



Tele*tubular*

Tubular Batteries for Arduous Applications



The ultimate power
for Telecom Towers

INDUSTRIAL

INTRODUCTION

In India, power outages in urban & semi-urban areas are frequent and for long durations. This, along with the high temperatures prevalent in India, poses a major threat to the life of storage batteries in rural and outdoor applications. Telecom battery usage is mostly cyclic in nature and, coupled with abusive environmental conditions, this demands customized technologies and creative business models. Exide, being a quality leader in power storage solutions, has widened its horizon by developing Teletubular Batteries featuring the latest Tubular Technology.

The Exide Teletubular range of products portrays the combination of all the best possible technological solutions for the intended application. Selection of the right alloy and modern production machinery ensures a very long service life both in stand by float mode of operation and in regular deep cycling operations typical in case of rural India. The tubular technology helps the product to perform without hassles in extreme climatic conditions, both high and low temperatures. Thus the product becomes the most relevant technology for India, which essentially has a tropical climate. The combination of low antimony alloy in the positive spine and ceramic vent plugs keeps the water topping up requirement very low. In certain storage power applications where more sophisticated lead acid batteries meet premature failure due to abusive environmental conditions, the Teletubular range shall operate without substantial threat on product life and performance. The Teletubular range is a matured product and is designed to serve its customers with guaranteed performance and long life.

UNIQUE FEATURES & BENEFITS OF EXIDE TELETUBULAR RANGE

- ❑ Tropicalised for deep cyclic applications as prevalent in Indian Summer
- ❑ Protected against "Partial-State-Of-Charge deterioration"
- ❑ No separate air-conditioned room required
- ❑ Operates with existing SMPS chargers specifications
- ❑ Supplied in factory filled and charged condition
- ❑ Ultra Low Maintenance - Topping up once in 2 years
- ❑ Easy to monitor state of charge / health
- ❑ Batteries supplied with a MS CABINET, ensuring security in outdoor application
- ❑ Cabinets fitted with exhaust system

Guaranteed for 5 years of trouble-free service

CELL SPECIFICATIONS

Container & Cover	– Polypropylene
Separators	– Microporous Polyethylene
Terminals	– Lug type bolted terminal
Positive Plate	– Rugged Tubular
Negative Plate	– Flat pasted

LIFE

- ❑ Estimated Service life of 8 - 10 years in actual field condition
- ❑ Designed life is 20 years at 27°C
- ❑ 6000 cycles at 20% DOD (Depth of Discharge)
- ❑ 4000 cycles at 50% DOD
- ❑ 3000 cycles at 80% DOD

BATTERY HOUSING

The Teletubular batteries are housed in a MS cabinet supplied along with the battery set. The cabinet meets the IP55 protection norms and thus would protect against ingress of dust, rainwater and other foreign particles. The cabinets have a built-in exhaust system.

CONNECTING CABLES

The battery system and the operating equipment are connected through cables of optimal size to minimize voltage drop. The Teletubular battery bank is connected to the charger system by a 70 sq. mm insulated copper stranded cable of not more than 10 meters length.

TELETUBULAR MONOBLOCK DETAILS

Model	Nominal Voltage (Volts)	Capacity (Ah upto 10.5 volts, 10 Hrs rate at 27°C)	Electrolyte Operating Sp. Gravity at 27°C (± 0.005)	Dimension (±5 mm)			Weight (± 3%)	
				Length (mm)	Width (mm)	Height (mm)	Dry (kg)	Filled (kg)
6TT 100	12 V	100	1.245	500	187	418	30.0	57.0
3TT 200	6 V	200	1.200	500	187	450	44.7	69.0
3TT 300	6V	300	1.200	500	187	450	54.0	72.0

48V BATTERY DETAILS WITH MS CABINET

Model	Dimension (± 5mm)			Weight (±5%) kg
	Length	Width	Height	
Cabinet for 48V 100 Ah	850	530	800	350
Cabinet for 48V 200 AH	1170	610	1470	720
Cabinet for 48V 300 AH	1170	610	1470	750

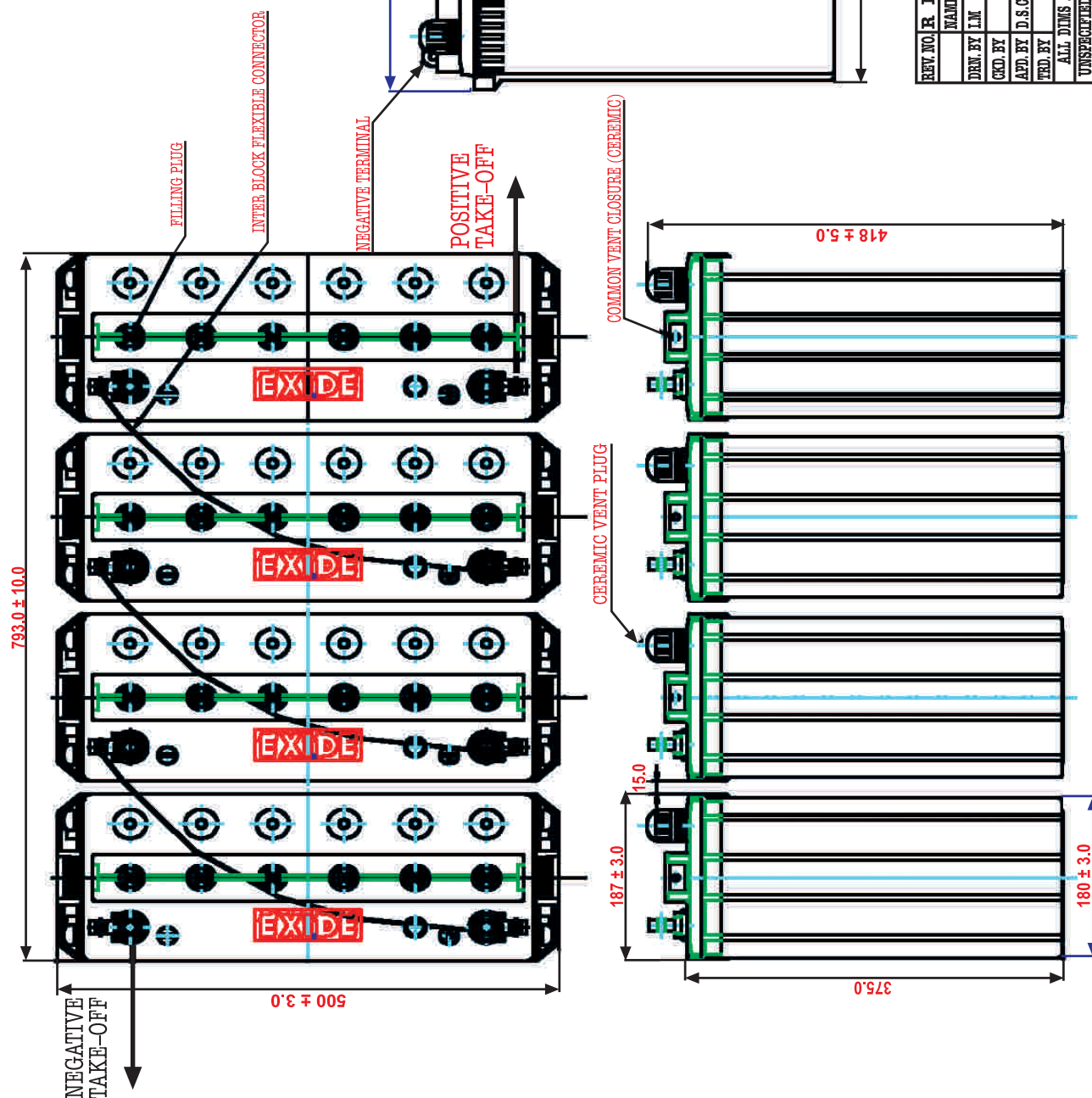
RECOMMENDED CHARGING VOLTAGE

Ambient Temperature (°C)	Recommended Float Charging Voltage per cell (V)	Maximum Charging current (A)
- 5 to 14	2.27 ± 0.01	0.15 C
15 to 40	2.25 ± 0.01	0.15 C

SYSTEM & CONNECTION LAYOUT DRAWING OF 48V 100 AH

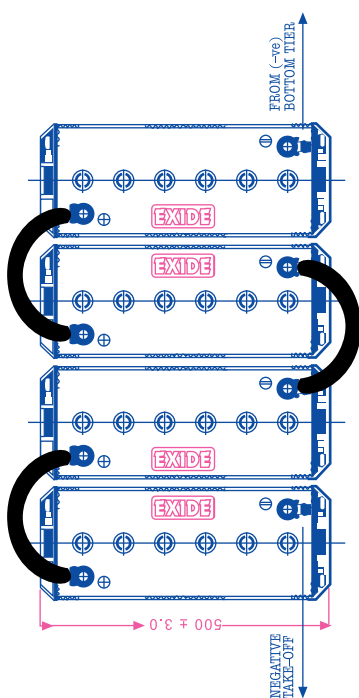
BILL OF MATERIAL

SL NO.	ITEM	QTY
1	6TT 100 (6TCMT 100)	4
2	FLEXIBLE CONNECTORS 35MM Sq mm length = 700 mm EACH CONNECTOR WITH TWO CABLE ENDS SBL 535	3
3	MS BATTERY CABINET AS PER IP 55 FITTED WITH POS & NEG TAKE-OFF CABLES	1

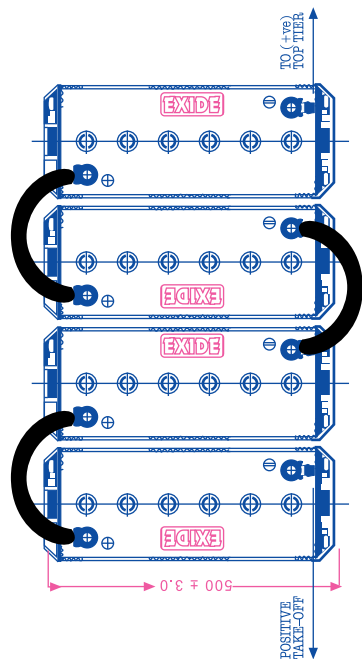


REV. NO.	R	E	V	I	S	I	O	N	S	DATE	REV. BY	CKD. BY	APP. BY
	NAME	SIGN	DATE	EXIDE INDUSTRIES LIMITED									
	BORN BY	LM	07/03/06	R & D CENTRE, CAL. 700 059									
	CKD. BY		07/03/06	TITLE :									
	APP. BY	D.S.G.	07/03/06	SYSTEM LAYOUT									
	TRD. BY			FOR									
	ALL DIMS ARE IN MM										48 VOLTS 100 AH		
	UNSPECIFIED TOLERANCES										SCALE : N.T.S.		
	FOR	>	1.0	5.0	TUBULAR BATTERIES								
	DIMS.	≤	1.0	5.0	DRG. NO.: BB 10114A								
	TOT.	+0.08	+0.01	+0.2	DATE OF ISSUE								

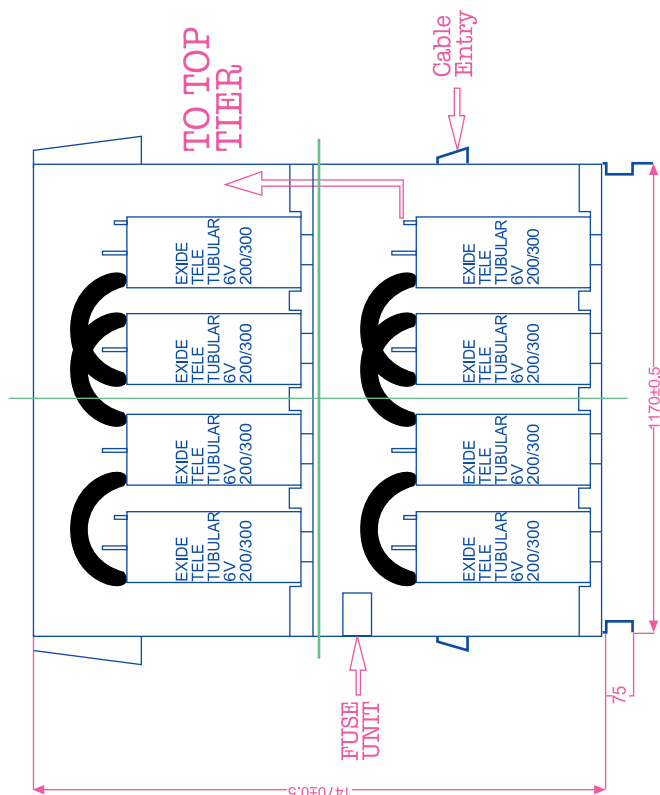
SYSTEM & CONNECTION LAYOUT DRAWING OF 48V 200 & 300 AH



TOP TIER PLAN (CONNECTION LAYOUT ONLY)



BOTTOM TIER PLAN (CONNECTION LAYOUT ONLY)

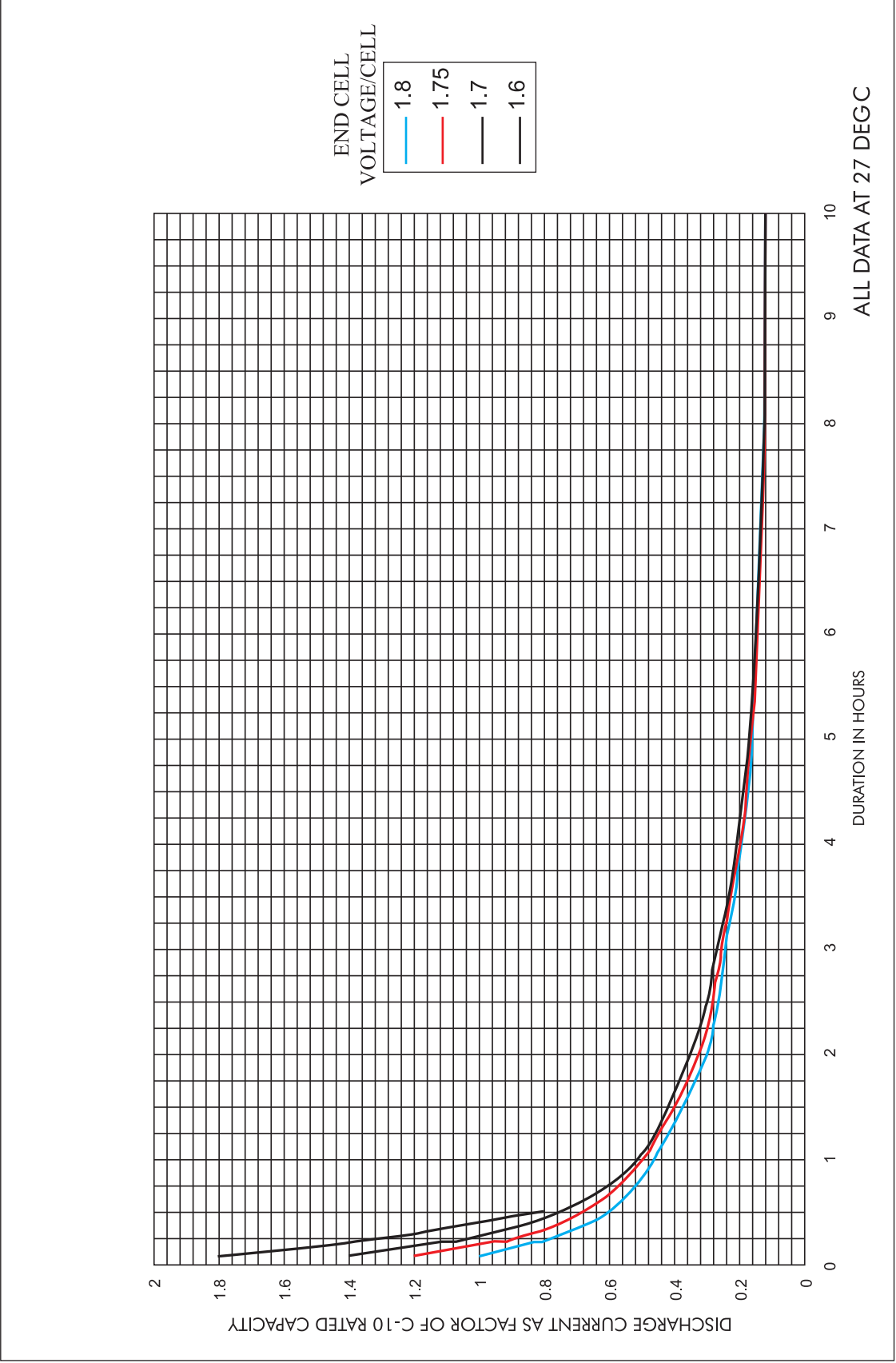


BILL OF MATERIAL

SL. NO.	ITEM	QTY
1.	TT 200 /300	8
2	FLEXIBLE CONNECTORS 35 sq. mm LENGTH = 320 mm (Cat. no CGL1421) EACH CONNECTOR WITH TWO CABLE ENDS (Cat. no.SLE335)	6
3	FLEXIBLE CONNECTORS 35 sq. mm LENGTH = 100 mm (Cat. no. CGL1422) EACH CONNECTOR WITH TWO CABLE ENDS (CAT. NO SLE335)	1
4	MS BATTERY CABINET FITTED WITH 2 Nos. EXHAUST FAN & A FUSE UNIT.	1

REV. NO.	R E V I S I O N S				DATE	REV. BY	CHK. BY	APD. BY
A	CABINET WITH OUT TOP EXHAUST FAN				18/08/07	I.M.	S.C.	S.C.
	NAME	SIGN	EXIDE INDUSTRIES LIMITED					
	DRN. BY	I.M.	16/07/07	R & D CENTRE, CAL. 700 059				
APD. BY	S.C.	16/07/07	TITLE :					
CHK. BY	S.C.	16/07/07	LAYOUT					
DRD. BY			DRAWING OF					
ALL DIMS ARE IN mm								
UNEXPECTED TOLERANCES								
FOR	>	1.0	5.0					
DIMS.	≤	1.0	5.0					
TOL.		+0.05	+0.1	+0.2				
BATTERIES								
DATE OF ISSUE								
DRG. NO.: BC 1130A								
SCALE : N.T.S.								

DISCHARGE CHARACTERISTICS OF TELETUBULAR BATTERIES AT VARIOUS RATES AND VARIOUS END CELL VOLTAGES





FROST & SULLIVAN

2010 BEST PRACTICES AWARD

Market Leadership - Industrial Batteries
India Back-up Power Industry
Excellence Awards

Bolti On

50% Lower Operating Cost

Get value for money in rural telephony!

Teletubular – Another success story of Exide Industries, a popular choice of a couple of Service Providers and Infrastructure companies due to reliable back-up power, enforced with superior design, manufacturing methodologies and special input material, ultimately contributing world class performance in power crunched rural sectors with problems of large gap between demand and generation, inadequate transmission capacity, non uniform locations of the load centers and generation stations. What's more it comes with a five-year warranty and yes, it requires a little maintenance – once in five years – and Exide takes care of any interim servicing needs.

Teletubular



Twice the talk at half the cost!

PARAMETER	Teletubular	VRLA
Warranty	5 years	18 months
Expected Life	8-10 years	3-4 years
Regular Depth Of Discharge Feasible	80-100%	30-40%
Temperature Tolerance	40-50°C	25-35°C

Ultimate power for telecom towers

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