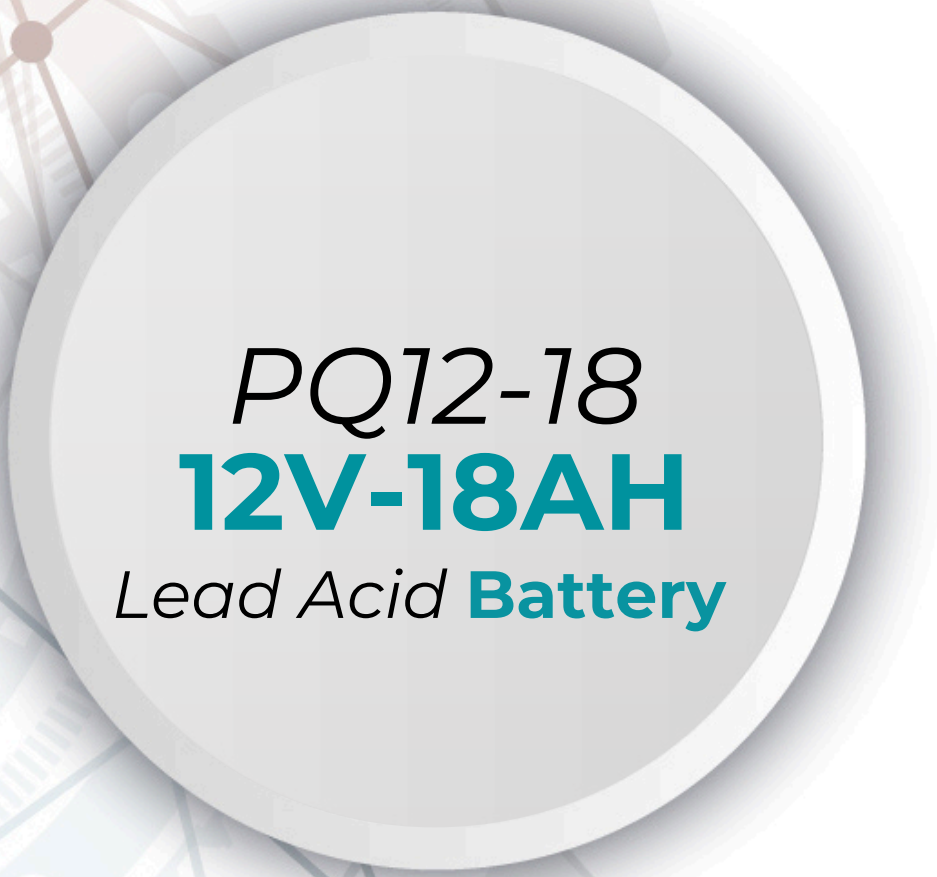




POWERQ
never will be dark



PQ12-18
12V-18AH
Lead Acid Battery



The PQ12-18 is a 12V-18Ah lead-acid battery designed for solar, UPS, and backup power. It delivers reliable performance, long service life, and stable energy storage.

SPECIFICATIONS

Nominal Voltage (V)

12v

Nominal Capacity

| | | |
|--------------|-------------------|--------|
| 20 hour rate | (0.9A to 10.50V) | 18Ah |
| 10 hour rate | (1.71A to 10.50V) | 17.1Ah |
| 5 hour rate | (3.06A to 10.20V) | 15.3Ah |
| 1 C | (18A to 9.60V) | 11.4Ah |
| 3C | (54A to 9.60V) | 7.2Ah |

Cold Cranking Amperes (-18°C)

200A

Cranking Amperes (25°C)

275A

Weight

Approx. 5.6kg (12.32 Lbs.)

Internal Resistance (at 1 KHz)

Approx. 10.5mΩ

Maximum Discharge Current For

5 seconds: 270A

Charging Methods at 25°C (77°F)

Cycle use:

| | |
|--------------------------|----------------|
| Charging Voltage | 14.4 to 15.0V |
| Coefficient | -5.0mV/°C/cell |
| Maximum Charging Current | 5.4A |

Standby use:

| | |
|------------------------|----------------|
| Float Charging Voltage | 13.5 to 13.8V |
| Coefficient | -3.0mV/°C/cell |

DIMENSIONS

(Units: mm (inch))

Length (L)

181 ± 1^2 (7.13 \pm 0.08 / 0.04)

Width (W)

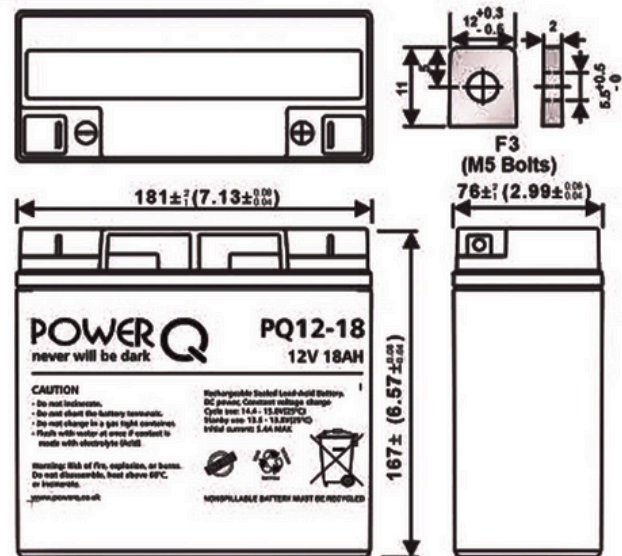
76 ± 1^2 (2.99 \pm 0.08 / 0.04)

Height (H)

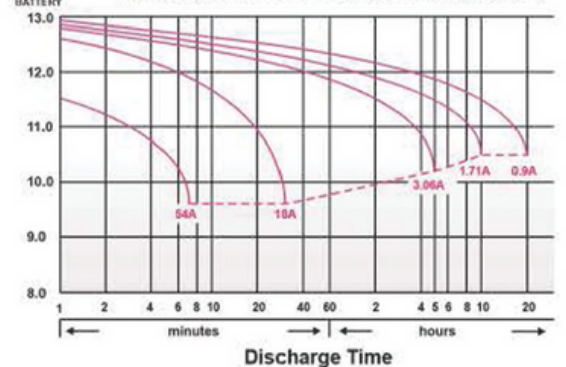
167 ± 1^2 (6.57 \pm 0.08 / 0.04)

Overall Height (HT)

167 ± 1^2 (6.57 \pm 0.08 / 0.04)



Discharge Time VS. Discharge Current (25°C)



(Units: mm (inch))

Operating Temperature Range

| | | | |
|-----------|-------------|----|--------------|
| Charge | -15°C (5°F) | to | 40°C (104°F) |
| Discharge | -15°C (5°F) | to | 50°C (122°F) |
| Storage | -15°C (5°F) | to | 40°C (104°F) |

Charge Retention (Shelf life) (at 20°C (68°F))

| | |
|----------|-----|
| 1 month | 97% |
| 3 months | 92% |
| 6 months | 85% |

Case Material

ABS UL94 HB
Optional: Flammability resistance of (UL94-V-0)

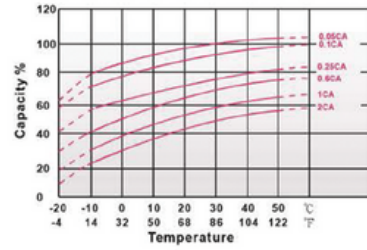
Design Life & Standard

10 Years

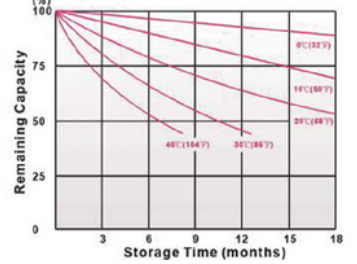
Terminal

F3

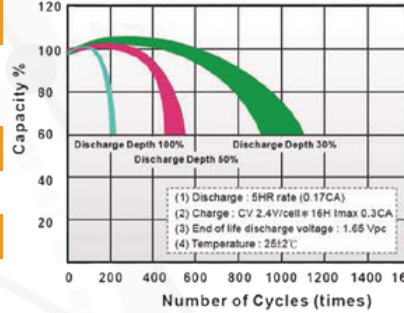
Effect of Temperature on Capacity 25°C (77°F)



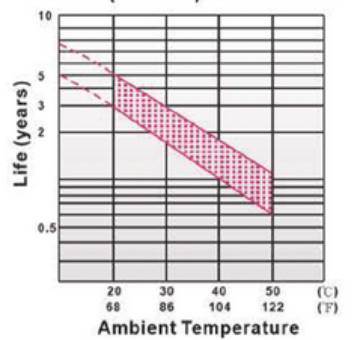
Capacity Retention Characteristic



Cycle Service Life



Trickle (or float) Service Life



PERFORMANCE DATA

Discharge Rates in **Watts** to Various End Voltages at 25°C (77°F)

| Time (min) | 1.85V | 1.80V | 1.75V | 1.70V | 1.67V | 1.65V | 1.60V |
|------------|-------|-------|-------|-------|-------|-------|-------|
| 5 | 98.9 | 116 | 128 | 135 | 137 | 139 | 141 |
| 10 | 67.0 | 77.1 | 84.5 | 89.1 | 90.2 | 91.7 | 92.9 |
| 15 | 57.2 | 64.5 | 69.4 | 72.5 | 73.3 | 74.2 | 75.1 |
| 30 | 32.7 | 35.1 | 37.7 | 39.4 | 39.8 | 40.3 | 40.8 |
| 60 | 18.8 | 19.8 | 20.7 | 21.3 | 21.5 | 21.8 | 22.2 |
| 120 | 11.9 | 12.4 | 12.7 | 13.1 | 13.2 | 13.3 | 13.5 |
| 180 | 8.75 | 9.10 | 9.33 | 9.53 | 9.60 | 9.68 | 9.78 |
| 240 | 6.63 | 6.93 | 7.12 | 7.27 | 7.32 | 7.38 | 7.46 |
| 300 | 5.82 | 6.05 | 6.17 | 6.27 | 6.30 | 6.35 | 6.41 |
| 600 | 3.40 | 3.52 | 3.60 | 3.67 | 3.68 | 3.72 | 3.75 |
| 1200 | 1.77 | 1.83 | 1.88 | 1.92 | 1.93 | 1.95 | 1.96 |

Discharge Rates in **Amperes** to Various End Voltages at 25°C (77°F)

| Time (min) | 1.85V | 1.80V | 1.75V | 1.70V | 1.67V | 1.65V | 1.60V |
|------------|-------|-------|-------|-------|-------|-------|-------|
| 5 | 62.6 | 68.3 | 71.9 | 75.1 | 76.4 | 77.8 | 80.2 |
| 10 | 38.6 | 41.8 | 44.3 | 46.5 | 47.4 | 48.4 | 50.1 |
| 15 | 31.9 | 34.6 | 36.3 | 37.7 | 38.2 | 38.8 | 39.7 |
| 30 | 17.4 | 18.7 | 19.8 | 20.7 | 21.0 | 21.4 | 21.9 |
| 60 | 9.7 | 10.3 | 10.7 | 11.0 | 11.1 | 11.3 | 11.5 |
| 120 | 5.98 | 6.23 | 6.39 | 6.53 | 6.58 | 6.64 | 6.72 |
| 180 | 4.35 | 4.52 | 4.64 | 4.73 | 4.76 | 4.80 | 4.85 |
| 240 | 3.43 | 3.52 | 3.58 | 3.62 | 3.63 | 3.65 | 3.68 |
| 300 | 2.96 | 3.02 | 3.07 | 3.11 | 3.12 | 3.14 | 3.16 |
| 600 | 1.73 | 1.77 | 1.80 | 1.82 | 1.83 | 1.84 | 1.85 |
| 1200 | 0.893 | 0.914 | 0.931 | 0.946 | 0.952 | 0.959 | 0.962 |

All data on the spec.sheet is an average value:

The tolerance range: $x < 6\text{min}$ (+15%~-15%), $6\text{min} \leq x < 10\text{min}$ (+12%~-12%), $10\text{min} \leq x < 60\text{min}$ (+8%~-8%), $x \geq 60\text{min}$ (+5%~-5%)

PQ12-18 12V-18AH

Lead-Acid Battery

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