Helvar

scalability • interoperability • modularity

458 Architectural Lighting Control

People | Innovations | Solutions

scalability interoperability modularity

Conran & Partners
architects

Architectural lighting requires reliable, cost effective and scalable control solutions. Helvar's 458-Series provides a modular control solution to meet the demanding requirements of specifiers and installers. The 458-Series seamlessly integrates with Helvar's Imagine and DIGIDIM systems. Its unique modularity, and interoperability with common lighting loads and protocols, makes it the perfect architectural lighting control solution.

- Modular mechanical concept
- Chassis allows "out of box" functionality
- Different chassis sizes (8, 16 & 24 channels)
- Separate dimmer, control and switching modules

Value Proposition

The 458-Series has been designed to provide easiness and flexibility throughout every stage of the project. Pre-installing just the 458 chassis provides the client with basic out-of-box functionality to switch the lights on/off, even if the exact load types are not fully known at this early project stage.

The 458 chassis take any combination of 458 control modules. This accommodates flexibility to meet last minute design changes, plus it allows for expanding the system and adding functionality upon client request.

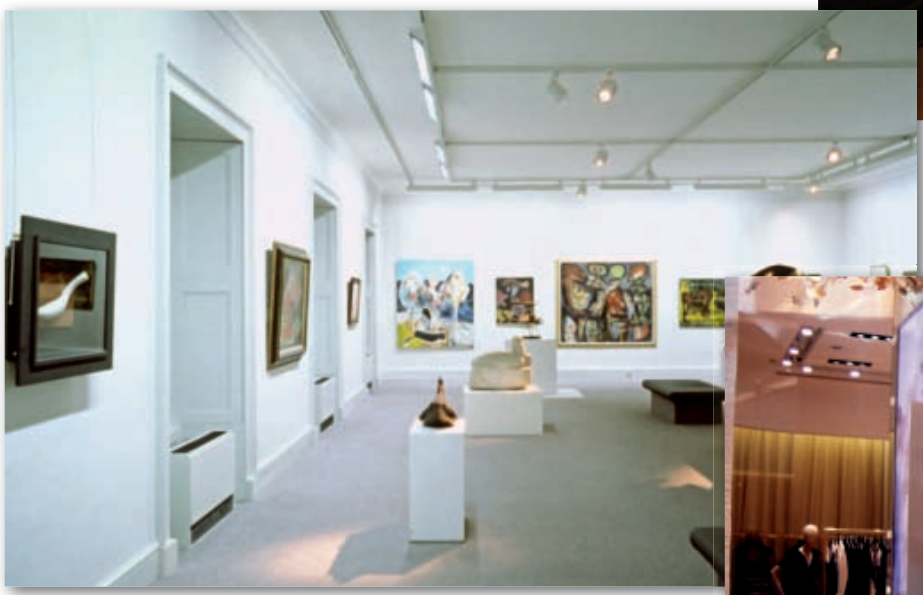
The 458 lighting system can be customised to meet the clients' specific requirements. For this purpose Helvar's Designer software provides an advanced yet easy-to-use configuration tool. From basic lighting scenarios to advanced timed schedules and conditional logic, Helvar can fulfil the clients' wishes.

creating ambience

Its unique scalability makes the 458-Series and versatile solution for a wide variety of applications from reception halls, lobbies and facades to residences, restaurants and galleries. Using 458-Series products provides the static and dynamic intelligence to enable a balance of ambience and energy efficiency. The 458-Series creates the right light for the right occasion, enhancing the comfort and wellbeing of people in their environment

Hilton Airport Helsinki

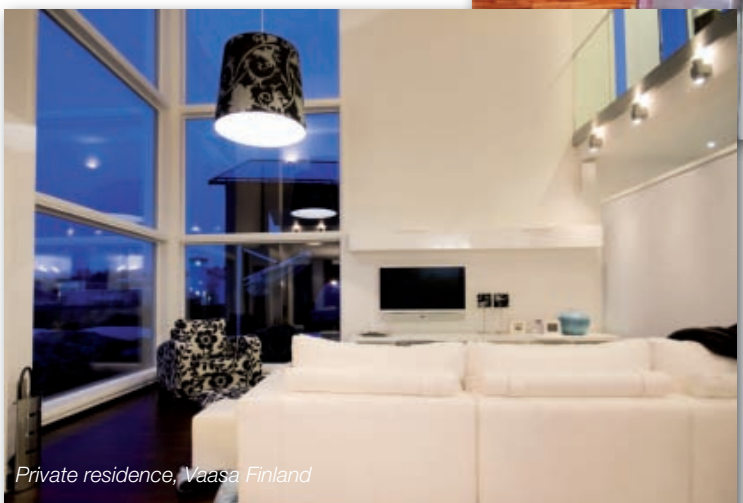
hotels



museums

Retail shop in Dubai Mall

retail



Private residence, Vaasa Finland

high end residential

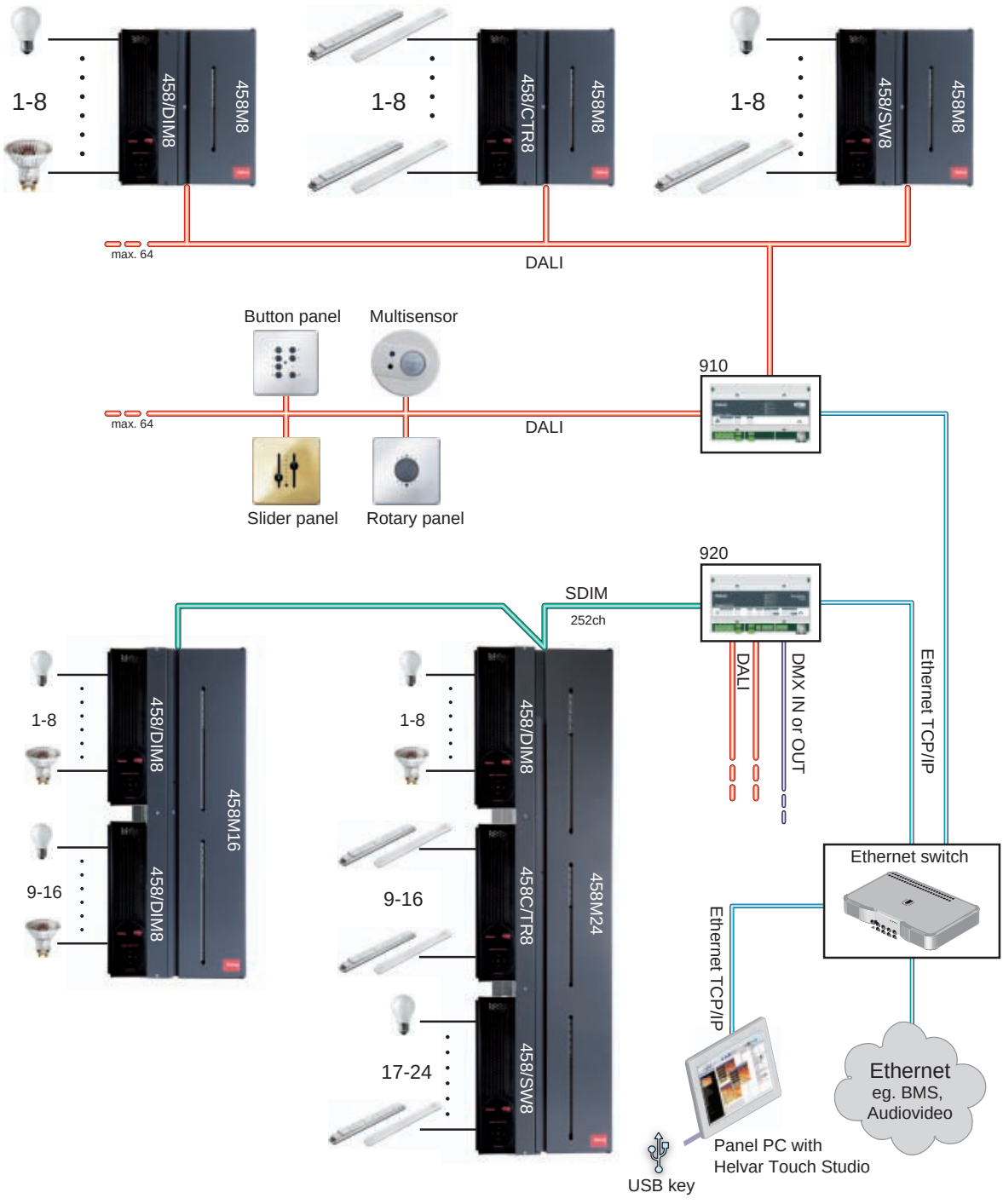
scalability **interoperability** modularity

System Layout

The 458-Series provides interoperability with common light loads, as well as lighting standards such as DALI, DSI and PWM. Using the 910 DIGIDIM and 920 Imagine routers, allows integration to third party systems via an Ethernet backbone.

digidim

Imagine



Modules

DIM8 - Dimming module

Eight channel thyristor dimmer module, for leading-edge dimming of resistive and inductive loads. The module has 8 channels rated at 10A each, with a total current capacity of 40A. The module has a DALI and S-DIM interface, for integration into DIGIDIM and Imagine systems.

CTR8 - Ballast control module

Eight channel ballast controller module, for controlling 0-10V, 1-10V, DSI, DALI-broadcast or PWM loads. Also included are 8 high inrush relays, rated at 16A per channel. The module has a DALI and S-DIM interface.

SW8 - Switching module

Eight channel switching module. The module contains 8 high inrush relay channels (Normally Open), for switching 16A per channel. The module has a DALI and S-DIM interface.

OPT4 - Options module

The options module is a 4-channel DIN ballast control unit for use inside the dimmer module (458/DIM8) or switching module (458/SW8). It provides 4 channels of ballast control including 0-10 V, 1-10 V, DSI, DALI-broadcast and PWM.

Chassis

M8 - Single mechanical chassis

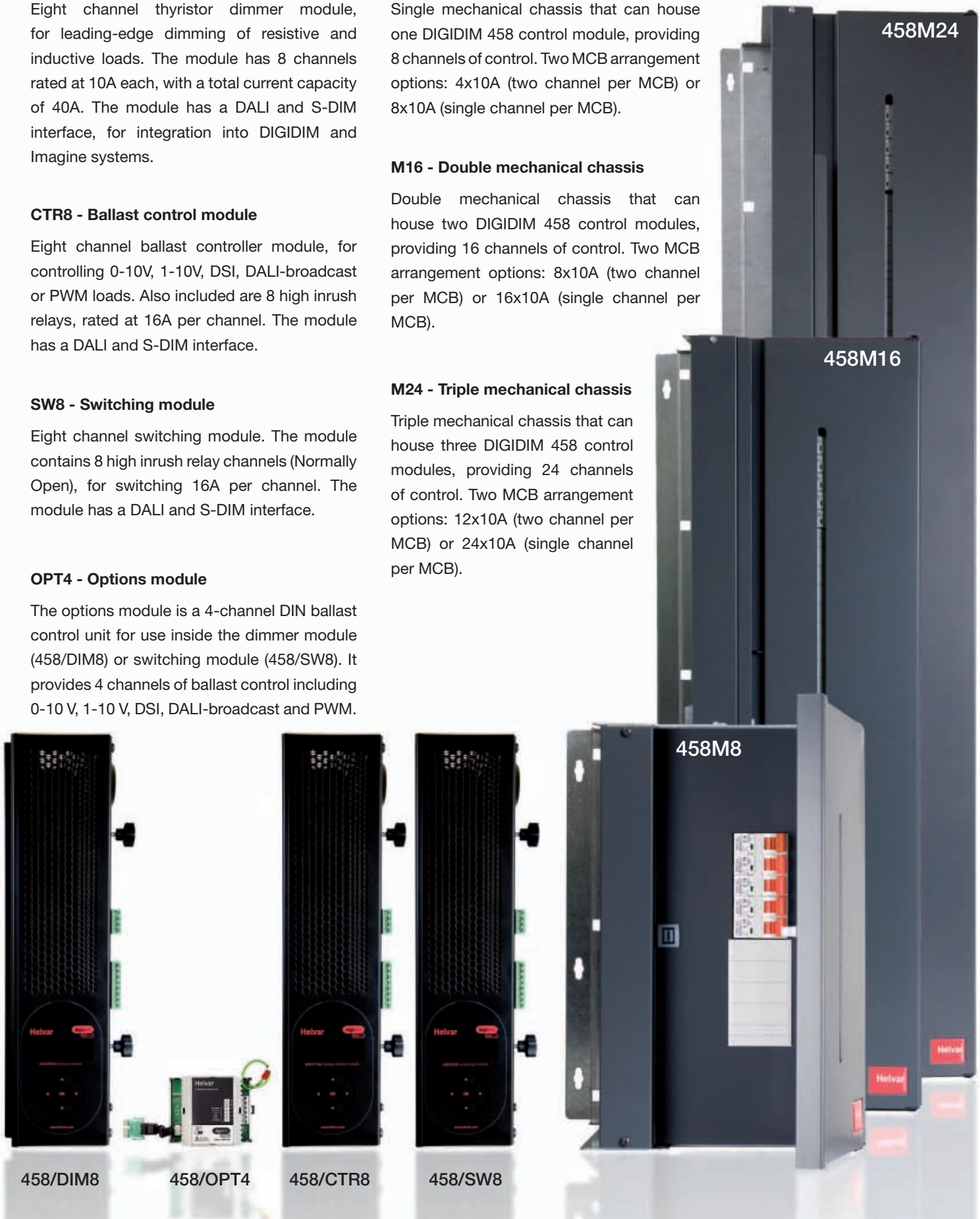
Single mechanical chassis that can house one DIGIDIM 458 control module, providing 8 channels of control. Two MCB arrangement options: 4x10A (two channel per MCB) or 8x10A (single channel per MCB).

M16 - Double mechanical chassis

Double mechanical chassis that can house two DIGIDIM 458 control modules, providing 16 channels of control. Two MCB arrangement options: 8x10A (two channel per MCB) or 16x10A (single channel per MCB).

M24 - Triple mechanical chassis

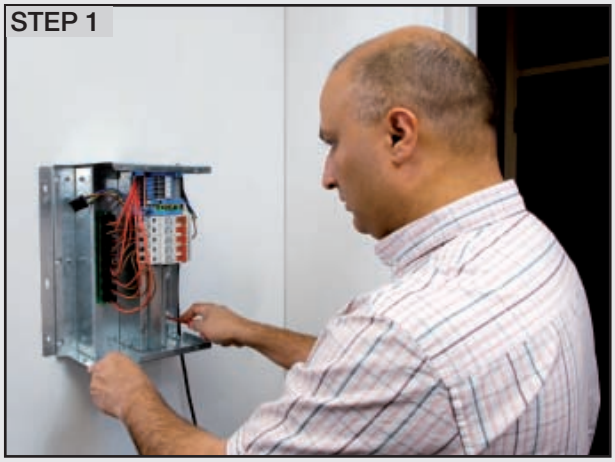
Triple mechanical chassis that can house three DIGIDIM 458 control modules, providing 24 channels of control. Two MCB arrangement options: 12x10A (two channel per MCB) or 24x10A (single channel per MCB).



Schedule example

Installation

During first installation, all lighting types may not yet be known. The 458 chassis simply allows the installer to connect mains input and load connections, providing basic on/off functionality. No control modules or PC's are needed at this stage. The basic lighting installation can be tested easily, making the commissioning stage faster and simple.



- *Remove the cover of the 458 chassis.*
- *Mount the 458 chassis on the wall.*

Commissioning

Once all light loads have been installed the relevant 458-Series control modules can be connected. Modules can be delivered with the chassis or at a later date. They are connected simply and quickly. Basic commissioning is fast and can be set via the LCD display panel or PC allowing for a fast and reliable handover of the installation stage.

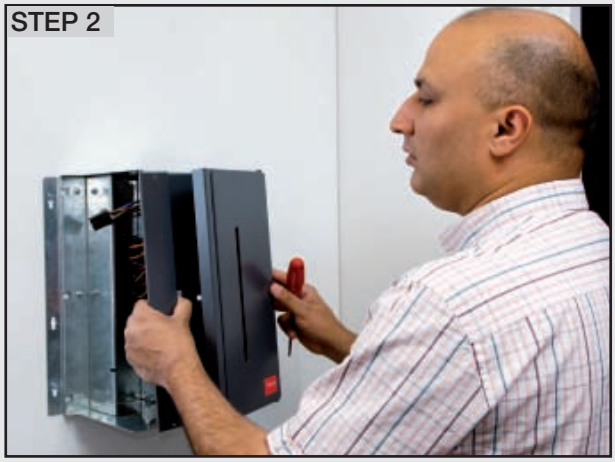
- *Remove the cover of the 458 chassis and connect the 458 control module(s).*
- *Plug the by-pass connectors into the control module(s).*
- *Make the DALI or S-DIM data connection.*

Programming

Following the commissioning stage, the final stage is to program the system's intelligence. This allows for customisation, fine tuning and final testing of the entire system. Due to the staged approach it is unlikely to encounter network problems in this stage. This effective final programming stage therefore ensures a smooth hand-over of the system to the client.

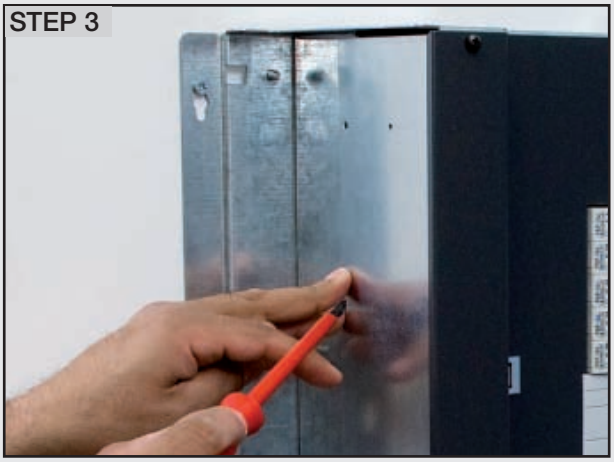
- *Connect the PC to the 458 network, through Ethernet or WiFi.*

STEP 2



- *Make the mains input and channel load connections.*
- *The by-pass terminals provide default out-of-box operation to the channel loads.*

STEP 3



- *Place the cover back on the chassis.*
- *The 458 chassis is now ready and provides basic switching through its MCB's.*

STEP 5

- *Place the cover back on the chassis.*

STEP 6

- *Commission the basic settings of the 458 control module(s).*

STEP 8

- *Start Helvar Designer software and program the system intelligence*
- *Remove the PC from the network. The system is now fully operational*

- *Helvar offers optional after sales service contracts*

Technical data

For full technical data please refer to the individual product datasheets, listed on www.helvar.com

Please contact your Helvar representative for availability information.

	Dimming (Leading Edge)	Switching (Normally Open)	Control (0-10V, 1-10V, DSI, DALI-broadcast, PWM)	Channel rating (A)	Total capacity (A)	Integrated power supply (DALI / TouchPanel)	Dimensions w x h x d (mm)
Modules							
458/DIM8	●	-	-	10A	40A	●	-
458/CTR8	-	●	●	16A	63A	-	-
458/SW8	-	●	-	16A	63A	-	-
Accessories							
458/OPT4 *	-	-	●	NA	NA	NA	DIN (70mm)
458/CM	Empty project enclosure to house DIN-rail devices.						328 x 359 x 151

Chassis	MCB channel arrangement	Dimensions w x h x d (mm)
458 M8D10 ** **458 M8S10 *****	4 x 10A 8 x 10A	311 x 363 x 178 (including modules)
458 M16D10 ** **458 M16S10 *****	8 x 10A 16 x 10A	311 x 750 x 178 (including modules)
458 M24D10 ** **458 M24S10 *****	12 x 10A 24 x 10A	311 x 1139 x 178 (including modules)

* Only in combination with 458/DIM8 and 458/SW8 modules

** D-version: 2 x channels connected per MCB, and 1 breaker for control module

*** S-version: 1 x channel connected per MCB, and 1 breaker for control module

NA: Not applicable

Due to our continuing program of product development, data is subject to change without notice.

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