PHILIPS

dynalite

DTC602

Timeclock Installation Manual

contents

operating the DTC602

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Introduction

The DTC602 Time Clock provides a simple means of configuring the time related settings of a Dynalite installation. The timeclock attends to its management tasks completely in the background, automatically setting the correct operating modes of the control system for time of day, day of week etc., without adjustment or monitoring. Flexible override functions and Local Control Panels give the users of controlled areas the freedom to select different settings temporarily if required. This flexibility means that users can go about their normal day's activities, unaware of the fact that the lighting and energy consumption of the building are being managed. The timeclock will function as either a stand-alone lighting event controller or, in conjunction with remote sensors, give totally integrated control of lighting. With the use of timed scenes, PE cells, and motion detectors it becomes a powerful energy management system.
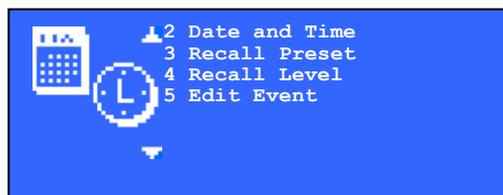
Controls
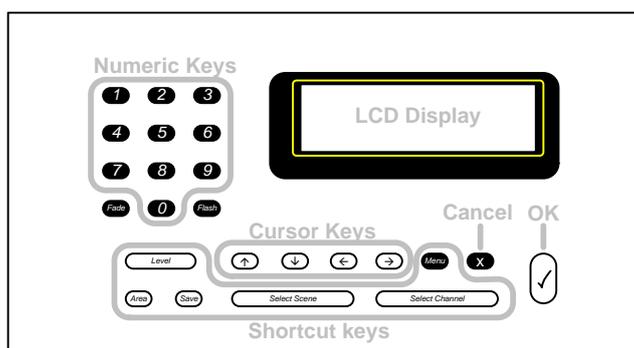
- The *LCD Display* shows screens of information that can be modified by the user.
- The *Numeric Keys* are used to enter numeric information and select menu items.
- The *Cursor Keys* are used to modify fields and navigate menus.
- The *Cancel Key* abandons changes that have been made to field values.
- The *OK key* accepts changes that have been made to field values.
- The *Shortcut Keys* can be used to access frequently used screens.
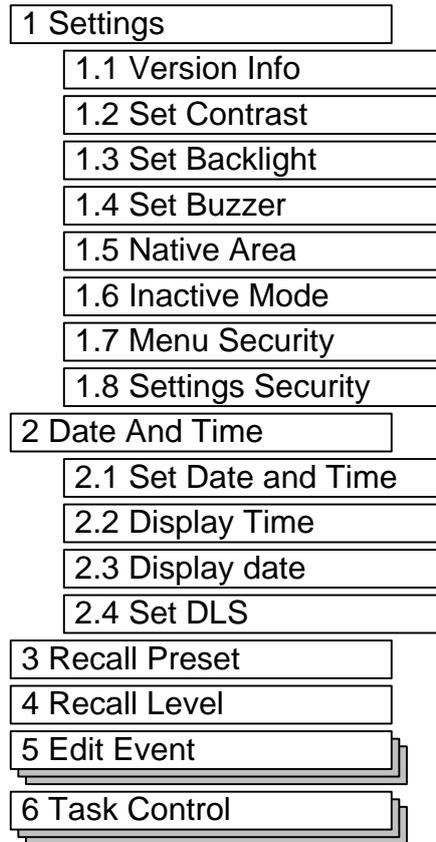
Menu

The DTC602 menu allows you to access the various screens of the product, using one of the following methods:

- A menu may be highlighted using the *cursor keys* ⬆ , ⬇ and the desired item may be selected by pressing the *OK key* ☑.
- If you know the menu item number it can be selected by pressing *Menu* Menu then the menu number. For example Menu , 1 , 4 will select the *Set Buzzer* screen.
- Frequently used Screens may be accessed using the *Shortcut Keys*.

Small arrows are displayed to the left of the list indicating that there are more menu items available off screen.

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Menu Map

1 Settings
1.1 Version Info
1.2 Set Contrast
1.3 Set Backlight
1.4 Set Buzzer
1.5 Native Area
1.6 Inactive Mode
1.7 Menu Security
1.8 Settings Security

2 Date And Time
2.1 Set Date and Time
2.2 Display Time
2.3 Display date
2.4 Set DLS

3 Recall Preset

4 Recall Level

| 5 Edit Event |
| --- |

6 Task Control

Fields

Fields that can be edited are marked with a dotted underscore.
This section explains the types of fields that appear on screen in this product. These fields are used to collect information and issue commands to the Dynalite system.

Fields can be highlighted (inverted) in an ordered sequence on the screen. The first field in the sequence is called the *Home* field and the last field in the sequence is called the *End* field.
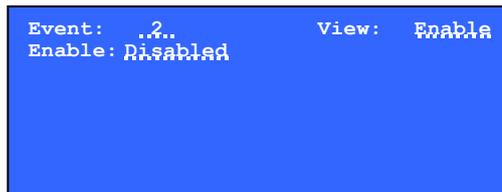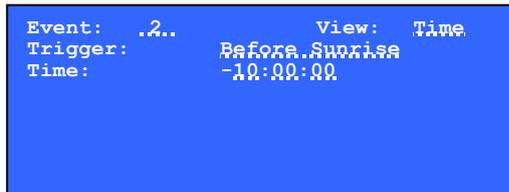
Home ⟶

```
Mode:  12 Hour
Time:  11:56 am
Day:   Thursday
Date:  20th Jan 2005
```

End ⟵
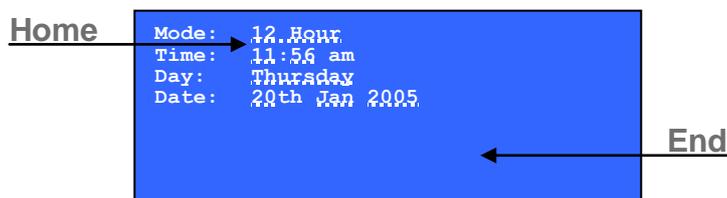
When a screen is displayed the home field is automatically highlighted, the next field can be highlighted using the *OK key* ⊘ and the previous field can be highlighted using the *Cancel key* ⊗ . When the *Cancel key* ⊗ is pressed while the home field is highlighted the previously displayed screen is shown and changes are discarded.

When the OK key ⊘ is pressed while the end field is highlighted, the previously displayed screen is shown and changes are saved (you will notice the end field will blink to indicate changes have been saved).

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Field Types

- *Numeric Field*: a numeric value can be directly entered using the *numeric keys*, or the value can be incremented with the *Up cursor* ⊕ or decremented using the *Down cursor* ⊕.
  If an incorrect value was entered wait 2 seconds and enter the desired value.
- List Field: an item from a list of options can be selected with the Up or down cursor keys. When the end of the list is encountered the list is cycled back to the beginning.
- Page Selector field: this field is similar to the List field however a change to the selected item cause changes to other fields displayed on the screen.
  More complex screens have multiple pages these pages may be navigated using the page selector field. An option to save or discard changes is also provided.

```
Event:    .2..        View:   Time
Trigger:      Before Sunrise
Time:        -10:00:00
```

```
Event:    .2..        View:    Enable
Enable: Disabled
```

Common Tasks

The settings described in this section can be easily configured by the manager of the system. For more advanced configurations see the screen reference section of this guide or contact your Dynalite trained technician.

Set the Time Clock

The time can be set from the Date and Time menu.

Press *Menu* (Menu) , 2 ❷ ,1 ❶ .

```
            ⊥ 2 Date and Time
              3 Recall Preset
              4 Recall Level
              5 Edit Event
```

- The **Mode** field sets the time display mode in 12 or 24hr time.
- The **Time** field sets the actual time.
- The **Day** field sets the day of the week.
- The **Date** field sets the calendar date.

Press *Menu* (Menu) , 2 ❷ ,4 ❹ .

```
Mode:    12 Hour
Time:    11:56 am
Day:     Thursday
Date:    20th Jan 2005
```

- The **DLS** field enables or disables the daylight savings (summer time) feature.
- The **Beg** field sets the date and time when the daylight savings period begins.
- The **End** field sets the date and time when the daylight savings period ends.
- The **Adj** field sets the number of minutes to advance the clock when the daylight savings period begins.

```
DLS: Enabled
Beg: Last Sun Oct 2:00am
End: Last Sun Mar 2:00am
Adj: 60 minutes
```
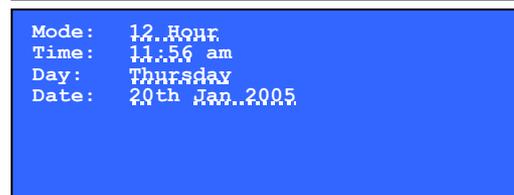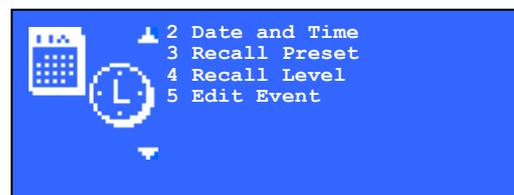
Note, that the time displayed on all screens is expressed in local time, i.e. adjusted for daylight savings.

Run a task

Tasks are sequences of commands that form the automatic functions of your Dynalite system; they are created by the Dynalite trained technician who commissioned your system.

For example a *Dusk Task* may be configured in your system. It's job is to switch on all outdoor lighting, and raise the indoor lighting level gradually to compensate for the lack of natural light.

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Tasks can be run manually by selecting the *Task Control* menu item

Press *Menu* Menu , 6 ❻ .

- The **Task** field is used to select the task
  control(your technician can provide a list
- The **Action** field is used to select the

  select *Start* to run a task, and press OK⊘.
- The screen indicates the current state of
  complex tasks can take some time to
  This shows when a task is complete.

```
Task:   .1..    Action:  Start

                Stopped
```
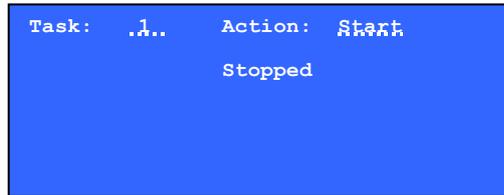
number to
of tasks).
operation

the task,
execute.

Enable or disable an Event

You may want to prevent a scheduled event from running on a particular day.
For example a event is configured in your system to water the lawn each evening at 10pm. You are planning
to have a party and want to ensure the watering system does not ruin your party.

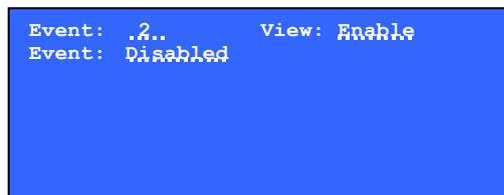Events can be disabled from the Edit event menu item.

Press *Menu* Menu , 5 ❺ .

- The **Event** field is used to select the event
  control (your technician can provide a list
- The **View** field is used to select the page,

  enable Here, and press OK⊘.
- The **Event** field is used to select the
  state of the event.

```
Event:   .2..          View:    Time
Trigger:        ..At.Time
Time:           10:00.00.pm
```

number to
of tasks).
select

```
Event:   .2..        View: Enable
Event:  Disabled
```

enabled

Recall a preset

The DTC602 can be used to recall a preset in any area of the system.

Press menu Menu , 3 ❸ .

- The **Area** field sets the area number to
- The **Preset** field sets the preset number
  issued.
- The preset will be issued after a short

  after you press OK ⊘.

```
Area:   .4
Preset: .6
```

control.
that will be

delay or

Note. The **Area** field may not be displayed on this
the native area of the panel has been set to a fixed area. This can be changed from the menu 1.5

screen if

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Security Settings

The screens of the DTC602 are can be protected by enabling the security settings. The screens are partitioned into two levels of security as follows.

```
            1 Settings
                    1.1 Version Info
                    1.2 Set Contrast
                    1.3 Set backlight
                    1.4 Set Buzzer
                    1.5 Native Area
                    1.6 Inactive mode
                    1.7 Menu Security
                    1.8 Settings security
            2 Date And Time
                    2.1 Set date and time
                    2.2 Display time
                    2.3 Display all
                    2.4 Set DLS
            3 Recall Preset
            4 Recall Level
            5 Edit Event
            6 Task Control
```

These partitions can be protected with an access code, giving the following security options:

- Users without an access code can access all menu items
- Users without an access code can access only those menu items that are not shaded
- Users without an access code cannot access any menu items

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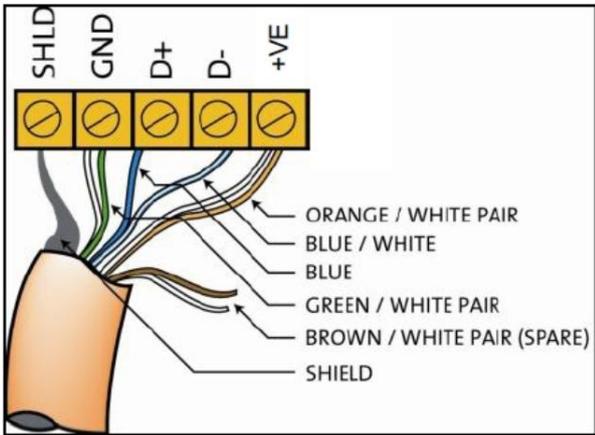
Serial Cable Connections

There is one RS485 port for DyNet signals, in the form of a RJ12 socket, on the front panel, which is used for the temporary connection of a PC or a Portable Programmer. There are data terminals on the control card, for permanent connections. The recommended cable for connections to the serial port is screened, stranded RS485 data cable with three twisted pairs. Recommended cable types include:

Beldon:	9503
Garland:	MCP3S
Hartland:	HCK603
M&M Cable:	B2003CS
M&M Cable:	B9503CS
Multicables:	AWM E120236 2092 20
RS Components:	368-687

One pair is paralleled for GND, one pair paralleled for +VE, and one pair used for DATA+ and DATA-.

Recommended Cable Colour Coding

Green/White pair	paralleled for GND
Orange/White pair	paralleled for +VE
Blue/White pair	Blue for DATA+
	White for DATA-
Brown/White pair	Spare or for Join

The colour-coding scheme used is not critical, as long as the same scheme is used throughout the installation.

Serial Cable Connecting Method

The recommended connecting method is to 'daisy chain' devices (ie. starting at the first device, then looping in then out of devices, with a single cable terminating at the last device. There should not be any spurs or stubs, and only the first and last device should terminate 1 cable, all other devices should terminate 2 cables). Devices may be wired in any order. The Data Cable should be segregated from any Mains Cables by 30mm. A data cable that is connected to an energised dimmer is live. Do not cut or terminate live data cables. If the Data Cable has to cross over any Mains Cables, it should do so at a 90^0 angle.
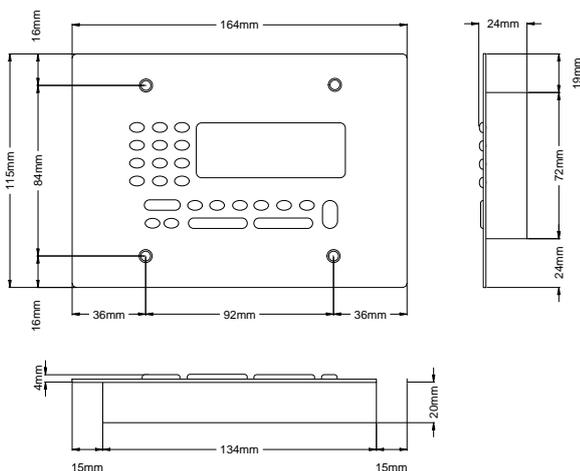
Connect Data Cable in a "Daisy Chain"
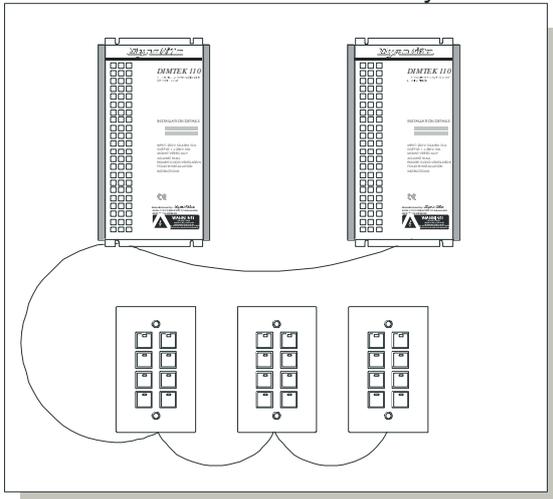
dimensions and specifications

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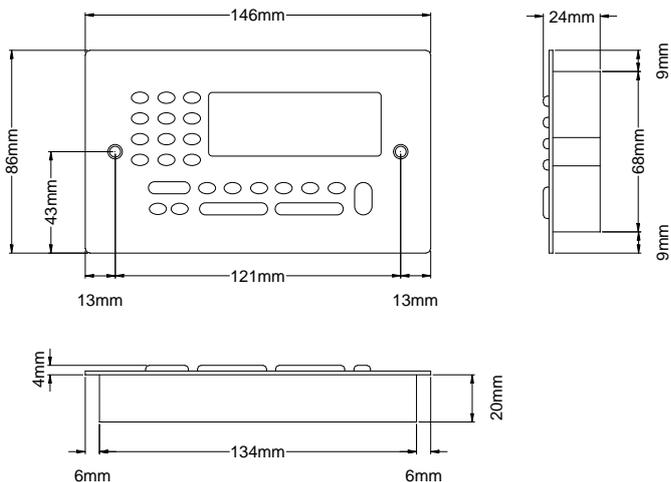
Mounting Methods

DTC602 - Use an Australian 3 gang wall box (not supplied) or 2 x C Clips (not supplied).

DTCE602 - Use the 2 gang wall box supplied with the product.

Dimensions - DTC602

Dimensions - DTCE602

specifications

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Supply
9-16V DC at 100mA from the DyNet network

Control IO
1 x RS485 DyNet serial port

User Controls
1 x 110 x 33 pixel rear lit LCD display
1 x 12 button LCD transport keys
1 x 12 button numeric keypad

Clock
365 day clock
Battery back up
Sunrise/Sunset tracking
Automatic daylight saving adjustment
250 timed events
64 tasks

Memory
All data stored in 100 year life EEPROM

Compliance
CE, C-Tick

Operating Environment
0º to 50ºC ambient temperature
0% to 95% RH non condensing

Construction
1.6mm stainless steel faceplate/body

Dimensions
DTC602:
H 115mm x W 164mm x D 24mm
DTCE602:
H 86mm x W 146mm x D 24mm

Weight
Packed weight 0.2kg