

# BTX 12-45 LS

## 12V-45,2Ah



### Features

- High purity lead calcium grid plates to prolong service life and enhance corrosion resistance
- Low resistance microporous glass fibre separators, AGM VRLA spill resistant design
- One way, self- regulating pressure relief valve allows gas to escape and prevents the ingress of oxygen
- High conductivity, leak resistant female terminal thread for ease of installation
- Heat sealed lid to box weld for superior integrity
- Flame arrestors for added safety

### Electrical Specification

|                                              |           |
|----------------------------------------------|-----------|
| Nominal Voltage                              | 12V       |
| 20-hr rate Capacity to 1.75V/cell at 20°C    | 45,2 Ah   |
| 10-hr rate Capacity to 1.75V/cell at 20°C    | 43,7 Ah   |
| 10-min rate Constant Power 1.6V/cell at 20°C | 194 Watts |

### Dimensions

|                                     |          |
|-------------------------------------|----------|
| Lenght                              | 197,5 mm |
| Width                               | 165,5 mm |
| Height                              | 170 mm   |
| Height over terminals               | 170 mm   |
| Min height required above terminals | 150 mm   |
| Weight (typical)                    | 14,8 kg  |

### Terminal Type

|                          |        |
|--------------------------|--------|
| Female threaded terminal | 6 mm   |
| Torque                   | 8,5 Nm |

### Internal Resistance

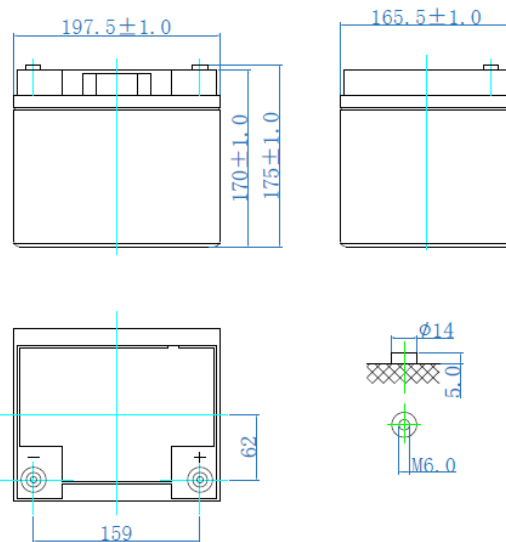
|                           |        |
|---------------------------|--------|
| Impedance (fully charged) | 6,1 mΩ |
|---------------------------|--------|

### Charge Voltage

|                                                                                            |                    |
|--------------------------------------------------------------------------------------------|--------------------|
| Float charge voltage at 20°C                                                               | 2.217~2.317 V/cell |
| Float charge voltage temperature correction factor<br>(for variations from standard 20°C)  | -3,3 mV/Cell/°C    |
| Cyclic (or Boost) charge voltage at 20°C                                                   | 2.425~2.475V/cell  |
| Cyclic charge voltage temperature correction factor<br>(for variations from standard 20°C) | -5 mV/Cell/°C      |
| Charge Current                                                                             |                    |
| Maximum charge current limit                                                               | 13,5 A             |
| Remote Degassing Facility                                                                  | No                 |
| Degassing Tube Diameter                                                                    | - mm               |

### Operating Temperature Range

|                                   |                 |
|-----------------------------------|-----------------|
| Storage (fully charged condition) | -20 °C to 60 °C |
| Charge                            | -10 °C to 60 °C |
| Discharge                         | -20 °C to 60 °C |



### Storage

|                                          |     |
|------------------------------------------|-----|
| Capacity loss in storage at 20°C / month | 3 % |
|------------------------------------------|-----|

### Case Material

|                 |                                  |
|-----------------|----------------------------------|
| Standard option | Top cover UL94:V0 / container HB |
|-----------------|----------------------------------|

### Design Life

|                                           |          |
|-------------------------------------------|----------|
| EUROBAT Classification (High Performance) | 10 years |
|-------------------------------------------|----------|

### Maximum Discharge Current

|                       |             |
|-----------------------|-------------|
| 1 Second              | 450 A (5 s) |
| 1 Minute              | 158 A       |
| Short Circuit Current | 1920 A      |

### Standards

Compliant with:  
BS 6290-4: 1997  
BS EN 60896-21: 2004  
BS EN 60896-22: 2004

### Constant Current Discharge - Amps at 20°C (in MINUTES)

| V/cell | 5   | 10   | 15   | 20   | 25   | 30   | 35   | 40   | 45   | 50   | 55   | 60   | 90   |
|--------|-----|------|------|------|------|------|------|------|------|------|------|------|------|
| 1,6    | 158 | 111  | 87,8 | 70,2 | 60,3 | 53,1 | 47,2 | 43   | 39,8 | 36,3 | 33,4 | 31   | 22,7 |
| 1,63   | 153 | 108  | 85,5 | 68,4 | 58,7 | 51,7 | 46   | 42   | 38,8 | 35,4 | 32,6 | 30,2 | 22,2 |
| 1,65   | 149 | 105  | 83,2 | 66,5 | 57,2 | 50,4 | 44,8 | 40,9 | 37,8 | 34,6 | 31,8 | 29,5 | 21,7 |
| 1,7    | 140 | 98,4 | 78,7 | 62,9 | 54   | 47,7 | 42,4 | 38,7 | 35,9 | 32,8 | 30,3 | 28,1 | 20,6 |
| 1,75   | 130 | 92,9 | 74,1 | 59,2 | 50,9 | 44,9 | 40   | 36,7 | 34   | 31,1 | 28,7 | 26,7 | 19,6 |
| 1,8    | 124 | 89,3 | 71,5 | 57,4 | 49,4 | 43,7 | 39   | 35,7 | 33,2 | 30,3 | 28   | 26,1 | 19,2 |

### Constant Current Discharge - Amps at 20°C (in HOURS)

| V/cell | 2    | 3    | 4    | 5    | 6    | 7    | 8    | 9    | 10   | 12   | 20   |
|--------|------|------|------|------|------|------|------|------|------|------|------|
| 1,6    | 18,1 | 13,2 | 10,8 | 9,17 | 8,06 | 7,12 | 6,32 | 5,69 | 5,12 | 4,26 | 2,43 |
| 1,63   | 17,7 | 12,9 | 10,5 | 8,94 | 7,87 | 6,95 | 6,17 | 5,55 | 5,02 | 4,18 | 2,41 |
| 1,65   | 17,3 | 12,6 | 10,3 | 8,75 | 7,69 | 6,79 | 6,03 | 5,43 | 4,93 | 4,11 | 2,38 |
| 1,7    | 16,5 | 11,9 | 9,8  | 8,32 | 7,32 | 6,46 | 5,74 | 5,17 | 4,73 | 3,97 | 2,32 |
| 1,75   | 15,6 | 11,3 | 9,26 | 7,91 | 6,95 | 6,13 | 5,45 | 4,91 | 4,55 | 3,82 | 2,26 |
| 1,8    | 15,4 | 11,1 | 9,07 | 7,74 | 6,8  | 6    | 5,34 | 4,8  | 4,37 | 3,69 | 2,21 |

### Constant Power Discharge - Watts per Cell at 20°C (in MINUTES)

| V/cell | 5   | 10  | 15  | 20  | 25   | 30   | 35   | 40   | 45   | 50   | 55   | 60   | 90   |
|--------|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|
| 1,6    | 281 | 194 | 156 | 125 | 106  | 93,3 | 82,4 | 74,6 | 68,5 | 63,2 | 58,8 | 55,1 | 38,8 |
| 1,63   | 275 | 190 | 153 | 122 | 104  | 91,8 | 81,1 | 73,4 | 67,5 | 62,2 | 58   | 54,3 | 38,2 |
| 1,65   | 269 | 187 | 152 | 120 | 102  | 90,3 | 79,8 | 72,3 | 66,5 | 61,3 | 57,1 | 53,6 | 37,7 |
| 1,7    | 257 | 179 | 146 | 116 | 99,6 | 87,3 | 77,2 | 70   | 64,4 | 59,5 | 55,5 | 52,1 | 36,7 |
| 1,75   | 245 | 172 | 140 | 112 | 95,9 | 84,2 | 74,6 | 67,8 | 62,4 | 57,7 | 53,8 | 50,5 | 35,5 |
| 1,8    | 233 | 165 | 135 | 108 | 92,2 | 81,2 | 72   | 65,4 | 60,3 | 55,8 | 52,2 | 49   | 34,5 |

### Constant Power Discharge - Watts per Cell at 20°C (in HOURS)

| V/cell | 2    | 3    | 4    | 5    | 6    | 7    | 8    | 9    | 10   | 12   | 20   |
|--------|------|------|------|------|------|------|------|------|------|------|------|
| 1,6    | 32   | 24,1 | 19,4 | 16,5 | 14,2 | 12,4 | 11,2 | 10,1 | 9,33 | 8,07 | 5,26 |
| 1,63   | 31,5 | 23,8 | 19,2 | 16,3 | 14   | 12,2 | 11   | 9,99 | 9,23 | 7,98 | 5,2  |
| 1,65   | 31,1 | 23,5 | 19   | 16,1 | 13,8 | 12,1 | 10,9 | 9,89 | 9,15 | 7,91 | 5,14 |
| 1,7    | 30,3 | 22,8 | 18,5 | 15,8 | 13,5 | 11,8 | 10,7 | 9,7  | 8,95 | 7,74 | 5,02 |
| 1,75   | 29,5 | 22,3 | 18   | 15,4 | 13,2 | 11,6 | 10,5 | 9,51 | 8,77 | 7,58 | 4,92 |
| 1,8    | 28,7 | 21,7 | 17,7 | 15   | 12,9 | 11,3 | 10,2 | 9,3  | 8,58 | 7,42 | 4,81 |