

10-year LongLife Series

These VRLA batteries use thicker plates than the standard 4-5 year models. The electrolyte is absorbed by the AGM separators and plates and therefore these batteries can be mounted in any position. The one-way valve allow gases to escape, avoiding excessive pressure build-up in the case of accidentally overcharge.

General Features

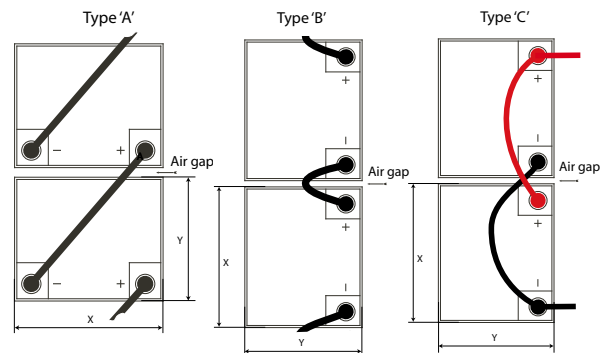
- Absorbent Glass Mat (AGM) technology for efficient gas recombination of up to 99% and freedom from electrolyte maintenance or water adding.
- Not restricted for air transport-complies with IATA/ICAO Special Provision A67.
- Can be mounted in any orientation.
- Computer designed lead, calcium tin alloy grid for high power density.
- Long service life, float or cyclic applications. Maintenance-free operation.
- Low self discharge.
- Case and cover are flame retardant ABS.

Features

- High Reliability and Good Quality
- Deep Discharge Recovery
- High Power Density
- Long Service Life, in Float or Cyclic Not for so called SLI applications (Starter, Lighting and Ignition)
- Flame retardant ABS, UL94V-0 / 92-2.
- International Standard, JIS and DIN

Models Available

| Model pbq... | Capacity in Ah | Dimensions (±2mm) (LxWxH1/H2) | Weight |
|--------------|----------------|-------------------------------|--------|
| 7-12L | 7.0 | 151x51x94/100mm | 2.35kg |
| 12-12L | 12.0 | 151x98x95/101mm | 3.67kg |
| 17-12L | 17.0 | 181x77x167mm | 5.5kg |
| 28-12L | 28.0 | 166x175x125mm | 8.1kg |
| 33-12LL | 33.0 | 195x130x155/168mm | 11kg |
| 40-12LL | 40.0 | 197.5x165.5x170mm | 14.7kg |
| 55-12LL | 55.0 | 239x132x205/210mm | 18kg |
| 65-12LL | 65.0 | 350x167x179mm | 23.4kg |
| 80-12LL | 80.0 | 350x167x179mm | 24kg |
| 100-12LL | 100.0 | 330x171x215/220mm | 32kg |
| 120-12LL | 120.0 | 410x176x227mm | 38kg |
| 150-12LL | 150.0 | 482x170x242mm | 47kg |
| 200-12LL | 200.0 | 522x238x218/223mm | 65kg |
| 230-12LL | 230.0 | 520x269x203/208 | 72.6kg |
| 100-6LL | 100.0 | 194x170x205/210mm | 16.5kg |
| 225-6LL | 225.0 | 320x176x225/230mm | 30.5kg |



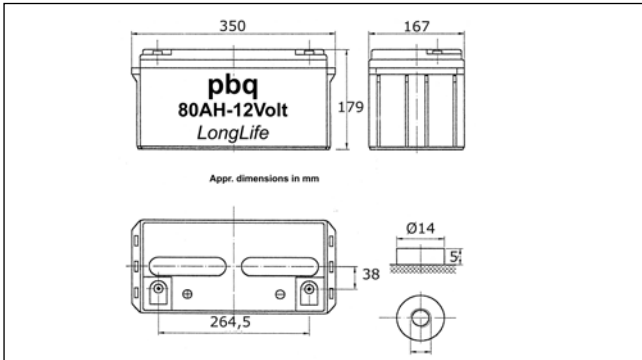
| Battery | X [mm] | Y [mm] | Airgap [mm] | Type A connection | Type B connection | Type C connection | Connector size |
|--------------|--------|--------|-------------|-------------------|-------------------|-------------------|----------------|
| pbq 33-12LL | 195 | 130 | 5 | ZKC250/6 | ZKC100/6 | ZKC250/6 | M6 insert |
| pbq 40-12LL | 197.5 | 165.5 | 10 | ZKC250/6 | ZKC100/6 | ZKC250/6 | M6 insert |
| pbq 55-12LL | 239 | 132 | 10 | ZKC250/6 | ZKC100/6 | ZKC250/6 | M6 insert |
| pbq 65-12LL | 350 | 167 | 10 | ZKC320/6 | ZKC100/6 | ZKC240/6 | M6 insert |
| pbq 80-12LL | 350 | 167 | 10 | ZKC320/6 | ZKC100/6 | ZKC240/6 | M6 insert |
| pbq 100-12LL | 330 | 171 | 10 | ZKC320/6 | ZKC100/6 | ZKC240/6 | M6 insert |
| pbq 120-12LL | 410 | 176 | 10 | ZKC420/8 | ZKC125/8 | ZKC420/8 | M8 insert |
| pbq 150-12LL | 482 | 170 | 10 | ZKC550/8 | ZKC125/8 | ZKC550/8 | M8 insert |
| pbq 200-12LL | 238 | 522 | 10 | ZKC550/8 | ZKC125/8 | ZKC420/8 | M8 insert |
| pbq 230-12LL | 269 | 520 | 10 | ZKC700/8 | ZKC125/8 | ZKC420/8 | M8 insert |

Automotive posts: Set of one positive and one negative screw-in type automotive post M6: ZKTERM001
Automotive posts: Set of one positive and one negative screw-in type automotive post M8: ZKTERM002

Inter-tier connector cables

| | | |
|------------|-----------|----------------------------------|
| 1 meter M6 | ZKC1000/6 | For pbq 33, 55, 65, 80 and 100Ah |
| 2 meter M6 | ZKC2000/6 | For pbq 33, 55, 65, 80 and 100Ah |
| 1 meter M8 | ZKC1000/8 | For pbq 120, 150, 200 and 230Ah |
| 2 meter M8 | ZKC2000/8 | For pbq 120, 150, 200 and 230Ah |

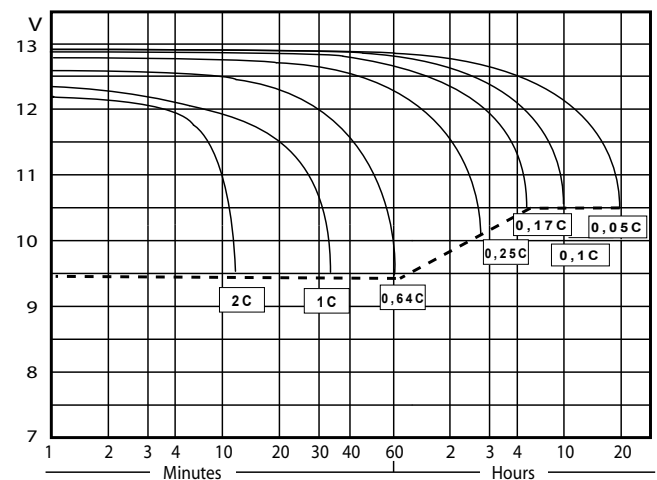
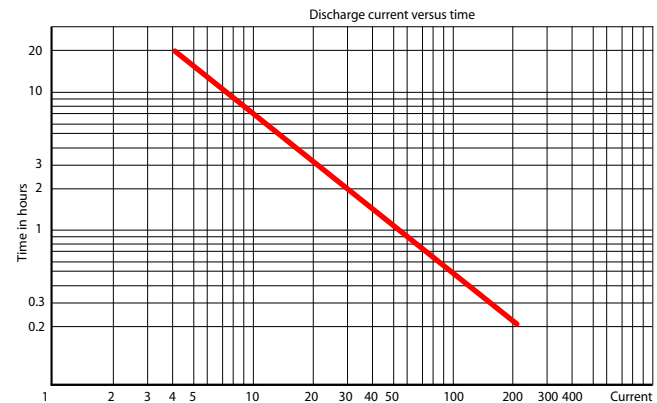
Type number key for cables
 ZKCxxx/y
 xxx = length between connecting holes in mm
 y = bolt diameter
 6: for 6mm bolt, 50mm² copper cable diameter
 8: for 8mm bolt, 75mm² copper cable diameter



| | |
|--------------------|--------------------------------------|
| Voltage | : 12 Volt |
| Capacity | : 80Ah |
| Appr. dimensions | : 350x167x179 mm (LxWxH) (±2mm) |
| Terminal | : M6 insert (<i>bolt supplied</i>) |
| Container & lid | : Flame retardant ABS (V0) |
| Approximate weight | : 24kg |
| Certificate(s) | : CE, UL, EN60896-21/22:2004 |
| RoHS Compliant | : Yes |
| Eurobat Compliant | : High Performance |

- Typical Applications:**
- UPS Systems
 - Emergency lighting systems
 - Cordless cleaning equipment
 - Telecommunication systems
 - Auxiliary power supply for recreational vehicles and boats (non-SLI applications)
 - Solar energy systems

| | |
|--|----------|
| Capacity | |
| 20 hour rate (4A) | : 80Ah |
| 10 hour rate (7.2A) | : 72Ah |
| 5 hour rate (14.4A) | : 65Ah |
| 1 hour rate (53.7A) | : 53.7Ah |
| Internal Resistance (fully charged) : 5.5mOhm | |
| Capacity versus temperature | |
| 40°C | : 102% |
| 25°C | : 100% |
| 0°C | : 85% |
| -15°C | : 65% |
| Max. discharge current : 750A (5 sec) | |
| Charge (constant voltage) | |
| Maximum charge current 24A | |
| Float use: 13.6 - 13.8 Volt. -20mV/°C | |
| Cyclic use: 14.4 - 14.7 Volt. -30mV/°C | |



Discharge data watt/battery

| | DoD [V/battery] | 5 min | 10 min | 15 min | 30 min | 45 min | 1 hr | 2 hrs | 3 hrs | 5 hrs |
|-------------|-----------------|-------|--------|--------|--------|--------|-------|-------|-------|-------|
| End Voltage | 10.8 | 2142 | 1650 | 1308 | 876 | 666 | 553.8 | 312 | 214.8 | 154.8 |
| | 10.5 | 2208 | 1722 | 1392 | 894 | 684 | 564.6 | 317.4 | 219 | 158.4 |
| | 10.2 | 2340 | 1794 | 1476 | 906 | 702 | 576 | 323.4 | 223.2 | 162 |
| | 9.9 | 2466 | 1866 | 1560 | 924 | 720 | 586.8 | 329.4 | 227.4 | 167.4 |
| | 9.6 | 2598 | 1800 | 1644 | 936 | 732 | 600 | 336 | 244.8 | 167.4 |