



TECHNICAL SPECIFICATIONS FOR DC POWER SUPPLY
(BATTERY CHARGER 110VDC, 120A, TYPE TACH3-110/120)

Item	Description	Unit	Technical Particulars
1	Manufacturer		Tavaan Azmayan Co.
2	Applicable standards		IEC
3	Manufacturer's Ref. No.		TACH3 -110/120
4	Type of rectifier		Thyristor controlled
5	Input AC supply		
	- Voltage	Vac	400/230, $\pm 10\%$
	- No.of phases	No.	3
	- Frequency	Hz	50, $\pm 2\%$
6	Rated output voltage	Vdc	110
7	Rated output current	Adc	120
8	Incoming feeder protection (MMS)	Adc	40A (25-40)
9	Outgoing feeder (load & battery) prot. MCCB)	Adc	100
10	Output current limiting (adjustable)		1.1 In
11	Float charge voltage (*)		
	- Battery	Vdc	121
	- Load	Vdc	112 -114
12	Range of float charge voltage adjustment (*)	Vdc	110 -125
13	Boost (Equalize) charge voltage (*)		
	- Battery	Vdc	128
	- Load	Vdc	112 -115
14	Range of boost charge voltage adjustment (*)	Vdc	125 -140
15	Manual charge voltage (*)	Vdc	148
16	Range of manual charge voltage adjustment (*)	Vdc	130 - 150
17	Range of manual charge current adjustment	%In	10 - 70
18	Means of adjusting output		Potentiometer
19	Means of adjusting load voltage at float & boost mode of operation		Dropper Diodes
20	Recharge time (adjustable)	Hrs	10
21	Output voltage regulation from no-load to full load	%	± 0.5
22	Maximum voltage ripple (rms)	%	1
23	Input AC power consumption	KVA	21



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24	Input AC power factor (Full Load)		> 0.8
25	Efficiency (Full Load)	%	> 85
26	Charging modes:		
	Float		Yes
	Boost		Yes
	Manual		Yes
27	Adjustable timer for boost (Equalize) charge		Yes
28	Protection		
	- AC power supply failure (AC Under /Over voltage , phase sequence , phase disconnection protection)		Yes
	- DC output High/Low voltage		Yes
	- Battery reverse connection (HRC fuse & reverse diode)		Yes
	- DC output short circuit protection (HRC fuse)		Yes
	- DC current over load protection (current limit)		Yes
	- Input breaker (MMS)		Yes
	- Earth fault (Pos. / Neg.)		Yes
29	Metering Instruments		
	- Input AC voltmeter, CL.1.5	Vac	0 - 500
	- Output DC voltmeter, CL.1.5	Vdc	0 - 150
	- Output DC ammeter, CL.1.5, (load)	Adc	0 - 100
	- Output DC ammeter, CL.1.5, (battery)	Adc	100 - 0 - 100
30	Indicators		
	- Input AC supply (R, S, T)	220Vac	Red, Yellow, Blue
	- Charger power on	LED	Green
	- Float charging	LED	Green
	- Boost charging	LED	Yellow
	- Manual charging	LED	Red
	- Current limit	LED	Yellow
	- AC power failure	LED	Red
	- Negative earth fault	LED	Red
	- Positive earth fault	LED	Red
	- DC output Low voltage	LED	Red
	- DC output High voltage	LED	Red
	- Charger Fail	LED	Red
	- Battery reverse connection	LED	Red
	- Battery discharge	LED	Red
	- Over temperature	LED	Red



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Item	Description	Unit	Technical Particulars
31	Audible alarm		Yes
32	Alarm Contacts : - Charger fail - DC under / over voltage - Earth Fault		Free Contact Free Contact Free Contact
33	Enclosure construction		Steel Sheet 2 mm, Thickness
34	Class (indoor/outdoor)		Indoor
35	Ingress protection		IP42
36	Type of cooling		Natural air +Auto fan
37	Cable entry		bottom of cubicle
38	Access to inside panel		front & rear doors
39	Type panel		Free stand
40	Connection blocks (terminal size)	mm ²	2.5 -70
41	Panel dimensions (HxWxD), approx	mm	2100x800x800
42	Total weight, approx	Kg	510
43	Color of panel (inside & outside)		Ral 7035

(*) Note : The Float, Boost & Initial charging voltages are considered for lead acid stationary batteries according to technical specifications. Other values can be adjusted as required.

Factory adjustment :	Float :	2.20 V/Cell
	Boost (Equalize):	2.33 V/Cell
	Manual (Initial):	2.70 V/Cell