

PHILIPS

dynalite

DDRC1220FR-GL

12 x 20 A Relay Controller



To reduce the risk of fire or electric shock, do not expose this device to rain or moisture. Installation, programming and maintenance must be carried out by qualified personnel. All local wiring and electrical regulations must be followed when installing device.

Overview

- **Single phase supply** – One phase at 0.25 A
- **12 x feed-through outputs** – Rated at 20 A
- **Multiple wiring schemes supported** – Controls Single Phase and Neutral or Three Phase and Neutral (Star) wiring
- **Powerful internal PLC** – Custom scripts can provide process control based on conditional logic
- **DIN-rail mounting** – 12 units wide
- **Hardware override** – Service override switch accessible from front panel

Read Instructions – We recommend that you read this guide prior to commencement of installation.

Manual Override Switches – These switches do not provide permanent isolation. Isolate at the supply before performing work on load circuits.

Special Programming – Once powered and terminated correctly this device only operates in basic mode. Advanced functions are commissioned via the Envision software. If commissioning services are required, contact your local distributor.

Power Sources – This device should only be operated from the type of supply specified on the front cover. This device must be earthed.

Feed-through output circuits – The load on a circuit should not exceed the specified capacity of 20 A. Loads should be calculated to ensure that the overall maximum capacity of 180 A is not exceeded. This device should be fed via HRC fuse or MCB. Output circuits are suitable for Single Phase or Three Phase Star (with Neutral) only. Suitable for some Delta wiring installations, contact Distributor Support for more information.

Mounting Location – Install in a dry, well-ventilated location. The device may emit some mechanical noise during operation. Take this into account when deciding the mounting location.

Data Cable – Use screened, stranded RS485 data cable with three twisted pairs. Segregate from mains cables by at least 300 mm. Connect devices in a 'daisy chain' configuration. A data cable that is connected to an energized device is live. Do not cut or terminate live data cables.

Installation – Installation must be done in accordance with local wiring code (or wiring rules). Network topology for installation is Daisy Chain. Installation of the home and building automation and control system shall comply with HD60364-4-41.

Installation Steps

1. Mount the device on a DIN-rail inside an approved enclosure, in compliance with local electrical codes.
2. Calculate loads to ensure no channels are overloaded, then connect loads to the output channels. The maximum loads are:

Per Channel: 20 A at 240 VAC (resistive).
Max inrush 500 A (200 uS)
Total Device Load: 180 A (resistive)

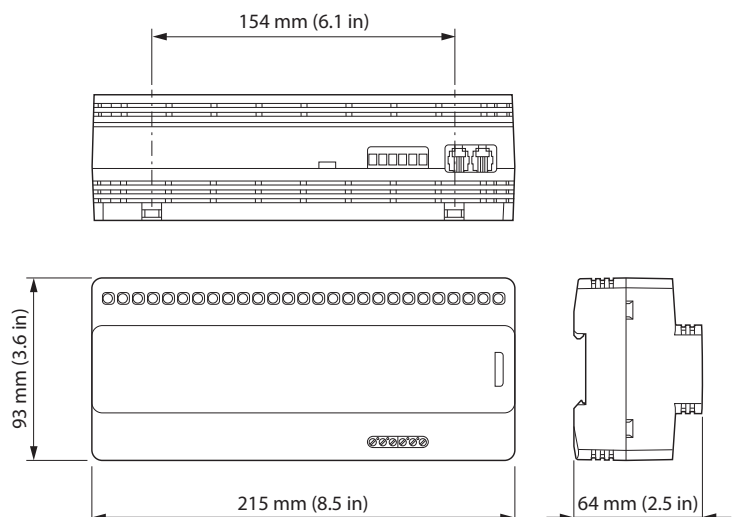
3. Connect supply and load cables to each channel. Supported supplies and wiring schemes are:

Single phase 100-240 VAC, 3 phase 400/230 VAC star, and 100-120/208-240 VAC delta 50/60 Hz supply not exceeding 240 VAC phase-to-ground and across load supply terminals.

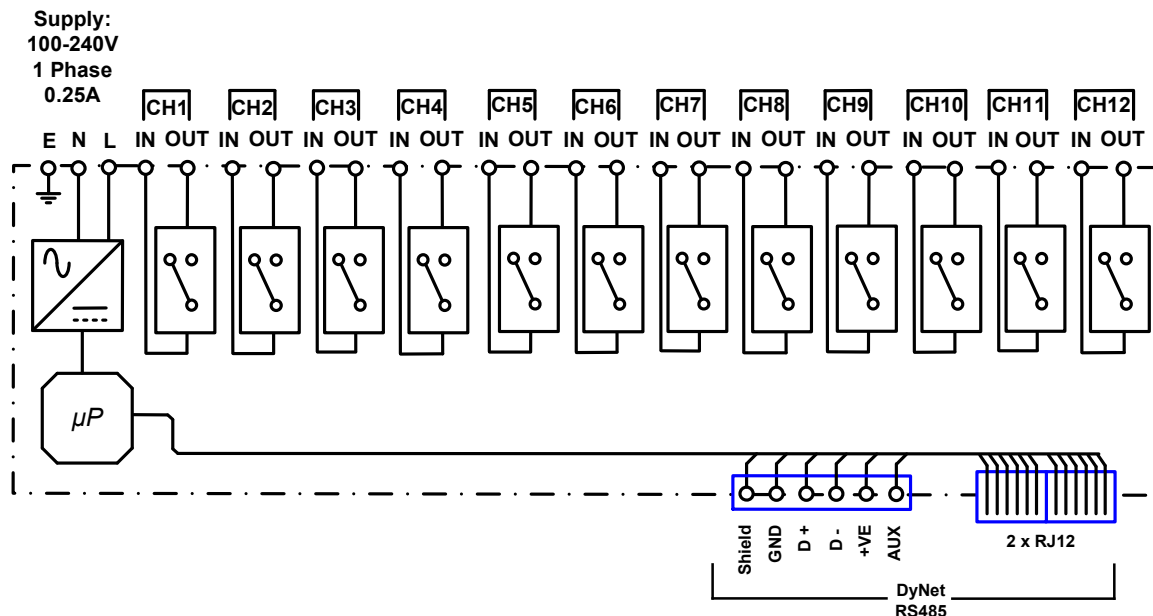
All live feeds must be protected with fuses / circuit breakers rated 20 A or lower. Relay open contact rated voltage must not exceed 240 VAC. Supply over-voltage (surge) must not exceed 4 kV, as per IEC category III classification.

4. Connect a single phase 0.25 A feed to the control circuit supply terminals. This device must be earthed.
5. Connect data cables to the device as per the diagrams on the next page.
6. If using the Auxiliary input, connect a dry contact device in between the AUX and GND terminals. Keep cable runs between the device and the dry contacts under ten meters and use shielded twisted pair where possible. The function of the Auxiliary input is configured during commissioning.

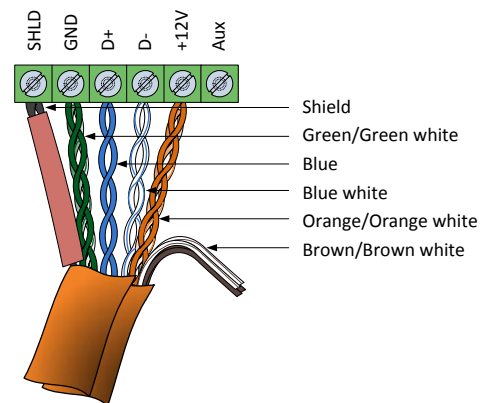
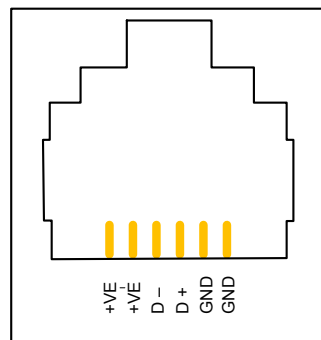
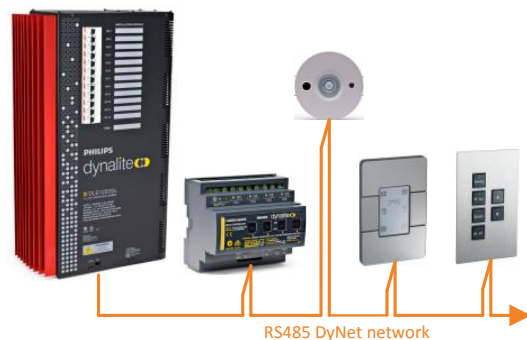
Hardware Dimensions



Electrical Diagram



Data Cable Connection



Recommended Cable Type

Dynalite DYNET-STP-CABLE or equivalent shielded three twisted-pair.

See datasheet for more information.

Recommended Cable Color Coding

Green/White Pair
Orange/White Pair
Blue/White Pair

Brown/White Pair

Paralleled for GND
Paralleled for +12VDC
Blue for DATA+
White for DATA-
Spare, use for SHIELD on unshielded cables

Product Specifications

Control Supply:	100-240 V 50/60 Hz single phase at 0.25 A, Over-voltage category III, maximum 4kV surge
Load Outputs:	12 x feed-through outputs at 20 A per channel, maximum total device load 180 A 1 Phase & Neutral, 3 Phase & Neutral Star. Some delta wiring supported.
Switching Device:	Relay 50 A 230 VAC resistive (5000 VA lighting load rated), maximum 500 A (200 uS) inrush current
Supply Terminals:	1 x Phase, 1 x Neutral 1 x Earth, up to 5 mm ² cable per terminal
Load Terminals:	1 x Phase, 1 x Neutral 1 x Earth, up to 5 mm ² cable per terminal
User Controls:	Service switch, Diagnostic LED
I/O:	1 x RS485 DyNet serial port 1 x AUX programmable dry contact input
DyNet DC Supply:	120 mA (capacity for approximately six panels)
Presets:	170
Programmable Logic:	8 tasks (most UPAN mnemonics supported)
Operating Conditions:	Temperature: 0 to 50° C ambient, Humidity: 0 to 90% non-condensing
Storage & Transport:	Temperature: -25 to 60° C ambient, Humidity: 0 to 90% non-condensing
Construction:	Polycarbonate DIN-rail enclosure, (12 units wide), IP20, UL940-V0 rated
Dimensions:	93 mm x 215 mm x 64 mm (3.7" x 8.5" x 2.5")
Weight:	0.76 kg
Certification:	CE, RCM

DDRC1220FR-GL Installation Instructions Rev 08 Specifications subject to change without notice

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