
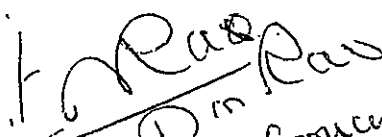


**GUARANTEED TECHNICAL PARTICULARS  
FOR BATTERY CHARGING EQUIPMENT**

S.NO.	Description	220V/80AH
1.	Type of Rectifier	SCR Type 3Phase Full wave Half Controlled Bridge
2.	No. of Units	01 Set comprising of Float Charger, Boost Charger, DCDB all in one Cabinet
3.	Manufacturer's type designation	SWATHI Make
4.	A.C. Supply a. Voltage (Volts) b. Current (Amps) c. No. of Phases d. Frequency, Cycles/Sec. e. Power factor	415V with +10%, -15% variation 14 Amps. 3 Phase 50 Hz., +/- 5% 0.8 lag
5.	Percentage taps provided on transformer	Not Applicable
6.	Rated D.C. Output for a. Boost Charger (KW) b. Float Charger (KW)	3.99 KW 1.96 KW
7.	Rated D.C. Output Voltage for a. Boost Charger (Volts) b. Float Charger (Volts)	266V 245V
8.	Rated D.C. Output current for a. Boost Charger (Amps) b. Float Charger (Amps)	15 Amps, 16 Amps 08 Amps
	Rate of D.C. Voltage control for a. Boost Charger (Volts) b. Float Charger (Volts)	231V to 248V in Step-I 248V to 266V in Step-II <del>248V</del> 231 to 245V in Single Step
10.	D.C. Output voltage regulation from no load to full load Volts	+ / - 1% of the Set DC Voltage
11.	Maximum ripple content %	2%

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 Swathi Electronics & Automation


	Maximum permissible temperature rise over an Ambient temperature of 50 Deg. C	45 Deg. C ✓												
13	Overall efficiency	Not less than 75 %												
14.	Unit dimensions: Width x Height x Depth mm	1000 X <sup>1500</sup> 1600 X 800 MM												
15	Unit Shipping weight Kgs.	350 Kgs. (appx.)												
16.	Load limiting feature	<p>Load limiting feature incorporated</p> <p>Characteristic Data:</p> <table border="1"> <thead> <tr> <th>LOAD</th> <th>SET VOLTAGE</th> </tr> </thead> <tbody> <tr> <td>100% -----</td> <td>245V</td> </tr> <tr> <td>103% -----</td> <td>244V</td> </tr> <tr> <td>105% -----</td> <td>242V</td> </tr> <tr> <td>109% -----</td> <td>237V</td> </tr> <tr> <td>112% -----</td> <td>230V</td> </tr> </tbody> </table>	LOAD	SET VOLTAGE	100% -----	245V	103% -----	244V	105% -----	242V	109% -----	237V	112% -----	230V
LOAD	SET VOLTAGE													
100% -----	245V													
103% -----	244V													
105% -----	242V													
109% -----	237V													
112% -----	230V													
17	Recommended settings for thermostat a. Operation temperature Deg. C  b. Reset temperature Deg. C	Not Applicable  40 Deg C ✓												
18	List of major accessories provided	Panel Key and Instruction Manual												
19.	D.C. DISTRIBUTION Protection & Control:	<p>a. 2 Pole MCB for DC Input Supply</p> <p>b. 10A 2Pole Rotary Switches for Load Feeders 18 Nos. ✓</p> <p>c. 20 A 2 Pole Rotary Switches for Load Feeders 6 Nos.</p> <p>d. 3 Pole MCCB at 84<sup>th</sup> Cell Tapping along with Blocking Diode and Contactor</p> <p>e. Battery Earth Leakage</p> <p>f. Battery Low Tripping</p> <p>g. Backup HRC Fuses</p>												

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*[Signature]*  
 21/10/2011  
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 APTRANSCO/VIDYUTH SOUDHA/HYD.


*[Signature]*  
 S. Ravi  
 S. Ravi  
 S. Ravi  
 S. Ravi

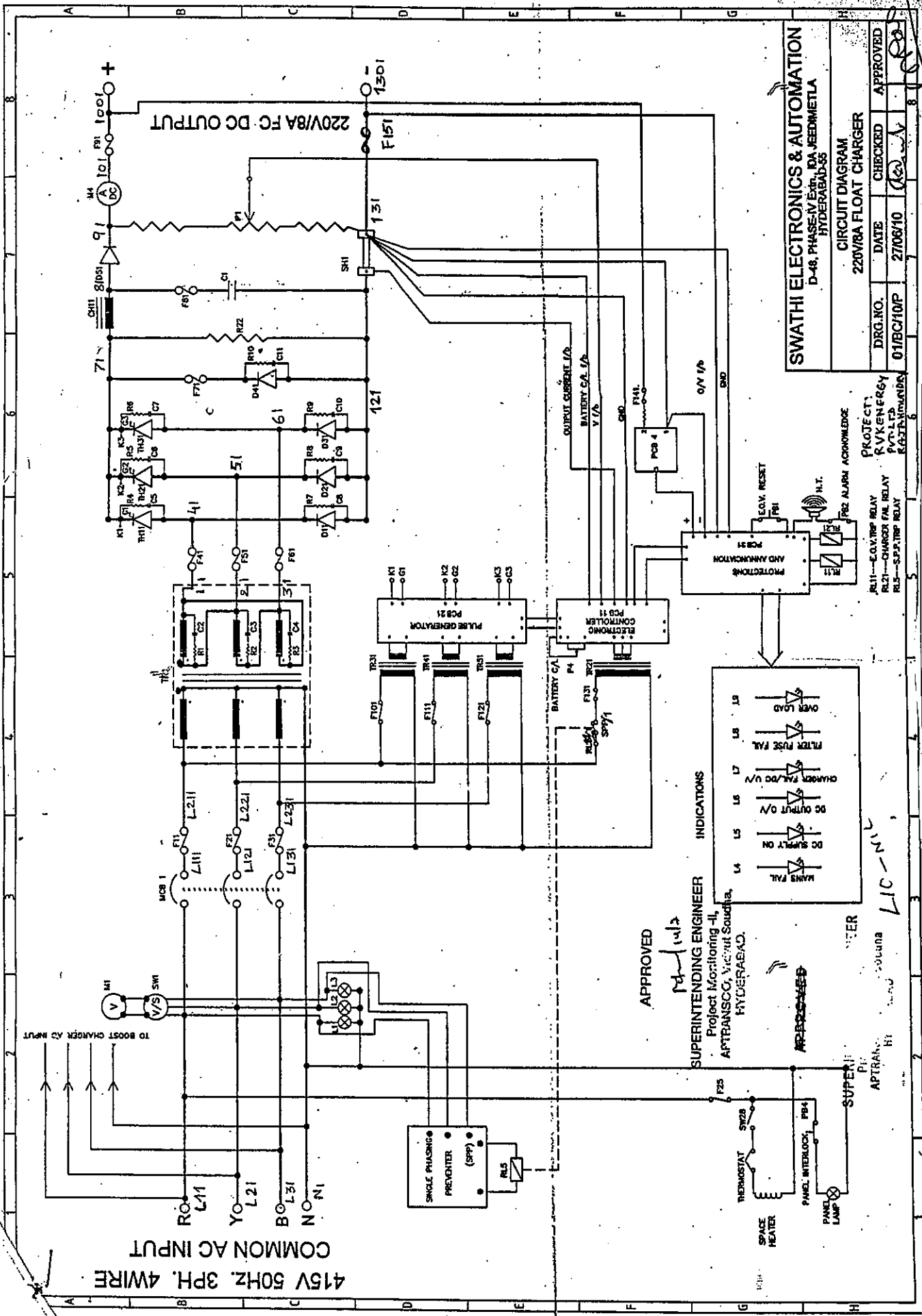
Recommended Spares	<ul style="list-style-type: none"> <li>a. Electronic Controller PCB <ul style="list-style-type: none"> <li>i. Amplifier PCB</li> <li>ii. Pulse Generator PCB</li> <li>iii. Protections and Annunciation PCB</li> <li>iv. DC/DC Converter PCB for Annunciation</li> </ul> </li> <li>b. Converter Diodes - 2 Nos.</li> <li>c. Converter SCRs - 2 Nos.</li> <li>d. Control Transformers - 2Nos.</li> <li>e. Control Relays <ul style="list-style-type: none"> <li>12V DC 2 c/o 6A - 2Nos.</li> <li>240V AC 2 c/o 6A - 2 Nos.</li> </ul> </li> <li>f. HRC Fuse links - 10 Nos.</li> </ul>
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	<p>Standardised Guaranteed Technical Particulars for Battery Charging Equipment (Swathi make)</p> <p>STD/GTP-DWG/Approval No. <u>211-1</u> Revision No. <u>0</u></p> <p>Prepared &amp; Approved during <b>October - 2011</b></p>
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- 20) The type tests should have been conducted not earlier than 5 years in the standard third party laboratory. The manufacturer shall produce the type tests at the time of acceptance tests.
- 21) Quality of material he shall apply the standard B.B.S. The manufacturer shall produce the valid BBS Certification at the time of acceptance tests.

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**SWATHI ELECTRONICS & AUTOMATION**  
D-48, PHASE-IV EXT., DA VEEDINIETTA  
HYDERABAD-56

DRG. NO.	DATE	CHECKED	APPROVED
01/BC/10/P	27/06/10	(Signature)	(Signature)

CIRCUIT DIAGRAM  
220V/8A FLOAT CHARGER

- INDICATIONS
- L4 - MAINS FAIL
  - L5 - DC BATTERY ON
  - L6 - DC OUTPUT O/V
  - L7 - CHARGER FAULT/DC O/V
  - L8 - FILTER FUSE FAIL
  - L9 - OVER LOAD

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SUPERINTENDING ENGINEER  
Project Monitoring-II,  
APTRANSCO, Vidyuth Soudha,  
HYDERABAD.

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CHIEF ENGINEER / CONSTRUCTION-1  
APTRANSCO/VIDYUTH SOUDHA/HYD

Standardised Drawing for Battery Charging Equipment (Swathi make).

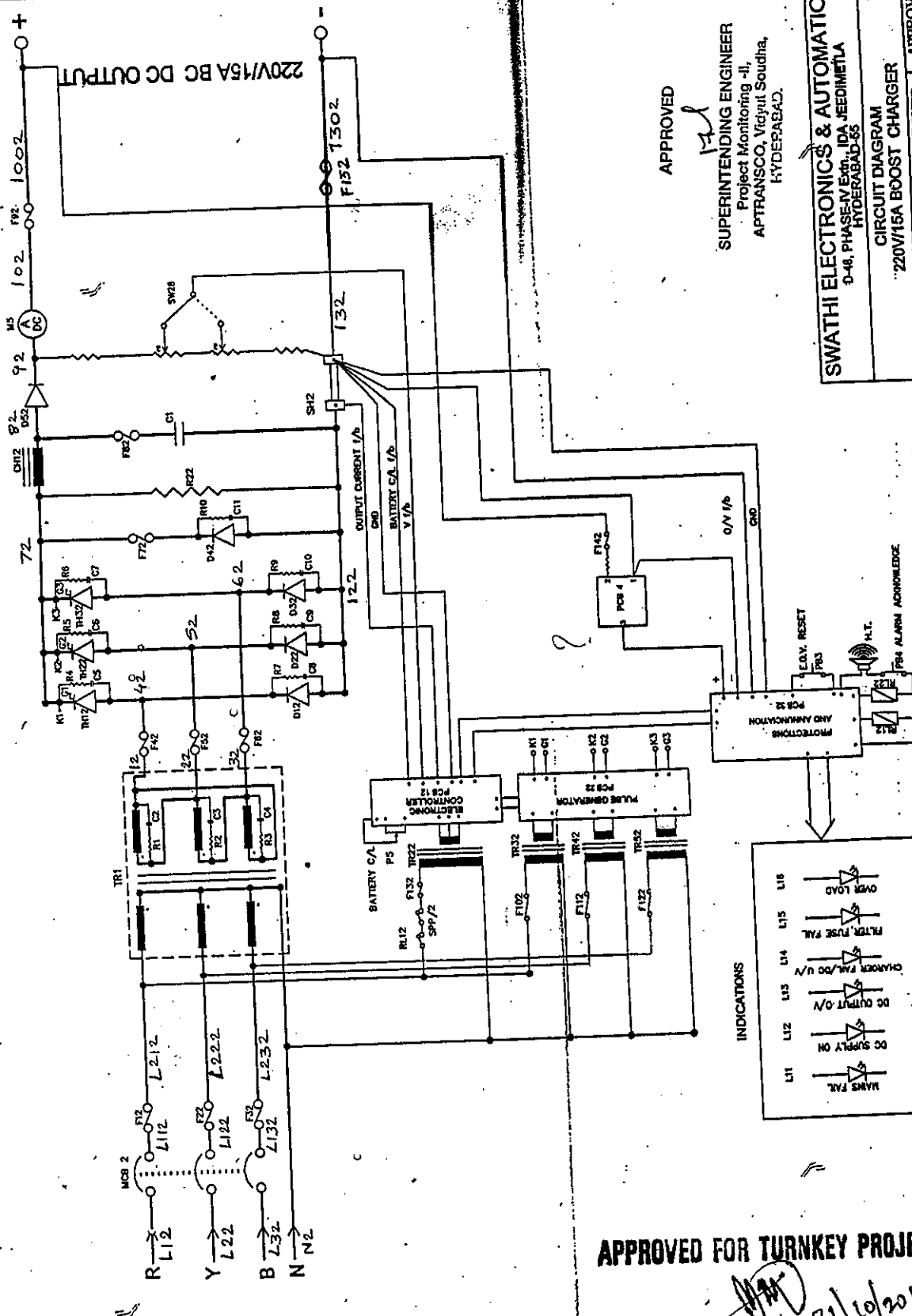
STD/GTP-DWG/Approval No. 211-2-sheet1 Revision No. 0

Prepared & Approved during October - 2011



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415V. 50HZ. 3PH. 4WIRE  
AC INPUT FROM COMMON INPUT

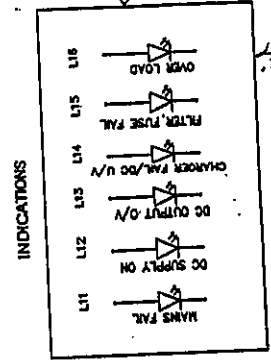


APPROVED  
SUPERINTENDING ENGINEER  
Project Monitoring -II,  
APTRANSCO, Veerajit Soudha,  
HYDERABAD.

SWATHI ELECTRONICS & AUTOMATION  
D-48, PHASE-V EXT., IDA JEEDEEMETA  
HYDERABAD-55

DRG. NO.	DATE	CHECKED	APPROVED
02BC/10R	27/08/10	(Signature)	(Signature)

CIRCUIT DIAGRAM  
220V/15A BOOST CHARGER  
PROJECT: RYKENERGY  
Pvt. Ltd.  
RATAHMUNDRY

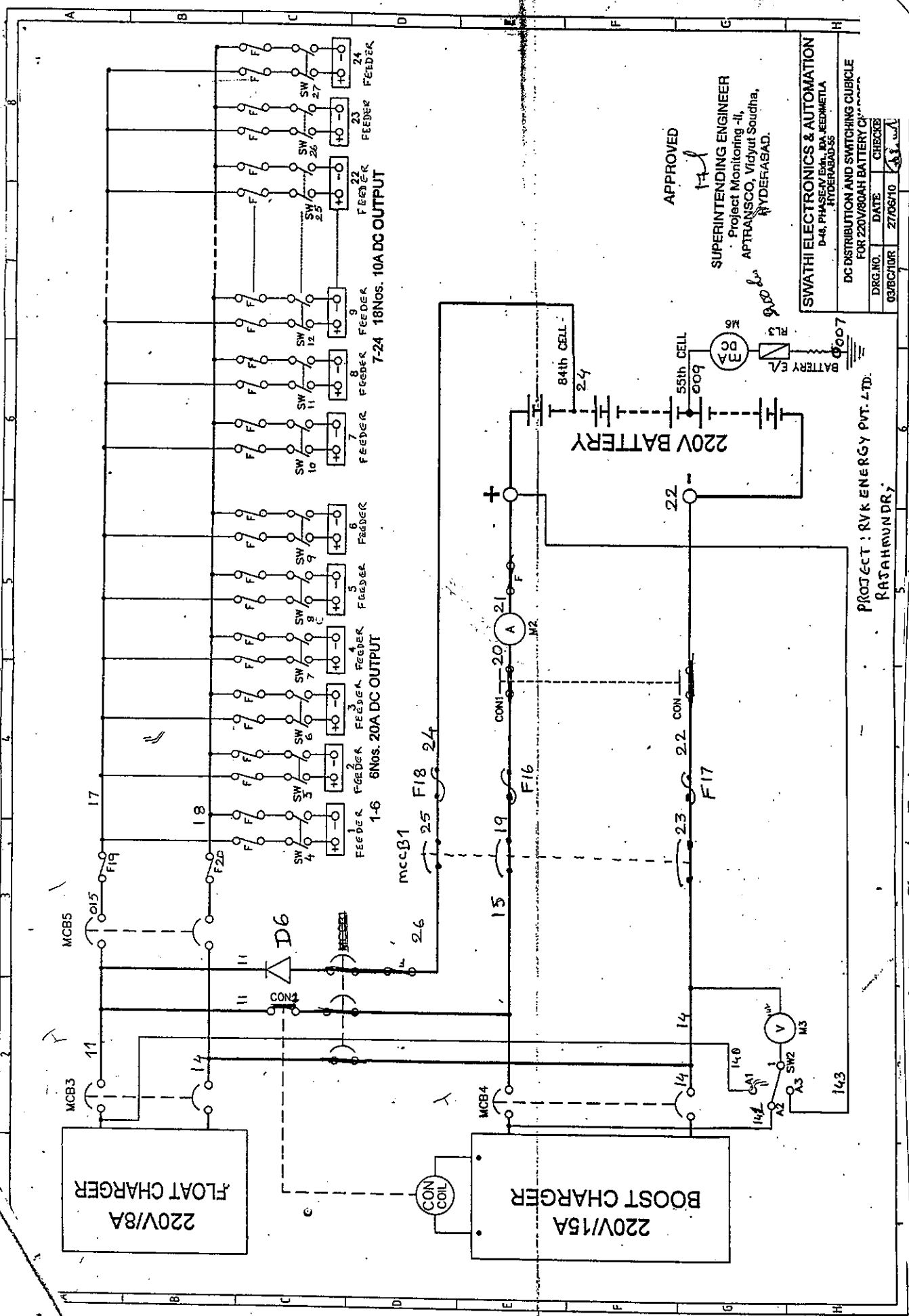


APPROVED FOR TURNKEY PROJECTS

CHIEF ENGINEER / CONSTRUCTION -1  
APTRANSCO/HYD/IDA/SOUDHA

Standardised Drawing for Battery Charging Equipment (Swathi make).

STD/GTP-DWG/Approval No. 211-2-sheet2 Revision No. 0



APPROVED

SUPERINTENDING ENGINEER  
Project Monitoring -II,  
APTRANSCO, Vidyut Soudha,  
HYDERABAD.

SWATHI ELECTRONICS & AUTOMATION  
D-48, PHASE-V, ESH, RAJAHMUNDRY,  
HYDERABAD-55

DC DISTRIBUTION AND SWITCHING CUBICLE  
FOR 220V/80AH BATTERY CHARGER

DRG. NO.	DATE	CHECKED
03/BC/10R	27/08/10	[Signature]

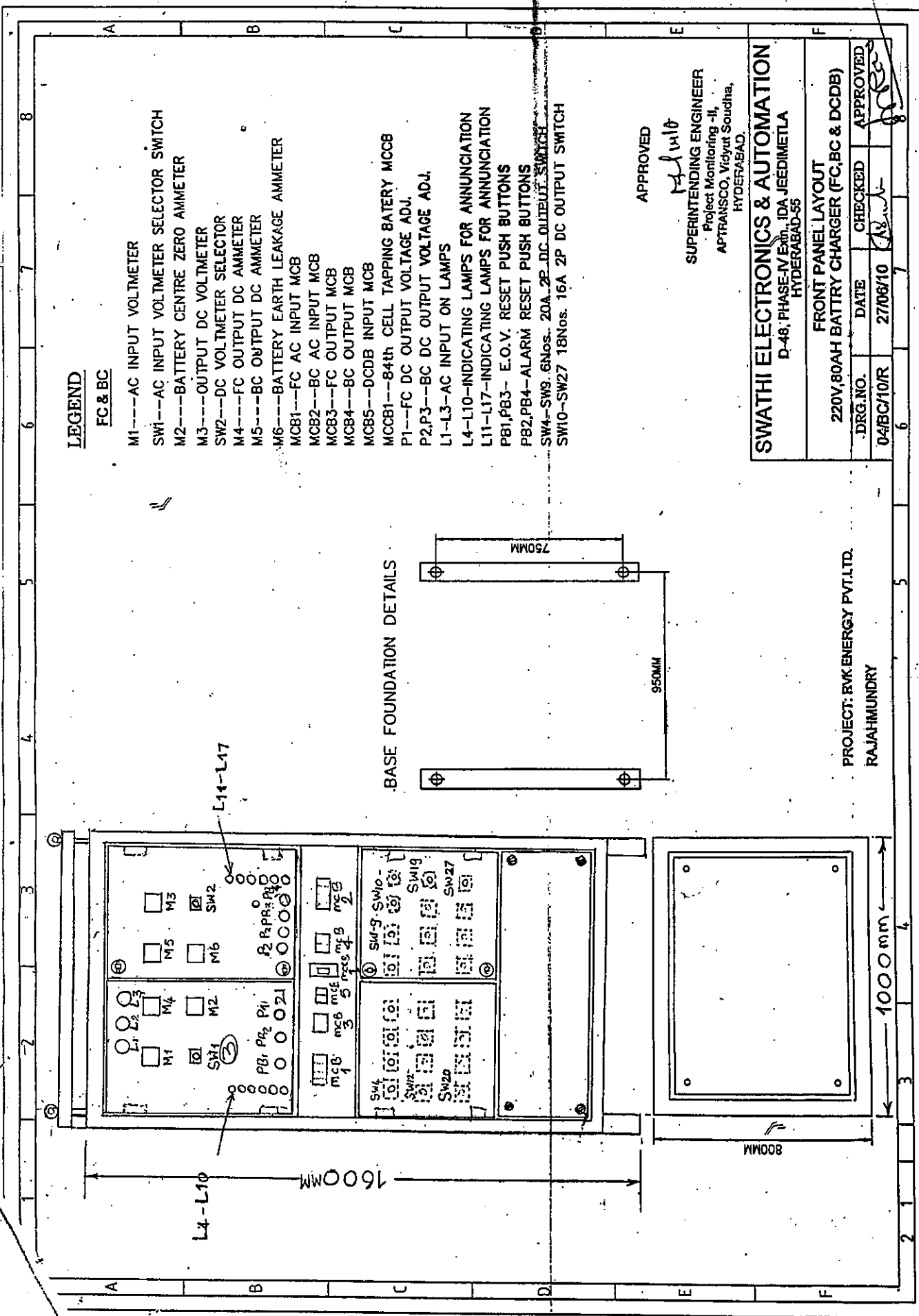
PROJECT : RVK ENERGY PVT. LTD.  
RAJAHMUNDRY

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31/10/2011  
CHIEF ENGINEER / CONSTRUCTION-1  
APTRANSCO/VIDYUTH SOUDHA/HYO.

Standardised Drawing for Battery Charging Equipment (Swathi make).

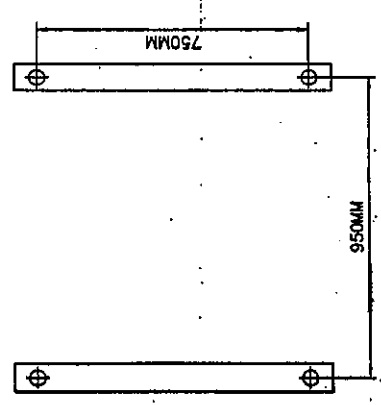
STD/GTP-DWG/Approval No. 211-2-sheet3 Revision No. 0



**LEGEND**  
FC & BC

- M1---AC INPUT VOLTMETER
- SW1---AC INPUT VOLTMETER SELECTOR SWITCH
- M2---BATTERY CENTRE ZERO AMMETER
- M3---OUTPUT DC VOLTMETER
- SW2---DC VOLTMETER SELECTOR
- M4---FC OUTPUT DC AMMETER
- M5---BC OUTPUT DC AMMETER
- M6---BATTERY EARTH LEAKAGE AMMETER
- MCB1---FC AC INPUT MCB
- MCB2---BC AC INPUT MCB
- MCB3---FC OUTPUT MCB
- MCB4---BC OUTPUT MCB
- MCB5---DCDB INPUT MCB
- MCCB1---84th CELL TAPPING BATTERY MCCB
- P1---FC DC OUTPUT VOLTAGE ADJ.
- P2,P3---BC DC OUTPUT VOLTAGE ADJ.
- L1-L3-AC INPUT ON LAMPS
- L4-L10-INDICATING LAMPS FOR ANNUNCIATION
- L11-L17-INDICATING LAMPS FOR ANNUNCIATION
- PB1,PB3- E.O.V. RESET PUSH BUTTONS
- PB2,PB4-ALARM RESET PUSH BUTTONS
- SW4-SW9. 6Nos. 20A 2P DC OUTPUT SWITCH
- SW10-SW27 18Nos. 16A 2P DC OUTPUT SWITCH

**BASE FOUNDATION DETAILS**



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SUPERINTENDING ENGINEER  
Project Monitoring -II,  
APTRANSCO, Vidyut Soudha,  
HYDERABAD.

**SWATHI ELECTRONICS & AUTOMATION**  
D-48, PHASE-V<sup>Extn</sup>, IDA JEEDIMETLA  
HYDERABAD-55

FRONT PANEL LAYOUT	
220V, 80AH BATTERY CHARGER (FC, BC & DCDB)	
DRG. NO.	DATE
04/BC/10/R	27/06/10
CHECKED	APPROVED
<i>[Signature]</i>	<i>[Signature]</i>

PROJECT: EVK ENERGY PVT.LTD.  
RAJAHMUNDRY

**APPROVED FOR TURNKEY PROJECTS**

*[Signature]* 31/10/2011

CHIEF ENGINEER / CONSTRUCTION-I  
APTRANSCO/VIDYUTH SOUDHA/HYD.

Standardised Drawing for Battery Charging Equipment (Swathi make).

STD/GTP-DWG/Approval No. 211-2-sheet4 Revision No. 0

