

# Quick Start Guide

## Elinx ESW200 Series

5 and 8 port Unmanaged Ethernet Switch



ESW200 Series

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# Chapter 1 – Introduction

## *Description*

The ESW205/208 series are plug-and-play, Class 1 Div 2, heavy Industrial Ethernet switches with a compact IP30 DIN rail case. Switch configurations support 5 and 8 ports, all copper or with ST, SC fiber ports.

They will support IEEE 802.3 for 10BaseT (10 Mbps), IEEE 802.3u for 100BaseTX and 100BaseFX (100 Mbps), and IEEE 802.3x, 10/100 Mbps, full and half duplex, MDI/MDX auto sensing.

The ESW205/208 series uses dual power inputs that accept 12 to 36 VDC or 10 to 24 VAC with removable terminal blocks. The acceptable operating temperature range is -10C to 60C or (-T models) -40 to 75°C with an ambient relative humidity rating of 10 to 95% (Non-condensing).

The ESW205/208 series has 7 different mounting options. One being din rail and 6 different panel mounted options. Panel mount adapters are shipped with switches.

## *Package Checklist*

The ESW205/208 will ship with the following items.

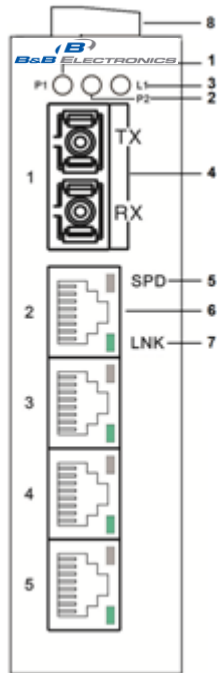
- B&B Ethernet switch with attached din rail clip
- Quick Start Guide
- 4 - Panel mount clips with screws

## ***ESW205/208 features***

- 10BaseT, 100BaseTX, 100BaseFX
- 10/100 Mbps, full and half duplex, MDI/MDX auto sensing.
- Full / Half Duplex Back Pressure Flow Control
- Store and forward architecture
- Broadcast Storm control
- RJ45 shielded connectors
- Single mode, multi mode, ST, SC, 100BaseFX fiber connectors
- Compact IP 30 enclosure
- UL/cUL Class I Div 2 Groups A,B,C, and D
- Heavy Industrial Level3, EN61000-6-2 certified
- Shock, Vibration, and Free Fall
- Din rail and panel mountable
- -10C to 60C or (-T models) -40 to 75°C operating temperature

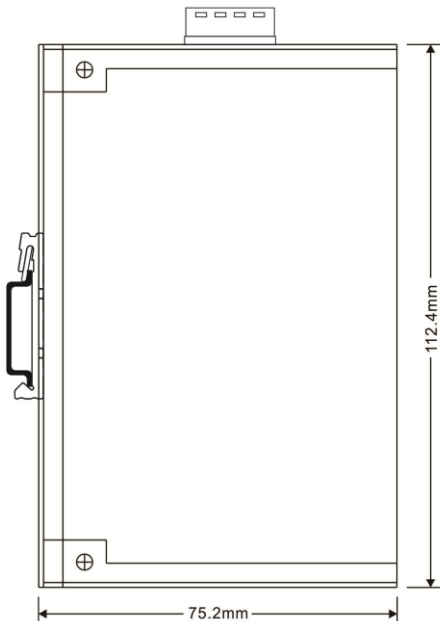
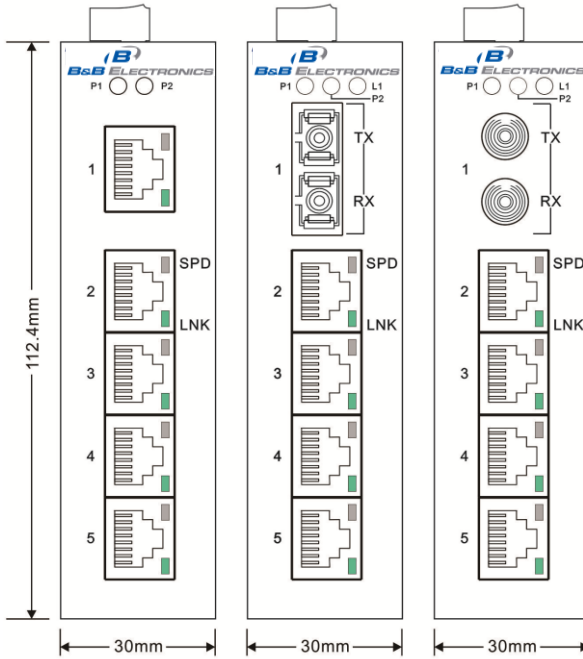
# ESW205/208 Overview

## Front Panel



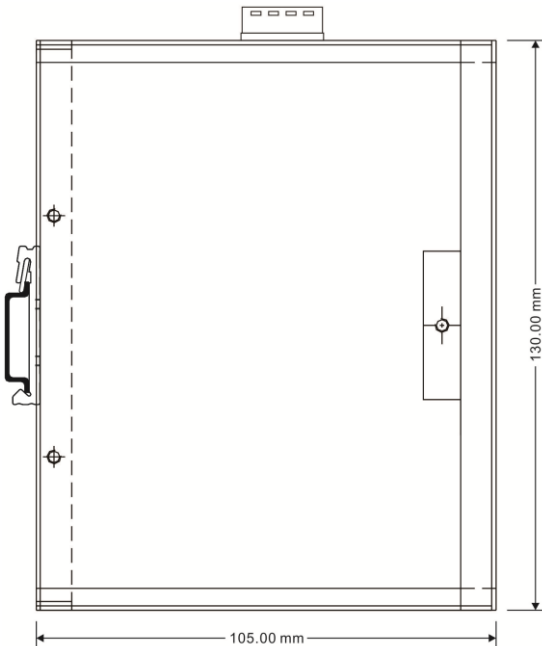
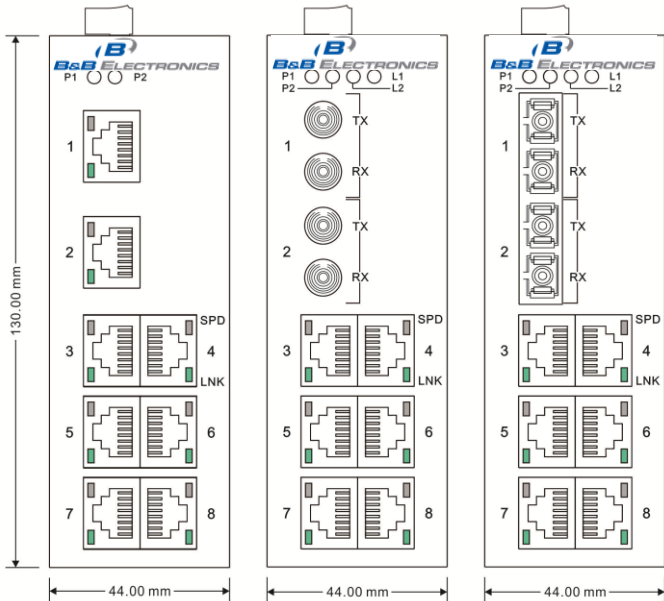
1. P1 power LED
2. P2 power LED
3. L1 fiber port Link, Activity LED
4. 100BaseFX, SC or ST Fiber Port
5. Speed LED
6. 10/100BaseT(X) RJ45 Port
7. Link LED
8. Power Terminal Block, P1 and P2

# Dimensional Drawing ESW205 Series

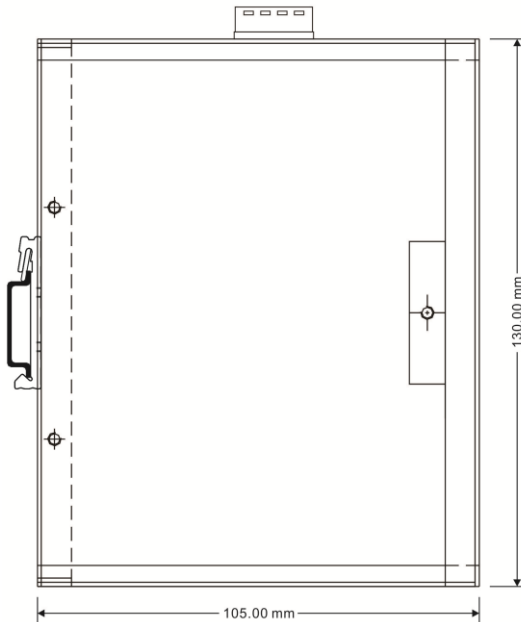
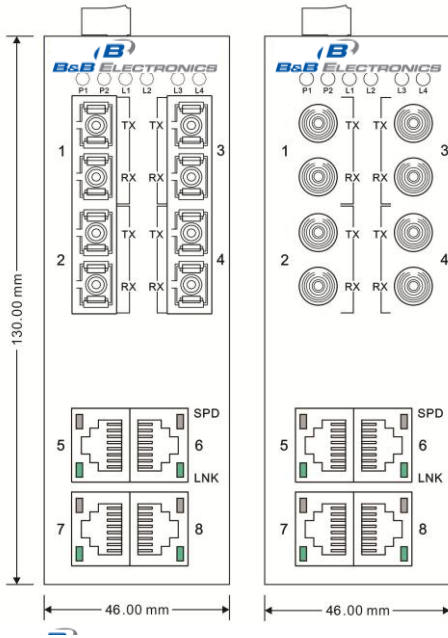




# Dimensional Drawing ESW208-2xx Series



# Dimensional Drawing ESW208-4xx Series

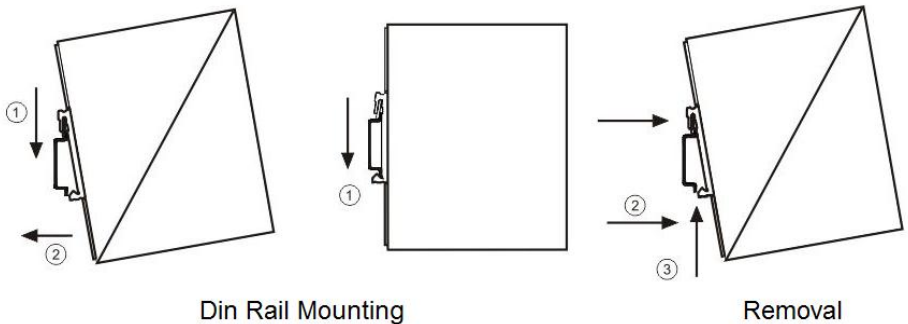


## LED Indicators

LED	Status	Description
PWR	Green ON	Power Applied
	Off	No power
Speed LED	Green ON	100Mbps
	Off	10Mbps
Link / Activity LED	Green ON	Link
	Blinking	Activity
	Off	Not connected to network
Fiber LED	Green ON	Link
	Blinking	Activity
	Off	Not connected to network

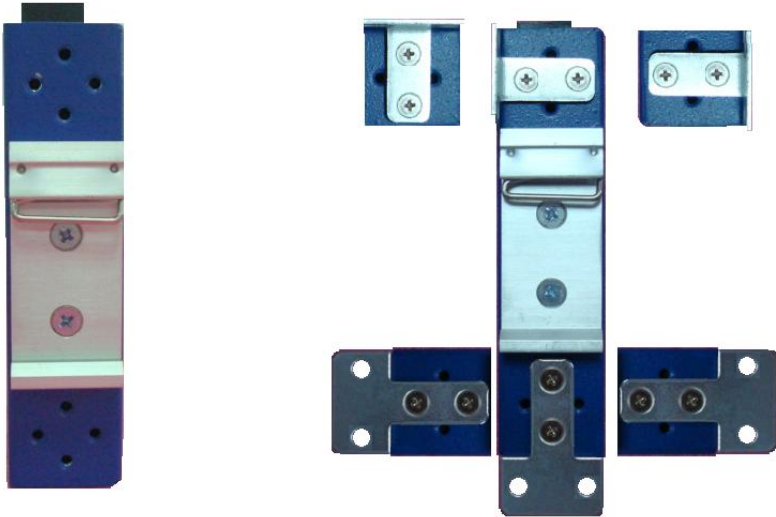
## Din Rail Mounting

The din rail mounting clips are connected to the switch when shipped and ready to be mounted on a 35mm size din rail.



## ***Panel Mounting***

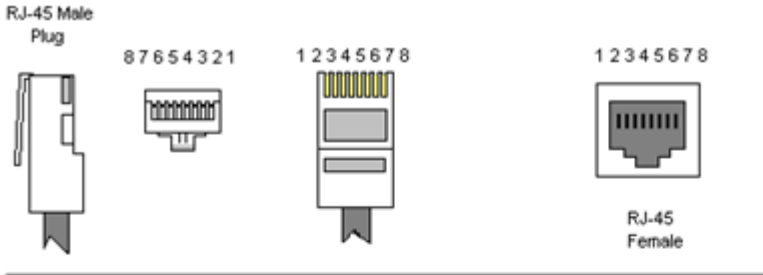
The switch ships with 4 panel mount clips giving the user 6 different ways to panel mount the unit.



# RJ45 Ethernet Connections

The ESW200 series RJ45 connectors will support 10BaseT and 100BaseTX communications. Each RJ45 port supports full or half duplex and MDI/MDX auto sensing.

Below are the EIA/TIA T568A / B color standard and RJ45 pin out along with standard and crossover cable connections.



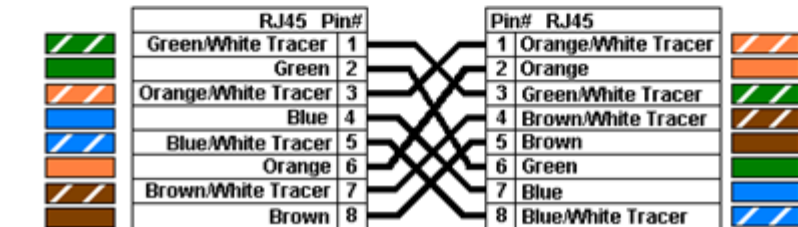
**Color Standard**  
EIA/TIA T568A

**Ethernet Patch Cable**



**Color Standard**  
EIA/TIA T568A

**Ethernet Crossover Cable**



\*"A" is earlier

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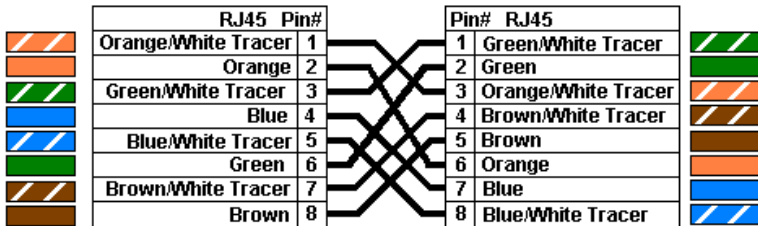
**Color Standard**  
EIA/TIA T568B

**Ethernet Patch Cable**



**Color Standard**  
EIA/TIA T568B

**Ethernet Crossover Cable**



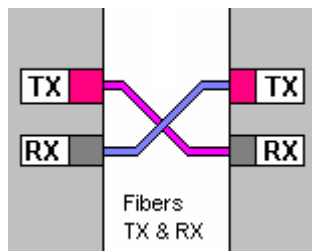
"B" is most recent

Common Ethernet Crossover Cables may only cross connect the Orange & Green pairs

**100BaseFX Ethernet SC / ST Fiber Port**

The use of fiber optics has become prevalent in Industrial Ethernet data communications systems. Extending distance, high data rate capabilities, noise rejection and electrical isolation are just a few of the important characteristics that make fiber optic technology ideal for use in industrial applications.

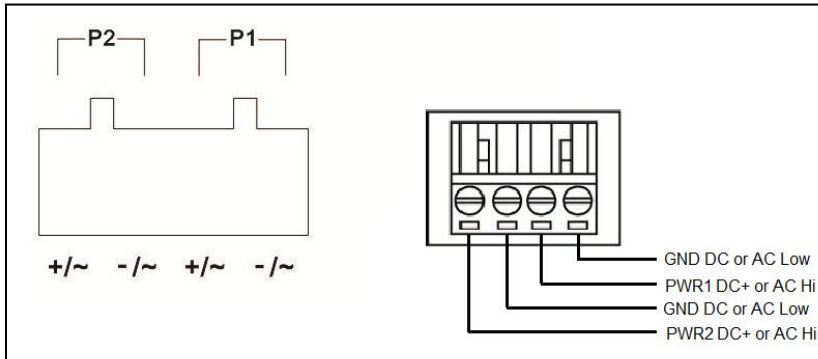
Each fiber port has a TX (transmit) and RX (receive) connection fixed at 100Mbps speed. The fiber ports will support multi mode or single mode fiber dependant on the model number ordered.



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## Power Input Connections

The ESW205/208 series accepts 12 to 36 VDC or 10 to 24 VAC input voltage using removable terminal blocks.



## UL Installation Information

### Electrical Ratings

#### INPUT: ESW205, ESW205-XX

Power: 24VDC@ 4.7W  
12 – 36 VDC@6.5W max.  
10 – 24VAC@6.5W max  
47 – 63Hz

#### INPUT: ESW208, ESW208-XX

**Power: 24VDC@5.7 W**

8 Copper 12 – 36 VDC@10.0W max  
1 Fiber 12 – 36 VDC@10.6W max  
4 Fiber 12 – 36 VDC@12.5W max.

8 Copper 12 – 36 VAC@10.0W max  
1 Fiber 12 – 36 VAC@10.6W max  
4 Fiber 12 – 36 VAC@12.5W max.  
47 – 63Hz

OUTPUT: All Models – Low Voltage, Limited Energy communications protocol.

## Wiring Terminals:

- One Conductor Per Terminal
- Use Copper wire only
- Wire Range: 25 to 12 AWG
- Tightening Torque: 4.5 Lb-in
- Temperature rating of field wiring - 105°C minimum (Sized for 60°C Ampacity)

## Ambient Temperature:

Standard Temperature Models –

-10°C to 60°C minimum/maximum surrounding air ambient. T4(or T4A)

This equipment is suitable for use in Class 1, Division 2, Groups A, B, C and D hazardous locations, Or nonhazardous locations only.

**WARNING** – EXPLOSION HAZARD – Substitution of component may impair suitability for Class 1, Division 2.

UL File Number: E245458



## Specifications

<b>Power Requirements</b>		
Low Voltage Range:	12 - 36 VDC	
	10 - 24 VAC	
<b>Connection</b>		
Power	Removable Terminal Block	
Protection	Reverse Polarity Protection	
	Redundant Power connectors	
<b>RJ45 Ports</b>		
	Shielded	
	10Base-T / 100Base-TX	
	Auto-sensing	
	Full / Half Duplex	
	MDI / MDI-X auto-Negotiate	
<b>Multi Mode Fiber</b>		
	100Base-FX	
Distance	2 km	
Wavelength	1310 nm	
Cable	50/125 um, 62.5/125 um	
TX power	-23.5-14 dBm	
Rec Sensitivity	-35 dBm	
Connector Type	ST or SC	
Cover	ST or SC	
<b>Single Mode Fiber</b>		
	100Base-FX	

Distance	20 km	
Wavelength	1310 nm	
Cable	9/125	
TX power	-15 - 8 dBm	
Rec Sensitivity	-35 dBm	
Connector Type	ST or SC	
Cover	ST or SC	
<b>LED Indicators</b>		
Power	Green ON solid	Power applied
Speed	Green ON solid	100 Mbps
Speed	Off	10Mbps
Link/Activity	Green ON Solid	Link
Link/Activity	Green flashing	Activity
Fiber Port	Green ON solid	100Mbps Link
Fiber Port	Green flashing	100Mbps Activity
<b>Slim Metal Enclosure</b>		
Material	aluminum or steel	
Rating	IP30	
DIN Rail	35mm - installed on switch	QTY 1
Panel Mounting	Bracket and screws - included with switch	QTY 4
DIN and Panel Accessories	DIN Rail and Panel mount with screws.	
Enclosure Dimensions	See Dimensional Drawings	
<b>IEEE Standards</b>		
IEEE802.3	10Base-T Ethernet	
IEEE802.3u	100BaseTX, 100Base FX	
IEEE802.3x	Flow Control	

Transfer Rate:	14,880bps (10Base-T), 148,800bps (100-Base-T)	
Packet buffer	64k Byte	
Address Table Size:	2K	
Processing Type	Store and Forward	
Broadcast Storm Control	Automatic	
Flow Control	Full / Half Duplex Back Pressure Flow Control	
<b>Agency Approvals</b>		
Hazardous Location	UL/cUL Class I Div 2 Groups A,B,C, and D	
EMI	FCC Part 15, CISPR (EN55022)	
Generic Standard for (Heavy) Industrial Environments	per EN61000-6-2	
EMC	EN61000-4-2 (ESD),level 3	Contact +/- 6kv
		Enclosure Air +/- 8kv
EMC	EN61000-4-3 (RS), level 3	10V/meter
EMC	EN61000-4-4 (EFT), level 3	
	Signal ports	+/- 1kV
	D.C. Power ports	+/- 2kV
	A.C. Power ports	+/- 2kV
	Earth ground ports <sup>3</sup>	NA
EMC	EN61000-4-5(Surge), level3	
	Signal ports	+/- 1kV
	D.C. Power ports	+/- 2kV
	A.C. Power ports	+/- 2kV
EMC	EN61000-4-6 (CS), level 3	
	Signal ports	10 V rms
	D.C. Power ports	10 V rms
	A.C. Power ports	10 V rms

	Earth ground ports3	NA
Shock	IEC 60068-2-27	
Vibration	IEC 60068-2-6	
Free Fall	IEC 60068-2-32	
<b>Certifications</b>		
Certifications	IP30	
Certifications	RoHS	
Certifications	WEEE	
<b>Environment Limits</b>		
Standard Temp Models	-10°C to 60°C	Heavy Industrial Standard temp
Extended Temp (-T) Models	-40°C to 75°C	Heavy Industrial wide temp
Storage Temperature	-40 to 85°C	
Ambient Relative Humidity	10 to 95% (Non-condensing)	

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