

# MaNima Pollux

## DATASHEET



## MaNima Pollux

- Redundant setup
- 8 PWM outputs
- 8 sensor inputs
- Digital in- and outputs
- Built-in Ethernet switch
- Measure PWM, Temperature, Power, Current and Voltage in real-time
- Firmware updates with Ethernet
- ArtNet/sACN compatible
- Configure with MaNima Configurator
- Autonomous operation

### Sensor Inputs

Measurements are possible with multiple sensor inputs. These readings can then be used for monitoring and conditions.

### PWM Output

There are 8 PWM outputs available on the MaNima Pollux. These can be used to control analogue LEDs or devices. PWM frequency can be adjusted up to 30kHz.

### Custom Software

The MaNima Pollux can be customized to communicate with your system. Contact MaNima Technologies for more information.

### Ethernet Switch

The MaNima Pollux doubles as an ethernet switch. The two ethernet ports on the Pollux are part of the same network.

### Redundant Setup

If the Pollux is used in an important installation that must be free from interference and malfunctions, it is possible to have a 2<sup>nd</sup> power source for the Pollux to ensure system reliability.

### Autonomous Operation

The Pollux is able to fulfil completely autonomous operations without user interaction.

### Digital/Potential Inputs

There are 2 digital/ potential inputs available on the MaNima Pollux. These can be used as triggers for actions.

### Monitoring and the Cloud

The Pollux has been made with monitoring in mind. It is also possible to send this data to a cloud database.

### Increased Reliability and Protection

The MaNima Pollux is able to measure the current and voltage going through the PWM outputs.



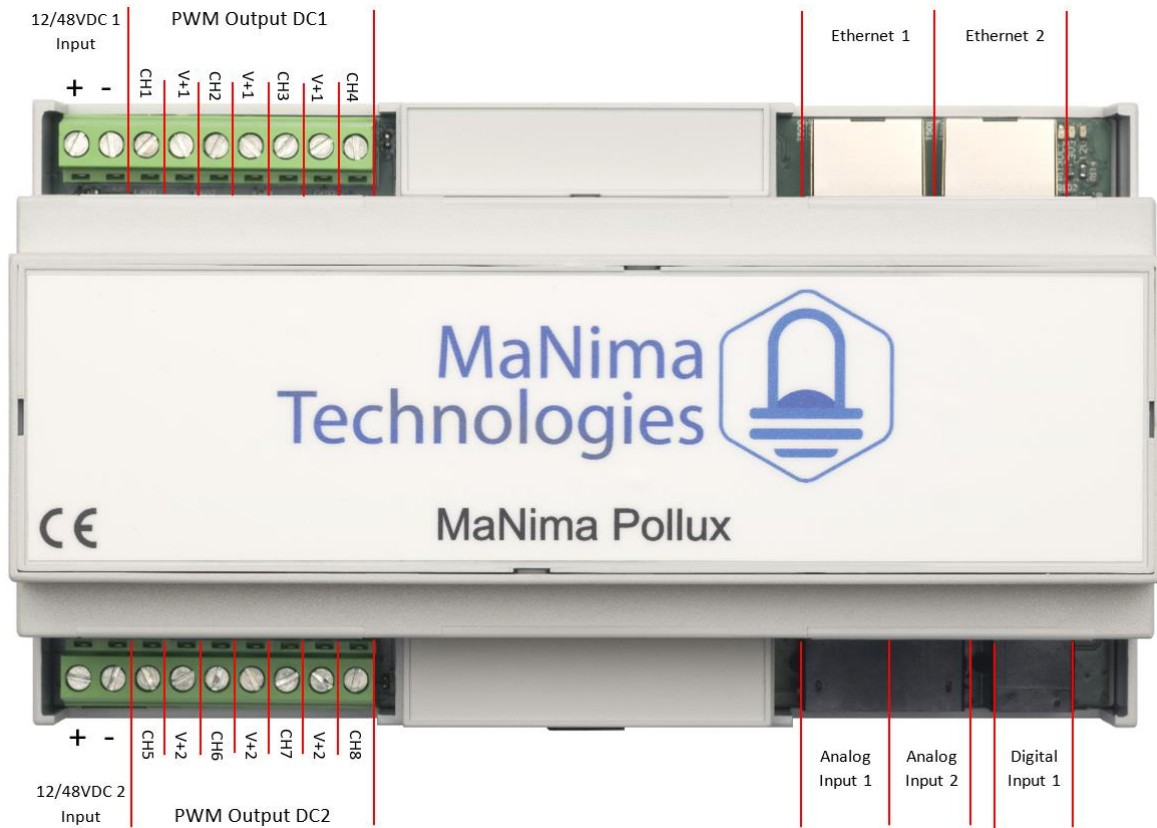
## Technical Specifications

Weight	360 Gr
Dimensions	90 x 159 x 58 mm (B x L x H)
Mounting	Din rail 35mm
IP class	IP10
Wiring	Max. 2.5mm <sup>2</sup>   14 AWG
Connectors	Ethernet switch terminal connector: RJ45 bus, 2 x 9 pins terminal block, 3 x 6P6C
Input voltage	12-48V DC 200mA max
Own power consumption	9.6W
Ethernet	RJ45 compatible, for 10/100 Base-TX Ethernet with static IP address or DHCP
Input	DC1 12/48VDC power inputs (20A)   DC2 12/48VDC power inputs (20A)   2 x Ethernet inputs/outputs   14 x NTC/LDR   2 x digital input   optional Wi-Fi module   4 additional GNDs   ArtNet/aSCN
Output	4 x Digital Output
Output DC1	12V – 4 channels x 5 A or 2 channels x 10 A 24V – 4 channels x 5 A or 2 channels x 10 A 36V – 4 channels x 5 A or 2 channels x 10 A 48V – 4 channels x 5 A or 2 channels x 10 A
Output DC2	12V – 4 channels x 5 A or 2 channels x 10 A 24V – 4 channels x 5 A or 2 channels x 10 A 36V – 4 channels x 5 A or 2 channels x 10 A 48V – 4 channels x 5 A or 2 channels x 10 A
Adjustable PWM frequency	Yes, up to 30kHz.
Safety Features	Real-time Internal PWM, Temperature, Power, Current and Voltage measurements
Efficiency	Approx. 99.8%
Over voltage protection	Yes, up to 60 Volts
Short circuit protection	Short circuit protection on in-and outputs
Directives	CE, RoHs
Operating temperature	10°C ~ 60°C
Storage temperature	10°C ~ 60°C
Warranty	5 Years
Gui	MaNima configurator



# Connection Diagram

Descriptions of ports from top left to bottom right:



**12/48V DC1:** Power input for power source 1. Corresponds with 'DC1 PWM Outputs'.

**12/48V DC2:** Power input for power source 2. Corresponds with 'DC2 PWM Outputs'.

**DC1 PWM outputs:** 4 x PWM Outputs and 3 x V+. Corresponds with '12/48V DC1 Power input'.

**DC2 PWM outputs:** 4 x PWM Outputs and 3 x V+. Corresponds with '12/48V DC2 Power input'.

**Analog input 1:** Input for analogue sensors. See next page for the pinout.

**Analog input 2:** Input for analogue sensors. See next page for the pinout.

**Digital in/output 1:** In- and outputs for the digital sensors. See next page for the pinout.

**Ethernet 1 and 2:** RJ45 connector Ethernet switch for connecting the Pollux to the network.

## Pinout schematics

### Connector Type: 6P6C

#### Analog 1

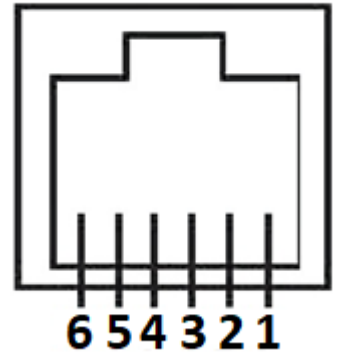
Pin	Function	Max Current	Max Voltage
1	GND	50mA	0,1V
2	GND	50mA	0,1V
3	NTC1_1	50mA	3,3V
4	NTC2_1	50mA	3,3V
5	NTC3_1	50mA	3,3V
6	NTC4_1	50mA	3,3V

#### Analog 2

Pin	Function	Max Current	Max Voltage
1	GND	50mA	0,1V
2	GND	50mA	0,1V
3	NTC5_1	50mA	3,3V
4	NTC6_1	50mA	3,3V
5	LDR1_1	50mA	3,3V
6	LDR2_1	50mA	3,3V

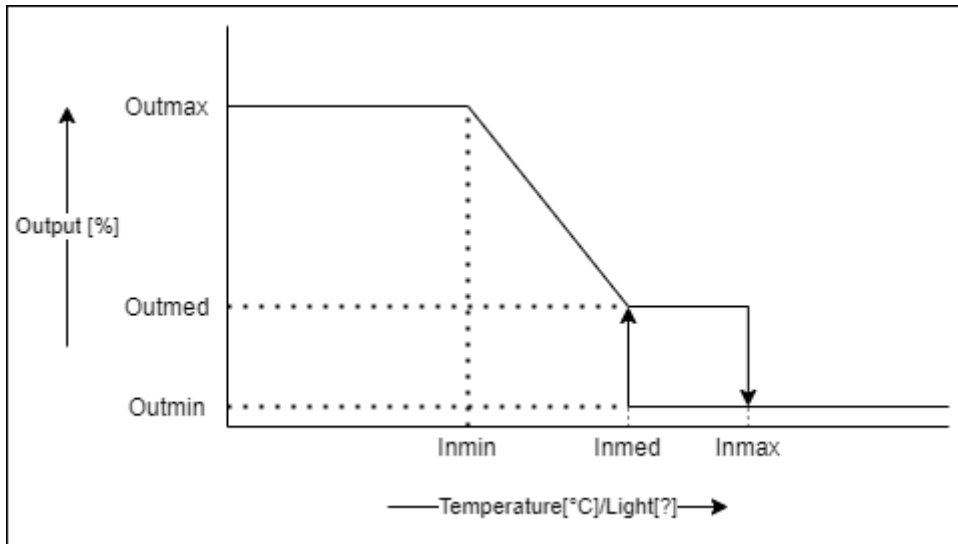
#### Digital 1

Pin	Function	Max Current	Max Voltage
1	Digital Out 1_1	50mA	300V
2	Digital Out 1_2	50mA	300V
3	Digital Out 2_1	50mA	300V
4	Digital Out 2_2	50mA	300V
5	Digital In 1	5mA	48V
6	Digital in 2	5mA	48V



# Temperature dim-curves

The dimming curve and its parameters:



This graph is used to visualise the effects of the parameters.

When setting the parameters, keep in mind the ambient temperature and generated temperature of the LEDs to reduce risk of damages.

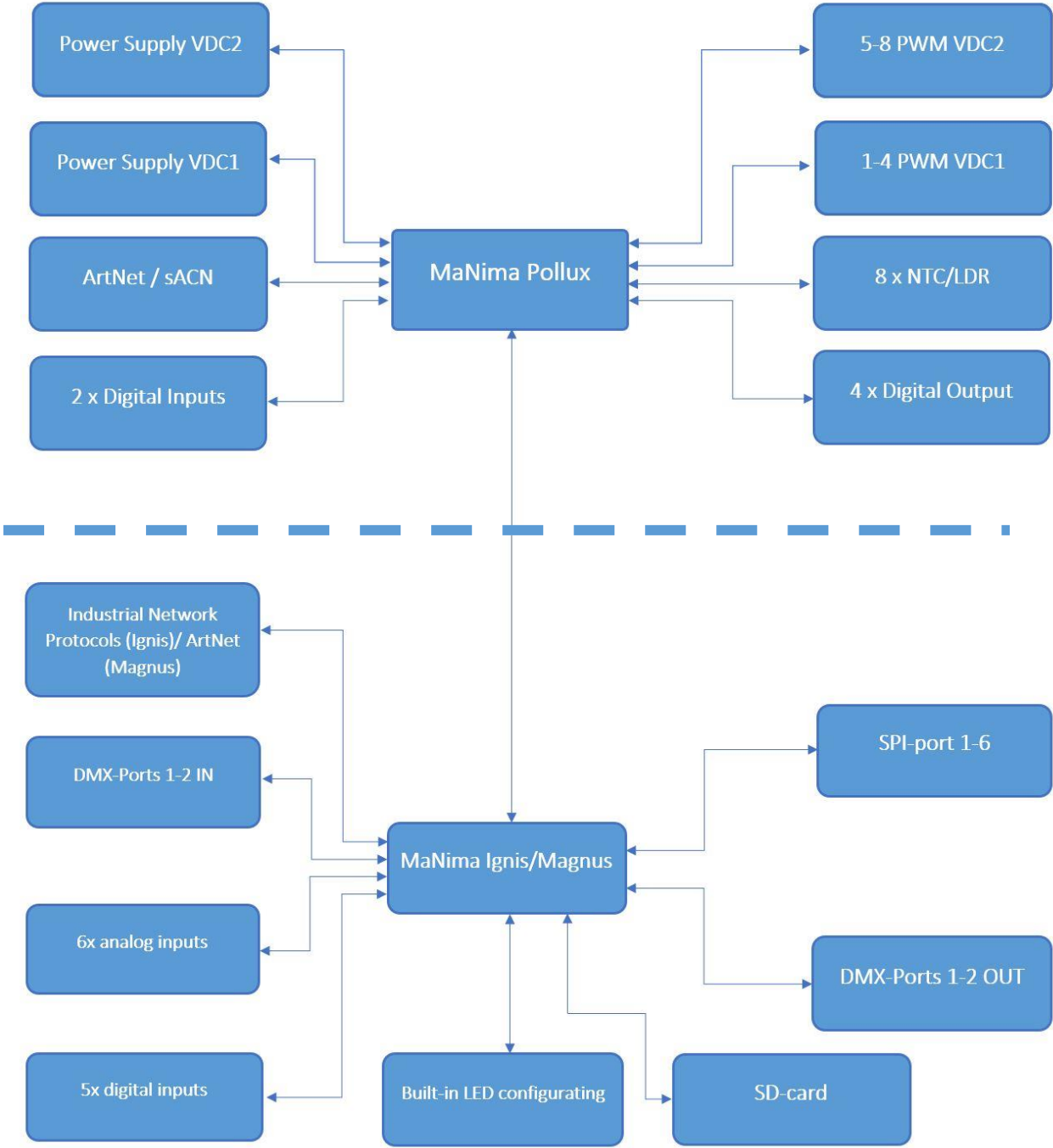
The parameters as shown in the MaNima Configurator:

Parameters	
Parameter name	Value
NTC1Outmax	100 %
NTC1Outmed	1 %
NTC1Outmin	0 %
NTC1Inmax	30.0 deg C
NTC1Inmed	29.0 deg C
NTC1Inmin	28.0 deg C
NTC1Temp	15.33 deg C
NTC1Dim	1.0

# MaNima Pollux Network Overview

**MaNima Pollux**

**Overview**



## MaNima Products Overview

### MaNima Ignis

Industrial Interface

Total system integration for industrial systems

INP and custom API

### MaNima Magnus

Digital LED Interface

For high quality digital LED applications

Standalone up to 26 SPI and 2 DMX universes

### MaNima Pollux

Monitoring and PWM

14 sensor inputs (8 analogue, 6 digital)

8 PWM outputs

### MaNima Nexus

Connectivity module

Connect the installation to wireless network

**MaNima Magnus:** The MaNima Magnus Architectural LED Interface is a professional LED controller with an industrial design made for operating digital LED installations. The interface is also able to control multiple protocols at once.

**MaNima Ignis:** The MaNima Ignis Industrial Interface is a LED interface designed for the industrial market. The MaNima Ignis is a stable and reliable platform that is used in the Industry for operating LEDs. The MaNima Ignis can communicate with existing systems.

**MaNima Nexus:** The MaNima Nexus is a module used for connecting advanced and complex systems to a network of MaNima products.

**MaNima Pollux:** The MaNima Pollux is an industrial PWM driver and LED monitoring module made for the professional market. The MaNima Pollux is a versatile device which can fulfil many different tasks. The MaNima Pollux has been designed to be reliable, stable and fail-safe.



## Contact Info

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#### YouTube:

Link: [MaNima Technologies - YouTube](#)

