

# sealed maintenance-free lead-acid **TECHNOCELL** battery **TCL series**



## TCL 28-12W

Batteries made in **AGM technology** - electrolyte is absorbed in highly porous fiber glass separators placed between the plates. One-way, self-regulating pressure relief valves prevent the case from blowing up, by preventing excessive buildup of pressure in the cells. They have a low internal resistance, which means a longer working time.

### MAIN APPLICATIONS

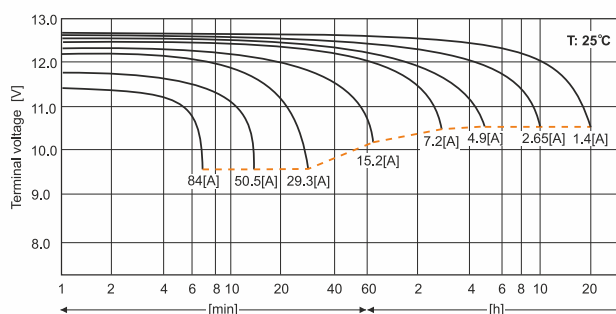
- uninterruptible power supplies
- cash registers and fiscal printers
- telecommunication PABX
- marine
- fire and security systems
- emergency lighting systems
- golf-carts, wheelchairs
- solar powered systems

### TECHNICAL DATA

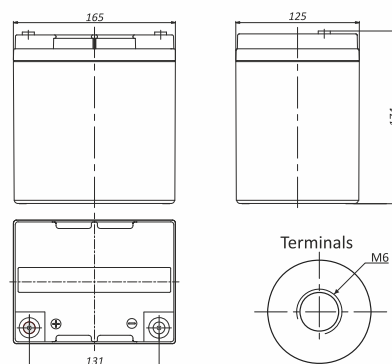
|  |  |
|--|--|
| Nominal voltage                          | 12 V                                   |
| Nominal capacity                         | 28Ah/C <sub>20</sub> 1,75V/cell @25°C  |
| Designed life                            | 10-12 years @ 20°C<br>6-8 years @ 25°C |
| Weight                                   | ~ 8,8 kg                               |
| Internal resistance                      | ~ 9 mΩ*                                |
| <b>Dimensions</b>                        |  |
| Height                                   | 174 mm                                 |
| Length                                   | 165 mm                                 |
| Width                                    | 125 mm                                 |
| <b>Charging voltage @ 25°C</b>           |  |
| Standby use                              | 13,7 V - 13,9 V (-18mV/°C)             |
| Cycle use                                | 14,6 V - 14,8 V (-24mV/°C)             |
| <b>Charging current</b>                  |  |
| Recommended                              | 2,8 A                                  |
| Maximum                                  | 8,4 A                                  |
| Max. discharge current (5s)              | 280 A                                  |
| <b>Ambient nominal temperature range</b> |  |
| Storage                                  | -20°C - 60°C                           |
| Charge                                   | 0°C - 50°C                             |
| Discharge                                | -20°C - 60°C                           |
| <b>Container material</b>                |  |
| Standard                                 | ABS UL 94-HB                           |
| Optional                                 | ABS UL 94-V0                           |

\*for a fully charged battery

### DISCHARGE CHARACTERISTICS



### DIMENSIONS



Tolerance: +/- 1mm

#### Constant current discharge (Current [A], 25 [°C] / 77 [°F])

| U <sub>f</sub><br>[V/cell] | Discharge time |        |        |       |       |       |      |      |      |      |      |      |
|----------------------------|----------------|--------|--------|-------|-------|-------|------|------|------|------|------|------|
|                            | 5 min          | 10 min | 15 min | 30min | 1h    | 2h    | 3h   | 4h   | 5h   | 8h   | 10h  | 20h  |
| 1,75                       | 72,07          | 55,09  | 42,10  | 25,71 | 14,63 | 9,49  | 7,22 | 5,88 | 4,89 | 3,26 | 2,65 | 1,40 |
| 1,70                       | 80,44          | 60,19  | 45,25  | 26,90 | 15,18 | 9,83  | 7,44 | 6,03 | 5,01 | 3,31 | 2,69 | 1,42 |
| 1,65                       | 89,16          | 65,38  | 48,31  | 28,15 | 15,69 | 10,17 | 7,65 | 6,20 | 5,14 | 3,36 | 2,73 | 1,44 |

#### Constant power discharge (Power [W/cell], 25 [°C] / 77 [°F])

| U <sub>f</sub><br>[V/cell] | Discharge time |        |        |       |       |       |       |       |      |      |      |      |
|----------------------------|----------------|--------|--------|-------|-------|-------|-------|-------|------|------|------|------|
|                            | 5 min          | 10 min | 15 min | 30min | 1h    | 2h    | 3h    | 4h    | 5h   | 8h   | 10h  | 20h  |
| 1,75                       | 126,4          | 98,96  | 76,92  | 48,16 | 27,99 | 18,26 | 13,97 | 11,42 | 9,52 | 6,41 | 5,23 | 2,77 |
| 1,70                       | 138,0          | 106,2  | 81,47  | 49,87 | 28,88 | 18,83 | 14,34 | 11,67 | 9,73 | 6,49 | 5,29 | 2,80 |
| 1,65                       | 149,5          | 113,3  | 85,70  | 51,66 | 29,66 | 19,37 | 14,68 | 11,95 | 9,95 | 6,58 | 5,37 | 2,83 |

U<sub>f</sub> - Final voltage

