



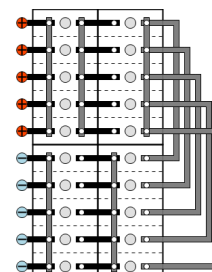
## VTX 1 L 1300 - Cell data sheet

### Classification

|                          |              |
|--------------------------|--------------|
| Brand                    | Alcad        |
| Cell type                | VTX 1 L 1300 |
| Cell P/N                 | 310559881    |
| Capacity at 5 hours rate | 1.300 Ah     |
| IEC Designation          | KGL1300P     |
| According to             | IEC 62259    |



Wiring principle



Crosswise

### Physical data

|                |        |                 |         |
|----------------|--------|-----------------|---------|
| Overall height | 411 mm |                 |         |
| Cell height    |        |                 |         |
| Width          | 195 mm | Weight per cell | 54,4 Kg |
| Length         | 412 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 | 13,6 liters |                   |       |

### Connection

|                                          |                    |                              |                    |
|------------------------------------------|--------------------|------------------------------|--------------------|
| Cable area of internal connection cables | 70 mm <sup>2</sup> | End-lug (and external cable) | 50 mm <sup>2</sup> |
|------------------------------------------|--------------------|------------------------------|--------------------|



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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 | 0,19 mOhm | Short circuit current | 7282 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      | 135 | 168 | 260 | 419 | 545 | 624  | 733 | 892 | 971 | 1.030 | 1.084 | 1.195 | 1.196 | 1.309 | 1.545 | 1.694 |
| 1,05   | 134 | 165 | 257 | 379 | 474 | 537  | 613 | 730 | 795 | 819   | 865   | 949   | 1.004 | 1.089 | 1.293 | 1.412 |
| 1,1    | 130 | 160 | 238 | 328 | 396 | 436  | 491 | 585 | 631 | 660   | 694   | 747   | 823   | 899   | 1.067 | 1.151 |
| 1,14   | 124 | 147 | 203 | 256 | 306 | 338  | 378 | 442 | 480 | 513   | 552   | 625   | 648   | 719   | 853   | 909   |

#### 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      | 157 | 191 | 291 | 448 | 570 | 645  | 749 | 901 | 977 | 1.034 | 1.086 | 1.195 | 1.196 | 1.309 | 1.545 | 1.694 |
| 1,05   | 156 | 190 | 292 | 417 | 514 | 578  | 653 | 772 | 838 | 863   | 909   | 996   | 1.054 | 1.144 | 1.358 | 1.483 |
| 1,1    | 152 | 186 | 275 | 371 | 444 | 486  | 545 | 646 | 696 | 727   | 764   | 822   | 905   | 989   | 1.173 | 1.266 |
| 1,14   | 145 | 172 | 237 | 296 | 352 | 388  | 433 | 505 | 548 | 585   | 630   | 712   | 739   | 820   | 973   | 1.036 |



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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 |