

# 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.
- **DMX Receive and convert to DyNet** - Up to 64 channels

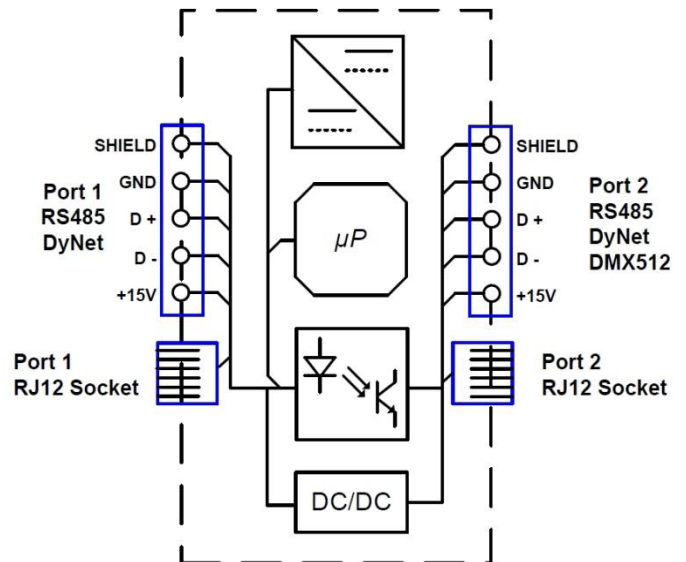
**Read Instructions** – We recommend that you read this Instruction Manual prior to commencement of installation.

**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. Connect devices in a 'daisy chain'. Do not cut or terminate live data cables.

## electrical diagram



## installation steps

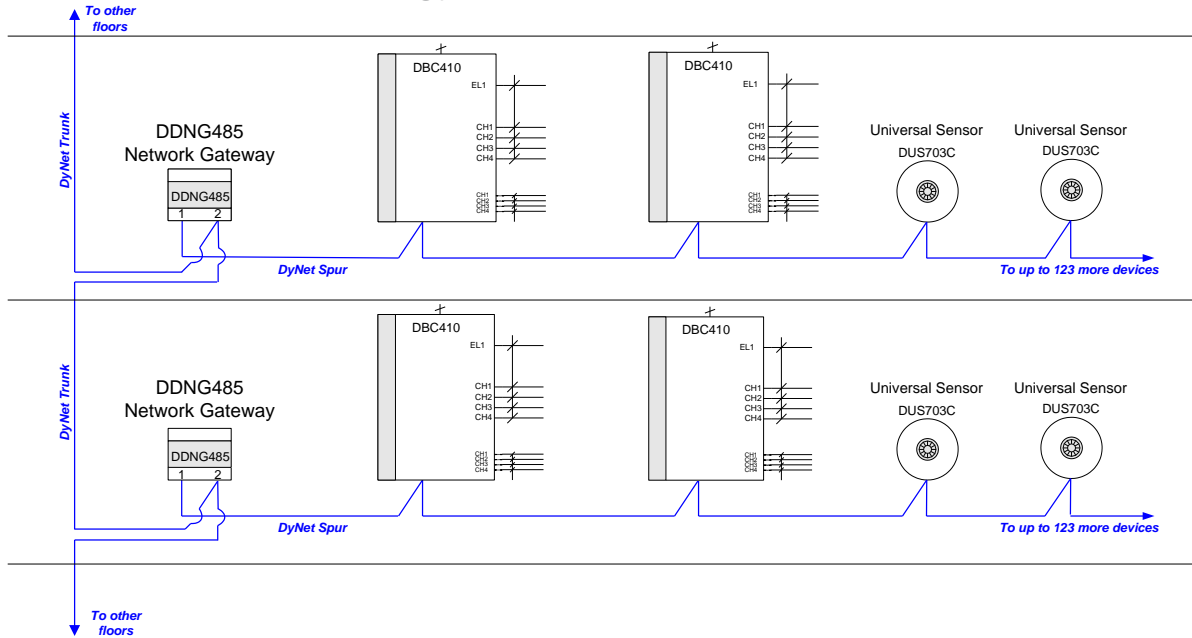
1. Mount the device on a DIN rail inside an appropriate enclosure. Alternatively there are 2 holes provided to fix the device to a surface without the use of DIN rail. Remove the front cover to access these holes.
2. Connect data cables to the device as per diagrams. Note that the device is powered from the DyNet network segment that is connected to Port 1. When implementing Repeaters, connect the link to Port 2 of both Gateways. Shielded cable must be used for long runs. When implementing Trunk / Spur topology, connect the Trunk to Port 2 and the Spur to Port 1. Note that up to 150mA of power from the DyNet network on Port 1 is fed to Port 2, so providing there is surplus power available on the Spurs it is normally not necessary to provide a network power supply for the Trunk.
3. If using the device as a DMX receiver, ensure DMX termination rules are obeyed, use a 120 Ohm terminating resistor across D+ and D- at the end of line. Note that Port 2 should be used for DMX Reception.

## example of repeaters



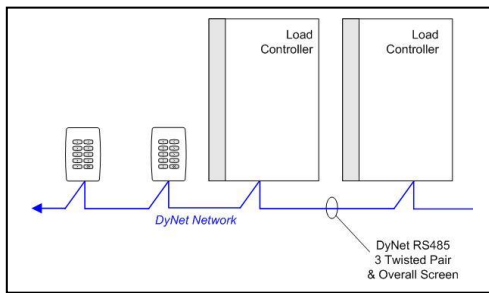


# example of trunk / spur topology

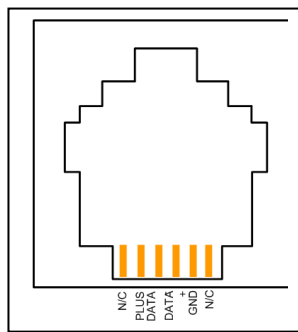


## connecting data cable

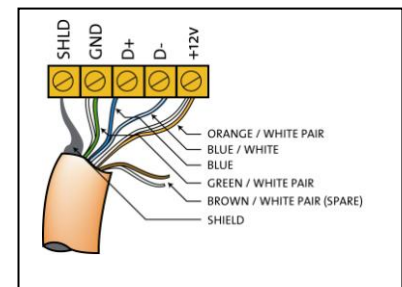
Connect Data Cable in a 'Daisy Chain'



RJ12 Socket Connections



Serial Cable Permanent Connections



## recommended cable colour coding

<b>Green/White Pair</b>	paralleled for GND
<b>Orange/White Pair</b>	paralleled for +12V
<b>Blue/White Pair</b>	Blue for DATA+
	White for DATA-

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

## recommended cable types

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

## product specifications

<b>RS485 Serial Port 1:</b>	1 x RS485 unterminated, consisting of 1 x 5 way terminal strip
<b>RS485 Serial Port 2:</b>	1 x RS485 unterminated, consisting of 1 x RJ12 socket & 1 x 5 way terminal strip
<b>Serial Port Isolation:</b>	Opto Isolated to 3.75KV
<b>RS485 Data Formats:</b>	DyNet, DyNet II, DMX512 Receive 64 channels. Supported Baud rates: 1200 - 460800
<b>User Controls:</b>	Service Switch, Diagnostic LED
<b>Internal Controls:</b>	Programmable Logic Controller, 64 Tasks
<b>Operating Environment:</b>	0° to 50°C ambient temperature, 0% to 95% RH non condensing
<b>Power Consumption:</b>	40mA from the DyNet network
<b>Compliance:</b>	CE, C-Tick
<b>Construction:</b>	ABS DIN Rail Enclosure (6 unit)
<b>Dimensions:</b>	H 86mm x W 105mm x D 58mm
<b>Weight:</b>	0.25Kg