Inverter

ZDTAC60000 DUAL

Telecom Inverters with High Intelligence

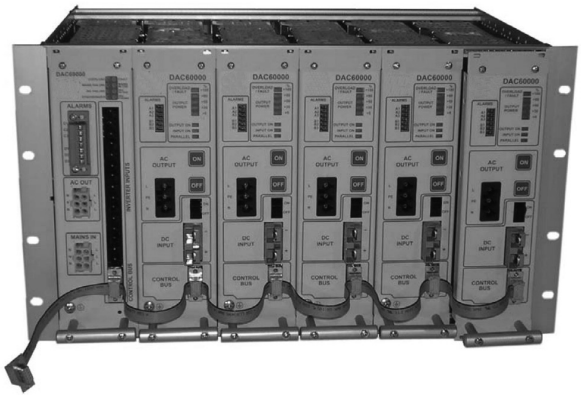
2 x 1500VA inverter modules in 19” 1.5U
Two inverters or inverter and static switch in 19” 1.5U
Redundant n+1 system, hot swap plug-in modules
Both On-line and Off-line applications

High power density 6kVA in 19” 3U
System power with static switch 1.5kVA 1.5U...7.5kVA n+1
System power without static switch 1.5kVA 1.5U...27kVA

ZDTAC60000 SERIES

Telecom Inverters with High Intelligence
24VDC Inverters with High Intelligence

Parallel connectable 600VA ... 14 kVA
Stand alone applications 600VA ... 1200VA
Redundant n+1 system with external static switch
Both On-line and Off-line applications
Real redundant, Fault tolerant system
Small size, light weight, standard 19” rack
High efficiency
High overload capability
User programmable features
Remote monitoring through RS-232 with standard PC



ZDTAC60000 DUAL:

INVERTER MODULES						
Type	DC input Range	Nominal AC output	Nominal Power	Cooling	Dimensions Without handles	Weight
Parallel connectable models						
ZDTAC62434FR	40…72VDC	230VAC, 50Hz	1500VA/1200W	Forced, fan	220 x 64 x 409 mm	4 kg
ZDTAC62514FR	40…72VDC	115VAC, 60Hz	750VA/750W	Forced, fan	220 x 64 x 409 mm	4 kg
Stand-alone models						
ZDTAC60434FR	40…72VDC	230VAC, 50Hz	1500VA/1200W	Forced, fan	220 x 64 x 409 mm	4 kg
ZDTAC60514FR	40…72VDC	115VAC, 60Hz	750VA/750W	Forced, fan	220 x 64 x 409 mm	4 kg

STATIC SWITCH MODULES	
Type	Description
ZBTPU69230FR	External static switch, 7500VA 230VAC, 220mm x 64mm x 409mm module
ZBTPU69310FR	External static switch, 3750VA 115VAC, 220mm x 64mm x 409mm module

19” 1.5U POWERFRAMES (sub-racks)	
Type	Description
ZMTSR8170	Sub-rack for two inverter modules, 19” x 1.5U x 435mm
ZMTSR8180	Sub-rack for inverter and static switch, 19” x 1.5U x 435mm
ZMTBP68300	Sub-rack including manual bypass and position for static switch (separate datasheet)
ZMTBP68360	Sub-rack including manual bypass, AC-distribution and position for static switch, see separate datasheet for fuse types
Z8T169274A	Coverplate set for empty module space in 19” 1.5U subrack

ZDTAC60000 Series:

STAND ALONE INVERTERS						
Type	DC input Range	Nominal AC output	Nominal Power	Cooling	Dimensions Without handles	Weight
ZDTAC60134VF	40…72VDC	230VAC, 50Hz	1000VA/700W	Convection	14TE x 6U x 372mm	4 kg
ZDTAC60134HF	40…72VDC	230VAC, 50Hz	1000VA/700W	Convection	19” x 2U x 280mm	7 kg
ZDTAC60234VF	40…72VDC	230VAC, 50Hz	1200VA/1200W	Forced, fan	14TE x 6U x 372mm	4 kg
ZDTAC60234HF	40…72VDC	230VAC, 50Hz	1200VA/1200W	Forced, fan	19” x 2U x 280mm	7 kg
ZDTAC60014VF	40…72VDC	115VAC, 60Hz	600VA/600W	Convection	14TE x 6U x 372mm	4 kg
ZDTAC60014HF	40…72VDC	115VAC, 60Hz	600VA/600W	Convection	19” x 2U x 280mm	7 kg

PARALLEL CONNECTABLE INVERTERS						
Type	DC input Range	Nominal AC output	Nominal Power	Cooling	Dimensions Without handles	Weight
ZDTAC62134VF	40…72VDC	230VAC, 50Hz	1000VA/700W	Convection	14TE x 6U x 372mm	4 kg
ZDTAC62134HF	40…72VDC	230VAC, 50Hz	1000VA/700W	Convection	19” x 2U x 280mm	7 kg
ZDTAC62234VF	40…72VDC	230VAC, 50Hz	1200VA/1200W	Forced, fan	14TE x 6U x 372mm	4 kg
ZDTAC62234HF	40…72VDC	230VAC, 50Hz	1200VA/1200W	Forced, fan	19” x 2U x 280mm	7 kg
ZDTAC62014VF	40…72VDC	115VAC, 60Hz	600VA/600W	Convection	14TE x 6U x 372mm	4 kg
ZDTAC62014HF	40…72VDC	115VAC, 60Hz	600VA/600W	Convection	19” x 2U x 280mm	7 kg

STAND ALONE INVERTERS						
Type	DC input Range	Nominal AC output	Nominal Power	Cooling	Dimensions Without handles	Weight
ZDTAC60132VF	20…32VDC	230VAC, 50Hz	1000VA/600W	Convection	14TE x 6U x 372mm	4 kg
ZDTAC60232VF	20…32VDC	230VAC, 50Hz	1200VA/800W	Forced, fan	14TE x 6U x 372mm	4 kg
ZDTAC60012VF	20…32VDC	115VAC, 60Hz	600VA/600W	Convection	14TE x 6U x 372mm	4 kg

PARALLEL CONNECTABLE INVERTERS						
Type	DC input Range	Nominal AC output	Nominal Power	Cooling	Dimensions Without handles	Weight
ZDTAC62132VF	20…32VDC	230VAC, 50Hz	1000VA/600W	Convection	14TE x 6U x 372mm	4 kg
ZDTAC62232VF	20…32VDC	230VAC, 50Hz	1200VA/800W	Forced, fan	14TE x 6U x 372mm	4 kg
ZDTAC62012VF	20…32VDC	115VAC, 60Hz	600VA/600W	Convection	14TE x 6U x 372mm	4 kg

STATIC SWITCH + MANUAL BYPASS	
Type	Description
ZBTPU69130VF	External static switch, 6000VA 230VAC, 14TE x 6U x 372mm module
ZMTSR7990+ZBTPU69130VF	External static switch, 6000VA 230VAC, 19” x 2U x 372mm
ZBTPU69010VF	External static switch, 3000VA 115VAC, 14TE x 6U x 372mm module
ZMTSR7990+ZBTPU69010VF	External static switch, 3000VA 115VAC, 19” x 2U x 372mm

ZMTBP68000 / ZMTBP68200	See separate datasheets for 6U and 2U manual bypass solutions

Inverter

SPECIFICATION INVERTERS	48VDC / 230VAC 1500VA	48VDC / 115VAC 750VA	48VDC / 230VAC 1000VA	48VDC / 230VAC 1200VA	48VDC / 115VAC 600VA
ELECTRICAL					
Input voltage	40-72 VDC	40-72 VDC	40-72 VDC	40-72 VDC	40-72 VDC
	User programmable (PC/RS-232) start-up and shut down voltage limits and delays				
Input current	35 Amax (continuous) 50 Amax (5 s)	22 Amax (continuous) 50 Amax (5 s)	22 Amax (continuous) 50 Amax (5 s)	35 Amax (continuous) 50 Amax (5 s)	18 Amax (continuous) 33 Amax (5 s)
Inrush current	< 20 A	< 20 A	< 20 A	< 20 A	< 20 A
Output voltage	Nominal 230 VAC sine wave, user programmable 200-240V, floating output				115 VAC sine wave, floating, user programmable 85-130V
Output frequency	Nominal 50 Hz, user programmable 40 - 70 Hz, crystal locked				Nominal 60 Hz, programmable 40 - 70 Hz, crystal locked
Nominal output power	1500VA / 1200W	750VA / 750W	1000VA / 700W	1200VA / 1200W	600VA / 600W
Output current	Nominal 6.5A Short circuit 13 A max	Nominal 6.5A Short circuit 13 A max	Nominal 4.4A Short circuit 13 A max 4 s	Nominal 5.2A Short circuit 13 A max 4 s	Nominal 5.2A Short circuit 13 A max 4 s
Efficiency	90 %	86 %	90 %	89 %	86 %
Static regulation, 0…100% load	+/-3%	+/-3%	+/-3%	+/-3%	+/-5%
Total harmonic distortion, resistive load	< 2 %	< 2 %	< 2 %	< 2 %	< 3 %
Transient recovery	< 0.3 ms	< 0.3 ms	< 0.3 ms	< 0.3 ms	< 0.3 ms
Psofometric noise, input	< 2 mV	< 2 mV	< 2 mV	< 2 mV	< 2 mV
Crest factor	> 2.5	> 2.5	> 3	> 2.7	> 2.7
Isolation	Input-Chassis 1500 VAC (2000 VCD) Input-Output 3000 VAC (4000 VDC) Output-Chassis 1500 VAC (2000 VDC)				
Overload	140 % (1700 W) / 5 seconds	165 % (1000 W) / 5 seconds	240 % (1700 W) / 5 seconds	140 % (1700 W) / 5 seconds	165 % (1000 W) / 5 seconds
	Max time can be limited shorter, 110% /60 s is always available Number of restart attempts and delays are user programmable				
Protection	Output current limiting Overload and short circuit Input and output fuses				
STANDARDS					
Safety	EN 60950-1				
EMC	EN 55022B, EN61000-6-3, EN61000-6-2 or EN61000-6-1 (EN61000-4-3 radiated immunity according to EN61000-6-1 other immunity standards EN61000-6-2) , ETS 300 132-2, BTNR 2511				
ALARMS, INDICATIONS AND CONTROLS					
LED-Indications	Input ON Output ON Output loading, 4 level Overload / Fault				
Relay alarms	Module failure and output ON				
Remote monitoring through RS-232 (Remote monitoring software)	Status information: For example input and output voltage, power, temperature, faults etc. Parameter adjustment: For example input voltage limits, output voltage, over load, faults etc.				
MECHANICAL					
Dimensions	See second page				
Connectors in modules rear panel	plug-in connectors DIN41612 F48, DIN41612 H15				
Connectors in sub-racks rear panel	ZMTSR8170 sub-rack: - DC input and GND M5 screw for cable clamp, 2 per powerframe - AC output M4 screw for cable clamp, 1 per powerframe ZMTSR8180 sub-rack: AC in and AC out (Lin, Lout, N) and GND M5 screw for cable clamp Connectors are shielded from hazardous contact				
Connectors in front panel			Input: 50A DC connector, Anderson SB50 6319 or UMA S50 50 A DC Output: Finger protected AC-connector, Wieland ST18/3S2		
Enclosure	Steel casing IP20				
ENVIRONMENTAL					
Operating temperature	0…45°C full power, 45…60°C reduced power				
Cooling	Forced cooling, 2 fans inside the modules		Natural convection	Forced cooling, monitored fans	Natural convection
SYSTEM FEATURES					
See manual					
OPTIONAL MODELS					
Nominal Power			Special versions by request, for example 600VA		
Input Voltage			Special versions by request, for example 24VDC and 110VDC		

SPECIFICATION INVERTERS	24VDC / 230VAC 1000VA	24VDC / 230VAC 1200VA	24VDC / 115VAC 600VA
ELECTRICAL			
Input voltage	20-32 VDC	20-32 VDC	20-32 VDC
	User programmable (PC/RS-232) start-up and shut down voltage limits and delays		
Input current	37 Amax (continuous) 75 Amax (5 s)	50 Amax (continuous) 75 Amax (5 s)	37 Amax (continuous) 65 Amax (5 s)
Inrush current	< 30 A	< 30 A	< 30 A
Output voltage	Nominal 230 VAC sine wave, user programmable 200-240V, floating output		115 VAC sine wave, floating, user programmable 85-130V
Output frequency	Nominal 50 Hz, user programmable 40 - 70 Hz, crystal locked		Nominal 60 Hz, programmable 40 - 70 Hz, crystal locked
Nominal output power	1000VA / 600W	1200VA / 800W	600VA / 600W
Output current	Nominal 4.4A Short circuit 13 A max 4 s	Nominal 5.2A Short circuit 13 A max 4 s	Nominal 5.2A Short circuit 13 A max 4 s
Efficiency	85 %	83 %	82 %
Static regulation, 0…100% load	+/-3%	+/-3%	+/-5%
Total harmonic distortion, resistive load	< 2 %	< 2 %	< 3 %
Transient recovery	< 0.3 ms	< 0.3 ms	< 0.3 ms
Crest factor	> 3	> 2.7	> 2.7
Isolation	Input-Chassis 1500 VAC (2000 VCD) Input-Output 3000 VAC (4000 VDC) Output-Chassis 1500 VAC (2000 VDC)		
Overload	200 % (1200 W) / 5 seconds	150 % (1200 W) / 5 seconds	165 % (1000 W) / 5 seconds
	Max time can be limited shorter, 110% /60 s is always available Number of restart attempts and delays are user programmable		
Protection	Output current limiting Overload and short circuit proof Input and output fuses		
STANDARDS			
Safety	EN 60950-1		
EMC	EN 55022A, EN61000-6-3, EN61000-6-2 or EN61000-6-1 (EN61000-4-3 radiated immunity according to EN61000-6-1 other immunity standards EN61000-6-2) , ETS 300 132-2, BTNR 2511		
ALARMS, INDICATIONS AND CONTROLS			
LED-Indications	Input ON Output ON Output loading, 4 level Overload / Fault		
Relay alarms	Module failure and output ON		
Remote monitoring through RS-232 (Remote monitoring software)	Status information: For example input and output voltage, power, temperature, faults etc. Parameter adjustment: For example input voltage limits, output voltage, over load, faults etc.		
MECHANICAL			
Dimensions	See first page		
Connectors in front panel	Input: 50A DC connector, Anderson SB50 6319 or UMA S50 50 A DC Output: Finger protected AC-connector, Wieland ST18/3S2		
Enclosure	Steel casing IP20		
ENVIRONMENTAL			
Operating temperature	0…45°C full power, 45…60°C reduced power		
Cooling	Natural convection	Forced cooling, monitored fans	Natural convection
SYSTEM FEATURES			
See manual			
OPTIONAL MODELS			
Nominal Power	Special versions by request		
Input Voltage	Special versions by request		

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