
Beacon Light Service for SIMATIC WinCC V7.5 or above

User manual

Version 1.0.0



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Abbreviations

The following abbreviations are used in this document:

BLS	Beacon Light Service
MS	Microsoft
SW	Software
WinCC RT	WinCC Runtime
Windows OS	Windows operatingsystem

Prerequisites

It is assumed that the readers of this manual have knowledge and experience of operating MS Windows at user level. Some topics will therefore not be described in detail, but will instead refer to other relevant MS Windows literature.

1. Introduction

This document is an operating manual intended for users of the Beacon Light Service SW package. In the following called BLS.

1.1 Beacon Light Service description

BLS is a specially developed software package, that visually shows alarms with different colorlight indication. BLS uses a specific beacon light tower connected to the WinCC RT PC's local USB port.

The HW- and SW requirements are as follows:

- The attached beacon light hardware must be of type:
 - Patlite LR6-USB
 - Description link: <https://www.patlite.com/product/detail0000000689.html>
- The SW can be used with the following WinCC V7.5 or above installation types:
 - StandAlone
 - Server
 - Client (fat client)
- The WinCC alarm Message Types used, must be configured with a "Central Signalling Device" tag.

The BLS SW package consists of the following modules:

1. **SIMATIC WinCC Beacon Light Service:**

This module is a Windows Service that runs in the background, whenever Windows OS is active.

WinCC RT must be started, in order to show alarm colorlights.

2. **Setup_BeaconColors.json file:**

A textfile in Json-format containing the setup information for the BLS to run correctly.

The following chapters describe the installation and configuration of the BLS package.

2. Installing the Beacon Light Service software package

2.1 Installation requirements

The BLS package has been tested with and supports the following:

Operating systems:

- MS Windows 10 Professional 64-bit
- MS Windows Server 2019 Standard 64-bit

Simatic WinCC:

- Simatic WinCC RT V7.5 or above

All the necessary files are installed in the following directory:

- C:\Program Files (x86)\Swappcon ApS\WinCC\Beacon Light

The BLS package must not be installed on:

- a PC without WinCC RT installed.
- a WebNavigator PC or WebUX device.

2.2 Installation on a WinCC RT PC

On the WinCC RT PC, the "setup.exe" file is activated on the installation medium:

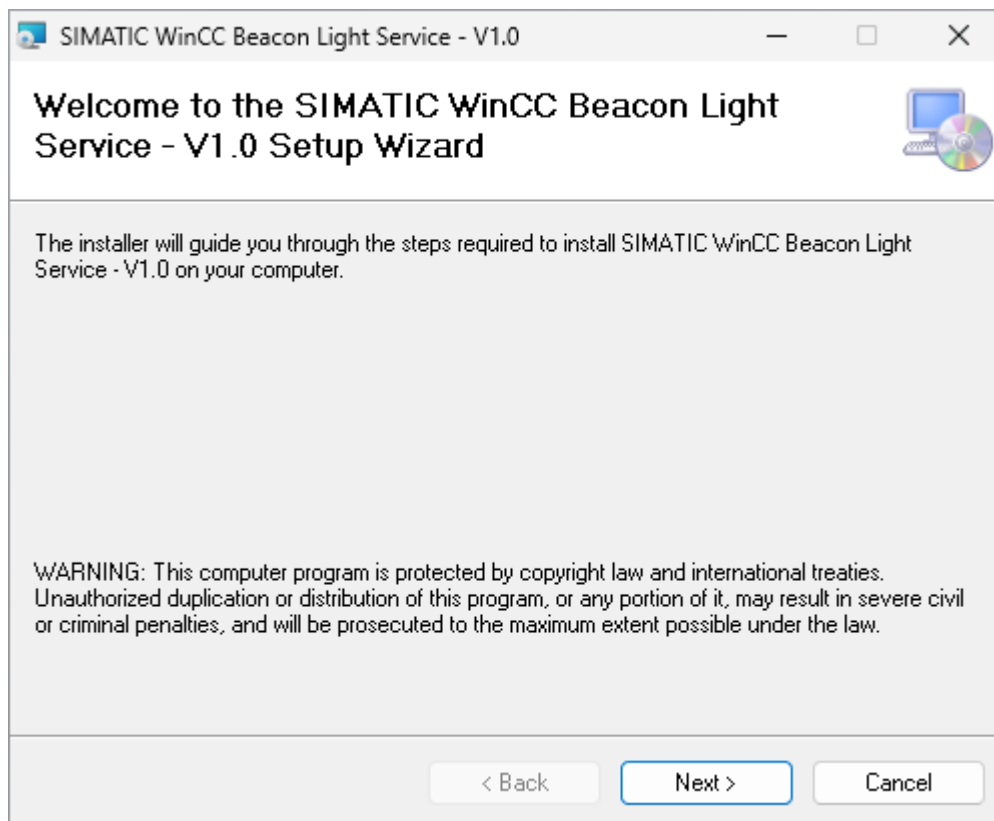


Figure 2.2.1: Installation program startup dialog.

Please press the "Next>" button.

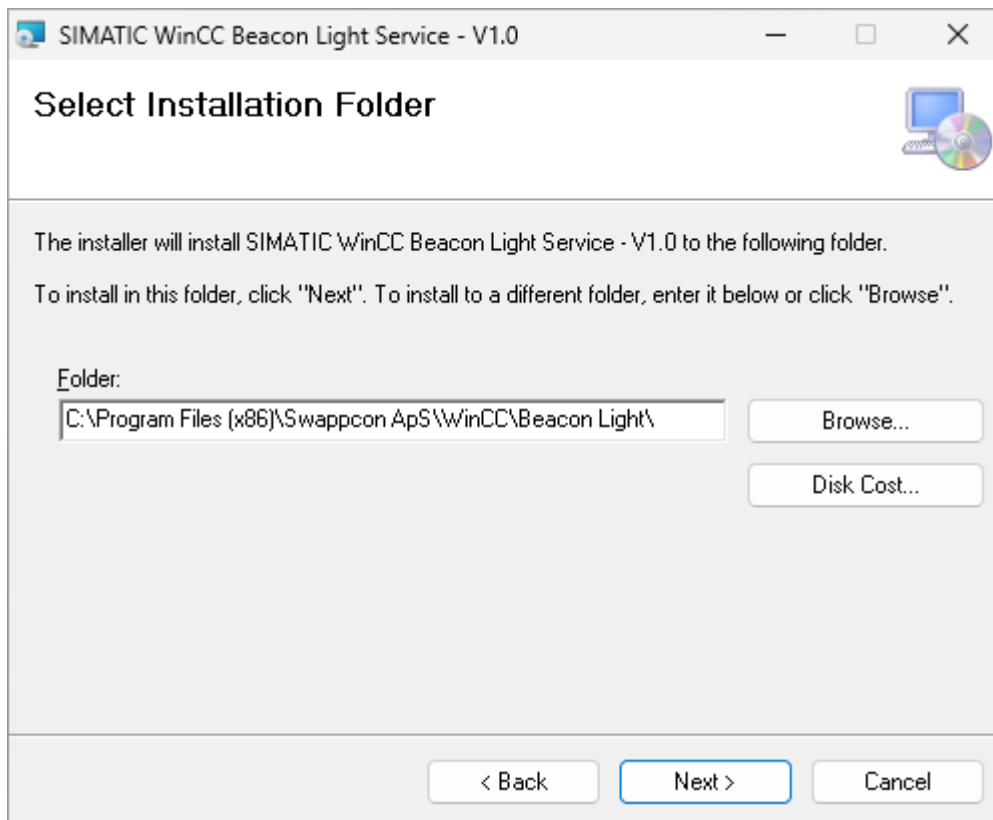


Figure 2.2.2: Installation directory dialog.

Please press the "Next>" button.

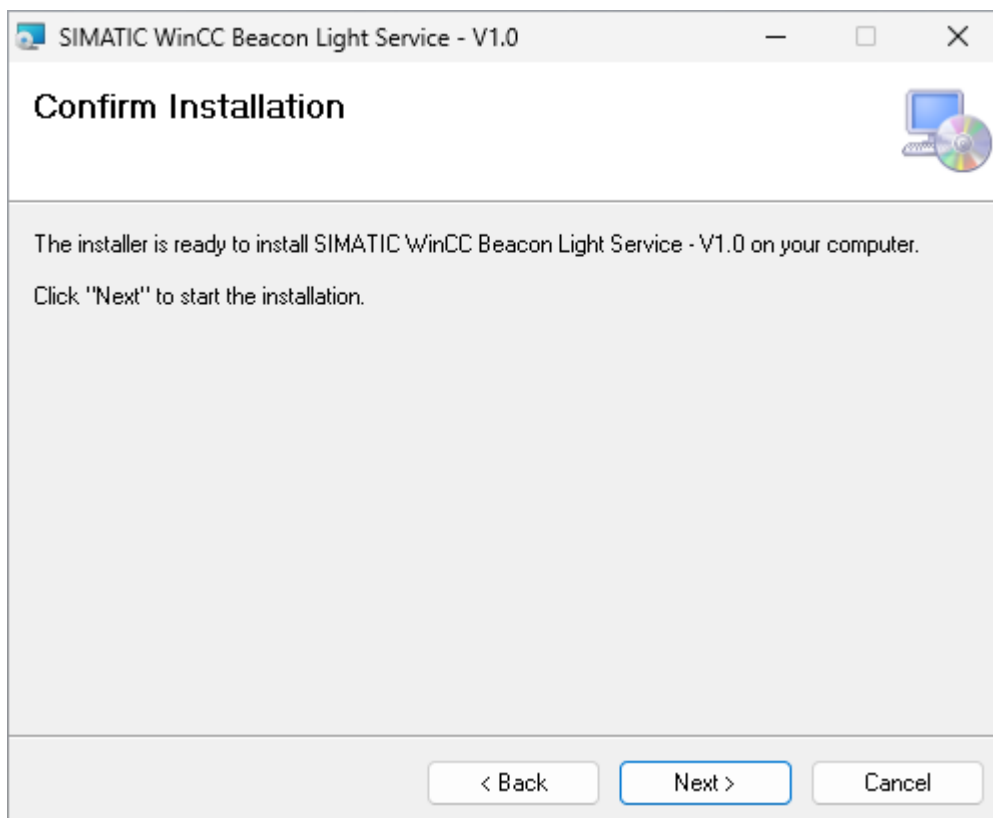


Figure 2.2.3: The installation program is ready for the installation itself.

Please press the "Next>" button.

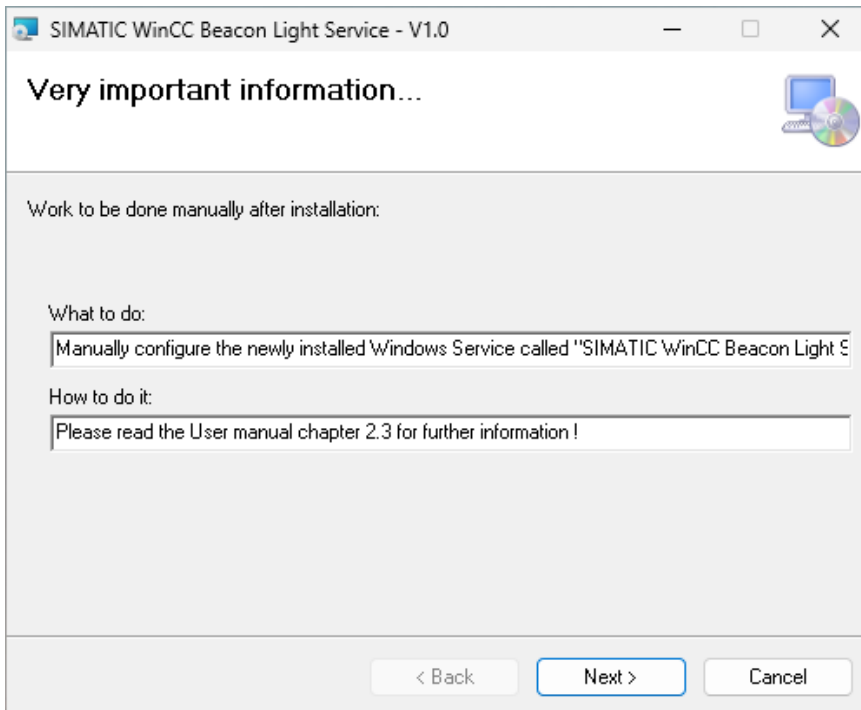


Figure 2.2.4: Installation program exit dialog.

Please press the "Next>" button.

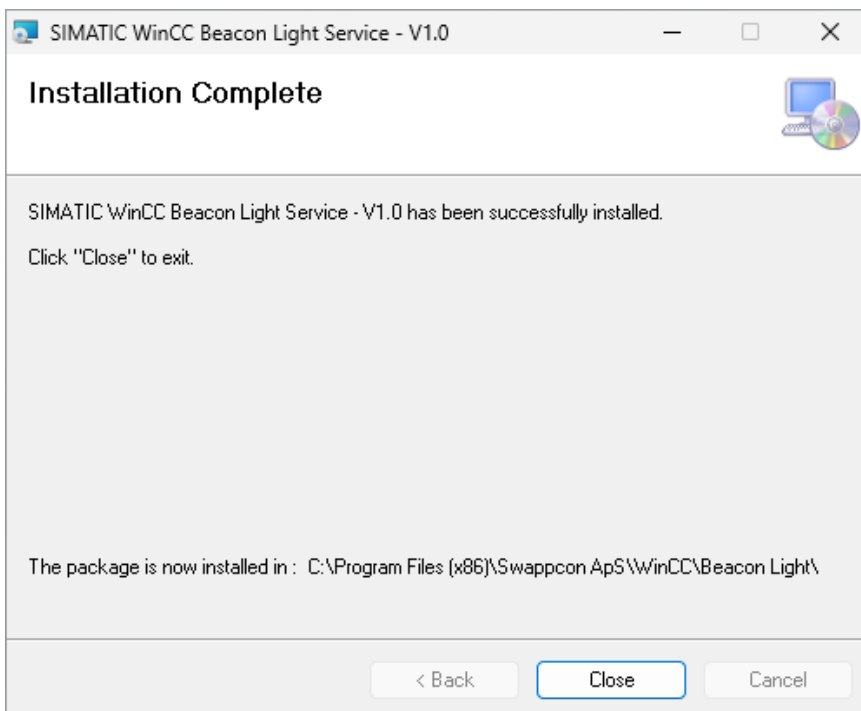


Figure 2.2.5: Installation program exit dialog.

After the installation process, the service must be configured and started manually, please read chapter 2.3 and chapter 3 ...

2.3 Important information about user rights for the service

The service is installed as a Windows service called:

- "SIMATIC WinCC Beacon Light Service"

This service application must run under a user account with the following Windows rights:

- Rights to write to the Windows Event Log system.
- Rights to shut down Windows services.

2.3.1 For installation on WinCC Standalone or WinCC Server:

The service must run under one of the following users:

- "Local System" user
- A user who is a member of the "SIMATIC HMI" user group.

2.3.2 For installation on a WinCC Client in a Multiuser system

On Client:

- The service must run under a user who is a member of the "SIMATIC HMI" group.

On Server:

- A user must be created on the WinCC Server PC with the same user name as the user on the Client PC. However, the user on the WinCC Server PC only needs to have "Guests" rights (belong to the "Guests" User Group).

3. Configure Beacon Light Service

3.1 Configuring BLS before first start

The service is dependant on a Json-configurationfile. A setup demo configuration file is installed in the installation directory:

- C:\Program Files (x86)\Swappcon ApS\WinCC\Beacon Light\Setup_BeaconColors.json

This Json-configurationfile must be edited and adapted to the users needs.
The file consists of the following information:

- configuration of up to 5 alarm colors, each indicated by a “Central Signalling Device” tagname.

```
{
  "Green": " CsdGreen",
  "Amber": "CsdAmber",
  "Red": "CsdRed",
  "White": "CsdWhite",
  "Blue": "CsdBlue"
}
```

Figure 3.1.1: Setup file example. Only text marked with blue color must be edited by the user !

The Json seup file can be edited using a standard text editor, f.ex. “Notepad”.

IMPORT:

It is VERY important that only the text marked with blue color is edited by the user !

The textlines configured in the setup file have the following characteristics:

Line	Blue text
"Green"	: "Central Signalling Device" tagname (Binary Tag) for green light indication
"Amber"	: "Central Signalling Device" tagname (Binary Tag) for amber light indication
"Red"	: "Central Signalling Device" tagname (Binary Tag) for red light indication
"White"	: "Central Signalling Device" tagname (Binary Tag) for white light indication
"Blue"	: "Central Signalling Device" tagname (Binary Tag) for blue light indication

Figure 3.1.1. is just an example of some testdata, and the tagnames are also just examples.
The user has free choice of tagnames in WinCC and in the Json-configurationfile.

A standard delivery of the Patlite Beacon Light Tower hardware consists of 3 colors (green, amber and red). It is possible to buy and add 2 extra colorunits to the light tower. These extra colors are white and blue. Description link: <https://www.patlite.com/product/detail0000000677.html>

The SW installation installs a default setup file with the following characteristics:

```
{
  "Green": " CsdGreen",
  "Amber": "CsdAmber",
  "Red": "CsdRed",
  "White": null,
  "Blue": null
}
```

where null indicates that the 2 extra colors are not available in the Beacon Light Tower hardware !

4. Log files : Information, Warnings and Errors

The BLS software writes information to the standard “Event Viewer” application in MS Windows. If the BLS does not work as expected, the user can seek information in the “Event Viewer” application to help solving the problem.

4.1. Using the “Event Viewer” application

4.1.1. Starting the “Event Viewer”

The application can be started in the following way:

1. Open a “Run” dialog in MS Windows.
2. Type “eventvwr.msc” and press the “OK” button.
3. Wait a moment while the application is initializing.
4. Expand the left treeview called “Applications and Services Logs”
5. Choose the log called “WinCC_BeaconLight_Log”

4.1.2. WinCC_BeaconLight_Log:

- This log contains information from the “SIMATIC WinCC Beacon Light Service”. Information is written everytime the service is started or stopped. Any errors will also be written to the log.