OPTICAL SYSTEMS DESIGN

OSD2184P

Micro 10/100/1000Base-T to 100Base-Fx/1000Base-X 3-Port Switch with IEEE802.3af/at/bt & PoH PoE Source

Introduction

The OSD2184P is a 3-port industrial ethernet switch offering Power over Ethernet meeting the latest IEEE802.3bt PoE specification with continued support for devices requiring IEEE802.3af/at and HDBase-T (PoH) PoE. Each of the two RJ45 ports is capable of providing 90W of power with a total power budget of 170W. This allows the latest PoE devices such as IP cameras, Wireless Access Points, microwave links and VOIP phones to be easily connected to your network. With a compact design the OSD2184P can easily be mounted inside a network enclosure or a Smart Pole using the DIN rail or wall mounting brackets provided. Additionally, the OSD2184PW version can be powered from a 12VDC to 57VDC supply. A rugged IP30 casing, fan-less design and wide operating temperature range from -40 to +75ºC make this product ideally suited for use in a wide range of harsh industrial environments.

Features and Benefits

- Complies with IEEE802.3i/802.3u/802.3ab 10/100/1000Base-T, IEEE802.3u 100Base-Fx, IEEE802.3z 1000Base-Lx/Sx standards
- Has two fixed 10/100/1000Base-T copper ports and one 100Mbps/1000Mbps SFP port
- Auto MDI/MDIX on copper ports (support both straight through and crossover cables)
- Can be used with either singlemode or multimode fiber over a variety of link budgets
- Complies with the IEEE802.3af/at/bt and HDBaseT (PoH) standards
- Provides up to 90W to each RJ45 port, up to 170W in total.
- User selectable PoE mode setup
- Web browser based Graphical User Interface (GUI)
- Available for operation over 1 or 2 fibers
- Powered by non-critical 46 to 57VDC supplies for OSD2184P or 12 to 57VDC for OSD2184PW (voltage booster version)
- Operates over the temperature range of -40 to +75ºC
- PoE mode setting from GUI or Push Button
- Remote PoE on/off control and status monitoring
- Supports 10KB jumbo frames
- SFP module sold separately
- DIN rail or surface mounting

Industrial Ethernet Media Converters / Switches

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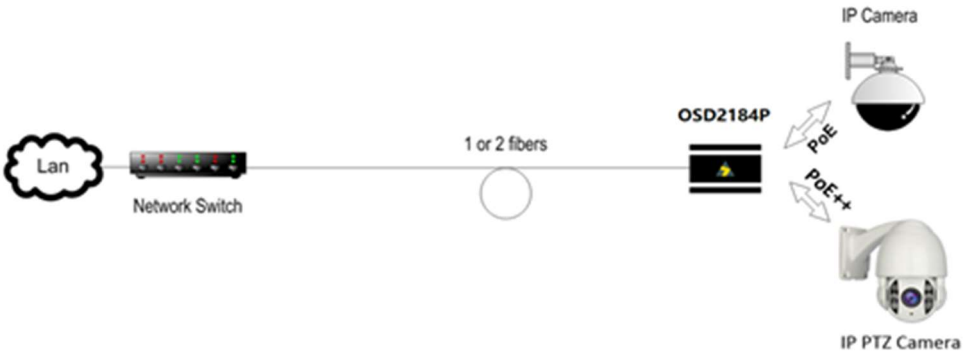
DESIGNED AND MANUFACTURED IN AUSTRALIA

OSD2184P

Typical System Design



Specifications

Hardware	
Ethernet	2 x 10/100/1000Base-T RJ45, IEEE802.3i/802.3u/802.3ab
Jumbo Frame Support	10KB
SFP	1 x Gigabit SFP ports (100Mbps or 1000Mbps user selectable)
Optical Data Interface	IEEE802.3z 1000Base-Lx/Sx, IEEE802.3u 100Base-Fx
Four PoE modes (user selectable via push button or GUI)	IEEE802.3af/at, IEEE802.3bt, HDBase-T (PoH) Additional PoE modes available via Web-GUI (see table below)
Enclosure Protection Class	IP30
Installation	DIN rail, wall mount or desktop
DIP Switch	3 way DIP switch for configuration 1. Software Program 2. 100 or 1000Mbps on the fiber port 3. PoE On/Off
Power Requirements – OSD2184P	Input Voltage: +46VDC to +57VDC @ 8W +PoE output power for PD devices. Output PoE Voltage: Vin - Vdrop
Power Requirements – OSD2184PW	Input Voltage: +12VDC to +57VDC @ 15W + PoE output power for PD devices. Output PoE Voltage: 56 to 57V - Vdrop
Output PoE Vdrop per port	PoE voltage drop per port <0.5V @ 30W, <1V @ 60W, <1.5V @ 90W
Power Connector	2 way 5.08mm terminal block
Indicators	2 x Copper Link/Activity on RJ45 2 x Copper Speed on RJ45 2 x PoE Power On/Off 4 x PoE Mode 1 x Power On/Off 1 x SFP Link/Speed on SFP
Environmental	-40 to +75°C
Relative Humidity	0 to 95% non-condensing
Dimensions	90W x 88D x 49H mm
Weight	400g

Management	
Interfaces	Command Line Interface (CLI mini USB) Web browser based Graphical User Interface (GUI)
Port Configuration	Auto negotiation
Port Status	Speed, duplex mode, link status, auto negotiation status

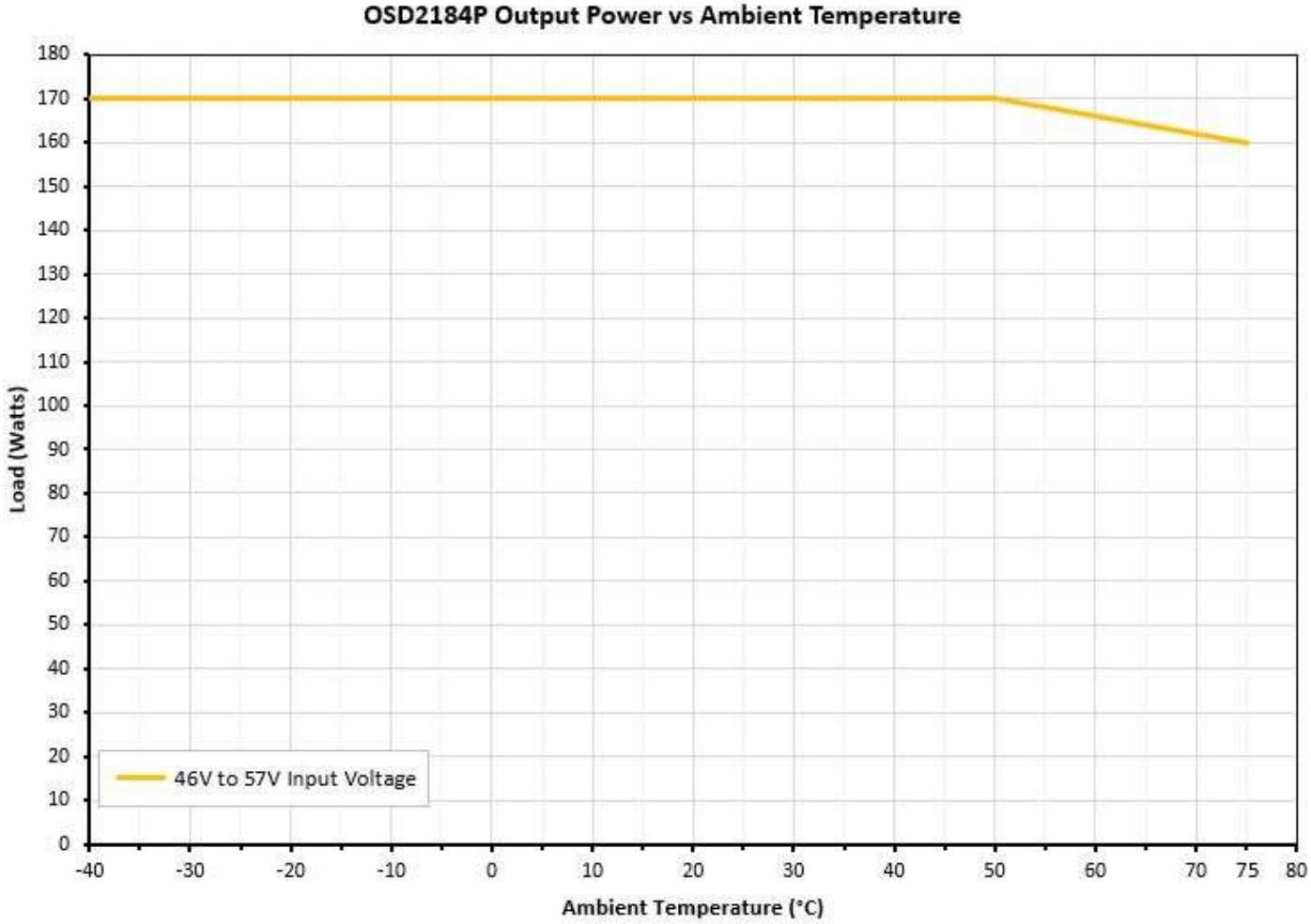
Specifications contained herein are correct at the time of printing. We reserve the right to alter specifications without notice.

PoE

PoE configurable parameters via Web-GUI:

Operating Mode	Legacy detection options	Pair number options	Maximum Power options
BT	Enable, Disable	2	15W, 30W
		4	15W, 30W, 60W, 90W
PoH	Disable	2	45W
		4	90W
Pre-BT	Enable, Disable	2	30W
		4	60W
Mode 4P CDP	Enable	2	30W
		4	60W
BT Special	Enable	2	45W
BT Class0=Class4	Enable	2	30W
		4	60W, 90W
2P 3Finger	Enable	2	30W
4P 4Finger	Enable	4	60W
BT with PoH	Enable	2	45W
		4	90W
BT PoH Like on all Class	Enable	2	45W
		4	90W
BT Special Class 4	Enable	2	30W
		4	60W

PoE Output Power Budget (Total Power of Two Copper Ports) with temperature derating



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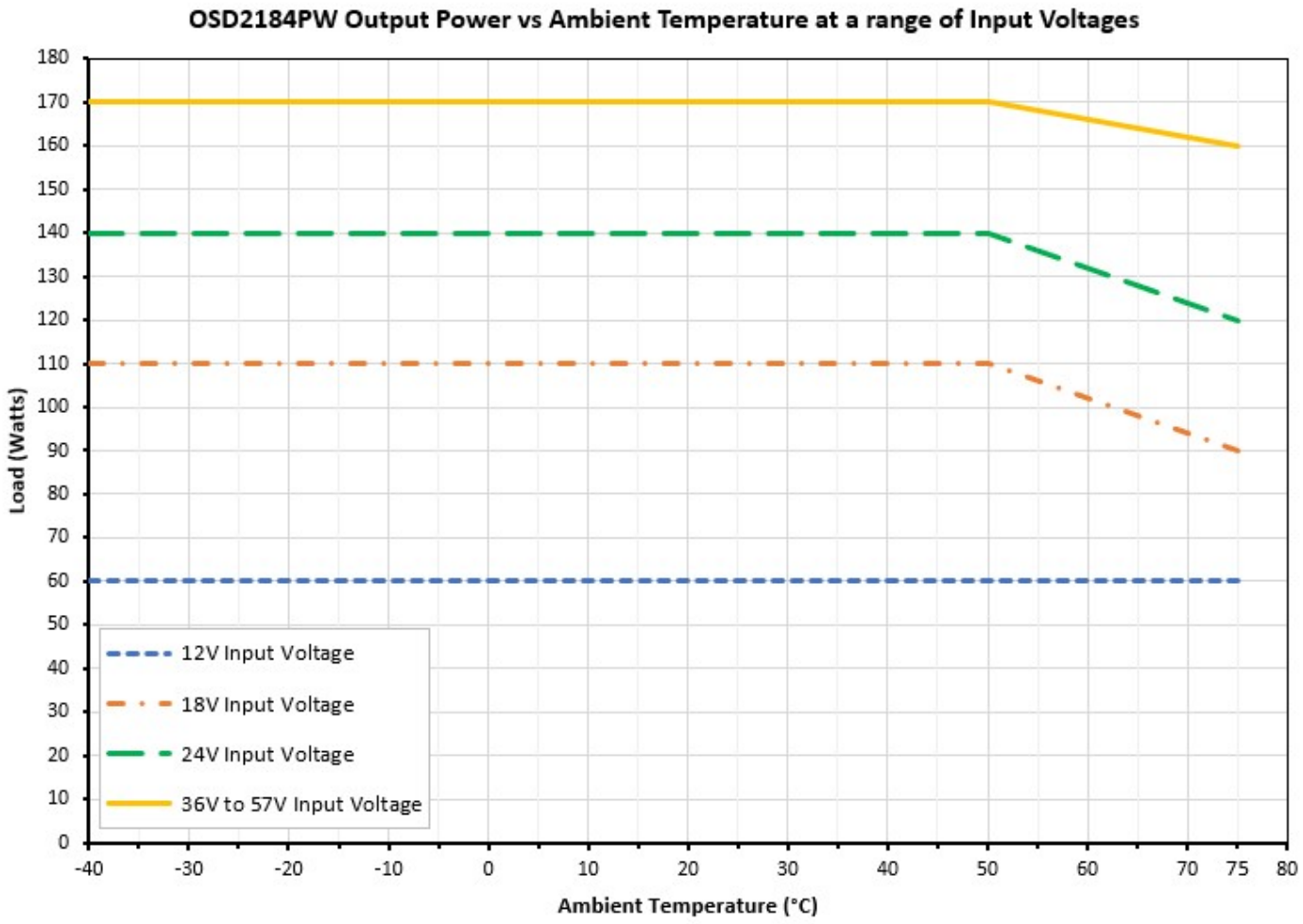
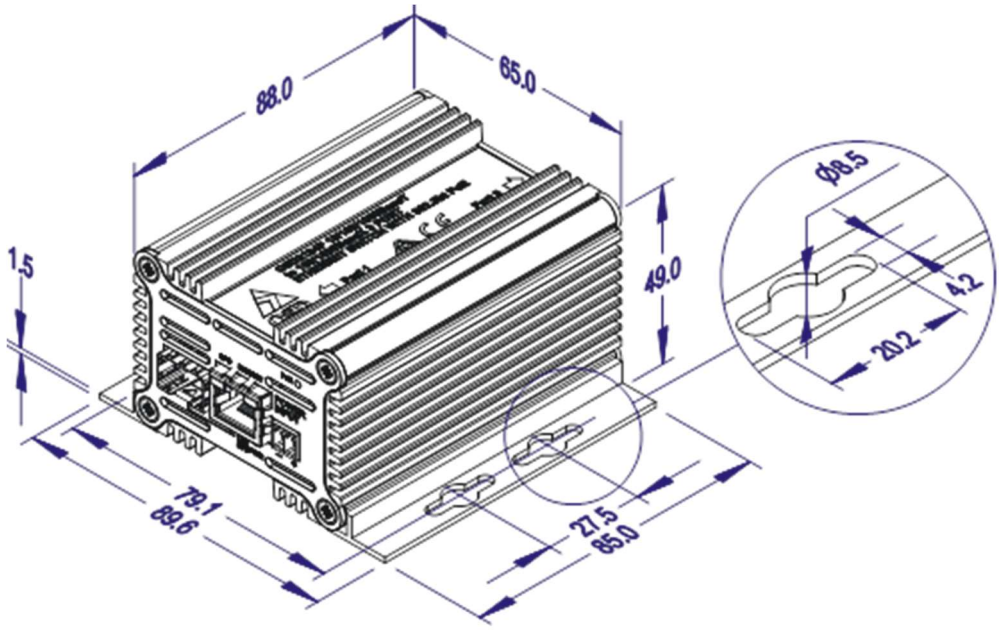


Dimensions

Surface Mounted



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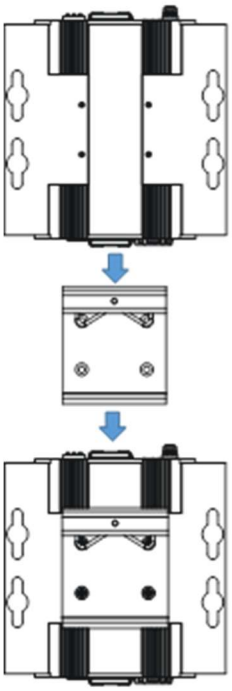
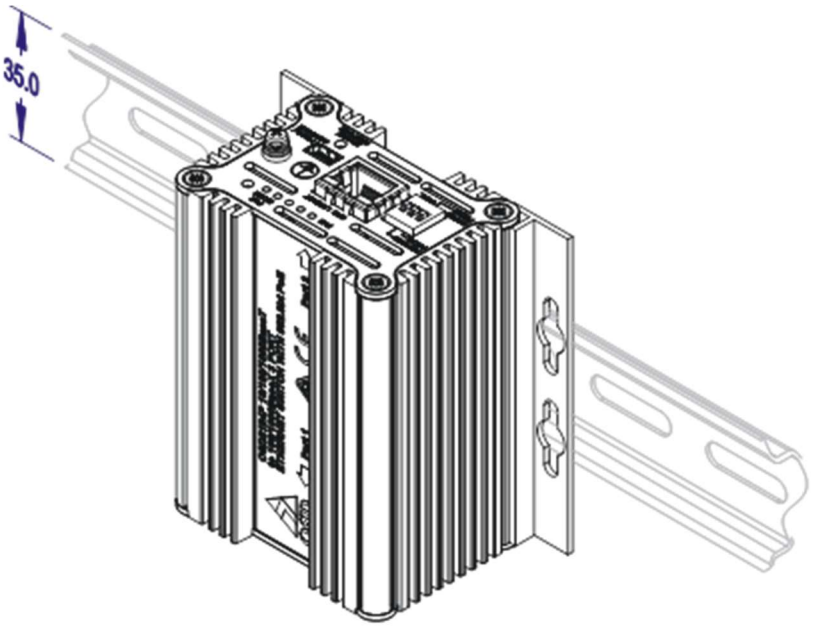
Din Rail Mounted





Warranty	
Warranty Period	5 years
MTBF (Ground Benign Environment, 30ºC)	455,000 hours for OSD2184P 402,000 hours for OSD2184PW

Ordering Information

Part No.	Description
OSD2184P	Micro 3-Port Switch with 2 x RJ45 with PoE IEEE802.3af/at/bt & PoH and 1 x Gb SFP
OSD2184PW	Micro 3-Port Switch with 2 x RJ45 with PoE IEEE802.3af/at/bt & PoH and 1 x Gb SFP supporting 12-57VDC input voltage range
SFP	See OSD SFP datasheets #102100XX, #10210000X

Doc ID: 1022184P04

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