

DNG232 RS232 serial port interface

The Dynalite DNG232 is designed to enable cost effective serial port integration between the Dynalite control system and third party systems such as AV systems, lighting desks, data projectors, HVAC, BMS and security systems. The interface incorporates a Programmable Logic Controller that can process comprehensive conditional and sequential logic and arithmetic functions.

A library of data formats is available for the systems integrator to choose from or, alternatively, a format can be created using the on board conditional logic engine to assemble, transmit and receive user-defined data strings. Macro functions are available to simplify the control of multiple devices.

The DNG232 is housed in a small stand alone enclosure that is an ideal size for installation behind racked equipment. The device is powered from the DyNet network and does not require to be supplied by mains voltage.



technical data

Supply

15V DC supplied by the DyNet network at 20mA

Serial Ports

1 x RS485 DyNet serial port
1 x RS232 serial port

RS485 Port Connections

Shield, GND, D-, D+, +15V
All available on screw terminals
1 x 2.5mm² max conductor size
Also available on RJ12 socket

RS232 Port Connections

Female DB9 connector

RS232 Port Modes

DTE, DCE, selected by jumpers

RS232 Data Formats

Baudrate: 600-250k
Max packet length: 254 bytes
Data bits: 7/8
Stop bits: 1/2
Parity: odd/even/none
Flow Control: none/RTS-CTS

User Controls

Service Switch
Diagnostic LED

Internal Controls

Programmable Logic Controller

Operating Environment

0° to 50°C ambient temperature
0% to 95% RH non condensing

Compliance

CE, C-Tick

Enclosure

ABS plastic


Dimensions

H 30mm x W 80mm x D 150mm

Weight

Packed weight 0.15kg

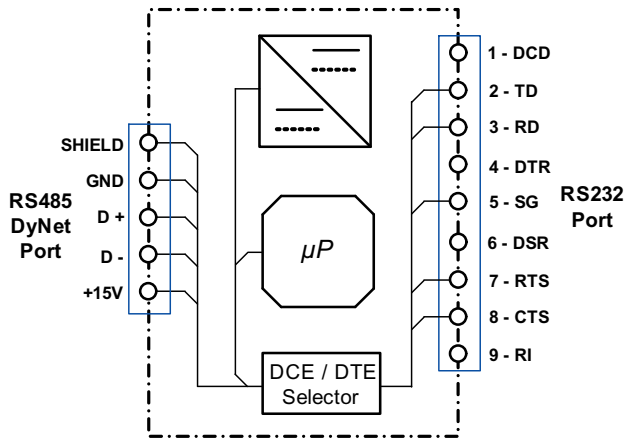
RS232 control lines



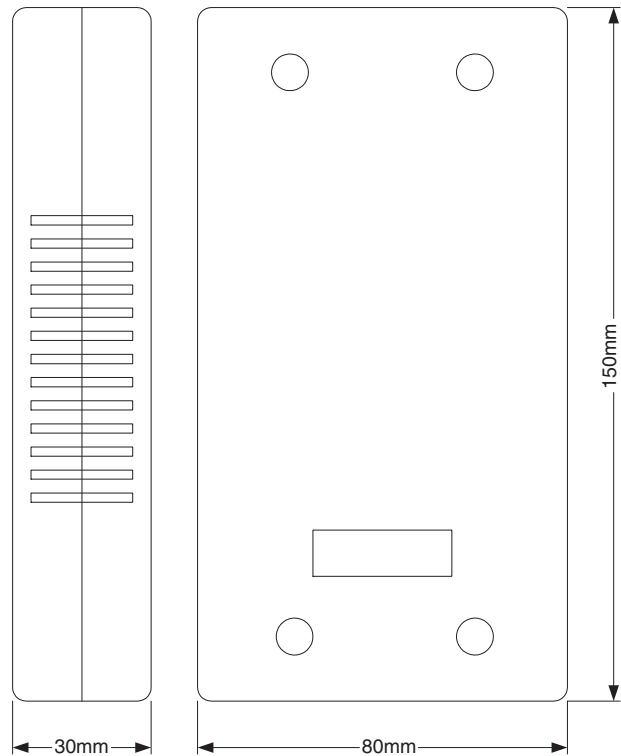
Pin	Function	Implementation
1	DCD (data carrier detect)	Not connected
2	RD (received data)	Connected to UART
3	TD (transmitted data)	Connected to UART
4	DTR (data terminal ready)	Not connected
5	SG (signal ground)	Connected to Ground
6	DSR (data set ready)	Not connected
7	RTS (request to send)	Software controlled
8	CTS (clear to send)	Software controlled
9	RI (ring indicator)	Not connected

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electrical diagram



mounting dimensions



plain english text interpreter

The factory settings will allow control of a Dynamalite system via plain English text strings which can be easily sent from a terminal program. To use the Microsoft terminal program, from the Start menu go to Programs > Accessories > Communications > HyperTerminal, then enter any name for the connection then select your PC's COM port (usually COM1) at 9600 baud with no flow control.

Examples of plain English commands ([enter] means the Enter key on the computer's keyboard):

Desired Action

Selecting Preset 8 in Area 1 with a fade of 3 seconds
 Request the Current Preset for Area 1
 Fade Channel 4 in Area 1 to a level of 70%
 Request the current level for Channel 1 Area 1
 Request a full list of commands available

Type this string

Preset 8 Area 1 Fade 3 [enter]
 RequestCurrentPreset Area 1 [enter]
 Channel 4 Area 1 Level 70 Fade 3 [enter]
 RequestChannelLevel 1 Area 1 [enter]
 help [enter]

Device will reply with this string

Preset 8 Area 1 Fade 3
 Reply with Current Preset x Area 1 Join ffxhex
 Channel 4 Area 1 Level 70 Fade 3
 Channel 1 Area 1 Level 70

Most commands have abbreviated versions, which are detailed in the help section. As well as using a Terminal program, commands may be sent and received via automation software. To facilitate this the astrich character * may precede a command to flush the transmit buffer of any information, eg.

*** Channel 4 Area 1 Level 70 Fade 3 <CR>**

Note the preceding * which will flush any existing information from the transmit buffer, see the "help" function for more details.



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