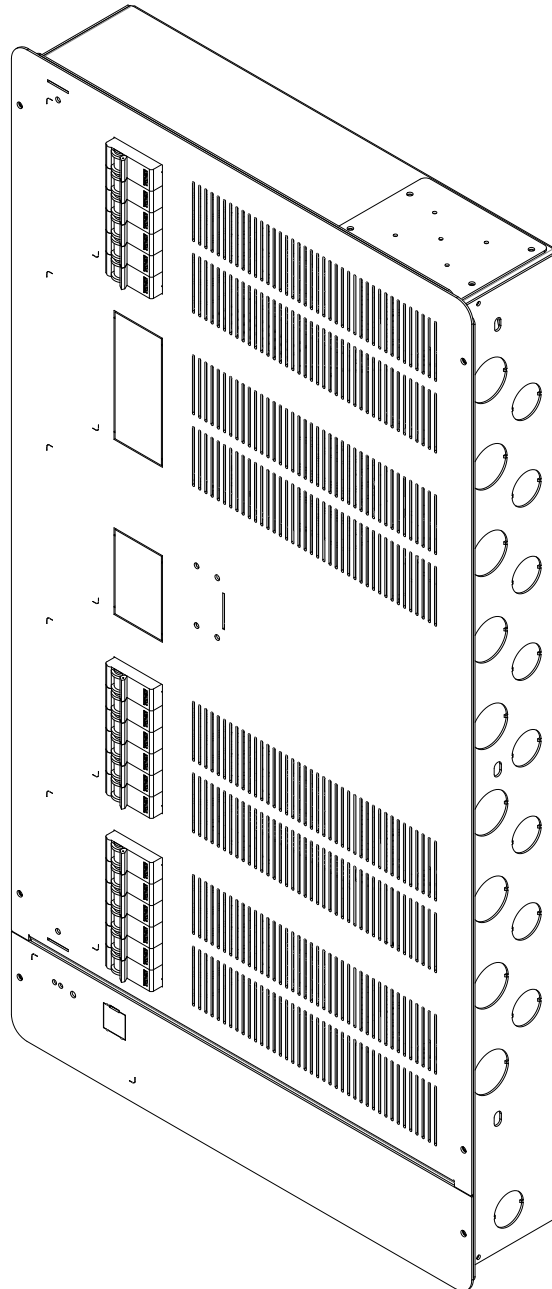

DMC4

Dynalite Modular Controller (4 Output Modules) Installation Instructions



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WARNING

ISOLATE FROM MAINS SUPPLY BEFORE TERMINATING OR ADJUSTING ANY TERMINALS. NO SERVICEABLE PARTS INSIDE. SERVICE BY QUALIFIED PERSONNEL ONLY.

Important Safeguards

Read the Instructions – We recommend that you read this instruction manual prior to commencement of installation. Do not energize the DMC4 until all steps of the installation procedure on page 6 are complete.

Compliance – The temperature limits and carrying capacity of communication wires must comply with HD 384.5.523 and the installation of home and building automation and control systems must comply with HD 60364-4-41. The network topology for installation is Daisy Chain.

Special Programming – Once assembled, powered and terminated correctly, this device will operate in basic mode. A new Philips Dynalite user interface on the same network will turn all output lighting channels on from button 1 and off from button 4 allowing testing of network cables and terminations. Advanced functions and custom presets can then be configured via the EnvisionProject commissioning software.

If commissioning services are required, contact your local distributor for details.

Power Sources – This device should only be operated from the type of supply specified on installed modules. This device *must* be earthed.

High Voltage Insulation Test – Do not apply High Voltage Insulation Test to any circuitry connected to the dimming system, as damage to the electronics may result.

Mounting Location – This device must be mounted upright on a vertical surface (refer to page 4 for mounting instructions). The specified minimum clearance of 200mm (8”) for **all** sides must be adhered to. Install in a dry, well-ventilated location.

Audible Noise – Controllers may emit some audible noise such as humming or relay chatter. Take this into account when deciding the mounting location.

Data Cable – The recommended cable for connections to the serial port is screened stranded RS485 compatible CAT-5E data cable with three twisted pairs. Refer to the installation instructions for the communication module for more cabling information. This cable must be segregated from mains and Class 1 cables as per local electrical code. If anticipated cable runs are over 300 m (1000 ft) for serial cables, consult your dealer for advice. Do not cut or terminate live data cables.

Features

- **Four Control Module Locations**

Wide range of interchangeable control modules available to meet the capacity and control type needs of any project.

Modules supplied separately.

The DMC4 is only compatible with Philips Dynalite modules.

- **Communication Module**

Allows the controller to be used with a variety of supported protocols.

- **Convection Cooled**

The DMC4 is ventilated, and requires no active cooling system when installed in accordance with these instructions.

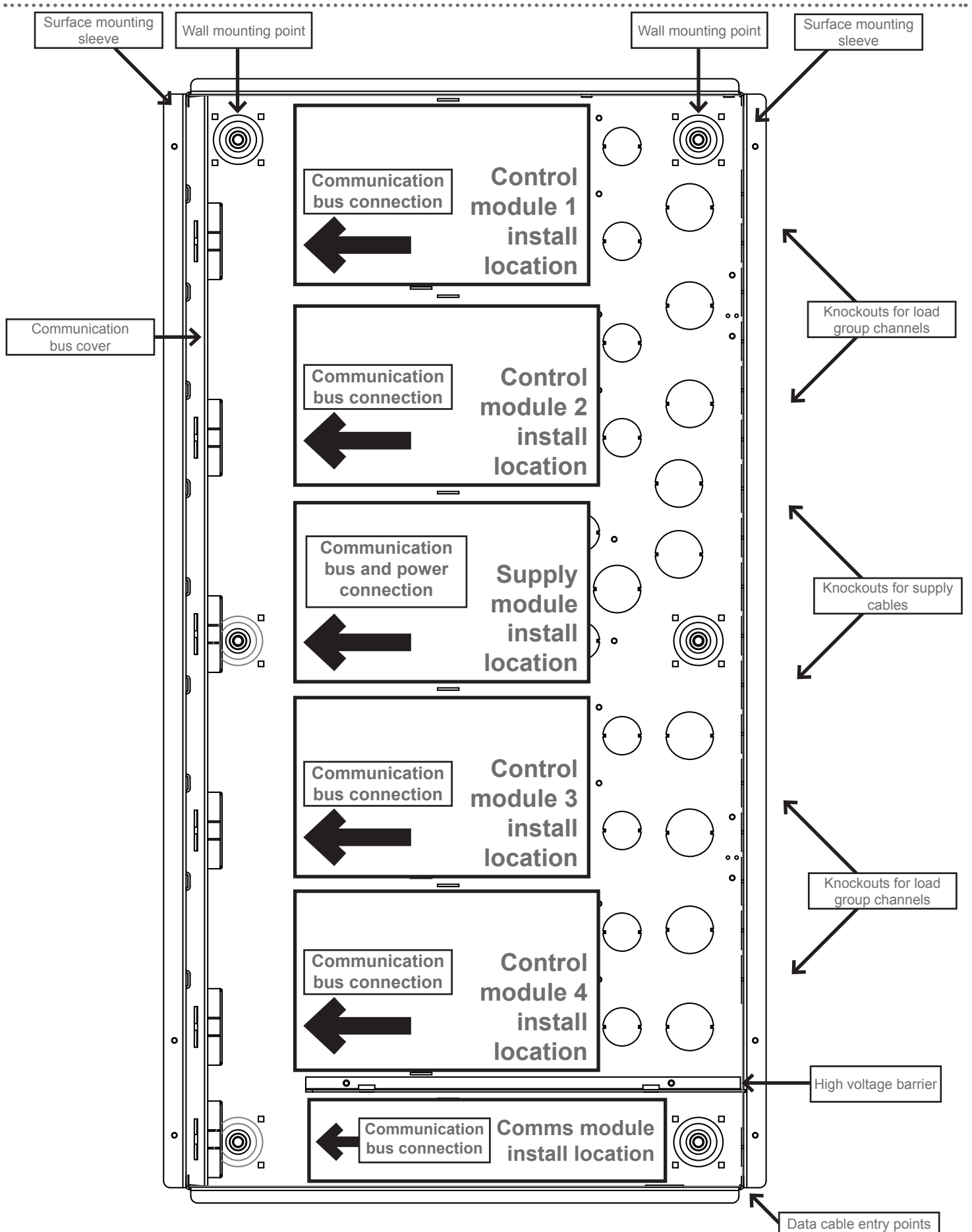
- **Multiple Control Options**

The DMC4 is designed to operate as part of a network system that can be structured to meet the project's needs.

- **Simple Installation**

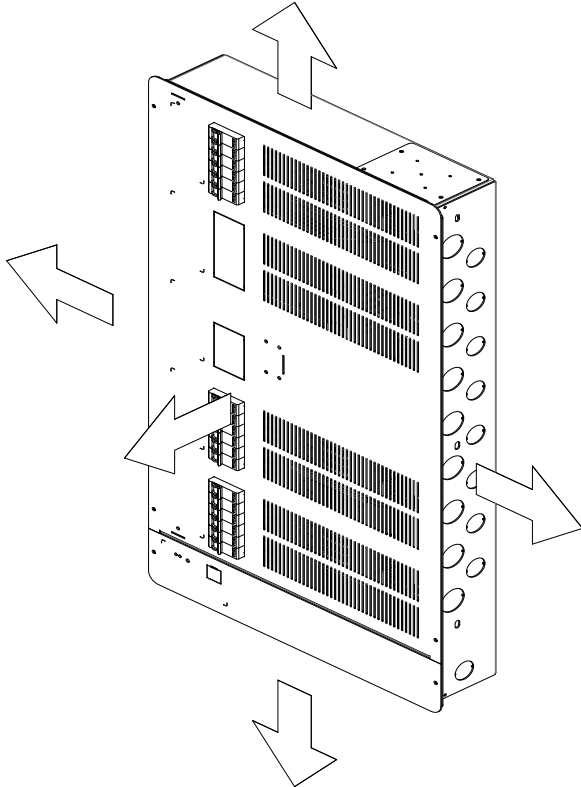
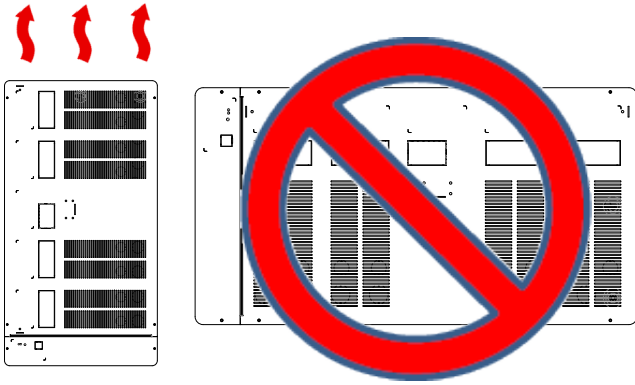
The enclosure is suitable for both surface and recess mount. Cabling knockouts for supply and load cables are provided at the top, side and back of the enclosure for supply and load cables. Cabling knockouts for Control cables (Class 2 / SELV) are located at the bottom of enclosure.

Internal View



For spare parts, please call your nearest Philips Dynalite Customer Service Centre.

Mounting



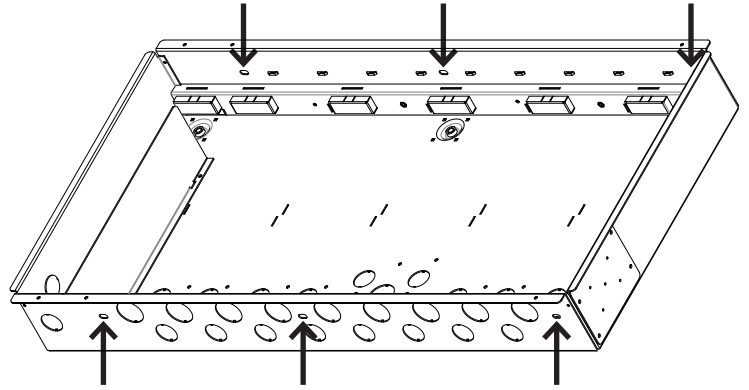
Select a suitable location

This device is designed for indoor use only. If installing in an outdoor location, the DMC4 must be housed in a suitable well-ventilated enclosure. Choose a dry location that will be accessible after the installation is complete. To ensure sufficient cooling, the DMC4 must be mounted vertically, as shown above. The DMC4 requires an air gap of 200mm (8") on the front, sides, top and bottom of the device. This air gap is also required to ensure serviceability of the DMC4 without complete removal from the mounting surface. The DMC4 can also be mounted on a cable tray or strut channel.

The device may emit some audible noise during operation. Take this into account when deciding the mounting location.

For surface mounting, six mounting points have been provided. Refer to the location of the mounting points in the dimension drawings on page 7 of this document.

For recess mounting, six holes suitable for M6 (1/4") fasteners have been provided on side walls as shown below. Minimum spacing between studs is 432mm (17"), minimum mounting depth 103mm (4.1")



Ensure no dust or other debris enters the device during installation. Do not leave the front cover off for any length of time. Excessive dust and dirt can impede the cooling of internal components.

Allow for Cable Entry

The DMC4 includes cabling knockouts for supply, load and signal control, data and dry contact cables.

Cables should enter the enclosure through a knockout close to the relevant module. Remove the required knockout plates for the supply cables before mounting the enclosure. If the DMC4 is at full capacity, multiple cable entries may be required.

Data and dry contact cables enter at the bottom of the enclosure into the communication module bay. Only signal control cables may be run through the mains voltage section of the enclosure.

Energizing the Device

If it is necessary to energize load circuits for test purposes before any control cables are connected, it is acceptable to replace the top cover and energize the device, as the default factory programming is to have all channels set to full output. Use the manual override keypad on the communication module to control individual channels.

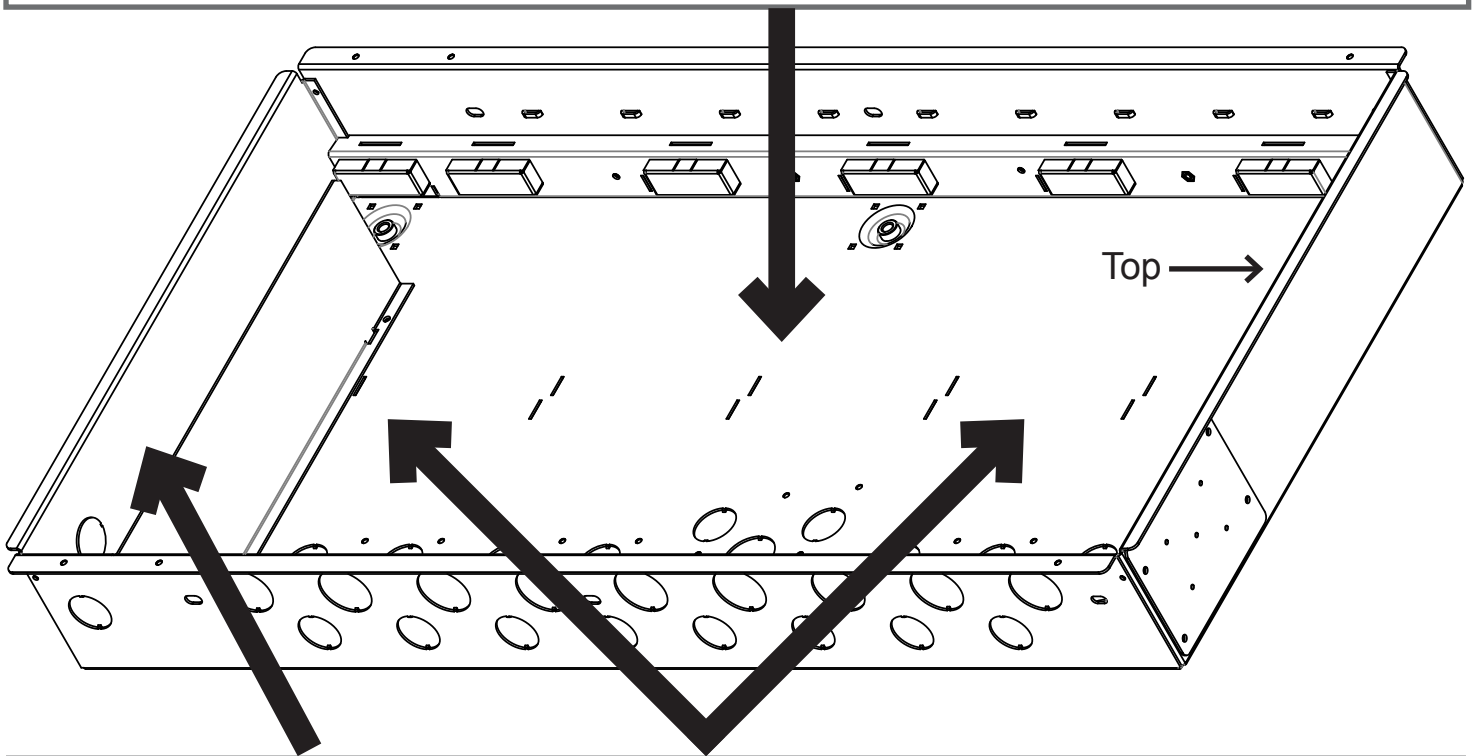
This device should be de-energized before terminating the control and data cables.

Before starting:

Remove the knockouts you intend to run the supply cables through – lighting group supply and network supply first – then mount the DMC4 (surface or recessed, as required). Once the unit is secured to the intended mounting wall follow the steps below for the different module mounting.

Supply Cables:

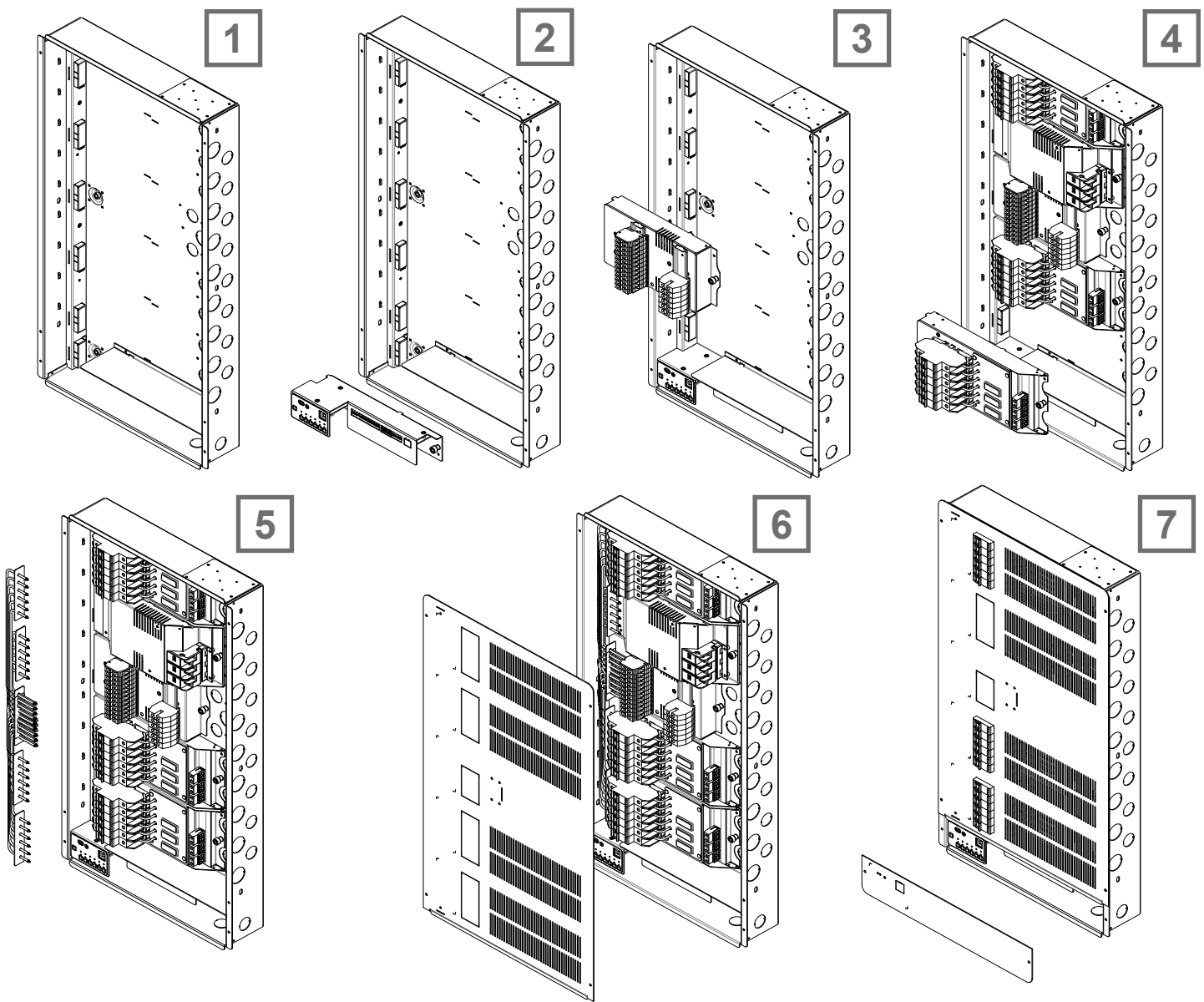
The supply input terminals are located on the DSM Module toward the top of the enclosure and consist of Neutral and Phase terminals, all of which will accept up to 16mm² cables. The supply cables should have a capacity of 63 A per phase for three-phase or single phase supply, to allow the device to be loaded to its maximum capacity. Two earth bars are located in the DMC4 unit in the field wiring space on the right.



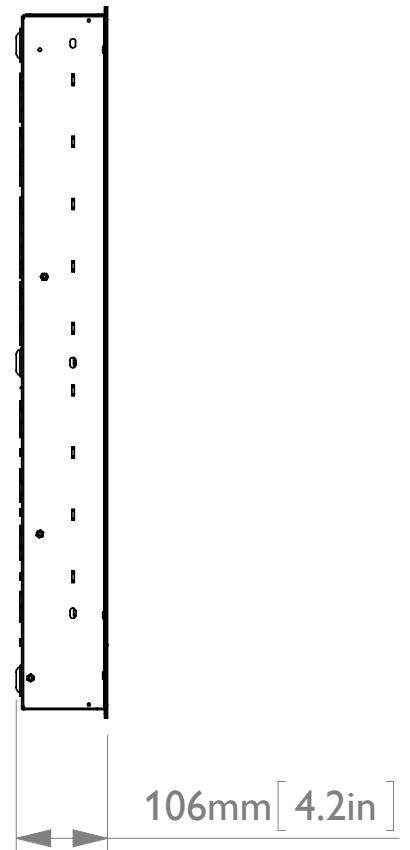
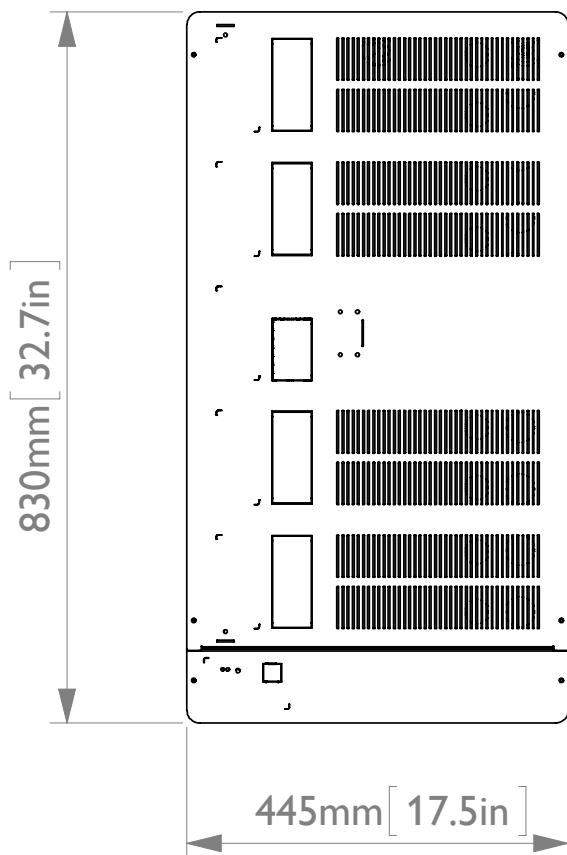
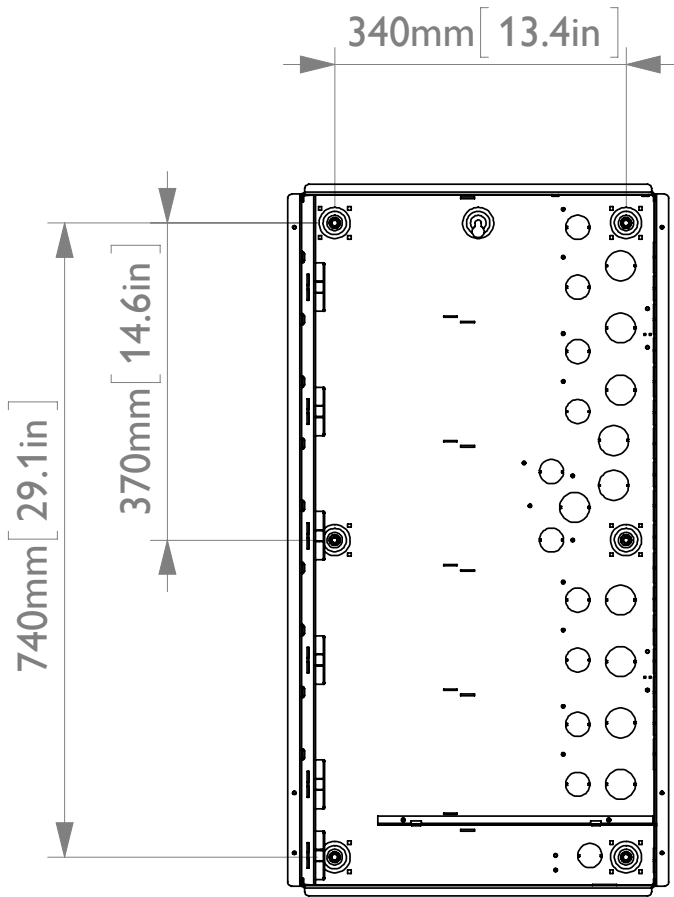
To install the Communication, Supply and Control modules:

- Connect the module ribbon cable to its respective plug.
- On the left hand side of the module there are two locating tabs which line up with the DMC4 communication bus cover. Slide the tabs into these locations and secure the module by tightening the fixing screw to the enclosure.
- Connect the modules to the internal wiring harness and field wiring as applicable (See step 5 on the next page).

There are four control module bays within the DMC4. Any control module can be fitted to any of the four locations above and below the supply module. Check the module installation instructions for additional advice.



1. After removing both front covers and the required knockouts for the power supply, networking cable and lighting group channels, mount the unit in its desired location. Once secured, the DMC4 unit is ready for the internal modules to be mounted.
2. Mount the communication module below the high-voltage barrier of the DMC4. Refer to the communications module installation instructions for more details before proceeding.
3. Mount the DSM4-XX power supply module in the middle of the DMC4. Refer to the power supply module installation instructions for more detail before proceeding.
4. Mount the control modules in the remaining module spaces. Any control module can be mounted in any location and any module location can be left empty, provided the corresponding wiring loom connectors are safely insulated (see below). Refer to the control module installation instructions for more details.
5. Connect the supplied wiring loom to the DMC4 as shown. Use only the loom supplied with the unit, and do not break or modify the loom in any way. Make sure the labels on the loom correspond to the wiring on each module. For modules requiring termination, remove the black insulating caps from the loom before terminating to the load and supply modules. **For any module location that is not populated or does not require termination, the corresponding insulating caps (or mains-rated isolating electrical terminators) must remain in place on the loom.** Terminate the correctly rated supply to each module but do not energize.
6. Check and retighten all terminals. Remove the knockout detail on the front cover as required. Replace the top and bottom cover plates, and make sure all screws are tightened securely. Stick the labels provided with the modules on the cover plate to indicate which module is installed in each location. If an uncovered knockout is not used, cover it with a suitable blanking plate.
7. The unit is now ready to be energized. If required, the bottom communication module cover can be removed when energized to access the override key matrix.



Specification

Control Modules: 4 x control module locations

Cable Entry: Supply/Control: TBA

Top: 1 x (90 x 80mm) (3.5" x 3.1") gland plate
Side: 9 x 35mm (1.4") 8 x 28.2mm (1.1")
Back: 10 x 35mm (1.4") 10 x 28.2mm (1.1")

Data

Side: 1 x 28.2mm (1.1")
Back: 1 x 28.2mm (1.1")
Bottom: 1 x 28.2mm (1.1")

Note: 28.2mm (1.1") opening is suitable for 3/4" conduit
35mm (1.4") opening is suitable for 1" conduit

Compliance: DMC4-UL: UL, cUL, CE, RCM, FCC, ICES-003
Overvoltage category III, Pollution Degree II
DMC4-CE: CE, RCM, Overvoltage category III, Pollution Degree II

Power Input Voltage: 120/230/277/347VAC +10%/-15% 3-Phase, 4-Wire (Y), or Single Phase

Power Input Current: 63A per phase for 3-phase supply, or single phase 63A max.

Power Input Frequency 50/60Hz

Operating Environment: 0°C to 40°C (32°F to 104°F) ambient temperature
0% to 90% RH non-condensing

Shipping and Storage: -25°C to 60°C (-13°F to 140°F) ambient temperature
0% to 90% RH non-condensing

Construction: Galvanized steel case with powder coated front covers

Dimensions: **H:** 830mm (32.7")
W: 445mm (17.5")
D: 106mm (4.2")

Packed Weight: 13.7 kg (30.2 lbs) excluding all modules

Federal Communications Commission (FCC) Compliance Notice: Radio Frequency Notice

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

CAUTION: Any modifications not approved by the manufacturer of this device could void the user's authority to operate this device.

Compliance to Industry Canada ICES-003: CAN ICES-3(B)/NMB-3(B)

DMC4 Installation Instructions Rev 02 Specifications subject to change without notice
Dynalite manufactured by WMGD Pty Ltd (ABN 33 097 246 921) Unit 6, 691 Gardeners Road Mascot NSW 2020 Australia Tel: +61 2 8338 9899 Fax: +61 2 8338 9333

E-Mail: support.controls@philips.com Web: <http://philips.com/dynalite>
