



ES 2.9-12

12V-2,9Ah



Features

- High purity lead calcium grid plates to prolong service life and enhance corrosion resistance
- Low resistance microporous glass fibre separators, AGM VRLA spill resistant design
- One way, self-regulating pressure relief valve allows gas to escape and prevents the ingress of oxygen
- High conductivity, leak resistant female terminal thread for ease of installation
- Heat sealed lid to box weld for superior integrity
- Flame arrestors for added safety

Electrical Specification

Nominal Voltage	12V
20-hr rate Capacity to 1.8V/cell at 20°C	2,9 Ah
10-hr rate Capacity to 1.8V/cell at 20°C	2,59 Ah
10-min rate Constant Power 1.6V/cell at 20°C	13,1 Watts

Dimensions

Lenght	79 mm
Width	56 mm
Height	99 mm
Height over terminals	105 mm
Min height required above terminals	103 mm
Weight (typical)	1 kg

Terminal Type

Female threaded terminal	T1 mm
Torque	-

Internal Resistance

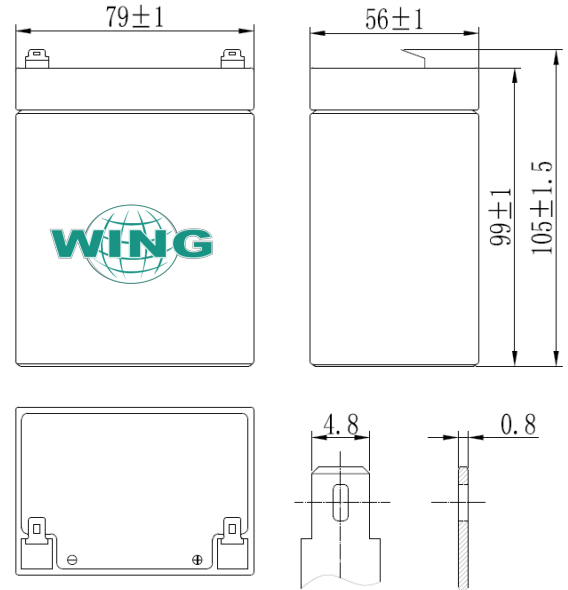
Impedance (fully charged)	45 mΩ
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Charge Voltage

Float charge voltage at 20°C	2.26~2.30 V/cell
Float charge voltage temperature correction factor (for variations from standard 20°C)	±3 mV/Cell/°C
Cyclic (or Boost) charge voltage at 20°C	2.42~2.49 V/cell
Cyclic charge voltage temperature correction factor (for variations from standard 20°C)	±4 mV/Cell/°C
Charge Current	
Maximum charge current limit	0,87 A
Remote Degassing Facility	-
Degassing Tube Diameter	-

Operating Temperature Range

Storage (fully charged condition)	-20 °C to 50 °C
Charge	-10 °C to 50 °C
Discharge	-15 °C to 50 °C



Storage

Capacity loss in storage at 20°C / month	<3 %
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Case Material

Standard option	ABS (UL94:V0 / HB)
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Design Life

EUROBAT Classification (High Performance)	6 - 9 years at 20 °C
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Maximum Discharge Current

1 Second	29 A
1 Minute	14,5 A
Short Circuit Current	46,8 A

Manufactured in ISO9001, ISO14001, OHSAS 18001 certified facility



Standards

Compliant with:
 BS 6290-4: 1997
 BS EN 60896-21: 2004
 BS EN 60896-22: 2004



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Constant Current Discharge - Amps at 20°C (In MINUTES)

V/cell	5	10	15	20	25	30	35	40	45	50	55	60	90
1,6	11,0	6,96	5,51	4,35	3,58	3,07	2,73	2,48	2,28	2,12	1,99	1,89	1,33
1,63	10,9	6,89	5,45	4,32	3,56	3,05	2,71	2,46	2,26	2,11	1,98	1,87	1,33
1,65	10,7	6,75	5,38	4,25	3,53	3,01	2,68	2,43	2,24	2,08	1,95	1,86	1,33
1,7	10,2	6,47	5,18	4,09	3,44	2,92	2,60	2,36	2,17	2,02	1,89	1,81	1,31
1,75	9,81	6,19	5,00	3,95	3,37	2,85	2,54	2,30	2,12	1,97	1,85	1,77	1,29
1,8	9,26	5,85	4,74	3,74	3,27	2,75	2,44	2,21	2,04	1,90	1,78	1,72	1,26

Constant Current Discharge - Amps at 20°C (in HOURS)

V/cell	2	3	4	5	6	7	8	9	10	12	20
1,6	1,03	0,741	0,593	0,504	0,424	0,368	0,326	0,296	0,273	0,237	0,148
1,63	1,03	0,739	0,591	0,502	0,423	0,366	0,325	0,296	0,272	0,236	0,148
1,65	1,02	0,737	0,589	0,501	0,421	0,365	0,324	0,295	0,271	0,236	0,147
1,7	1,02	0,730	0,584	0,496	0,418	0,362	0,321	0,292	0,269	0,234	0,146
1,75	1,00	0,725	0,580	0,493	0,415	0,360	0,319	0,290	0,267	0,232	0,145
1,8	0,974	0,703	0,563	0,478	0,402	0,349	0,309	0,281	0,259	0,225	0,141

Constant Power Discharge - Watts per Cell at 20°C (in MINUTES)

V/cell	5	10	15	20	25	30	35	40	45	50	55	60	90
1,6	20,5	13,1	10,5	8,27	6,81	5,87	5,22	4,74	4,38	4,08	3,83	3,64	2,59
1,63	20,2	13,0	10,4	8,20	6,76	5,82	5,18	4,70	4,35	4,04	3,79	3,61	2,58
1,65	19,9	12,7	10,2	8,07	6,71	5,75	5,12	4,64	4,29	3,99	3,75	3,58	2,57
1,7	19,1	12,2	9,84	7,77	6,54	5,58	4,96	4,50	4,16	3,87	3,63	3,49	2,55
1,75	18,2	11,6	9,51	7,50	6,41	5,44	4,84	4,39	4,06	3,78	3,546	3,42	2,51
1,8	17,2	11,0	9,00	7,11	6,21	5,24	4,66	4,23	3,91	3,64	3,416	3,32	2,45

Constant Power Discharge - Watts per Cell at 20°C (in HOURS)

V/cell	2	3	4	5	6	7	8	9	10	12	20
1,6	2,01	1,47	1,18	1,00	0,843	0,731	0,652	0,593	0,545	0,474	0,296
1,63	2,00	1,46	1,17	1,00	0,841	0,729	0,650	0,591	0,544	0,473	0,296
1,65	2,00	1,46	1,17	0,997	0,839	0,727	0,648	0,589	0,542	0,471	0,295
1,7	1,98	1,45	1,16	0,988	0,831	0,721	0,642	0,584	0,537	0,467	0,292
1,75	1,95	1,44	1,15	0,981	0,825	0,716	0,638	0,580	0,534	0,464	0,290
1,8	1,90	1,39	1,12	0,952	0,800	0,694	0,619	0,563	0,518	0,450	0,281