

# NiCd D Cell 4Ah Batteries

## Description

Mackwell Nickel Cadmium (NiCd) type D cell 4Ah batteries have been developed especially for Emergency Lighting applications, designed to a high quality to provide a 4 year life as required by EN 60598-2-22 and ICEL1001, when operated within the temperature ranges specified in this document.

The batteries are available in a variety of configurations and are supplied with red and black 'flying lead' wire assemblies with either shrouded spade terminals or 2-pin polarised plugs to allow simple push-in connection to our Emergency control modules. For quick and simple installation the batteries are provided with end caps or in some cases mounted on a metal plate.



- High-temperature cells rated for continuous use at +55°C
- High Energy retention
- Designed to provide 3 hour duration over a 4 year life
- Welded connections between cells
- Simple connection using leads having either a polarised plug or push-on spade terminals
- Provided with plastic end caps or mounted on metal plate for simple installation
- Available in various configurations
- Recyclable construction
- High quality design complying with IEC/EN 61951-1

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Batteries should not be stored in a discharged state and a maximum storage time of three years in an ambient temperature of +25°C is recommended. If this is exceeded it may be necessary to fully charge and discharge the batteries several times to restore their full working capacity.

If using a battery pack not supplied by Mackwell, ensure that it is correctly rated for the application.

## General Specifications:

|                              |   |
|------------------------------|---|
| Nominal single cell voltage: | 1.2V  |
| Case temperature range *:    | +10°C to +55°C  |
| Rated minimum capacity:      | 4Ah   |
| Single cell dimensions:      | 62mm long x 32mm diameter (Typical)                                   |
| Single cell weight:          | 120g (Typical)  |
| Battery spade terminals:     | 6.3 x 0.8mm (positive), 4.7 x 0.5mm (negative) welded to ends of cell |
| End cap fixing clearance:    | 4mm   |

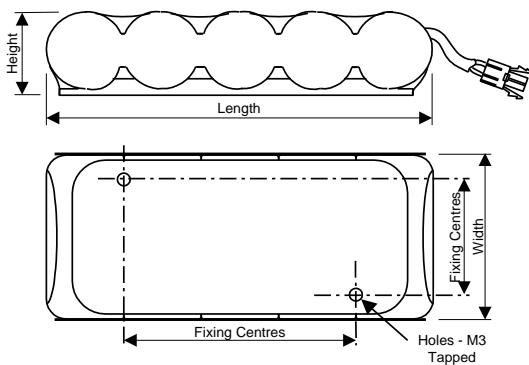
\* It is important that the specified temperatures are not exceeded or the operational life of the cells will be reduced.

## Battery Configurations:

The following tables show the variety of battery configurations that are available:

| D Type Cells: Side By Side Packs |                                       |             |             |
|----------------------------------|---------------------------------------|-------------|-------------|
| <b>Catalogue Number:</b>         | <b>B215</b>                           | <b>B217</b> | <b>B219</b> |
| <b>No. of Cells</b>              | 3                                     | 4           | 5           |
| <b>Nominal Volts</b>             | 3.6V                                  | 4.8V        | 6.0V        |
| <b>Length x Width (mm)</b>       | 100 x 65                              | 135 x 65    | 165 x 65    |
| <b>Height (mm)</b>               | 35                                    | 35          | 35          |
| <b>Fixing Centres (mm)</b>       | 40 x 32                               | 40 x 64     | 40 x 96     |
| <b>Weight (g)</b>                | 450                                   | 600         | 700         |
| <b>Connection method</b>         | 2-pin polarised plug                  |             |             |
| <b>Connecting cable length</b>   | 250mm                                 |             |             |
| <b>Mounting scheme</b>           | Mounting plate (with M3 tapped holes) |             |             |

## Side by side configuration on mounting plate



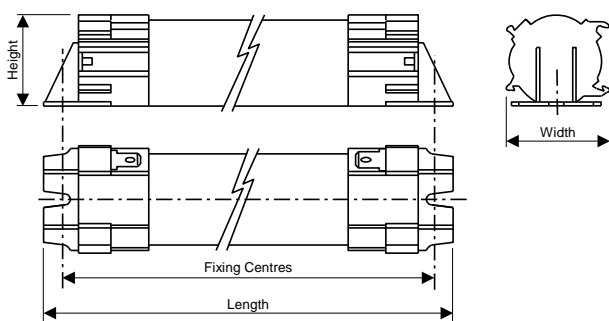
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| D Type Cells: Single Sticks |                 |          |          |          |          |
|-----------------------------|-----------------|----------|----------|----------|----------|
| Catalogue Number:           | B613            | B644     | B616     | B618     | B778     |
| No. of Cells                | 2               | 3        | 4        | 5        | 6        |
| Nominal Volts               | 2.4V            | 3.6V     | 4.8V     | 6.0V     | 7.2V     |
| Length x Width (mm)         | 155 x 38        | 215 x 38 | 275 x 38 | 335 x 38 | 395 x 38 |
| Height (mm)                 | 35              | 35       | 35       | 35       | 35       |
| Fixing Centres (mm)         | 140             | 200      | 260      | 320      | 380      |
| Weight (g)                  | 300             | 400      | 600      | 650      | 700      |
| Connection method           | Spade terminals |          |          |          |          |
| Connecting cable length     | 500mm           |          |          |          |          |
| Mounting scheme             | End caps        |          |          |          |          |

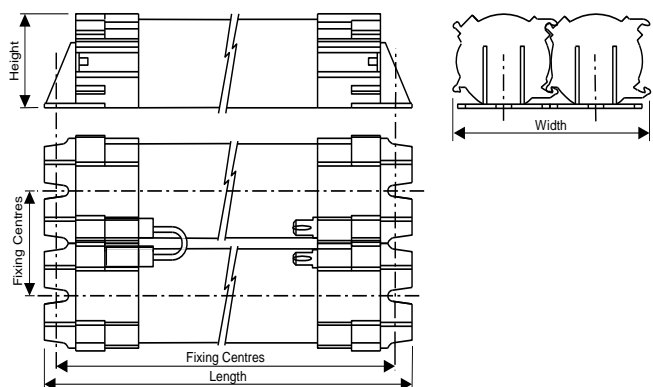
| D Type Cells: Twin Sticks |            |                 |          |          |          |          |          |
|---------------------------|------------|-----------------|----------|----------|----------|----------|----------|
| Catalogue Number:         | B422*      | B824            | B624*    | B776     | B576*    | B812     | B633     |
| No. of Cells              | 1 + 1      | 2 + 2           | 2 + 2    | 3 + 3    | 3 + 3    | 4 + 4    | 5 + 5    |
| Nominal Volts             | 2.4V       | 4.8V            | 4.8V     | 7.2V     | 7.2V     | 9.6V     | 12.0V    |
| Length x Width (mm)       | 70 X 76    | 155 X 76        | 128 X 76 | 215 X 76 | 187 X 76 | 275 X 76 | 335 X 76 |
| Height (mm)               | 37         | 35              | 40       | 35       | 40       | 35       | 35       |
| Fixing Centres (mm)       | 50         | 37 X 140        | 100      | 37 X 200 | 160      | 37 X 260 | 37 X 320 |
| Weight (g)                | 300        | 550             | 600      | 850      | 850      | 1100     | 1200     |
| Connection method         | 2-pin plug | Spade terminals |          |          |          |          |          |
| Connecting cable length   | 250mm      | 500mm           |          |          |          |          |          |
| Mounting scheme           | End caps   |                 |          |          |          |          |          |

\*Note that B422, B624 & B576 batteries use different end caps with a central fixing location.

## Single stick configuration drawing



## Twin stick configuration drawing (B824, B776, B812 & B633)



We reserve the right to alter specifications without prior notice.