

Micro Instruments

Electronic Research & Development

Innovative Electronics for a changing world

MANUAL

POE 4+4 GM



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Description:

The **POE 4 +4 GM** is an 4+4 = 8 Channel Gigabit DC passive power over Ethernet injector unit with a 10Mbps management Ethernet interface to allow the user to toggle the power output of each one of the 8 POE power outputs via a web-browser interface.

POE output ports is Grouped into **Group A** (4 POE channels) and **Group B** (4 POE channels) –The user can select the **MODE** (MODE B-2 pair power or PHANTOM POWER-4 pair power) and **voltage** (24VDC or 48VDC- input dependant) for each group of 4 POE outputs individually via changing power connections at the rear of the unit.

The unit operates from 18Vdc to 60Vdc supply voltage for Group A and B .

Technical & Connections:

The unit have 8 LAN input Ports and 8 LAN + POE output ports via 70W POE+ Gigabit Ethernet transformers.

All Power output Ports on the device is protected via **1Amp** PTC thermal self recoverable fuses against short circuits and faulty equipment that might be connected to the port.

The unit controls power to each POE output port via **mechanical relays** for robustness on the power line from incoming spikes on the power line caused by ESD discharges etc.

POE Port 1 to 8 can only be toggled to break power to the POE outputs 1 to 8 to reset connected devices.

The POE port will after being toggled – automatically re-connect power to the connected device after **15 seconds** so the user can not log himself out permanently of a connection to the remote tower.

10Mbps User control Ethernet interface for remote management.

Each Port have led indication for port power status , led's also indicates if the unit is connected in MODE B- 2pair power or PHANTOM MODE-4pair power mode for POE A and POE B.

When POE A or POE B is connected in the MODE B mode – only the **green** led illuminates on the POE port

When POE A or POE B is connected in the PHANTOM mode – the **green** and **amber** led illuminates on the POE port

Rear view



POE A is the master unit and POE B is the slave unit

The unit will not work if Power is connected to POE B only – always use POE A power input

RESET

To factory reset the unit to the default 192.168.1.2 IP address , disconnect power from the unit , short circuit the 2 pins carefully as indicated by the arrow on the backside , apply power to POE A , wait 10seconds , remove the short circuit across the 2 reset pins.

Green pluggable terminals for power connection:

The unit can be powered from the **same** supply voltage or from **two different** supply voltages –see connection diagrams below

**** Reverse polarity connections could damage your POE connected equipment****

Please be careful about correct polarity when connecting the power source

Each POE group , POE A (ch1-4) and POE B (ch1-4) can be wired to function in the

(same or different modes) and the (same or different) voltages.

MODES :

MODE B = 2 pair powering over LAN cable

PHANTOM = 4 pair powering over LAN cable

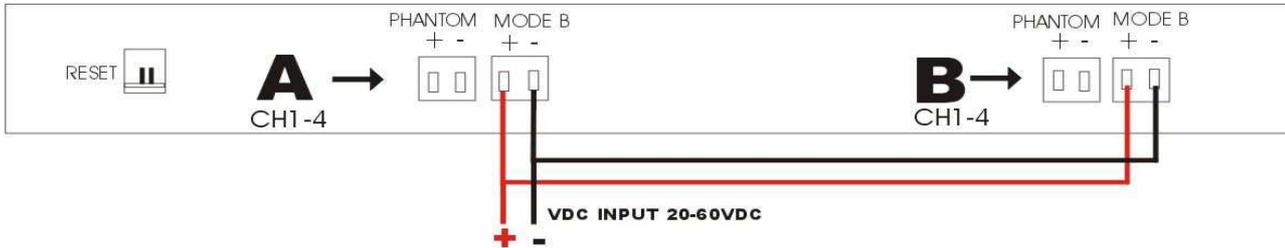
Provision was made for the user to write the voltage for the POE A group and the POE B group onto the front facia of the unit to avoid confusion between different voltage supplies between the channels

Voltage outputs will be equal to voltage inputs

MODE B = POWER OVER 2 PAIRS = +4,5 and - 7,8

PHANTOM = POWER OVER all 4 pairs + 1,2,4,5 and - 3,6,7,8

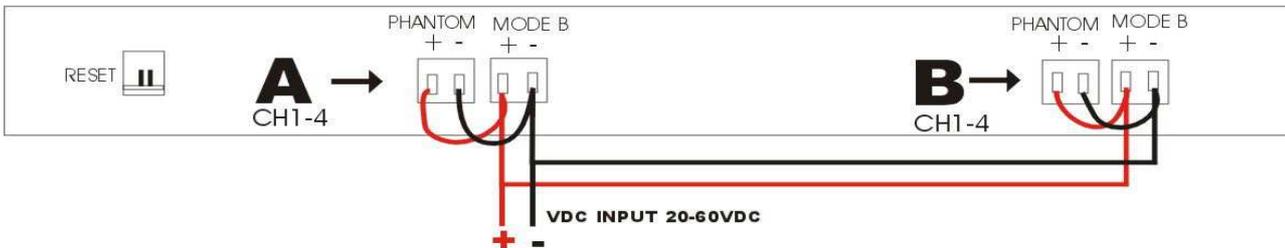
POWER Connection - MODE B for POE A + POE B at the same voltage



POWER Connection - MODE B for POE A + POE B at different voltages



POWER Connection - PHANTOM for POE A + POE B at the same voltage

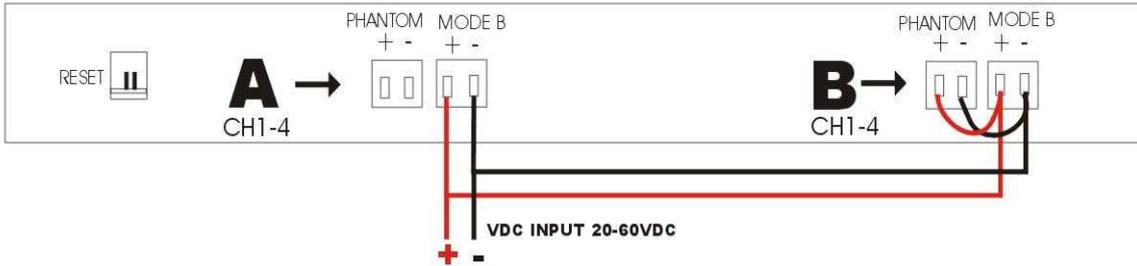


POWER Connection - PHANTOM for POE A + POE B at different voltages

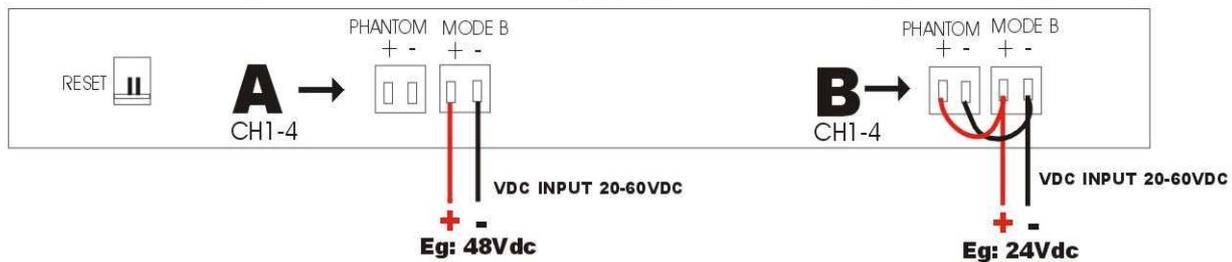


PHANTOM = POWER OVER all 4 pairs + 1,2,4,5 and - 3,6,7,8

POWER Connection - MODE B for POE A and Phantom for POE B at the same voltage or vice versa



POWER Connection - MODE B for POE A and Phantom for POE B at different voltages or vice versa



Screenshots:

Home page

Indicates PORT output power active with a green dot
 POE ID – user can specify a site name for the POE 4+4GM



Managed 4+4 CH GB DC POE Injector

- Home
- POE ID and MODE
- POE A Control(Main)
- POE B Control(Expander)
- Network Configuration

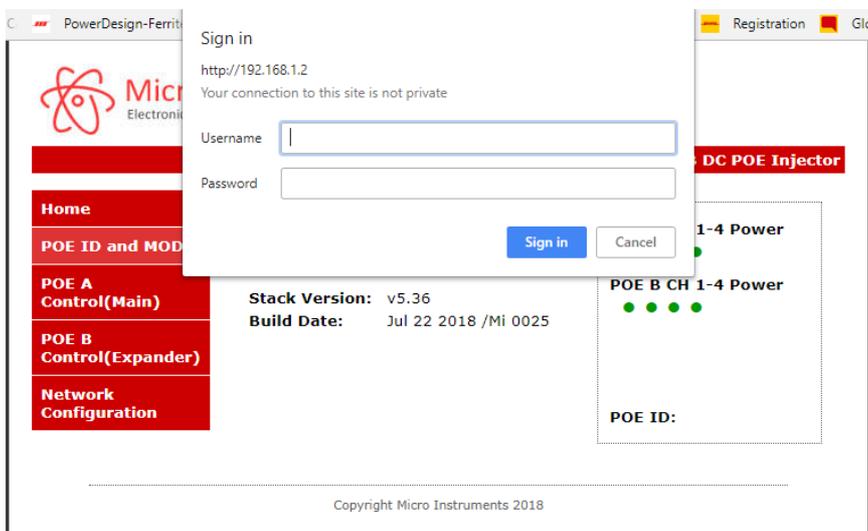
Managed 4 + 4 CH GB DC POE injector

Stack Version: v5.36
 Build Date: Jul 22 2018 /Mi 0025

POE A CH 1-4 Power
 ● ● ● ●
 POE B CH 1-4 Power
 ● ● ● ●

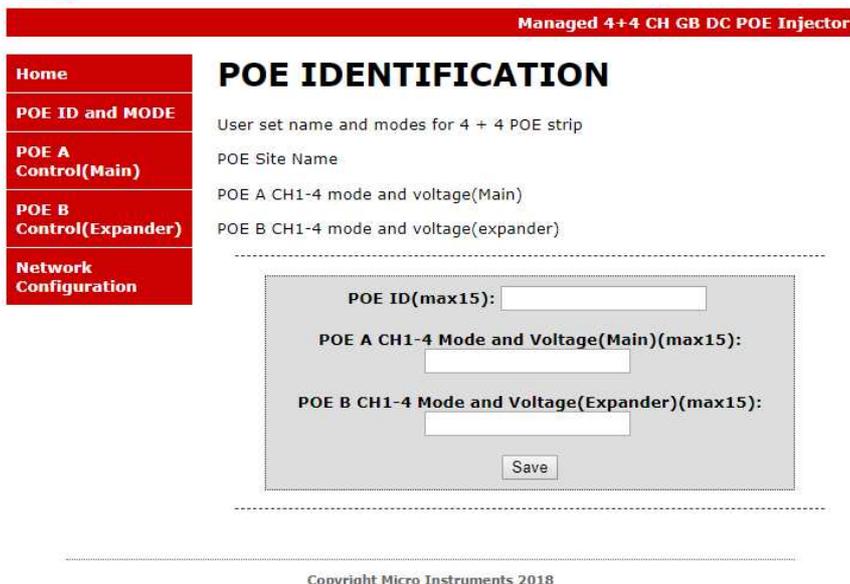
POE ID:

Selecting any menu will bring up the password pop up
Default : admin & admin



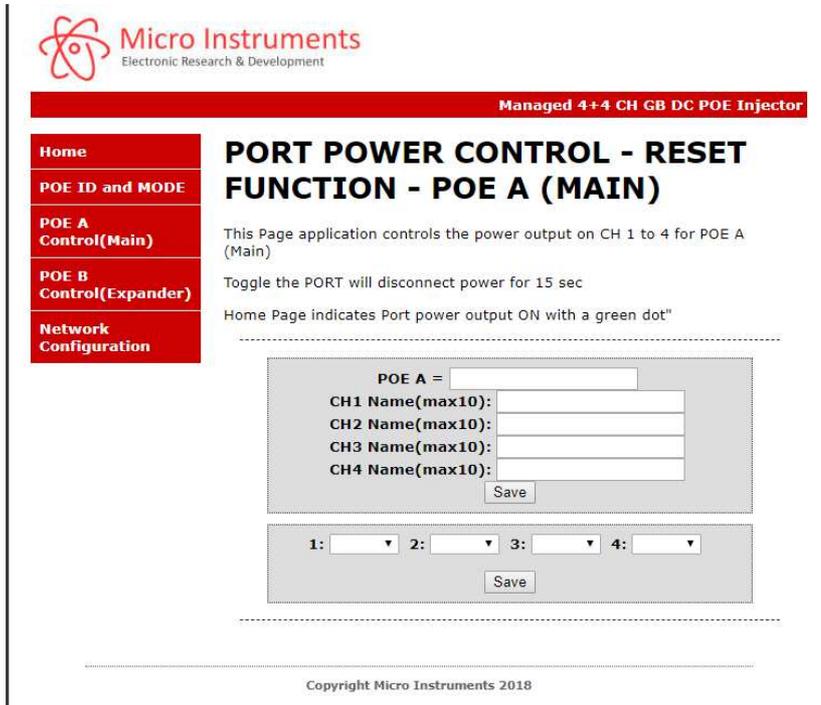
POE ID : user defined site name for the POE 4+4GM

User can enter the voltage and the mode for POE A and POE B for reference



POE A - PORT POWER CYCLE:

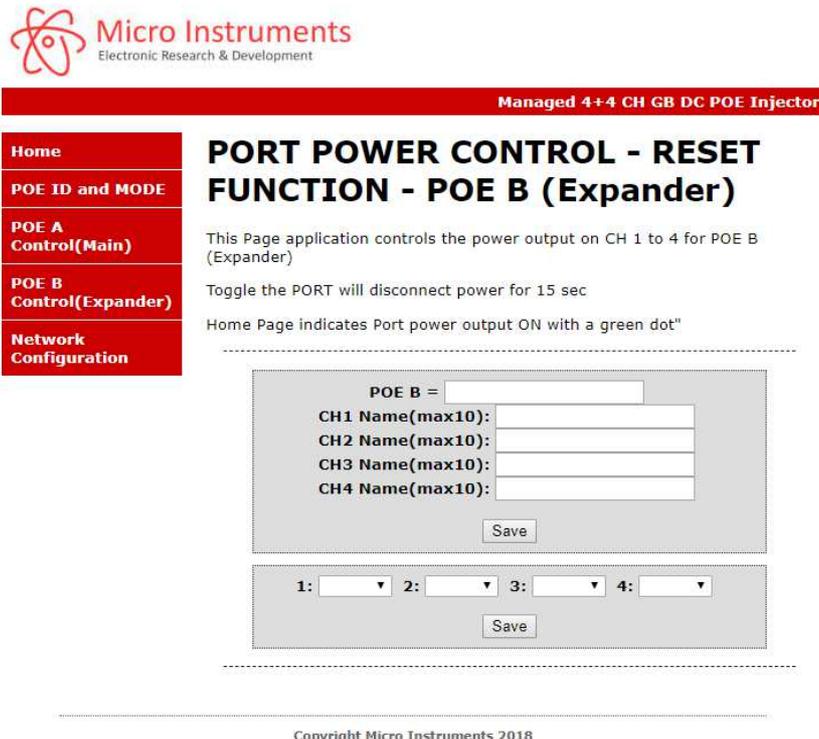
User defined Names can be specified for **PORT A** channel 1 to 4 to easily identifies connected devices to the port
 PORT A CH 1-4 can be toggled for 15 sec to reset connected devices



The screenshot shows the web interface for the POE A control. At the top left is the Micro Instruments logo and name. A red navigation bar contains the text "Managed 4+4 CH GB DC POE Injector". On the left is a vertical menu with options: Home, POE ID and MODE, POE A Control(Main), POE B Control(Expander), and Network Configuration. The main content area is titled "PORT POWER CONTROL - RESET FUNCTION - POE A (MAIN)". Below the title, there are two paragraphs of text: "This Page application controls the power output on CH 1 to 4 for POE A (Main)" and "Toggle the PORT will disconnect power for 15 sec". A note states "Home Page indicates Port power output ON with a green dot". The interface features two main form sections. The first section is for naming channels, with labels "POE A =", "CH1 Name(max10):", "CH2 Name(max10):", "CH3 Name(max10):", and "CH4 Name(max10):", each followed by a text input field and a "Save" button. The second section is for channel toggling, with labels "1:", "2:", "3:", and "4:", each followed by a dropdown menu and a "Save" button. At the bottom, it says "Copyright Micro Instruments 2018".

POE B - PORT POWER CYCLE:

User defined Names can be specified for **PORT B** channel 1 to 4 to easily identifies connected devices to the port
 PORT B CH 1-4 can be toggled for 15 sec to reset connected devices



The screenshot shows the web interface for the POE B control. At the top left is the Micro Instruments logo and name. A red navigation bar contains the text "Managed 4+4 CH GB DC POE Injector". On the left is a vertical menu with options: Home, POE ID and MODE, POE A Control(Main), POE B Control(Expander), and Network Configuration. The main content area is titled "PORT POWER CONTROL - RESET FUNCTION - POE B (Expander)". Below the title, there are two paragraphs of text: "This Page application controls the power output on CH 1 to 4 for POE B (Expander)" and "Toggle the PORT will disconnect power for 15 sec". A note states "Home Page indicates Port power output ON with a green dot". The interface features two main form sections. The first section is for naming channels, with labels "POE B =", "CH1 Name(max10):", "CH2 Name(max10):", "CH3 Name(max10):", and "CH4 Name(max10):", each followed by a text input field and a "Save" button. The second section is for channel toggling, with labels "1:", "2:", "3:", and "4:", each followed by a dropdown menu and a "Save" button. At the bottom, it says "Copyright Micro Instruments 2018".

Network Configuration:

Change User defined password

Set IP address , Gateway and subnet Mask for the Ethernet interface



Managed 4+4 CH GB DC POE Injector

Home

POE ID and MODE

POE A
Control(Main)

POE B
Control(Expander)

Network
Configuration

Ethernet Configuration

This page allows the configuration of the units network settings.

CAUTION: Incorrect settings may cause the unit to lose network connectivity.

Enter the new settings/name for the unit below:

MAC Address:	<input type="text" value="00:19:F6:00:1D:C2"/>
Host Name:	<input type="text" value="POE4+4GM"/>
Password: [max 9]	<input type="text" value="admin"/>
IP Address:	<input type="text" value="192.168.1.2"/>
Gateway:	<input type="text" value="192.168.1.1"/>
Subnet Mask:	<input type="text" value="255.255.255.0"/>
<input type="button" value="Save Config and Reboot"/>	

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Physical:

The unit is housed in a **19"** standard rack mount enclosure – the mounting flanges on the sides can be turned 90 degrees to act as mounting feet if a **19"** rack cabinet is not available.

LENGTH: 440mm

HIGHT: 45mm

WIDTH: 80mm

WEIGHT : 1.375Kg

