



For Telecom Applications

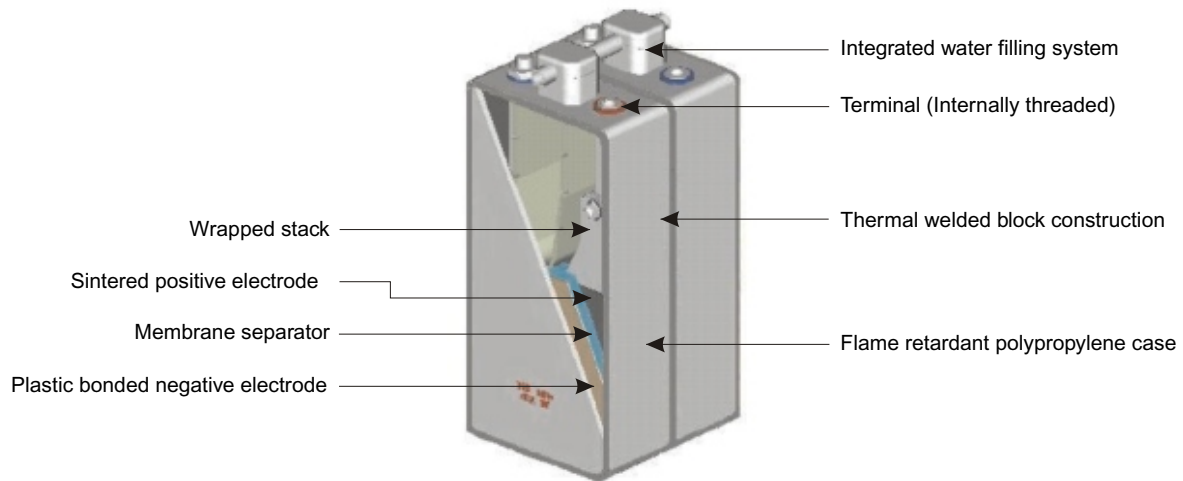


Dimensional and Electrical Data

HBL Nickel cadmium batteries for telecom applications are specially designed using sintered positive plates and plastic bonded negative plates.

The sintered positive plates are manufactured using a high-temperature sintering process to form plates which can survive temperature extremes typical of outdoor installations. The plastic bonded negative plates are specially designed with high power density and have reduced water consumption. Membrane separators provide insulation between the plates and permit free flow of electrolyte.

Construction



KSL Bloc Construction

These batteries use flame retardant polypropylene cell containers in bloc construction. The blocs are thermally welded for high impact resistance. All-steel terminals and fasteners give these batteries the ruggedness required to meet the demanding application needs. The battery is provided with a reliable single point watering system which also incorporates a flame arresting device.

The blocs are dimensioned to fit in the space designed for valve regulated lead acid batteries and are also compatible with the existing charging equipment. The blocs are designed to easily connect together as a 24V/48V system.

Benefits

- ▶ Optimized performance to suit application requirements
- ▶ Fits in the space provided for VRLA batteries
- ▶ Lighter than VRLA batteries
- ▶ Performs reliably at extreme temperatures (+40° to -20°C)
- ▶ Easy topping with water using single point watering system
- ▶ Low ownership cost when considered over its lifetime
- ▶ Long life (greater than 20 years)
- ▶ Reliable construction (no risk of sudden death)
- ▶ Can withstand extreme temperatures without damage (from +70°C to -50°C)

Standards

These batteries conform to the following international standards:

- ▶ IEC 60623
- ▶ BS 6260

Applications

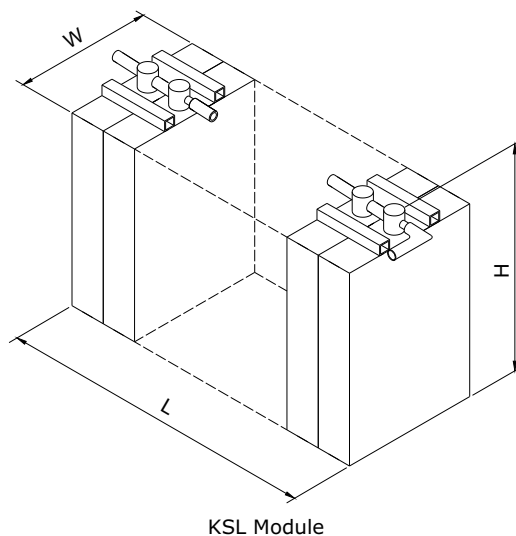
- ▶ Local or access terminals
- ▶ Base transceiver stations
- ▶ Base station controllers
- ▶ Optical nodes units



Dimensions and Weight

Type	Rated Capacity (C ₅ Ah*)	Dimensions (mm)			Weight per cell (kgs)	Voltage (V)		
		L	W	H				
KSL 81-3	94	121	171	259	2.75	3.6		
KSL 81-4		157	171	259		4.8		
KSL 81-5		194	171	259		6.0		
KSL 81-6		230	171	259		7.2		
KSL 81-7		266	171	259		8.4		
KSL 81-8		303	171	259		9.6		
KSL 81-10		375	171	259		12.0		
KSL 81-11		412	171	259		13.2		
KSL 126-3		141	165	171		259	3.80	3.6
KSL 126-4			216	171		259		4.8
KSL 126-5			267	171		259		6.0
KSL 126-6	318		171	259	7.2			
KSL 126-7	369		171	259	8.4			
KSL 126-8	420		171	259	9.6			
KSL 162-2	188		157	171	259	5.55		2.4
KSL 162-3			230	171	259			3.6
KSL 162-4		303	171	259	4.8			

* 5 hr capacity as per IEC 60623.



Electrical Performance

Discharge data in amperes after a constant voltage charge at 1.45 V / cell

End Voltage 1.00 V per cell

Type	Rated Capacity (C ₈ Ah)	Time in Hours									
		1	2	3	4	5	6	7	8	9	10
KSL 81	81	55.7	36.9	25.5	19.4	15.8	13.4	11.6	10.3	9.3	8.4
KSL 126	126	87.1	57.7	39.8	30.2	24.7	20.8	18.2	16.2	14.5	13.1
KSL 162	162	111.4	73.9	50.6	38.7	31.7	27.5	23.8	20.7	18.5	16.7

End Voltage 1.05 V per cell

Type	Rated Capacity (C ₈ Ah)	Time in Hours									
		1	2	3	4	5	6	7	8	9	10
KSL 81	81	46.8	33.3	25.2	19.2	15.6	13.4	11.7	10.2	9.1	8.3
KSL 126	126	72.9	51.6	39.4	29.8	24.3	21.0	18.4	16.0	14.4	13.0
KSL 162	162	93.2	66.8	50.3	38.3	31.1	26.8	23.4	20.5	18.1	16.5

End Voltage 1.10 V per cell

Type	Rated Capacity (C ₈ Ah)	Time in Hours									
		1	2	3	4	5	6	7	8	9	10
KSL 81	81	39.6	27.8	22.8	18.4	15.3	13.3	11.6	10.1	9.0	8.2
KSL 126	126	61.8	43.5	35.6	28.9	23.9	20.8	18.0	15.8	14.2	12.8
KSL 162	162	79.0	55.7	45.6	36.9	30.6	26.6	23.0	20.3	18.0	16.4

End Voltage 1.14 V per cell

Type	Rated Capacity (C ₈ Ah)	Time in Hours									
		1	2	3	4	5	6	7	8	9	10
KSL 81	81	30.6	24.3	19.1	16.2	13.9	12.0	10.5	9.3	8.4	7.7
KSL 126	126	47.8	38.0	30.0	25.3	21.7	19.0	16.5	14.6	13.1	12.0
KSL 162	162	60.8	48.6	38.4	32.4	27.7	24.0	21.0	18.6	16.9	15.5

Note: Rated Capacity C₈ is with CV charge at 1.45 V per cell to end 1.1 V per cell

Discharge data in watts after a constant voltage charge at 1.45 V / cell

End Voltage 1.00 V per cell

Type	Rated Capacity (C ₈ Ah)	Time in Hours									
		1	2	3	4	5	6	7	8	9	10
KSL 81	81	60.2	40.2	28.8	22.5	18.5	15.9	14.0	12.3	10.9	9.9
KSL 126	126	94.1	62.8	45.0	35.1	29.0	25.0	21.8	19.0	17.1	15.6
KSL 162	162	120.4	80.4	57.5	45.0	37.1	31.9	27.8	24.4	22.0	19.9

End Voltage 1.05 V per cell

Type	Rated Capacity (C ₈ Ah)	Time in Hours									
		1	2	3	4	5	6	7	8	9	10
KSL 81	81	50.9	36.6	28.5	22.5	18.5	16.0	13.9	12.0	10.9	9.8
KSL 126	126	79.7	57.2	44.3	35.1	29.0	24.8	21.8	18.8	16.9	15.4
KSL 162	162	102.0	73.2	56.8	45.0	37.1	31.9	27.6	24.1	21.6	19.6

End Voltage 1.10 V per cell

Type	Rated Capacity (C ₈ Ah)	Time in Hours									
		1	2	3	4	5	6	7	8	9	10
KSL 81	81	44.7	31.5	26.2	21.6	17.9	15.5	13.5	11.9	10.7	9.7
KSL 126	126	69.8	49.2	40.9	33.7	27.9	24.3	21.2	18.6	16.6	15.2
KSL 162	162	89.2	63.0	52.3	43.1	35.7	31.0	27.0	23.9	21.5	19.4

End Voltage 1.14 V per cell

Type	Rated Capacity (C ₈ Ah)	Time in Hours									
		1	2	3	4	5	6	7	8	9	10
KSL 81	81	35.1	27.9	22.4	18.9	16.3	14.2	12.5	11.1	10.1	9.3
KSL 126	126	54.9	43.6	35.0	29.6	25.4	22.2	19.5	17.3	15.7	14.5
KSL 162	162	70.2	55.8	44.9	37.9	32.5	28.5	25.1	22.2	20.1	18.5

Note: Rated Capacity C₈ is with CV charge at 1.45 V per cell to end 1.1 V per cell



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