



## 6LS-4.5

6V 4.5 Ah

Q-Batteries Security Akku 6LS-4.5 is an AGM battery and it is designed for stand-by applications such as burglar-systems or UPS-systems.

### Application:

burglar-systems, UPS-systems,  
fire-detecting-systems,  
telecommunication-systems

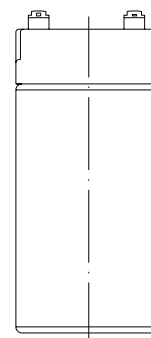
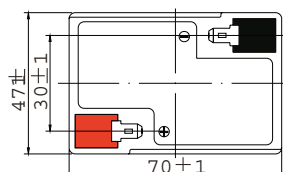
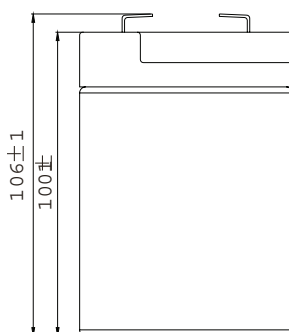
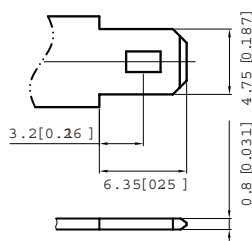


### Specification:

Voltage Per Unit	6 V		
Capacity	4.5 Ah (20 h) cell voltage 1.8V / cell		
Cells Per Unit	6		
Weight	ca. 0,81 kg +/- 3%		
Max. Discharge Current	67.5 A (5 sec.)		
Internal Resistance	ca. 25m $\Omega$		
Operating Temperature Range Normal	Discharge: - 15°C - 50°C	Charge: -10°C - 50°C	Storage: - 20°C - 50°C
Operating Temperature Range	25°C $\pm$ 5°C		
Self Discharge	Valve Regulated Lead Acid (VRLA) batteries can be stored for more than 6 months at 25°C. Self-discharge ratio less than 3% per month at 25°C. Please charge batteries before using.		
Terminal	F1 (Fast on Terminal 4.8 mm)		
Container Material	A.B.S. (UL94-HB)		

### Dimensions:

70 Length x 47 Width x 100 mm Height



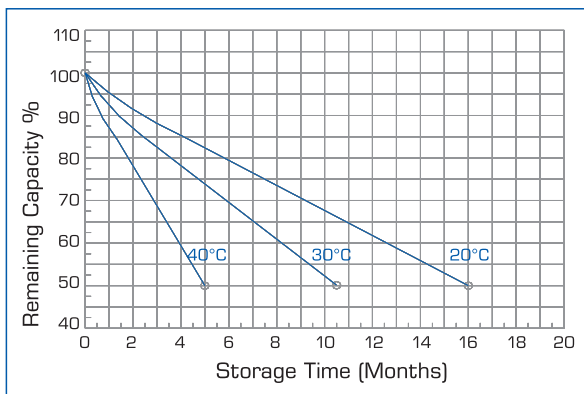
## Constant current discharge characteristics: A (25°C)

F.V/Time	5 Min.	10 Min.	15 Min.	20 Min.	30 Min.	45 Min.	1 HR	2 HR	3 HR	4 HR	5 HR	6 HR	8 HR	10 HR	20 HR
1.85 V/cell	8,64	6,02	4,97	4,31	3,46	2,66	2,17	1,33	1,01	0,831	0,706	0,611	0,486	0,404	0,223
1.80 V/cell	10,6	7,19	5,76	4,87	3,83	2,90	2,34	1,41	1,06	0,874	0,736	0,638	0,504	0,419	0,225
1.75 V/cell	12,6	8,13	6,35	5,31	4,09	3,08	2,46	1,47	1,10	0,901	0,756	0,654	0,518	0,427	0,227
1.70 V/cell	14,3	8,96	6,88	5,70	4,29	3,20	2,57	1,53	1,14	0,924	0,775	0,670	0,525	0,434	0,231
1.65 V/cell	15,7	9,64	7,27	5,98	4,47	3,32	2,67	1,58	1,17	0,943	0,792	0,683	0,534	0,440	0,234
1.60 V/cell	16,5	10,0	7,58	6,17	4,60	3,40	2,73	1,63	1,19	0,966	0,808	0,696	0,545	0,447	0,236

## Constant current discharge characteristics: Watt (25°C)

F.V/Time	5 Min.	10 Min.	15 Min.	20 Min.	30 Min.	45 Min.	1 HR	2 HR	3 HR	4 HR	5 HR	6 HR	8 HR	10 HR	20 HR
1.85 V/cell	16,3	11,5	9,55	8,35	6,74	5,21	4,28	2,63	2,01	1,66	1,41	1,23	0,977	0,815	0,450
1.80 V/cell	19,8	13,6	11,0	9,37	7,41	5,65	4,58	2,78	2,10	1,73	1,46	1,27	1,01	0,838	0,452
1.75 V/cell	23,2	15,2	12,0	10,1	7,86	5,96	4,80	2,88	2,16	1,78	1,49	1,30	1,03	0,849	0,453
1.70 V/cell	26,0	16,6	12,9	10,8	8,20	6,16	4,97	2,98	2,22	1,81	1,52	1,32	1,04	0,858	0,459
1.65 V/cell	28,3	17,6	13,4	11,2	8,48	6,36	5,15	3,05	2,27	1,84	1,55	1,34	1,05	0,866	0,463
1.60 V/cell	29,2	18,1	13,9	11,4	8,62	6,44	5,22	3,13	2,31	1,87	1,57	1,36	1,07	0,876	0,464

## Storage characteristic:



## Charging Method:

Charge the batteries at least once every six months, if they are stored at 25°C

Constant Voltage (V)  
-0.2C x 2h + 2.4-2.45V/Cell x 24h, max. Current 0.3CA

Constant Current (A)  
-0.2C x 2h + 0.1CA x 12h

Fast  
-0.2C x 2h + 0.3CA x 4.0h

## Capacity Factors with different Temperature:

Battery Type		-20°C	-10°C	0°C	5°C	10°C	20°C	25°C	30°C	40°C	45°C
GEL Battery	6V & 12V	50%	70%	83%	85%	90%	98%	100%	102%	104%	105%
	2V	60%	75%	85%	88%	92%	99%	100%	103%	105%	106%
AGM Battery	6V & 12V	46%	66%	76%	83%	90%	98%	100%	103%	107%	109%
	2V	55%	70%	80%	85%	92%	99%	100%	104%	108%	110%