

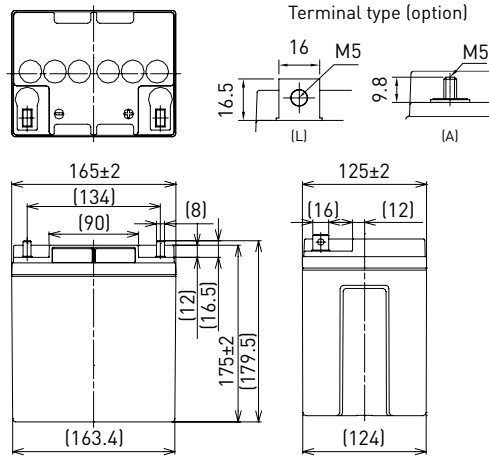
LC-P1228P

DIMENSIONS (MM)



Contents indicated (including the recycle marking, etc.) are subject to change without notice.

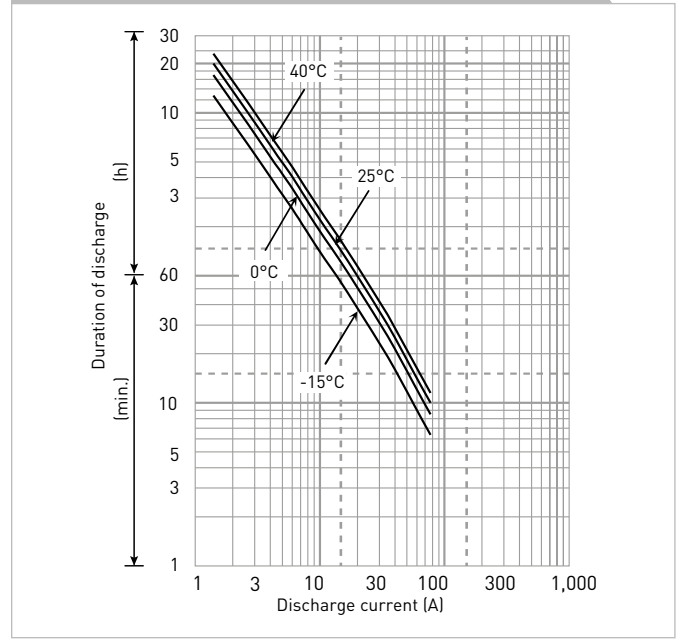
FOR STANDBY POWER SUPPLIES.
EXPECTED TRICKLE DESIGN LIFE: 10 - 12 YEARS AT 20°C
ACCORDING TO EUROBAT.



Battery case resin: flame retardant (UL94 V-0)

| SPECIFICATIONS | | |
|---|------------------------------|---------------|
| Name | LC-P1228P/AP | |
| Nominal voltage | 12V | |
| Nominal capacity (20 hour rate) | 28Ah | |
| Dimensions | Length | 165mm |
| | Width | 125mm |
| | Height | 175mm/179.5mm |
| Approx. mass | 9.40kg | |
| Terminal | M5 bolt/nut & threaded post | |
| Capacity (25°C) | 20 hour rate | 28Ah |
| | 10 hour rate | 26Ah |
| | 3 hour rate | 22Ah |
| | 1 hour rate | 21Ah |
| Impedance | Fully charged battery (25°C) | 11mΩ |
| | | |
| Temperature dependency of capacity (20 hour rate) | 40°C | 102% |
| | 25°C | 100% |
| | 0°C | 85% |
| | -15°C | 65% |
| Self-discharge (25°C) | After 3 month | 91% |
| | After 6 month | 82% |
| | After 12 month | 64% |

DURATION OF DISCHARGE VS. DISCHARGE CURRENT



| WATT TABLE (25°C) | | | | | | | | | | | | | [Wattage/battery] | | | |
|-------------------|-------|--------|--------|--------|--------|--------|-----|------|-----|------|------|------|-------------------|------|------|--|
| Cut-off | 5min. | 10min. | 15min. | 20min. | 30min. | 45min. | 1h | 1.5h | 2h | 3h | 4h | 5h | 6h | 10h | 20h | |
| 9.6V | 1,160 | 865 | 664 | 585 | 410 | 304 | 260 | 159 | 129 | 91.6 | 74.1 | 61.1 | 50.8 | 31.8 | 16.8 | |
| 9.9V | 1,093 | 849 | 654 | 579 | 404 | 294 | 254 | 156 | 128 | 90.4 | 72.9 | 60.8 | 50.4 | 31.8 | 16.8 | |
| 10.2V | 1,026 | 818 | 643 | 567 | 397 | 288 | 251 | 155 | 127 | 89.3 | 71.7 | 60.5 | 49.9 | 31.8 | 16.8 | |
| 10.5V | 976 | 784 | 621 | 545 | 386 | 282 | 247 | 154 | 126 | 88.1 | 71.1 | 60.2 | 49.5 | 31.8 | 16.8 | |
| 10.8V | 903 | 773 | 610 | 539 | 374 | 255 | 218 | 149 | 118 | 84.5 | 70.5 | 59.9 | 49.0 | 31.8 | 16.8 | |

| AMPERE TABLE (25°C) | | | | | | | | | | | | | [Ampere/battery] | | | |
|---------------------|-------|--------|--------|--------|--------|--------|------|------|------|------|------|------|------------------|------|------|--|
| Cut-off | 5min. | 10min. | 15min. | 20min. | 30min. | 45min. | 1h | 1.5h | 2h | 3h | 4h | 5h | 6h | 10h | 20h | |
| 9.6V | 104 | 77.2 | 57.7 | 50.4 | 35.0 | 25.9 | 22.1 | 13.5 | 10.9 | 7.70 | 6.20 | 5.10 | 4.30 | 2.60 | 1.40 | |
| 9.9V | 98.0 | 75.8 | 56.9 | 49.9 | 34.5 | 25.0 | 21.6 | 13.2 | 10.8 | 7.60 | 6.10 | 5.06 | 4.28 | 2.60 | 1.40 | |
| 10.2V | 92.0 | 73.0 | 55.9 | 48.9 | 33.9 | 24.5 | 21.3 | 13.1 | 10.7 | 7.50 | 6.00 | 5.03 | 4.25 | 2.60 | 1.40 | |
| 10.5V | 87.5 | 70.0 | 54.0 | 47.0 | 33.0 | 24.0 | 21.0 | 13.0 | 10.6 | 7.40 | 5.95 | 4.99 | 4.23 | 2.60 | 1.40 | |
| 10.8V | 81.0 | 69.0 | 53.0 | 46.5 | 32.0 | 21.7 | 18.5 | 12.6 | 10.0 | 7.10 | 5.90 | 4.95 | 4.20 | 2.60 | 1.40 | |

All mentioned values are average values

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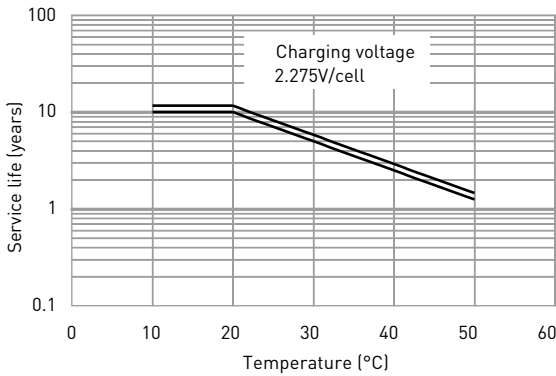
CHARGING METHOD (25°C)

Trickle use Control voltage: 13.6V - 13.8V
Initial current: 4.20A or smaller

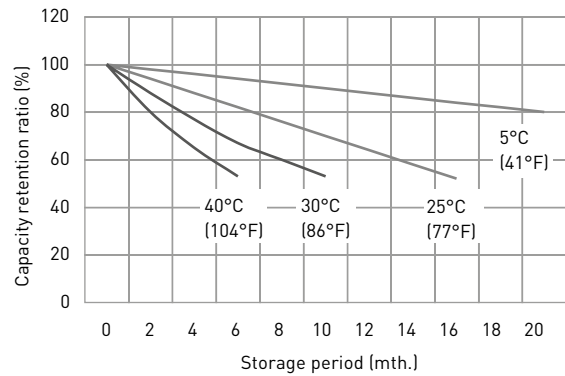
CUT-OFF VOLTAGE

| | | | | | |
|--------------------------|---------------|---------------|---------------|---------------|---------------|
| Discharge current | 1.40A - 5.60A | 5.60A - 14.0A | 14.0A - 28.0A | 28.0A - 56.0A | 56.0A - 84.0A |
| Cut-off voltage | 10.5V | 10.2V | 9.9V | 9.3V | 8.7V |

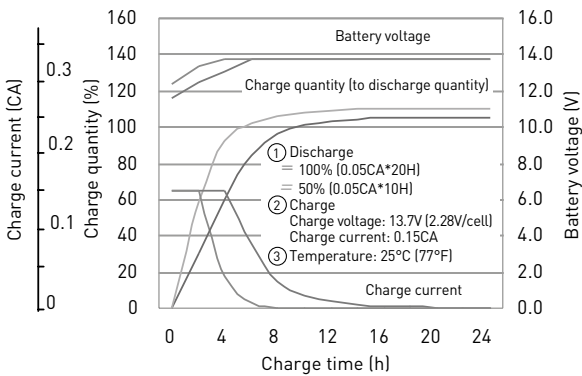
INFLUENCE OF TEMPERATURE ON TRICKLE LIFE



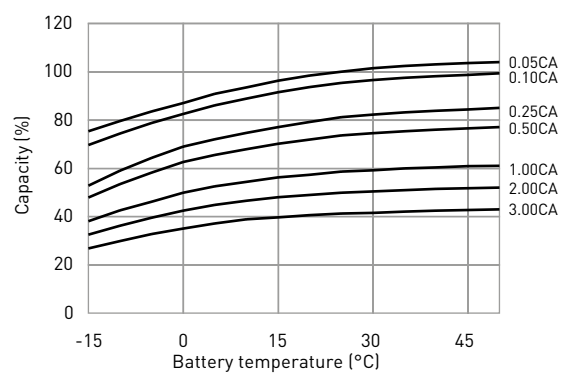
RESIDUAL CAPACITY TEST RESULT



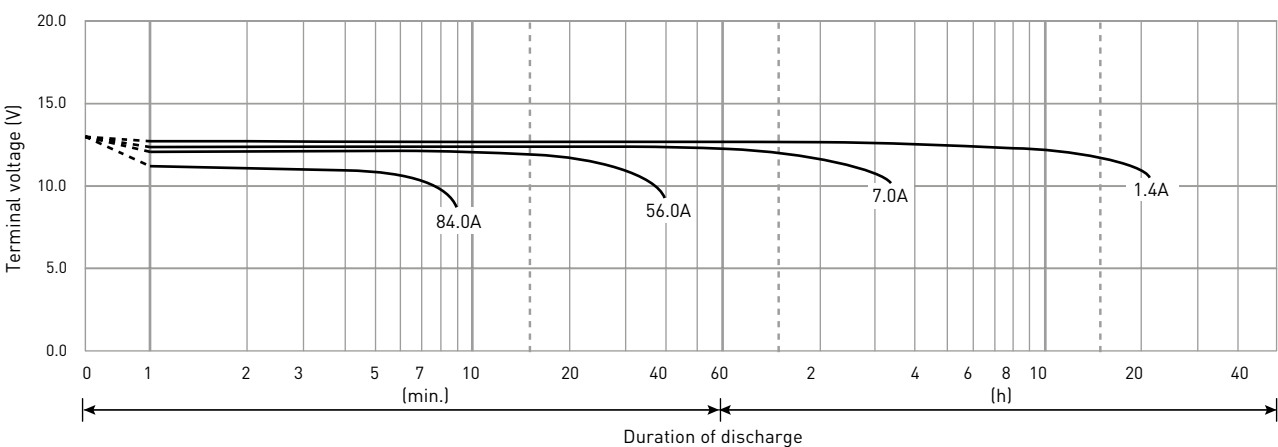
CONSTANT-VOLTAGE CONSTANT-CURRENT CHARGE CHARACTERISTICS FOR TRICKLE USE



DISCHARGE CAPACITY BY TEMPERATURE AND BY DISCHARGE CURRENT



DISCHARGE CHARACTERISTICS



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