# DDNG485 Network Gateway - Installation Manual

## Features

- **Powered From The DyNet Network** - Mains supply not required

- **2 x Optically Isolated RS485 Ports** - 3.75KV isolation.

- **Powerful Internal PLC -** Custom scripts can be written to provide process control based on conditional logic.

- **DIN Rail Mounting -** 6 Units wide. There is also provision for mounting on surfaces other than DIN rails

**NOTE:**

**Read Instructions** – We recommend that you read this Instruction Manual prior to commencement of installation.

**Special Programming** – This device will only operate in basic modes unless programmed via a computer. If programming is required, contact your local agent for details. Once the data cable is connected to the devices, the factory default settings will allow any control panel to operate all channels in all controllers.

**Mounting Location** – Install in a dry, well-ventilated location.

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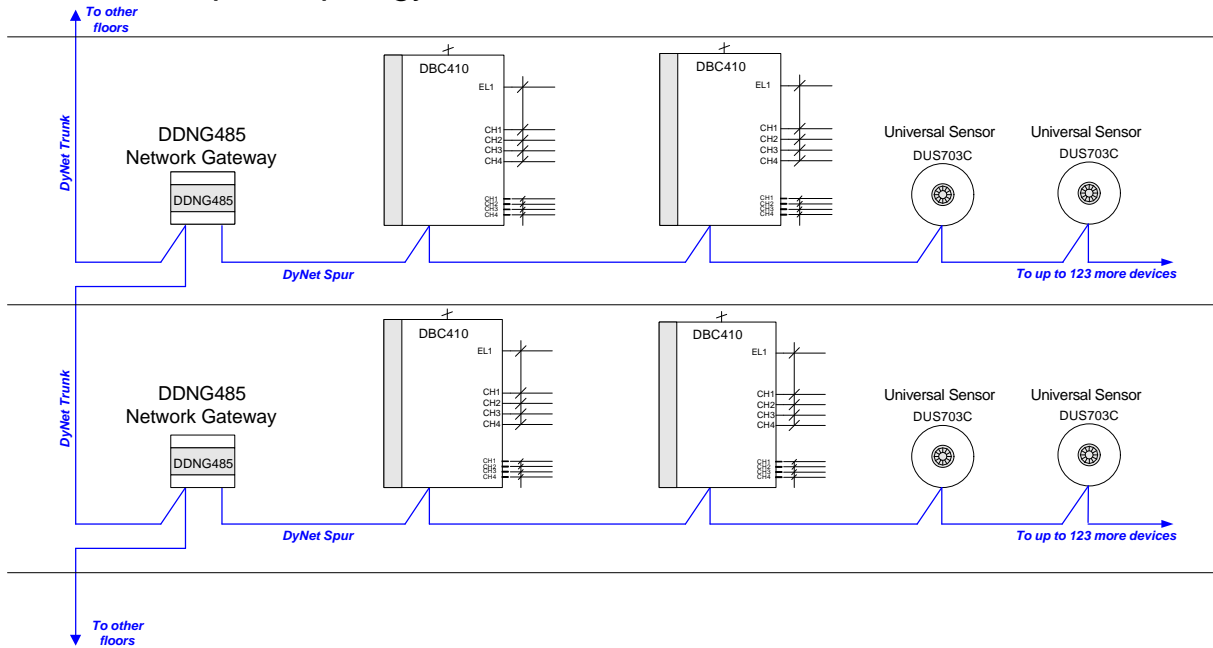
## Electrical Diagram
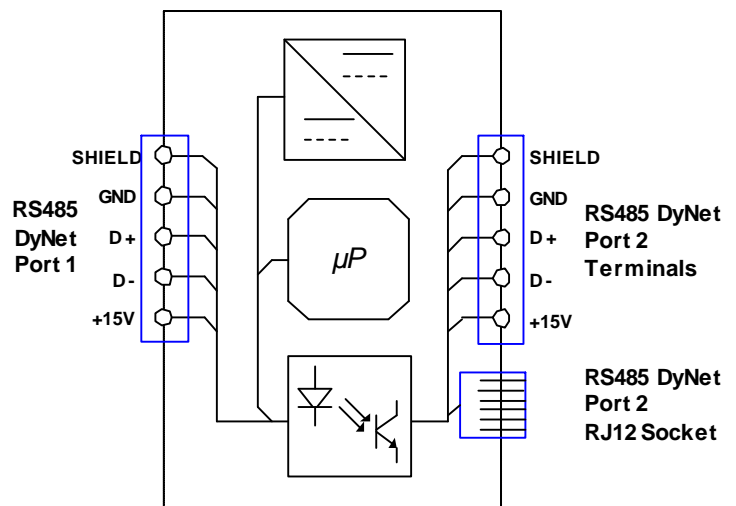


## Installation Steps

1. Mount the device on a DIN rail inside an appropriate enclosure. Alternatively there are 2 holes provided to fix the device to a surface without the use of DIN rail. Remove the front cover to access these holes.

2. Connect data cables to the device as per diagrams. Note that the device is powered from the DyNet network segment that is connected to Port 1. When implementing Trunk / Spur topology, connect the Trunk to Port 2 and the Spur to Port 1. When implementing Repeaters, connect the link to Port 2 of both Gateways.
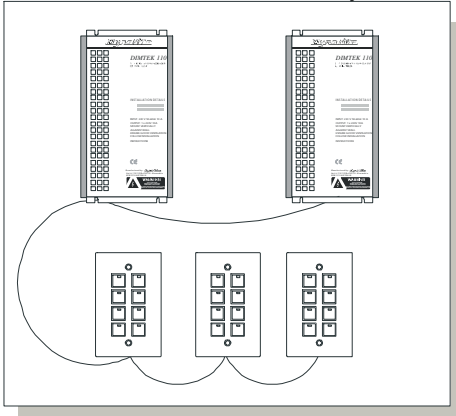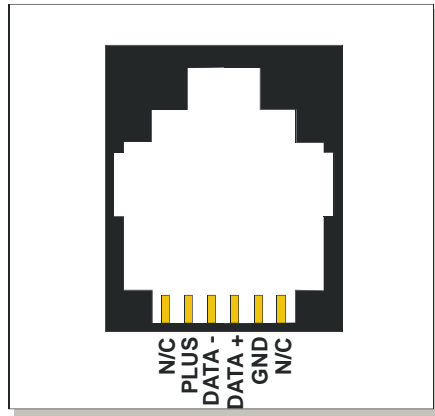
## Example of Repeaters



DDNG485 Network Gateway — DDNG485

DyNet - Up to 2 Kilometers

To network devices — To network devices

# Example of Trunk / Spur Topology



---

# Connecting Data Cable

## Connect Data Cable in a "Daisy Chain"



## RJ12 Socket Connections



N/C | PLUS | DATA - | DATA + | GND | N/C

## Serial Cable Permanent Connections



SHIELD | GND | D+ | D- | +12V

Sample Colours

- ORANGE / WHITE PAIR
- BLUE / WHITE PAIR
- GREEN / WHITE PAIR
- DRAIN WIRE
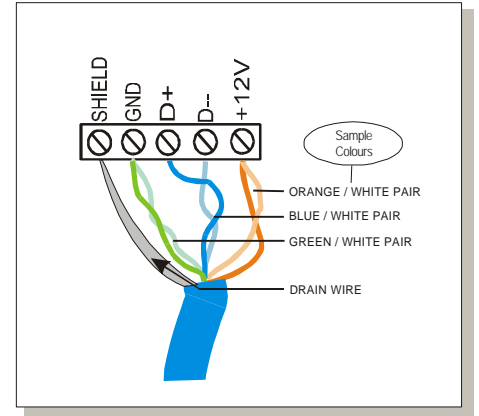
## Recommended Cable Colour Coding

| | |
|---|---|
| **Green/White Pair** | paralleled for GND |
| **Orange/White Pair** | paralleled for +12V |
| **Blue/White Pair** | Blue for DATA+ |
| | White for DATA- |

\* If using CAT5 cable, parallel the brown pair for Shield

## Recommended Cable Types

| | | | |
|---|---|---|---|
| Belden: | 9503 | | |
| Garland: | MCP3S | M&M cable: | B9503CS |
| Hartland: | HCK603 | Multicables: | AWME120236209220 |
| M&M Cable: | B2003CS | RS Components: | 368-687 |

---

# Product Specifications

**DDNG485**

| | |
|---|---|
| **RS485 Serial Port 1:** | 1 x RS485 unterminated DyNet, consisting of 1 x 5 way terminal strip |
| **RS485 Serial Port 2:** | 1 x RS485 unterminated DyNet, consisting of 1 x RJ12 socket & 1 x 5 way terminal strip |
| **Serial Port Isolation:** | Opto Isolated to 3.75KV |
| **RS485 Data Formats:** | DyNet & DyNet II - Baud rate: 1200 - 460800 |
| **User Controls:** | Service Switch, Diagnostic LED |
| **Internal Controls:** | Programmable Logic Controller, 64 Tasks |
| **Operating Environment:** | 0° to 50°C ambient temperature, 0% to 95% RH non condensing |
| **Power Consumption:** | 40mA from the DyNet network |
| **Compliance:** | CE, C-Tick |
| **Construction:** | ABS DIN Rail Enclosure (6 unit) |
| **Dimensions:** | H 86mm x W 105mm x D 58mm |
| **Weight:** | 0.25Kg |