



SWL



SWL Series

VALVE REGULATED LEAD-ACID BATTERIES

SWL

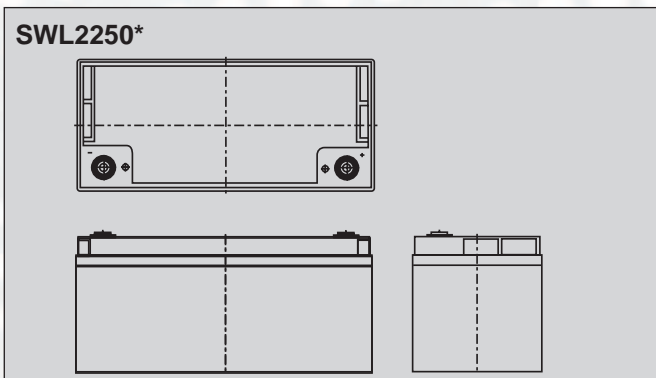
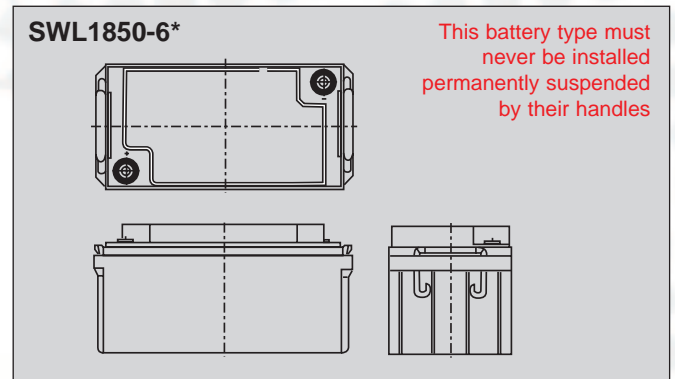
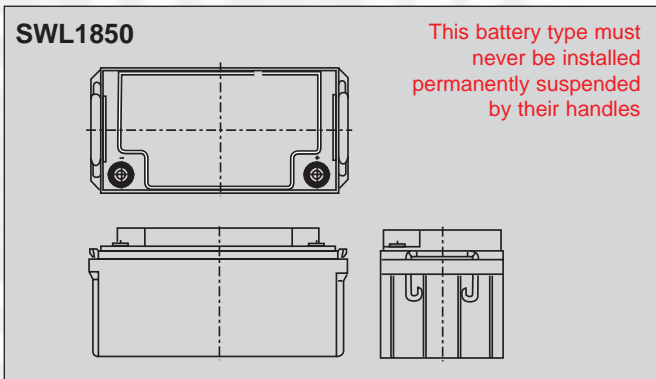
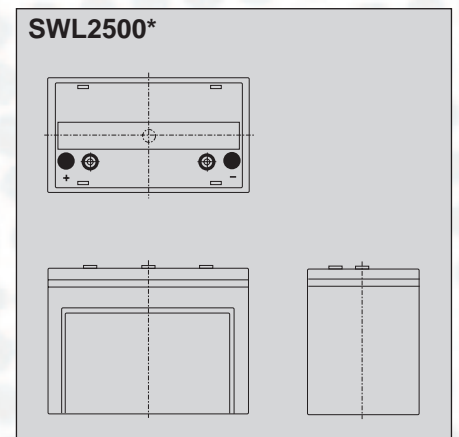
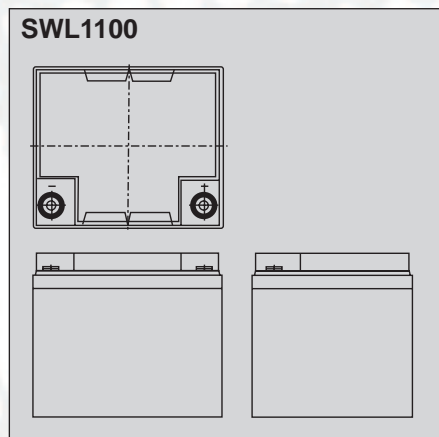
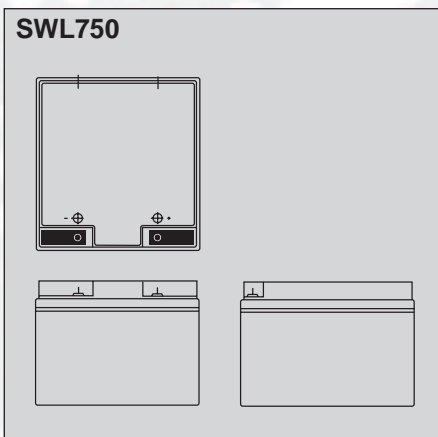
SWL VALVE REGULATED LEAD-ACID BATTERIES (VRLA)

The SWL range is an enhanced NPL design resulting in an improved energy to density ratio, giving up to 40% extra discharge capacity. All other attributes and operational characteristics are the same, thereby maintaining the benefit of a common mechanical and electrical design for users of both products.

FEATURES

- Yuasa VRLA batteries can be used in any orientation excluding continuous use inverted.
- Standard case material is flame retardant to (UL94) HBØ.
- FR option case material is flame retardant to UL94:VØ (oxygen index 30).
- SWL batteries are manufactured in factories that comply with ISO9001:2000.
- FR option SWL's comply with BS6290 Part 4 (1997).
- SWL batteries comply with IEC 60896-21+22.

Layouts



Terminals (mm)

| Terminal | X | Y | L |
|----------|------|----|----|
| B | 17mm | M5 | 10 |
| C | 20mm | M6 | 16 |
| D | 20mm | M8 | 16 |

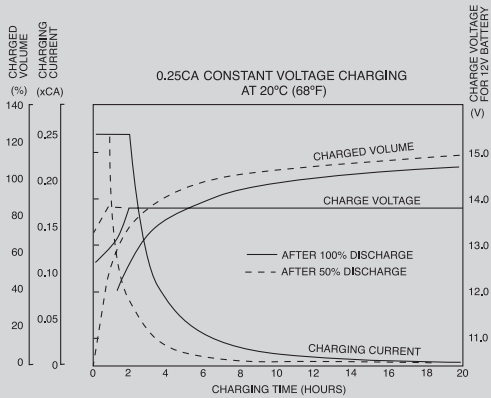
*Models available in Flame Retardent case only.

General Specifications

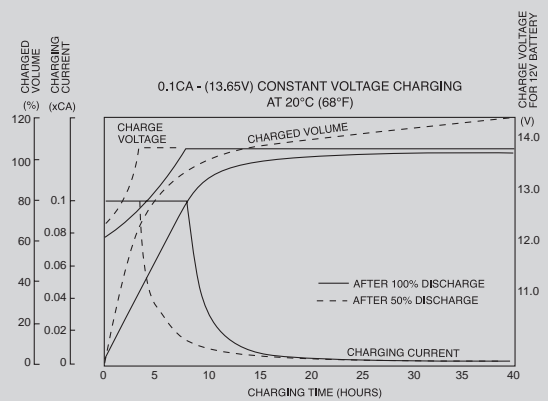
| Specifications | SWL 750 | SWL1100 | SWL1800* | SWL1850 | SWL2250* | SWL1850-6* | SWL2500* |
|--|---------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|
| 1) Nominal Voltage | 12 | 12 | 12 | 12 | 6 | 12 | 12 |
| 2) Nominal Wattage/Cell 10 min to 1.6V/Cell 5 min to 1.6V/Cell 3 min to 1.6V/Cell | 128 196 239 | 200 285 346 | 300 443 511 | 319 453 536 | 375 524 582 | - - - | 490 650 750 |
| 3) Weight (Approx)/Kg | 9.3 | 14.5 | 22 | 23.8 | 28.4 | 23.5 | 36 |
| 4) Energy Density (Wh/L) | 88 | 96 | 81.5 | 88 | 100 | 90 | 95 |
| 5) Specific Energy (Wh.kg) 10HR | 36 | 37 | 28.7 | 39 | 40 | 40 | 31 |
| 6) Internal Resistance (Approx)/mohm | 8.5 | 6 | 6 | 4.4 | 3.6 | 1.6 | 6 |
| 7) Maximum (1 min) discharge Current/A | 150 | 200 | 165 | 500 | 500 | 500 | 500 |
| 8) Maximum Short Duration (1 sec) Discharge Current in Amperes | 500 | 500 | 450 | 800 | 800 | 800 | 800 |
| 9) Operating Temperatures/°C Charge Discharge | -15 to 50 -20 to 60 | -15 to 50 -20 to 60 | -15 to 50 -20 to 60 | -15 to 50 -20 to 60 | -15 to 50 -20 to 60 | -15 to 50 -20 to 60 | -15 to 50 -20 to 60 |
| 10) Percentage Charge Retention at 20°C 1 month 3 months 6 months | 97 91 85 | 97 91 85 | 97 91 85 | 97 91 85 | 97 91 85 | 97 91 85 | 97 91 85 |
| 11) Standard Terminal Type | I Type Zn alloy casting B | Lead post with brass insert B | Lead post with brass insert C | Lead post with brass insert D | Lead post with brass insert C | Lead post with brass insert C | Lead post with brass insert C |
| 12) Torque Nm | 2.45 | 2.45 | 4.76 | 4.76 | 6.1 | 4.76 | 6 |
| 13) Case Material | ABS | ABS | ABS | ABS | ABS | ABS | ABS |
| Dimensions / mm | | | | | | | |
| Length +/-1 Width +/-1 Height +/-2 | 166 175 125 | 197 165 170 | 216 168 223 | 350 166 174 | 380 166 177.5 | 350 166 174 | 305 173 223 |

*Models available in Flame Retardent case only.

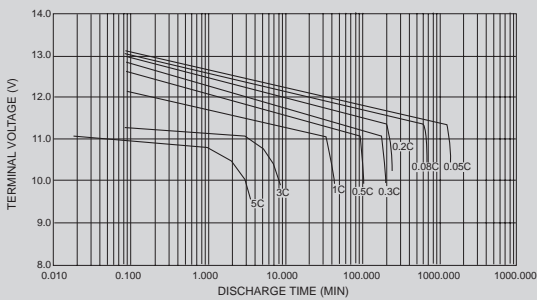
CHARGING CHARACTERISTICS



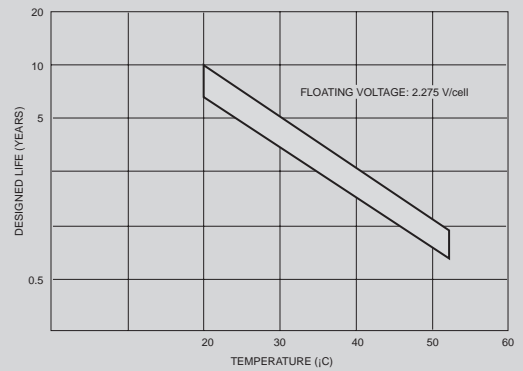
CHARGING CHARACTERISTICS



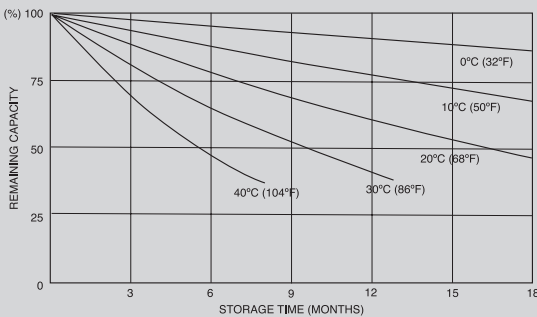
DISCHARGE CHARACTERISTIC CURVES



TEMPERATURE/LIFE CHARACTERISTIC



SELF DISCHARGE CHARACTERISTICS



Charging Methods (At 20°C)

Standby use: Float charging voltage 2.275vpc

CAUTION

- Avoid short circuit.
- Do not charge in a sealed container.
- Service life and operational characteristics will be affected by temperature.
- AC Ripple reduces service life.

WARNING!

SWL (Standard) and (FR) battery types SWL1850; SWL1850-6; SWL2500, must never be installed permanently suspended by their handles; they are not designed for this purpose.



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