



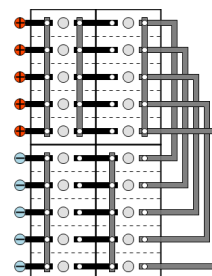
## VTX 1 L 1400 - Cell data sheet

### Classification

|                          |              |
|--------------------------|--------------|
| Brand                    | Alcad        |
| Cell type                | VTX 1 L 1400 |
| Cell P/N                 | 310559981    |
| Capacity at 5 hours rate | 1.400 Ah     |
| IEC Designation          | KGL1400P     |
| According to             | IEC 62259    |



Wiring principle



Crosswise

### Physical data

|                |        |                 |         |
|----------------|--------|-----------------|---------|
| Overall height | 411 mm |                 |         |
| Cell height    |        |                 |         |
| Width          | 195 mm | Weight per cell | 57,5 Kg |
| Length         | 437 mm |                 |         |

### Construction

|                    |                 |                           |                                           |
|--------------------|-----------------|---------------------------|-------------------------------------------|
| Container material | Polypropylene   | No. of terminals/polarity | 5                                         |
| Separator type     | Felt            | Terminal material         | Steel                                     |
| Connection torque  | 30,0 +/- 3,0 Nm | Vent type                 | Low pressure flame arresting vent (large) |
| Terminal size      | M10 SW 16 mm    | Handle                    | Yes                                       |

### Plates

| Positive       |                         | Negative       |                         |
|----------------|-------------------------|----------------|-------------------------|
| Type of plates | Maintenance Free Pocket | Type of plates | Maintenance Free Pocket |

### Electrolyte

|                              |             |                   |       |
|------------------------------|-------------|-------------------|-------|
| Electrolyte type: Renewal    | E13         | Max/Min           | 50 mm |
| Electrolyte type: Initial    | E22         | Vent oil quantity |       |
| Electrolyte per cell: Liquid | 14,5 liters |                   |       |

### Connection

|                                          |        |                              |        |
|------------------------------------------|--------|------------------------------|--------|
| Cable area of internal connection cables | 70 mm² | End-lug (and external cable) | 50 mm² |
|------------------------------------------|--------|------------------------------|--------|



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### Charging

|                      |             |                         |             |
|----------------------|-------------|-------------------------|-------------|
| Float voltage        | 1,42 V/Cell | High rate voltage (min) | 1,45 V/Cell |
| Single-level voltage | 1,42 V/Cell |                         |             |

### Resistance/Short circuit

|                     |           |                       |        |
|---------------------|-----------|-----------------------|--------|
| Internal resistance | 0,17 mOhm | Short circuit current | 7843 A |
|---------------------|-----------|-----------------------|--------|

### Performance data

#### Current discharge

After prolonged float charge of fully charged cells. Available amperes at +20°C +/- 5°C (+68°F +/- 9°F)

| V/Cell | 10h | 8h  | 5h  | 3h  | 2h  | 1,5h | 1h  | 30m | 20m   | 15m   | 10m   | 5m    | 1m    | 30s   | 5s    | 1s    |
|--------|-----|-----|-----|-----|-----|------|-----|-----|-------|-------|-------|-------|-------|-------|-------|-------|
| 1      | 146 | 180 | 280 | 451 | 587 | 672  | 790 | 960 | 1.046 | 1.109 | 1.168 | 1.287 | 1.288 | 1.410 | 1.664 | 1.824 |
| 1,05   | 144 | 178 | 277 | 408 | 511 | 579  | 660 | 786 | 856   | 882   | 931   | 1.022 | 1.081 | 1.173 | 1.393 | 1.521 |
| 1,1    | 140 | 172 | 257 | 353 | 427 | 469  | 529 | 630 | 680   | 711   | 747   | 804   | 886   | 968   | 1.149 | 1.239 |
| 1,14   | 133 | 158 | 218 | 275 | 329 | 364  | 407 | 476 | 517   | 553   | 595   | 673   | 698   | 774   | 919   | 978   |

#### Power discharge

Available power (W), after prolonged float charged of fully charged cells at +20°C +/- 5°C (+68°F +/- 9°F)

| V/Cell | 10h | 8h  | 5h  | 3h  | 2h  | 1,5h | 1h  | 30m | 20m   | 15m   | 10m   | 5m    | 1m    | 30s   | 5s    | 1s    |
|--------|-----|-----|-----|-----|-----|------|-----|-----|-------|-------|-------|-------|-------|-------|-------|-------|
| 1      | 169 | 206 | 313 | 482 | 614 | 695  | 807 | 970 | 1.052 | 1.113 | 1.170 | 1.287 | 1.288 | 1.410 | 1.664 | 1.824 |
| 1,05   | 168 | 205 | 314 | 450 | 554 | 622  | 704 | 831 | 903   | 929   | 979   | 1.073 | 1.135 | 1.232 | 1.462 | 1.597 |
| 1,1    | 164 | 200 | 296 | 400 | 479 | 524  | 587 | 696 | 750   | 783   | 822   | 885   | 975   | 1.065 | 1.264 | 1.363 |
| 1,14   | 156 | 185 | 255 | 319 | 379 | 418  | 467 | 544 | 590   | 630   | 678   | 767   | 795   | 883   | 1.048 | 1.116 |



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### Kt Factor

#### Current discharge

After prolonged float charge of fully charged cells. Kt factor at +20°C +/- 5°C (+68°F +/- 9°F)

| V/Cell | 10h  | 8h   | 5h   | 3h   | 2h   | 1,5h | 1h   | 30m  | 20m  | 15m  | 10m  | 5m   | 1m   | 30s  | 5s   | 1s   |
|--------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 1      | 9,6  | 7,76 | 5,00 | 3,11 | 2,39 | 2,08 | 1,77 | 1,46 | 1,34 | 1,26 | 1,20 | 1,09 | 1,09 | 0,99 | 0,84 | 0,77 |
| 1,05   | 9,7  | 7,89 | 5,06 | 3,43 | 2,74 | 2,42 | 2,12 | 1,78 | 1,64 | 1,59 | 1,50 | 1,37 | 1,29 | 1,19 | 1,01 | 0,92 |
| 1,1    | 10,0 | 8,12 | 5,45 | 3,97 | 3,28 | 2,98 | 2,65 | 2,22 | 2,06 | 1,97 | 1,87 | 1,74 | 1,58 | 1,45 | 1,22 | 1,13 |
| 1,14   | 10,5 | 8,84 | 6,41 | 5,08 | 4,26 | 3,85 | 3,44 | 2,94 | 2,71 | 2,53 | 2,35 | 2,08 | 2,01 | 1,81 | 1,52 | 1,43 |

#### Power discharge

Kt factor power, after prolonged float charged of fully charged cells at +20°C +/- 5°C (+68°F +/- 9°F)

| V/Cell | 10h  | 8h   | 5h   | 3h   | 2h   | 1,5h | 1h   | 30m  | 20m  | 15m  | 10m  | 5m   | 1m   | 30s  | 5s   | 1s   |
|--------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 1      | 8,30 | 6,79 | 4,47 | 2,90 | 2,28 | 2,01 | 1,73 | 1,44 | 1,33 | 1,26 | 1,20 | 1,09 | 1,09 | 0,99 | 0,84 | 0,77 |
| 1,05   | 8,35 | 6,84 | 4,45 | 3,11 | 2,53 | 2,25 | 1,99 | 1,68 | 1,55 | 1,51 | 1,43 | 1,30 | 1,23 | 1,14 | 0,96 | 0,88 |
| 1,1    | 8,55 | 6,98 | 4,72 | 3,50 | 2,93 | 2,67 | 2,39 | 2,01 | 1,87 | 1,79 | 1,70 | 1,58 | 1,44 | 1,32 | 1,11 | 1,03 |
| 1,14   | 8,97 | 7,55 | 5,49 | 4,40 | 3,70 | 3,35 | 3,00 | 2,57 | 2,37 | 2,22 | 2,06 | 1,83 | 1,76 | 1,59 | 1,34 | 1,26 |