Combined electronic ballast and emergency lighting module
TC-DD compact fluorescent lamps

PC DD COMBO 220-240 V 50/60 Hz

Description:
Warm start fixed output, combined electronic high frequency ballasts and emergency lighting modules for compact fluorescent lamps.

Features:

Operation
• Pre-heat start in normal operation
• AC operation of lamps
• Deep discharge protection
• Regulated electronic charging circuit

Easy to Use
• Lightweight one piece unit
• Small size
• Simplified wiring
• No compatibility issues
• Push wire terminals
• Emergency testing by isolating only the unswitched supply

Safe and Reliable
• Automated manufacture using SMD and radial insertion
• Designed and manufactured to ISO 9001

3 h duration - Nicd 4.0 Ah D Cells

<table>
<thead>
<tr>
<th>Lamp</th>
<th>Ballast</th>
</tr>
</thead>
<tbody>
<tr>
<td>watt-</td>
<td>type</td>
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<tr>
<td>age W</td>
<td>type</td>
</tr>
<tr>
<td>1x28</td>
<td>TC-DD</td>
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Accu Nicd 4.0 Ah D Cells

<table>
<thead>
<tr>
<th>type</th>
<th>article number</th>
<th>type</th>
<th>number of cells</th>
<th>Charge indicator</th>
<th>article number</th>
</tr>
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<tbody>
<tr>
<td>Accu Ni-Cd 4A</td>
<td>89895961</td>
<td>stick</td>
<td>4</td>
<td>LED EM green (supplied separately)</td>
<td>89899605</td>
</tr>
<tr>
<td>Accu Ni-Cd 4B</td>
<td>89895977</td>
<td>side by side</td>
<td>4</td>
<td>high brightness green also available</td>
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</tbody>
</table>

Data sheet 03/08-161-2  We reserve the right to make technical changes without prior notice.
Normal operation:
Rated mains supply voltage	 220–240 V
Mains frequency	 50/60 Hz
Earth leakage current	 < 0.5 mA
Minimum lamp starting temperature	 -15°C
Lamp operating frequency	 > 42 kHz
Ballast lumen factor	 75%
Light output variation over rated voltage range	 ± 2%
Recharge period	 24 hours
Nominal charge current	 210 mA
Can be used with high brightness charge indicators (LEDs)

Emergency light output factor:
Ballast	 BLF
PC 1x28/34 DD COMBO 220-240V 50/60Hz	 12%

Lamp starting (normal operation):
Type of start: Pre-heat
Starting time: 2 seconds
Number of starts: circa 20,000

Restarting after lamp replacement:
Note: Before servicing luminaires the mains supply should always be disconnected.

If faulty lamps are changed with the mains connected they will restart automatically provided an interval of 2 seconds is left after removal.

Lamp starting (normal operation):
Type of start: Pre-heat
Starting time: 2 seconds
Number of starts: circa 20,000

Emergency operation:
Battery design voltage	 1.2 V per cell
Nominal discharge current (3 Hr. unit)	 1.1 A
Minimum lamp starting temperature	 0°C

Batteries:
Case temperature range (to ensure 4 years life)	 0°C to +55°C
Storage life (in temperate conditions)	 4 years

Mechanical details:
Case manufactured from polycarbonate.

LED charge indicator
• Green
• Mounting hole 6.5 mm dia
• Length of LED lead 750 mm (Bezel supplied fitted to LED)

Battery leads
• Quantity: 1 red and 1 black
• Length : 1300 mm
• Wire type: 0.5 mm² solid conductor
• Insulation temperature rating: 90°C

Termination 1
Push on 4.8 mm receptacle to suit battery spade fitted with insulating cover

Termination 2
9 mm stripped insulation

Batteries (stick):

Batteries (side by side):

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Electrical connections:
The combined unit must be connected to earth through the appropriate termination.

Terminal block type:
Push wire only with release mechanism

Terminal block capacity
0.5 to 1.5 mm² solid conductor

Wire strip length:
8.5 to 9.5 mm

Keep all leads as short as possible, maximum length 0.5 m

Batteries:
Connection method: 4.8 x 0.5 mm spade welded to end of cell

For the stick batteries this connection is accessible after the battery end caps have been fitted.
To inhibit inverter operation, only disconnect the batteries by removing the connector from the battery spade tags.

Service life:
Service life at maximum case temperature of +75 °C measured at designated tc point: 50,000 hours.

CE marking:
The combined units are CE marked for compliance with the low voltage directive. Certificates of compliance are available to allow luminaires to be CE marked for compliance with the EMC directive.

Packing quantities:
PC DD COMBO: 25 pieces/carton 200 pieces/carton
LED green: 25 pieces/bag
Accu Ni-Cd: 25 pieces/carton

Miniature circuit breakers (MCBs):
The maximum number of these electronic ballasts that may be used with miniature circuit breakers (MCBs). These quantities are based on single pole MCBs. For multi-pole MCBs derate by 20%.

<table>
<thead>
<tr>
<th>Type</th>
<th>Type C MCB rating</th>
<th>Type B MCB rating</th>
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<tbody>
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<td>10 A 16 A 20 A</td>
<td>10 A 16 A 20 A</td>
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<td>PC 1x28/34 DD COMBO 220-240V 50/60 Hz</td>
<td>24 36 44</td>
<td>12 18 22</td>
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