

ZBF-24V-4A-7Ah

Power supply with battery charger 27.6VDC/4A, space for battery 2 x 12V/7-9Ah



■ Features:

- Universal AC input / Full range
- Include high quality DELTA ELECTRONICS PSU module
- Output protections: Overload / Short circuit / Over voltage / Over temperature
- Battery protections: Battery reverse polarity / Battery cut off
- Case protections: against sabotage
- Battery charging current control
- Cooling by free air convection
- Optical alarm signals AC OK and DC OK

ELECTRICAL SPECIFICATION

MODEL	ZBF-24-4A-7Ah	Rev. R1.0/R1.1
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OUTPUT

Rated DC Voltage – line mode	27.6VDC
Rated DC Voltage – battery mode	21 ÷ 27.6V
Rated current for load	3.5A
Current range for load	0 ÷ 3.5A
Rated power for load	96.6W
Rated power for charging	11.3W
Total rated power	107.9W
Voltage tolerance [3]	± 5%
Ripple & Noise (max.) [2]	150mV _{p-p}

BATTERY

Space for battery	24V / 7.2 ÷ 9Ah VRLA AGM – two battery 12V connected by series	
Rated voltage	24V	
Charging parameters	Current (max.)	Voltage
	0.41A	27.6V

INPUT

Voltage range	90-132VAC, 180-264VAC (Selectable by Switch in PSU module)
Frequency range	47 ÷ 63Hz
Efficiency (typ.)	86%
AC current (typ.)	2.0A/ 115VAC, 1.2A/ 230VAC
Inrush current (typ.)	36A / 230VAC

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OUTPUT PROTECTIONS	Line mode	Battery mode
Short circuit	Type: FS1 fuse blow on BUF module, recovers after fuse replacement	
Overload	Range: 110-150% total rated power	Range: above 110% total rated power
	Type: hiccup mode of power supply module and FS1 fuse blow on BUF module, recovers after fuse replacement and removal of fault condition	Type: FS1 fuse blow on BUF module, recovers after fuse replacement and removal of fault condition
Over voltage	Range: 105-150% rated DC voltage Type: hiccup mode of power supply module, auto-recovery	No protection
Over temperature	Range: <70°C Surrounding Air Temperature and 100% load Type: shut down of PSU module, recovers after removal of fault condition	No protection

BATTERY PROTECTIONS

Short circuit	Type: FS1 (F5A) fuse blow on BUF module, recovers after fuse replacement
Battery reverse (polarity)	Type: one time, non auto-recovery
Battery cut-off	Range: 21V \pm 1VDC, relay cut off

WORKING ENVIRONMENT

Working temperature	-10°C \div +45°C
Working humidity	20 \div 85% non-condensing
Storage temperature and humidity	-20°C \div +60°C, 10 \div 95% non-condensing

SAFETY and EMC REGULATIONS

Safety standards	Compliance to EN60950-1
Withstand voltage	I-P/O-P: 3kVAC; I-P/GND: 1.5kVAC; O-P/GND: 0.5kVAC
EMC emission	Compliance to EN 55032
EMC immunity	Compliance to EN61000-4-2, -3, -4, -5, -6, -8, -11

OTHERS

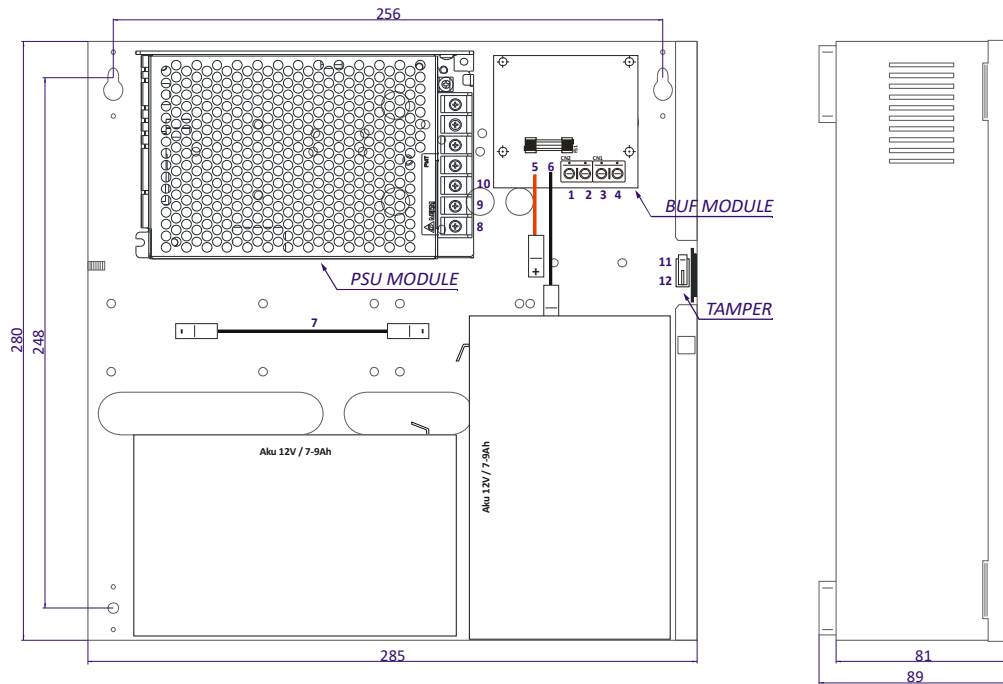
Dimensions Internal/External	285*280*80mm (W x H x D); 289*285*89mm (W x H x D)
Weight net/gross	2.1kg / 2.3kg

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MECHANICAL SPECIFICATION



PSU module – input			TAMPER – protection against sabotage		
Pin No.	Assignment	Description	Pin No.	Assignment	Description
8	AC/L	Line AC	11	NO	Normally open contact
9	AC/N	Neutral AC	12	COM	Common contact
10	GND	Ground			

BUF module – battery and output		
1,3	V _{OUT+}	Positive DC
2,4	V _{OUT-}	Negative DC
5	BAT+ (red) female connector 6.4x0.8	Positive battery 24V
6	BAT- (black) female connector 6.4x0.8	Negative battery 24V
7	BAT (black) female connector 6.4x0.8	Wire to connect two batteries in series

LED AC OK (yellow)	LED DC OK (green)	Description	Check
		Normal work – AC mode	
		Battery mode work, AC power failure	Possibility of AC fuse damage
		Both AC and DC power failure	Possibility of AC fuse damage an battery fuse damage.
- light off	- light on		