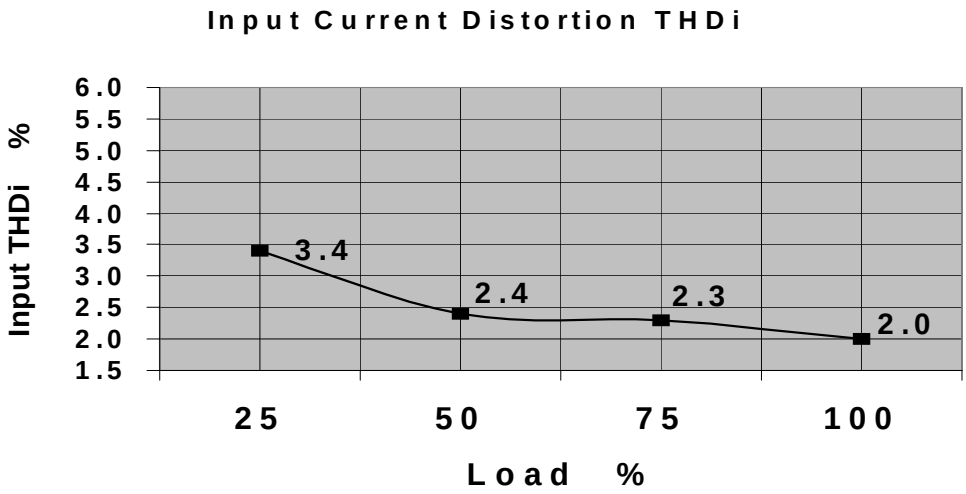
4. INPUT CHARACTERISTICS

Module Range		D1M				D2M		
Module Type		DPA 10	DPA 15	DPA 20	DPA 25	DPA 30	DPA 40	DPA 50
Output Rated Power per Module cosφ	kVA	10	15	20	25	30	40	45 [1]
Output Rated Power per Module cosφ	KW	8	12	16	20	24	32	40
Nominal Input Voltage	V	3x380/220V+N, 3x400V/230V+N, 3x415/240V+N						
Input Voltage Tolerance (ref to 3x400/230V) for Loads in %:	V	(-23%/+15%) 3x308/177 V to 3x460/264 V for <100% load (-30%/+15%) 3x280/161 V to 3x460/264 V for < 80% load (-40%/+15%) 3x240/138 V to 3x460/264 V for < 60% load						
Input Frequency	Hz	35 – 70						
Input Power Factor		PF=0.99 @ 100 % load						
Inrush Current	A	limited by soft start / max. In						
Input Distortion THDI		Sine-wave THDi = < 2 % @ 100% load						
Max. Input Power with rated output power and charged battery per Module (output Cosφ = 1.0)	kW	**8.5**	**12.8**	**17.0**	**21.3**	**25.4**	**33.9**	**42.9**
Max. Input Current with rated output power and charged battery per Module (output Cosφ = 1.0)	A	**12.3**	**18.5**	**24.7**	**30.8**	**36.8**	**49.1**	**62.1**
Max. Input Power with rated output power and discharged battery per Module (output Cosφ = 1.0)	kW	**9.3**	**14.0**	**18.6**	**23.3**	**27.8**	**37.1**	**46.9**
Max. Input Current with rated output power and discharged battery per Module (output Cosφ = 1.0)	A	**13.5**	**20.2**	**27.0**	**33.7**	**40.3**	**53.7**	**68.0**
1) On Inverter mode 50 KVA/40kW on Bypass mode 45 KVA/40kW								

5. INPUT PF VERSUS % LOAD



6. INPUT DISTORTION THDI VERSUS % LOAD



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7. BATTERY CHARACTERISTICS

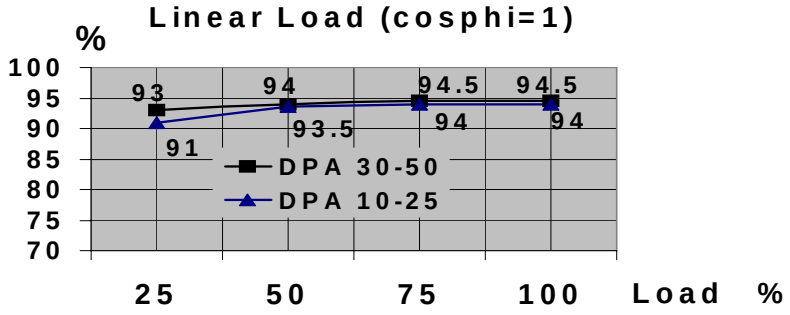
Module Range		D1M				D2M		
Module Type		DPA 10	DPA 15	DPA 20	DPA 25	DPA 30	DPA 40	DPA 50
Variable Number of 12V Battery Blocks	No.	30-50	30-50	30-50	40-50	40-50	40-50	40-50
Maximum Battery Charger Current	A	10A Standard				10A Std.	15A Standard	
Battery Charging Curve		Ripple free ; IU (DIN 41773)						
Temperature compensation		Standard (temp. sensor optional)						
Battery Test		Automatic and periodically (adjustable)						
Battery Type		Maintenance free VRLA or NiCd						

8. OUTPUT CHARACTERISTICS

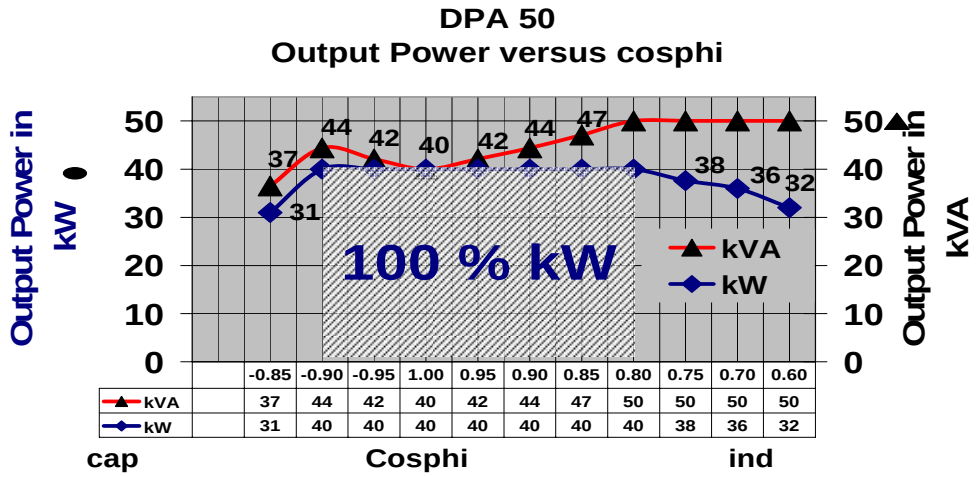
Module Range		D1M				D2M		
Module Type		DPA 10	DPA 15	DPA 20	DPA 25	DPA 30	DPA 40	DPA 50
Output Rated Power per Module	kVA	10	15	20	25	30	40	45 [1)]
Output Rated Power per Module	KW	8	12	16	20	24	32	40
Output Current In @ cosphi 1.0 (400 V)	A	11.6	17.4	23.2	29	35	46.5	58
Output Rated Voltage	V	3x380/220V or 3x400/230V or 3x415/240V						
Output Voltage Stability	%	Static: < +/- 1% Dynamic (Step load 0%-100% or 100%-0%) < +/- 4%						
Output Voltage Distortion	%	With Linear Load < +/- 2% With Non-linear Load (EN62040-3:2001) < +/- 4%						
Output Frequency	Hz	50 Hz or 60 Hz						
Output Frequency Tolerance	%	Synchronized with mains < +/- 2 % (selectable for bypass operation) or < +/- 4 % Free running +/- 0.1 %						
Bypass operation		At Nominal Input voltage of 3x400 V or 190 V to 264 V ph-N +/- 15 %						
Permissible Unbalanced Load (All 3 phases regulated independently)	%	100%						
Phase Angle Tolerance (With 100 % Unbalanced load)	Deg.	+/- 0 deg.						
Overload Capability on Inverter	%	125 % load 10 min. 150 % load 60 sec.						
Output short capability (RMS)	A	Inverter : 2 x In during 250 ms Bypass : 10 x In during 10 ms						
Crest - Factor		3 : 1						
1) On Inverter mode 50 KVA/40kW on Bypass mode 45 KVA/40kW								

9. AC – AC EFFICIENCY with Linear load @ cosphi 1

Efficiency up to 1 % higher with output PF cosphi 0.8
Details refer to paragraph 10.7 Environmental Characteristics



10. Output Power in KW and KVA VERSUS cosphi



		D1M Module Range								D2M Module Range					
		DPA10		DPA15		DPA20		DPA25		DPA30		DPA40		DPA50 [1]	
	cosφ	kW	kVA	kW	kVA	kW	kVA	kW	kVA	kW	kVA	kW	kVA	kW	kVA
Cap.	0.85	6.2	7.3	9.3	11	12.3	14.5	15.4	18.1	18.5	21.8	24.6	29	31	36.5
	0.90	8	8.9	12	13.3	16	17.8	20	22.2	24	26.7	32	35.6	40	44.4
	0.95	8	8.4	12	12.6	16	16.8	20	21.1	24	25.3	32	33.7	40	42.1
	1.00	**8**	**8**	**12**	**12**	**16**	**16**	**20**	**20.0**	**24**	**24**	**32**	**32.0**	**40**	**40**
	0.95	8	8.4	12	12.6	16	16.8	20	21.1	24	25.3	32	33.7	40	42.1
	0.90	8	8.9	12	13.3	16	17.8	20	22.2	24	26.7	32	35.6	40	44.4
	0.85	8	9.4	12	14.1	16	18.8	20	23.5	24	28.2	32	37.6	40	47.1
Ind.	0.80	8	10	12	15	16	20	20	25	24	30	32	40	40	50[1]
	0.75	7.6	10	11.4	15	15.3	20	19.1	25	22.9	30	30.5	40	38	50[1]
	0.70	7.2	10	10.8	15	14.5	20	18.1	25	21.7	30	28.9	40	36	50[1]
	0.60	6.3	10	9.5	15	12.7	20	15.9	25	19	30	25.4	40	32	50[1]

1) DPA 50 : On Inverter Mode 50 KVA/40kW on Bypass Mode 45 KVA/40kW

Changes of this table without notice – modifications reserved

11. ENVIRONMENTAL CHARACTERISTICS

Module Range		D1M				D2M		
Module Type		DPA 10	DPA 15	DPA 20	DPA 25	DPA 30	DPA 40	DPA 50
Audible Noise with 100% / 50% Load	dBA	55/49	57/49	57/49	57/49	59/51	65/55	65/55
Operation temperature	°C	0 – 40						
Ambient Temperature for Batteries (recommended)	°C	20 – 25						
Storage Temperature	°C	-25 - +70						
Battery Storage Time at Ambient Temperature		Max. 6 months						
Max. altitude (above sea level)	m	1000m (3300ft) without de-rating						
De-rating factor for use at altitudes above 1000m sea level according (IEC 62040-3)		Meter above sea level (m / ft)	De-Rating Factor for Power					
		1500 / 4850	0.95					
		2000 / 6600	0.91					
		2500 / 8250	0.86					
		3000 / 9900	0.82					
Relative Air-humidity		Max. 95% (non-condensing)						
Accessibility		Totally front accessibility for service and maintenance (no need for side, top or rear access)						
Positioning		Min. 20 cm rear space (required for fan)						
Input and Output Power Cabling		From the bottom on the front						
Efficiency AC-AC up to (at cosphi 1.0) (depending on Module power)	%	*Load* : *100 %* *75 %* *50%* *25%* DPA 30-50 : 94.5% 94.5% 94% 93% DPA 10-25 : 94% 94% 93.5% 91%						
Efficiency with Linear Load at cosφ =0.8ind Efficiency Non-linear Load (EN 62040-1-1:2003)		Typically up to 1 % higher of above values Typically up to 1 % lower of above values						
Eco-Mode efficiency at 100% load	%	98 %						

12. STANDARDS

Safety	EN 62040-1-1:2003, EN 60950-1:2001/A11:2004					
Electromagnetic Compatibility	EN 62040-2:2005, EN61000-3-2:2000, EN6100-3-3:1995/A1:2001, EN61000-6-2:2001, EN61000-6-4:2001					
EMC Classes C2 domestic or industrial In < 16A C3 industrial In >16A	Classic DPA-25 C2, (C3)	Triple DPA-75 C2, (C3)	Upgrade DPA-125 C2, (C3)	Classic DPA-50 C2, (C3)	Triple DPA-150 C2, (C3)	Upgrade DPA-250 C2, (C3)
Performance	EN62040-3:2001					
Product certification	CE					
Degree of protection	IP 20					

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