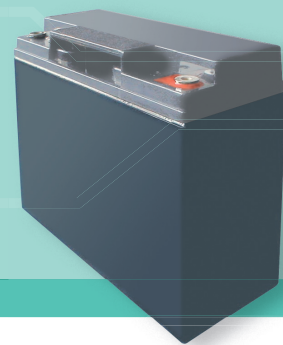




## ESL 18-12



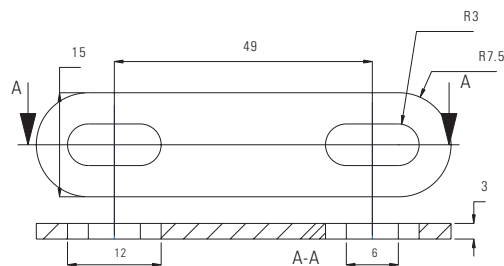
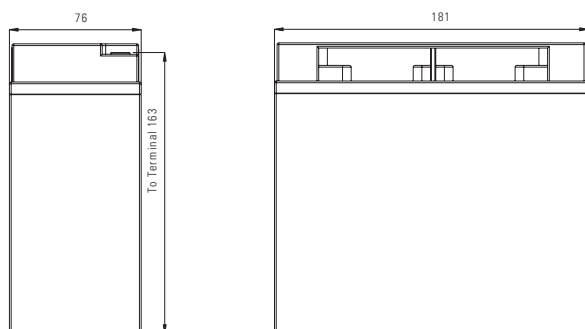
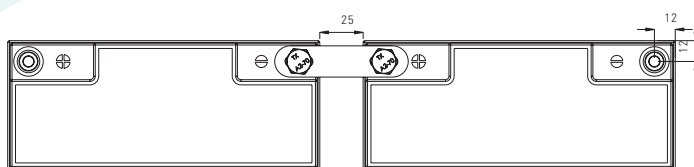
### Innovative Features

- Completely maintenance free, sealed construction eliminates the need for watering
- Fully tank formed plates
- Analytical Grade electrolyte
- Spill proof / leak proof
- Valve regulated Max internal pressure 2.5 psi
- Multi-position usage
- ABS Case and cover - VO on request
- Low self discharge
- FAA and IATA approved as non-hazardous
- Built to comply with IEC 8962, DIN 43534, BS 6290 Pt4, Eurobat

### Specifications

- Nominal Voltage.....12 Volts
- Nominal Capacity .....18Ah (C20 @ 20 °C)
- Design Life .....12 Years
- Operating Temperature...-20 °C to 50 °C
- Grid alloy.....Calcium / Tin lead alloy
- Plates.....Flat Pasted
- Separator .....Absorbant Glass Mat
- Active material.....Very high purity lead
- Case and cover.....ABS (VO on request)
- Charge Voltage .....Float 2.25 - 2.30 VPC @25 °C  
Cycling 2.35 @25 °C  
Max. 2.4 VPC Max ripple 0.05C (A)
- Electrolyte .....Sulphuric acid Analytical grade purity
- Venting Valve .....EPDM Rubber 1.5 to 2 psi (10.5 - 14 KPa) release pressure.  
Resealing at 1 psi (7 KPa)
- Terminal .....Insert 12mm Dia M5 thread.  
Epoxy sealed by extended mechanical paths
- Torque setting.....The recommended torque value for all types is 5-7 Nm
- Cables.....Connectors, cables, terminal covers on request.

### Terminal Dimensions



### Specifications

Nominal Voltage	12V		
Nominal Capacity	18 Ah		
Dimensions	Total Height - (Inc. terminal s)	181 mm - n/a mm	7.13 inches - n/a inches
	Length - Width	76 mm - 167 mm	2.99 inches - 6.57 inches
Weight 6.25 Kg - 13.81 lbs			

## Characteristics

Capacity 20 °C (68 °F) To 1.7 volts	20 hour rate 10 hour rate 5 hour rate 1 hour rate 15 min rate Internal Resistance Impedance	18.0 Ah 15.8 Ah 14.8 Ah 11.0 Ah 8.0 Ah 17.1 mOhms S
Capacity correction for Temperature Variations (C20)	40 °C (104 °F) 20 °C (68 °F) 0 °C (32 °F) -15 °C (5 °F)	102% 100% 85% 65%
Self-Discharge 20 °C (68 °F)	Capacity after 1 months storage Capacity after 3 months storage Capacity after 6 months storage	98% 94% 86%
Short Circuit Current 20 °C (68 °F)	732	
Terminal	Standard Optional	12mm Insert M5 thread Cu Flag
Charging (Constant Voltage)	Cyclic Float	2.35 - 2.40 VPC (20-25 °C) 2.27 - 2.30 VPC (15-25 °C)

## Constant Power Discharge - Watts per Cell at 20°C

End V per Cell	5M	10M	15M	20M	25M	30M	35M	40M	45M	60M	90M	2 hr	3 hr	4 hr
1.85	86.2	64.2	52.7	44.4	38.4	33.8	30.0	27.0	24.5	19.6	14.9	11.8	8.50	6.56
1.80	95.7	67.8	55.5	46.8	39.7	34.6	30.5	27.4	24.8	19.9	15.2	12.1	8.60	6.68
1.75	101	72.6	56.4	48.0	40.7	35.1	31.1	27.9	25.2	20.3	15.3	12.1	8.69	6.76
1.70	106	74.8	58.1	48.6	41.1	35.5	31.5	28.3	25.8	20.8	15.6	12.4	8.92	6.94
1.65	107	75.7	59.6	49.0	41.5	36.0	31.9	28.7	26.2	21.2	15.8	12.6	8.99	-
1.60	108	76.0	60.0	50.0	42.0	36.5	32.5	29.2	26.7	21.6	16.1	12.7	9.04	-

## Constant Amps discharge - Amps at 20°C

End V per Cell	5 M	10 M	15 M	20 M	25 M	30 M	35 M	40 M	45 M	60 M	90 M	2 hr	3 hr	4 hr	5 hr	8 hr	10 hr	12 hr	20 hr
1.85	46.3	34.4	28.1	23.6	20.4	17.9	15.8	14.2	12.8	10.2	7.72	6.09	4.36	3.35	2.75	1.80	1.49	1.25	0.86
1.80	52.2	36.9	30.0	25.2	21.3	18.5	16.2	14.5	13.1	10.5	7.92	6.26	4.43	3.42	2.84	1.87	1.53	1.28	0.88
1.75	55.9	39.9	30.8	26.0	21.9	18.8	16.6	14.8	13.4	10.7	8.03	6.32	4.49	3.48	2.87	1.88	1.54	1.29	0.89
1.70	58.9	41.4	32.0	26.5	22.3	19.2	16.9	15.1	13.7	11.0	8.16	6.49	4.62	3.58	2.95	1.92	1.58	1.33	0.90
1.65	60.0	42.0	32.9	26.9	22.6	19.5	17.2	15.4	14.0	11.2	8.33	6.59	4.67	-	-	-	-	-	-
1.60	60.6	42.4	33.2	27.4	22.9	19.8	17.6	15.7	14.3	11.5	8.46	6.64	4.70	-	-	-	-	-	-

## Ampere Hour at 20 °C

End V per Cell	2 hr	3 hr	4 hr	5 hr	8 hr	10 hr	12 hr	20 hr
1.85	12.2	13.1	13.4	13.8	14.4	14.9	15.0	17.2
1.80	12.5	13.3	13.7	14.2	15.0	15.3	15.4	17.7
1.75	12.6	13.5	13.9	14.3	15.1	15.4	15.5	17.8
1.70	13.0	13.9	14.3	14.8	15.4	15.8	16.0	18.0
1.65	13.2	14.0	-	-	-	-	-	-
1.60	13.3	14.1	-	-	-	-	-	-