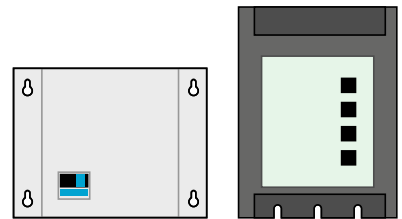# The PhilipsLM Driver

The PhilipsLM driver allows North to interface with a Philips LightMaster Modular (LMM) lighting management system. Available for Commander and ObSys.

This document relates to PhilipsLM driver version 1.1

Please read the *Commander Manual* or *ObSys Manual* alongside this document, available from *www.northbt.com*

Contents

Compatibility with the Philips System

The PhilipsLM driver allows North to interface with a Philips LightMaster Modular (LMM) lighting management system.

The driver connects to an IP network (Fig. 1), and can access up to seven Philips LightMaster area controllers. Each area controller provides lighting control for a discrete area, zone, or floor.

Each area controller is connected to a LON network of up to 100 Philips lighting control modules (LCM). Depending on the model of LCM, each can support lighting outputs, sensor inputs, and keypads.

An alternative driver is available for PC-based North devices. The LtMaster driver interfaces to an ECS Philips LightMaster system via CAN bus, using a CAN bus PCI-card.

Fig. 1 North to Philips LightMaster Modular
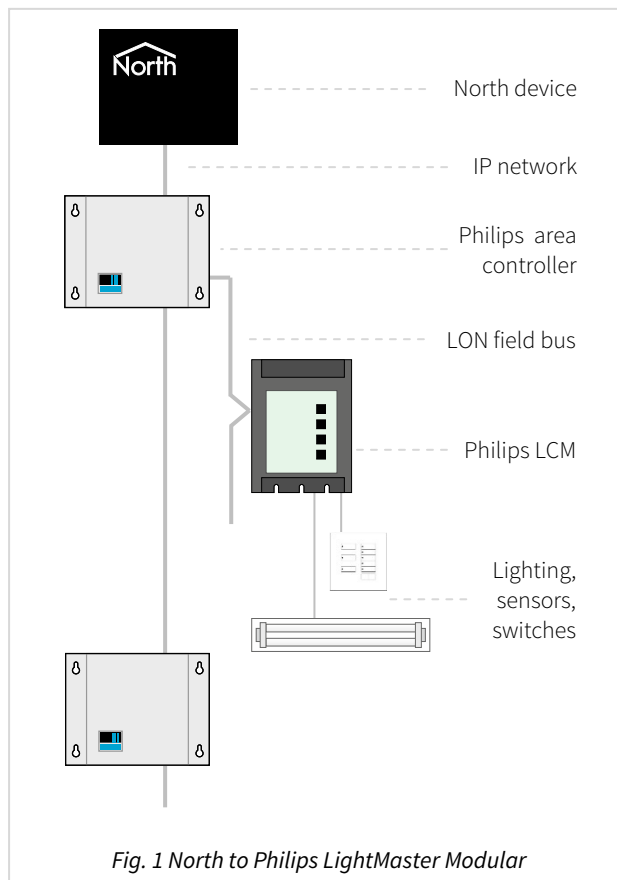
Equipment

The Philips LightMaster area controller model LFC5089/20, with TCP/IP enabled, is compatible with the driver. Software version 10.0 or later is supported, however version 12.2 provides the best experience.

Philips lighting control modules (LCMs) that are compatible with the driver include models: 9LS, 4LS, 4SI, LON_DALI, 4OUT, etc. Connect to these lighting outputs, occupancy sensors, light sensors, push buttons, and IR interfaces.

Values

Depending on the type of lighting and sensors connected, the driver can typically access the following values from an LCM:

- Input levels
- Output level
- Output scene
- Button press

Prerequisites

The Philips LMM system is typically configured using LightManager commissioning software. The area controller is assigned a static IP address, MAC address, area number, and a system database loaded.

An SHA-1 hash key is used to encrypt communication with the area controllers. This may need to be set within the controller by Philips.

If you are connecting to the Philips LightMaster Modular system via a firewall, then the driver will require access on UDP port 51783 to receive data, and UDP port 51784 (default) or 51782 (SHA-1 disabled) to send data.

Using the Driver

On ObSys and Commander, the driver is pre-installed. On all of these North devices, you can use the driver to create an interface to Philips. Once started, you will need to configure the driver before it can communicate with the Philips LMM system. On all of these North devices, you can use the driver to create an interface to Philips.

Starting the Interface

⌨ To start an interface using the PhilipsLM driver, follow these steps:

→ **Start Engineering** your North device using ObSys

→ Navigate to **Configuration, Interfaces,** and set an unused **Interface** to 'PhilipsLM' to start the interface

→ Navigate to the top-level of your North device and re-scan it

The driver setup object (M*c*), labelled **PhilipsLM Setup**, should now be available. If this object is not available, check an interface licence is available and the driver is installed.

Setting up the Driver

⌨ To set up the driver, follow these steps:

→ Navigate to the **PhilipsLM Setup** object (M*c*).

→ Navigate to **Area 1: Controller Setup** object (A1)

→ Set the **IP Address** object (IP) to the IP address of the Philips area controller

→ Set the **Area Number** object (N) to the area number set in the Philips area controller

Checking Communications

The driver polls each of the Philips area controllers in turn, requesting input and output status information. A single controller is polled every **Poll Rate**, as configured within the driver setup object.

You can check that the interface is communicating with an area controller by reading the **Last Response** object (LC). If communications are OK, a recent time and date should be shown.

Object Specifications

Once an interface is started, one or more extra objects become available within the top-level object of the device. As with all North objects, each of these extra objects may contain sub-objects, (and each of these may contain sub-objects, and so on) – the whole object structure is a multi-layer hierarchy. It is possible to navigate around the objects using the ObSys Engineering Software.

Each object is specified below, along with its sub-objects.

Example Object Reference

An example of a reference to an object in the same device: the Philips LM System object (S1) contains Area 1 (A1), which contains LCM 1 (L1). Within an LCM, there is an Input 1 Level (I1.V). Therefore, the object reference will be 'S1.A1.L1.I1.V'.

An example of a reference to an object in a different device: the IP network object (IP) contains Default Commander object (CDIP), which contains the object above (S1.A1.L1.I1.V) – therefore the complete object reference is 'IP.CDIP.S1.A1.L1.I1.V'.

Device Top-Level Objects

When an interface is started using the PhilipsLM driver, the objects below become available within the top-level object of the device. For example, if Interface 1 is started, then the object with references 'M1' and 'S1' become available.

Description	Reference	Type
PhilipsLM Setup Set up the PhilipsLM driver, started on interface *c* (*c* is the interface number)	M*c*	Fixed container: On the Commander platform this will be *[CDM v20\PhilipsLM v11]* On the ObSys platform this will be *[OSM v20\PhilipsLM v11]*
Philips LM System Access Philips LightMaster system connected to interface *c* (*c* is the interface number)	S*c*	Fixed container: *[PhilipsLM v11\System]*

PhilipsLM Driver Setup

Object Type: [OSM v20\PhilipsLM v11]
Object Type: [CDM v20\PhilipsLM v11]

The PhilipsLM driver contains the following objects:

Description	Reference	Type
Poll Rate (s) The driver requests status information periodically from each area controller, requesting an individual area every Poll Rate seconds	R	Obj\Num: 1…60000; Adjustable
SHA1 Authentication Disabled Disables SHA-1 hash encryption of messages between the North device and area controllers	M	Obj\NoYes; Adjustable
Area *x*: Controller Setup Add an area controller to the driver's configuration. The area number, *x*, is in the range 1…7.	A*x*	Fixed container: On the Commander platform this will be *[CDM v20\PhilipsLM v11\Area]* On the ObSys platform this will be *[OSM v20\PhilipsLM v11\Area]*

Area: Controller Setup

Object Type: [OSM v20\PhilipsLM v11\Area]
Object Type: [CDM v20\PhilipsLM v11\Area]

An Area Controller Setup object contains information required to access a Philips area controller (AC).

Description	Reference	Type
IP Address IP address of AC	IP	Obj\IP; Adjustable
Area Number Area number of AC	N	Obj\Num: 0…1000; Adjustable
Last Response Date & time message last received from AC	LC	Obj\DateTime
Disable Communications Temporarily disable communications to the AC. Use this to allow the controller to be re-programmed. On restarting the North device, the value will revert to 'No'.	DC	Obj\NoYes: Adjustable

Philips LM System

Object Type: [PhilipsLM v11\System]

The Philips LM System is a network of up to seven Philips LightMaster area controllers. Before you can access an area, configure the controller's information within the driver setup object.

Description	Reference	Type
Area *x* The Area, *x*, is a number in the range 1…7	D*x*	Fixed Container: *[PhilipsLM v11\Area]*

Area

Object Type: [PhilipsLM v11\Area]

An Area is a Philips LightMaster area controller. It contains a network of up to 100 lighting control modules (LCM).

Description	Reference	Type
DALI Error Count Count of DALI ballasts in a failed state for any reason	DE	Obj\Num: 0…65535
LCM *x* The LCM number, *x*, is a number in the range 1…100	LCM *x*	Fixed Container: *[PhilipsLM v11\LCM]*

LCM

Object Type: *[PhilipsLM v11\LCM]*

An LCM is a Philips LightMaster lighting control module. Depending on the model of LCM, each may support lighting outputs, sensor inputs, and/or keypads.

Description	Reference	Type
Status Shows the current status of the LCM itself	S	Obj\Enum: 0…5; Adjustable Values: 0=Unknown, 1=Happy, 2=Missing, 3=Unassigned, 4=Unhappy, 5=Insecure
Input x Level The input number, x, is in the range 1…16	Ix.V	Obj\Float: 0…100
Input x Alt Level Available for multi-sensor input devices, provides the level for the presence detector. The input number, x, is in the range 1…16	Mx.V	Obj\Float: 0…100
Output y Level The output number, y, is in the range 1…64	Oy.V	Obj\Float: 0…100; Adjustable
Output y Last Scene Last scene number of the output. The output number, y, is in the range 1…64	Oy.LS	Obj\Num: 0, 1…16
Last Button Pressed The last button pressed on keypad	LB	Obj\Num: 0, 1…256, 65535 Values: 0=All off, 1..256=Button number, 65535=None pressed
Button n: Press Send a switch-on or switch-off button press. The button number, n, is in the range 1…256	Bn	Obj\OffOn; Adjustable-only
All Buttons: Set off Send a switch-off button press to all buttons	B0	Obj\OffOn; Adjustable-only

Driver Versions

Version	Build Date	Details
1.0	1/5/2008	Driver released
1.1	29/10/2012	DALI Error Count and scene information added
1.1	21/3/2013	Added object to disable communications to an area controller
1.1	31/3/2016	Fixed issue with MAC address on local device

Next Steps…

If you require help, contact support on 01273 694422 or visit *www.northbt.com/support*

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Document issued 06/12/2016.