

Self Discharge

## **FSP Series-General Purpose**

FSP1270(12V7.0Ah)

# FORTRON/SOURCE Specification

Nomial Voltage	12V							
Nomial Capacity(20HR)	7.0AH							
	Length	151 $\pm$ 2mm (5.95 inches)						
D:	Width	64.5 $\pm$ 1mm (2.54 inches)						
Dimension	Container Height	94.5 $\pm$ 1mm (3.72 inches)						
	Total Height (with Termina	al) $100 \pm 1$ mm (3.94 inches)						
Approx Weight	Approx 2.18 kg (4.81lbs)							
Terminal	T1 / T2							
Container Material	ABS							
	7.00 AH/0.350A	(20hr ,1.80V/cell,25 °C/77 °F)						
	6.51 AH/0.651A	(10hr,1.80V/cell,25 °C/77 °F)						
Rated Capacity	5.95 AH/1.19A	(5hr,1.75V/cell,25 ℃/77 ℉)						
	5.37 AH/1.79A	(3hr,1.75V/cell,25 ℃/77 ℉)						
	4.40 AH/4.40A	(1hr,1.60V/cell,25 ℃/77 ℉)						
Max. Discharge Current	105A (5s)							
Internal Resistance	Approx 23mÙ							
Operating Temp.Range	Discharge : $-15\sim50^{\circ}$ C (5) Charge : $0\sim40^{\circ}$ C (5) Storage : $-15\sim40^{\circ}$ C (5)	32∼104°F)						
Nominal Operating Temp. Range	25±3°C (77±5°F)							
	Initial Charging Current less than 2.1A.Voltage							
Cycle Use	14.4V~15.0V at 25 ℃(77 Å)Temp. Coefficient -30mV/ ℃							
	No limit on Initial Charging Current Voltage							
Standby Use	13.5V~13.8V at 25 $^{\circ}$ C(77 $^{\circ}$ )Temp. Coefficient -20mV/ $^{\circ}$ C							
Capacity affected by	40°C (104 °F)	103%						
	25°C ( 77°F)	100%						
Temperature 	0°C ( 32°F)	86%						
	FSP series batteries may be	stored for up to 6 months						



#### **Applications**

- ♦ All purpose
- Uninterruptable Power Supply (UPS)
- ♦ Electric Power System (EPS)
- ♦ Emergency backup power supply
- Emergency light
- Railway signal
- ♦ Aircraft signal
- ♦ Alarm and security system
- ♦ Electronic apparatus and equipment
- ♦ Communication power supply
- DC power supply
- ♦ Auto control system



Constant Current Discharge (Amperes) at 25 C° (77 F°)															
F.V/Time	5min	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	13.3	10.2	8.48	7.33	5.67	4.18	3.52	2.08	1.63	1.32	1.08	0.94	0.756	0.631	0.347
1.80V/cell	17.9	13.1	10.2	8.67	6.69	4.86	3.94	2.27	1.75	1.41	1.16	1.01	0.802	0.651	0.350
1.75V/cell	20.2	14.4	11.2	9.32	6.94	5.04	4.13	2.36	1.79	1.45	1.19	1.03	0.816	0.669	0.354
1.70V/cell	22.2	15.7	11.9	9.80	7.23	5.24	4.26	2.42	1.83	1.48	1.22	1.05	0.827	0.682	0.360
1.65V/cell	24.5	16.9	12.7	10.4	7.63	5.37	4.35	2.45	1.91	1.54	1.25	1.08	0.840	0.696	0.365
1.60V/cell	27.0	18.4	13.6	11.1	8.05	5.60	4.40	2.56	1.97	1.58	1.30	1.10	0.848	0.704	0.367

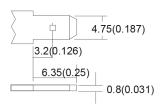
at 25 ℃(77 f) and then a freshening charge is required.

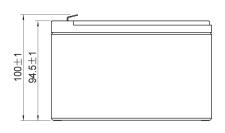
For higher temperatures the time interval will be shorter.

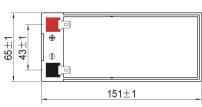
Constant Power Discharge (Watts / Cell) at 25 C°(77 F°)															
F.V/Time	5min	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	24.4	18.9	15.8	13.8	10.8	8.03	6.79	4.04	3.18	2.59	2.12	1.84	1.492	1.250	0.686
1.80V/cell	32.4	23.9	18.9	16.1	12.6	9.26	7.57	4.38	3.40	2.75	2.26	1.97	1.578	1.286	0.692
1.75V/cell	35.7	25.8	20.3	17.2	12.9	9.52	7.88	4.53	3.45	2.80	2.31	2.02	1.602	1.319	0.698
1.70V/cell	38.2	27.5	21.4	17.9	13.4	9.86	8.10	4.63	3.54	2.87	2.37	2.05	1.622	1.345	0.710
1.65V/cell	41.6	29.4	22.6	18.9	14.0	10.0	8.23	4.67	3.67	2.96	2.43	2.09	1.644	1.370	0.719
1.60V/cell	44.8	31.2	23.8	19.9	14.7	10.4	8.26	4.85	3.76	3.04	2.50	2.13	1.656	1.383	0.722

#### **Dimensions**

### ■ T1 Terminal Unit: mm [inches]

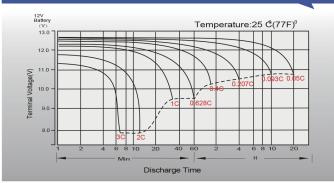




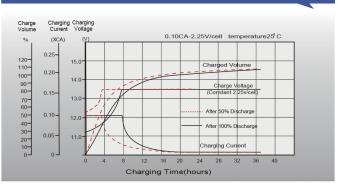




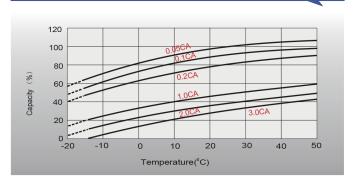
#### Discharge Characteristics



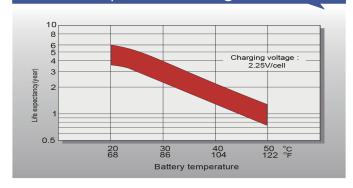
#### Float Charging Characteristics



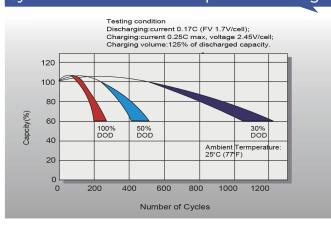
#### Temperature Effects In Relation to Battery Capacity



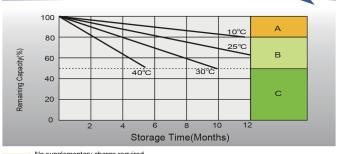
#### Effect of Temperature on Long Term Float Life



#### Cycle Life in Relation to Depth of Discharge



#### Self Discharge Characteristics



No supplementary charge required (Carry out supplementary charge before use if 100% capacity is required.)

Supplementary charge required before use.Optional charging way as below:

1. Charged for above 3 days at limted current 0.25CA and constant volatge 2.25V/cell.

2. Charged for above 20hours at limted current 0.25CA and constant volatge 2.45V/cell.

3. Charged for 8~10hours at limted current 0.05CA.

Supplementary charge may often fail to recover the capacity