Optical Media Converter

User Manual

V1.1

Please read before using the device

www.ez-net.co.kr

1. 제품소개

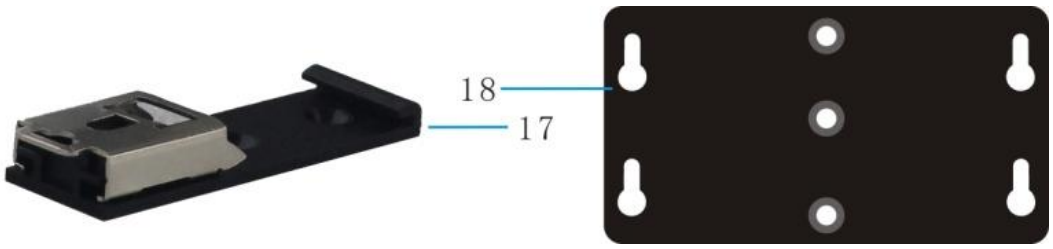
.산업용 광미디어 컨버터 5 종의 제품과 산업용 스위치 6 종의 제품으로 구성된 공용사용자 설명서입니다.
NEXT-300FSCM-POE / NEXT-300FSCS-POE /NEXT-300FSCSWA-POE/ NEXT-300FSCSWB-POE / NEXT-3000SFP-POE 산업용광미디어 컨버터 시리즈모델과 NEXT-POE514FDT-SCM / NEXT-POE515FDT-SCS / NEXT-POE516FDT-A / NEXT-POE516FDT-B / NEXT-POE524FDT / NEXT-POE1524GDT 산업용 POE 스위치는 열악한 환경에서도 안정적으로 작동할 수 있는 견고한 Industrial Level Four EMC 기준으로 설계되었습니다.
.Auto-Negotiation 및 LED 램프를 지원하여 네트워크를 제공하는 이상적인 솔루션입니다.
.이 장치는 네트워크 안정성을 보장하기 위하여 전원이중화 시스템 (12~56VDC)를 지원합니다. DIN 레일 장착 및 벽면장착의 두 가지 설치방식에 대응하여 편리한 현장설치가 가능합니다.
.POE IP 카메라 및 POE 무선 AP 와 같은 모든 종류의 IEEE802.3at PD(Powered Device)를 지원하며 포트당 최대 30W 의 전력을 지원합니다. (48V DC 이상의 전원공급 시 POE 기능이 동작합니다.)

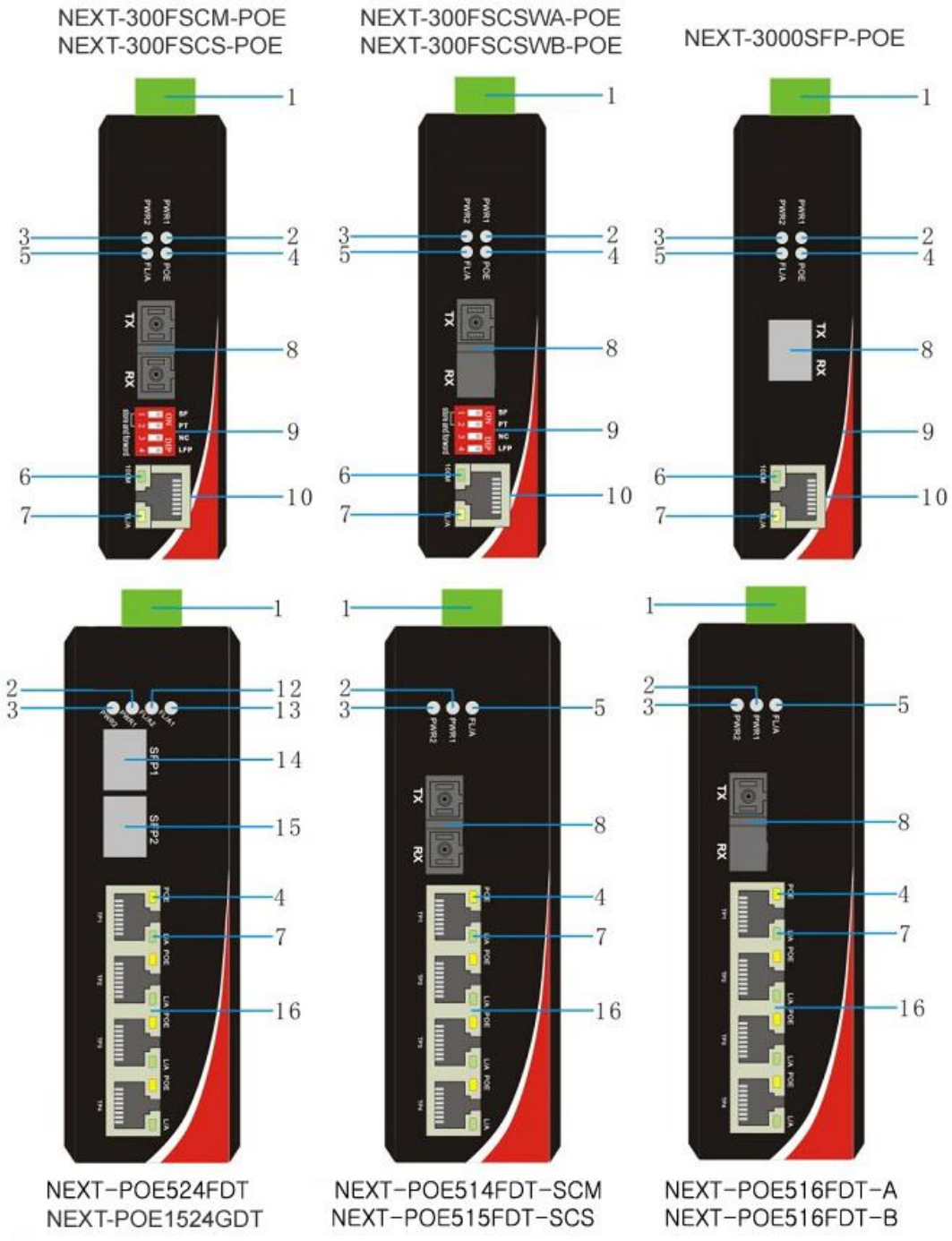
2. Packing list

Industrial media converter/Switch	1piece
Warranty card	1piece
User manual	1copy
DIN-rail or wall mounting kit	1piece

Note : "The product components are subject to change without notice.

3. The panels and LED indicators





<Industrial Optical POE Media Converter>

Model No.	Description
NEXT-300FSCM-POE	10/100M MMF,1310nm,SC,2km, with POE
NEXT-300FSCS-POE	10/100M SMF,1310nm,SC,20km, with POE
NEXT-300FSCSWA-POE	10/100M Bi-di TX1310/RX1550nm,SC,20km, with POE
NEXT-300FSCSWB-POE	10/100M Bi-di TX1550/RX1310nm,SC,20km, with POE
NEXT-3000SFP-POE	10/100/1000M SFP with 1TP POE

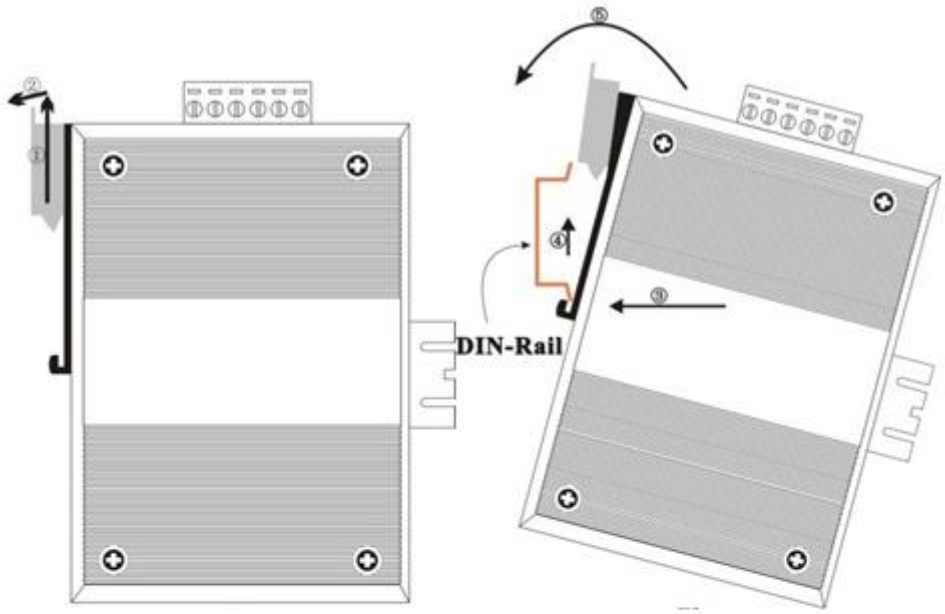
<Industrial POE Switch>

Model No.	Description
NEXT-POE514FDT-SCM	Industrial 10/100M Dual SC + 4TP POE Fiber Switch(1310nm/2Km Multi-mode)
NEXT-POE515FDT-SCS	Industrial 10/100M Dual SC + 4TP POE Fiber Switch(1310nm/20Km Single-mode)
NEXT-POE516FDT-A	Industrial 10/100M SC + 4TP POE Fiber Switch(Bi-di TX:1310nm RX:1550nm/20km
NEXT-POE516FDT-B	Industrial 10/100M SC + 4TP POE Fiber Switch(Bi-di TX:1550nm RX:1310nm/20km
NEXT-POE524FDT	Industrial 10/100M 2SFP + 4TP POE Fiber Switch
NEXT-POE1524GDT	Industrial 10/100/1000M 2SFP + 4TP POE Fiber Switch

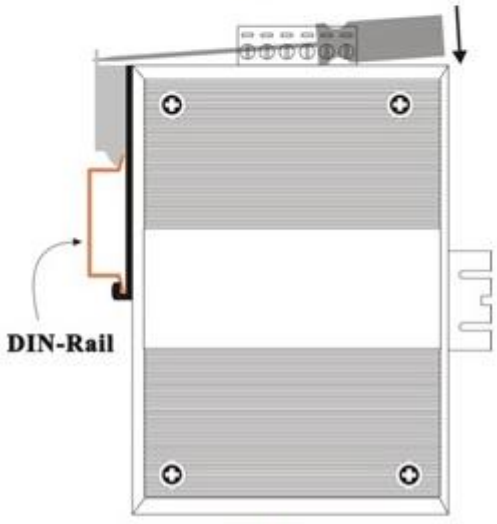
Mark	Name	Function
1	Terminal block	Power supply and Grounding port
2	PWR1	“On”: Power 1 is on and normal
3	PWR2	“On”: Power 2 is on and normal
4	POE	“On”: Power over POE port is on and normal
5	FL/A	“On”: Fiber link is in correct connection. “Blink”: Signal packet goes through Fx end
6	100M	“On”: 100Mbps
7	TL/A	“On”: Electric link is in correct connection. “Blink”: Signal packet goes through Tx end
8	Optical port	Fiber optic connecting port. Connector type: SC, GBIC, Bi-di
9	DIP Switch	To control the LFP function
10	RJ45 port	Copper cable connector
11	100M	“On”: 100Mbps
12	FL/A2	“On”: SFP2 Fiber link is in correct connection. “Blink”: Signal packet goes through SFP2 Fx end
13	FL/A1	“On”: SFP1 Fiber link is in correct connection. “Blink”: Signal packet goes through SFP1 Fx end
14	SFP1	SFP mould port 1
15	SFP2	SFP mould port 2
16	1×4 RJ45	Copper cable connector
17	DIN kit	DIN-rail mounting kit
18	Ear kit	Wall mounting kit

4. Installation

4.1 DIN-rail installation



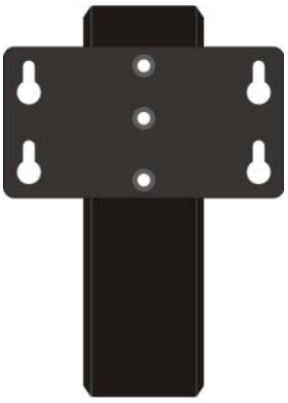
Pic 1 Pic 2



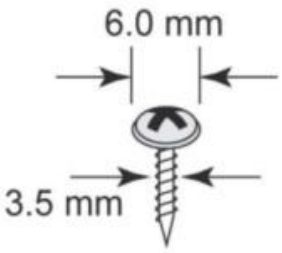
Pic 3

The DIN installation is based on the Pic 1 and Pic 2. Unload is based on the Pic 3, then Pic2 and Pic 1.

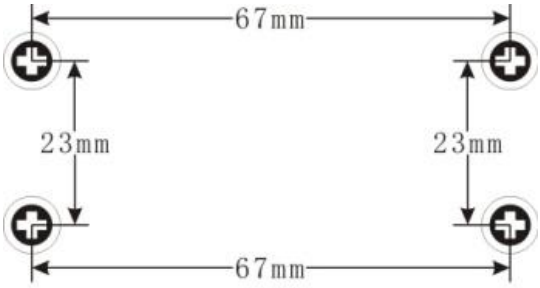
4.2 Wall-mounted installation



Pic 4



Pic 5



Pic 6

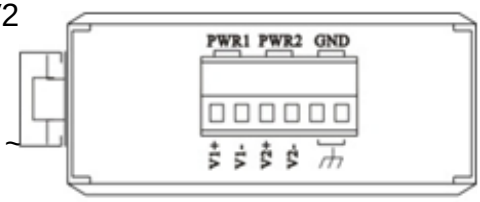
Fix hanging ears in the switch, as shown in figure 4;

Select 4 suitable screws (diameter of screw head should be less than 6 mm , diameter of screw should be less than3.5 mm diameter, as shown in Pic 5) and fix the device on the wall as Pic 6, don't completely tighten the screws, keep some space about 2mm.

Install hanging ear of switch alignment inside the four screws, then press the switch down, ensure the hanging ear has been fix properly, and turn the screw.

4.3 Wall-mounted installation

Input terminal of the switch for 6PIN plug type terminals, V1+ and V1- is for power supply 1 (PWR1), V2 + and V2- is for power supply 2 (PWR2) and GND for earthing terminal, as shown in Pic 7.



Pic 7

Power 1 and power 2 input voltage range is 12VDC ~ 56VDC，V1+,and V2+ are positive, V1- and V2- are negative, and the equipment supports anti reverse function;

Two sets of power can be simultaneously accessed. So if One of the power failure, the switch is still able to work;

4.4 Copper cable connection

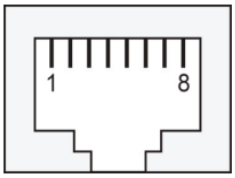
MDI Port Pinouts

Pin	Signal
1	Tx+
2	Tx-
3	Rx+
6	Rx-

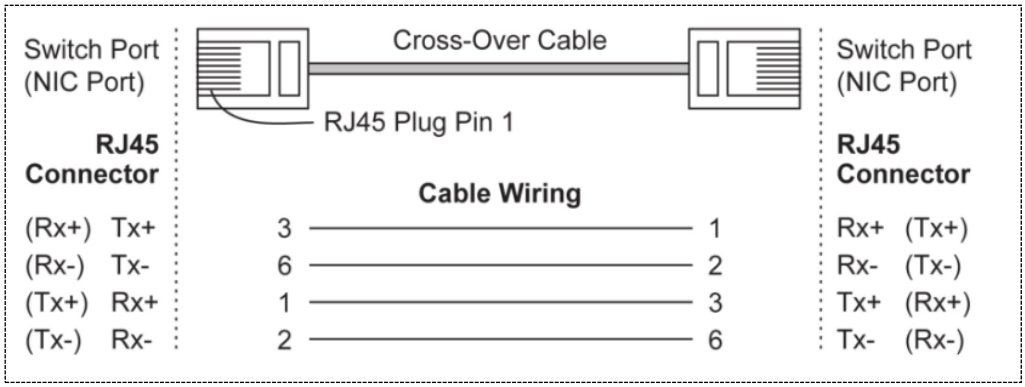
MDI-X Port Pinouts

Pin	Signal
1	Rx+
2	Rx-
3	Tx+
6	Tx-

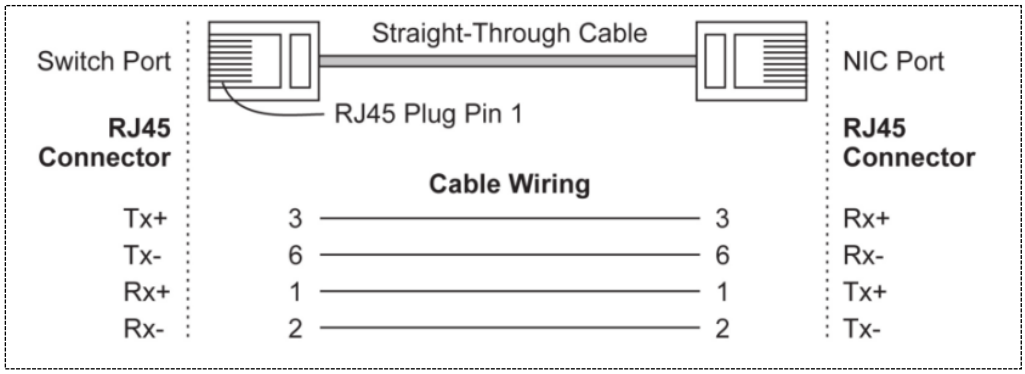
8-pin RJ45



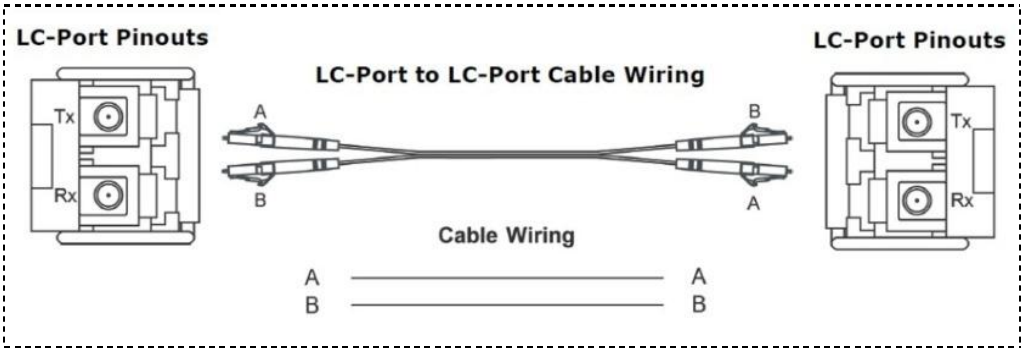
MDI



MDI-X

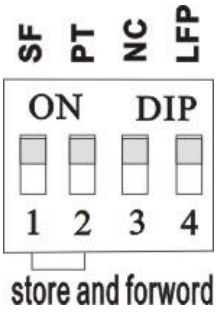


4.5 Fiber cable connection



4.6 DIP switch

Switch	Status	Function
1:	On	Pass through mode
	Off	Switch mode
2	On	Modified cut through mode
	Off	Store-and-forward mode
3	On	No available
	Off	
4	On	Enable LFP function(default)
	Off	Disable LFP function



5. Technical parameters

1. Power supply
   Input voltage: 12V～56V (redundant dual power)
   PSE Power: 0～30W
   POE Pin: 1/2+，3/6-
2. Copper Port
   Connector: RJ-45 connector
   Data Rate: 10/100Mbps Auto
   Twisted Pair cable: Cat5 UTP cable
   Transmission distance: 100 meter
3. Fiber Port
   Connector: SC, SFP
   Data Rate: 155Mbps，1.25Gbps
   Fiber Type: SM 9/125μm，MM 50/125μm、62.5/125μm
   Transmission distance: 2km ~ 20km
4. Environment
   Storage temperature: -40~95℃
   Operating temperature: -40~85℃
   Relative humidity: 5%-90%
5. Mechanism
   Enclosure: IP 40, Black, Metal shell
   Mounting: DIN-rail, Wall

6. Standards

UL508
EMI FCC Part 15，CISPR（EN55022）
EMS en61000-4-2（ESD）Level 3
EN61000-4-3（RS）Level 3
EN61000-4-4（EFT）Level 3
EN61000-4-5（Surge）Level 3
EN61000-4-6（CS）Level 3
EN61000-4-8
EN61000-4-11
IEC60068-2-27
IEC60068-2-32
IEC60068-2-6

7. Warning

1. This product is suitable for indoor application.
2. Place the dust cover on the fiber interface when not in use.
3. It is dangerous to stare at the fiber transmitter with the naked eye.
4. Optical fiber transceivers must be used in pair.
5. Single optical fiber transceiver must be used in pair(A,B)
   A: TX1310/RX1550nm B: TX1550/RX1310nm.

8. Trouble shooting

1. Device is not connecting. Please check that the corresponding network device is using the same transfer rate as the media converter (10Mbps, 100Mbps or 1000Mbps).
2. If power loss is excessive in the fiber, please check and clean the fiber patch cord connectors.

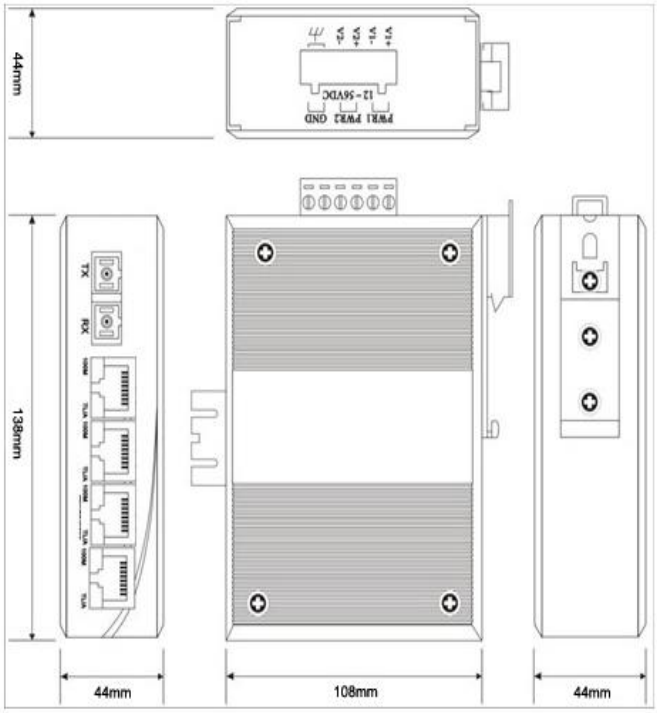
9. Responsibility Note

(1) The user should cover the damage during transport to equipment resend for maintained at the user's own expense
(2) Please contact your authorized reseller immediately, if there is any damage to the equipment during transport
(3) If you want to prepare power supply by yourself, please make sure the power supply you select meet the requirement given by this manual. We will not cover the damage caused by your using unqualified power supply.
(4) Do please follow this manual when using the power supply.

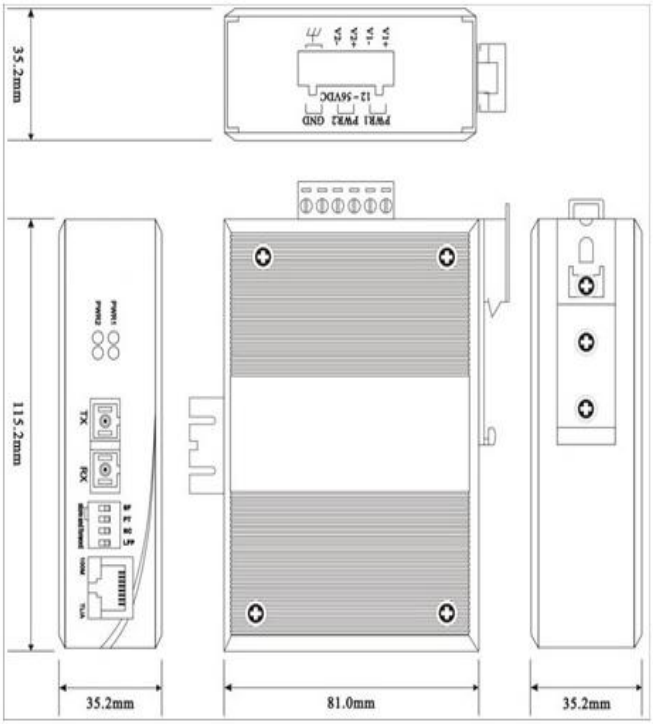
(5) All rights reserved. No part of this manual can be reproduced, or transmitted in any form or by any means, without authorization form us.
(6) We will not cover the damage to the equipment or any person caused by your changing the equipment or this manual in any form without authorization from us.
(7) We will change the equipment for new ones if it can not work normally because of the quality itself within the warranty time. We will keep the old ones.
(8) The packages of the equipment meet the requests of environmental protection, should be recycled.

Attention: If there are any printing mistakes in this manual, the right to explain is reserved. And the pictures of equipment appearance in this manual are just for user's information, the final equipment appearance depends on reality products, if there are any improvements on technology, we will be sorry for won't inform you again.

10. Dimension



(Industrial POE Switch)



(Industrial POE Media Converter)

11. Specification(Industrial POE Media Converter)

Standards	IEEE802.3 10BaseT; IEEE802.3u 100BaseT(X) IEEE802.3x Flow control; IEEE802.1d Spanning Tree, IEEE802.1Q VLANs; IEEE 802.3af/at POE
Performance	Processing Type : Store and Forward, Cut-through MAC Table Size: 1Kbit Buffer Space: 288Kbit Time Delay: ＜150μs
Copper Port	Data Rate: 10/100M Connector: RJ45 Distance: 100m
Fiber Port	Data Rate: 155M Connector: SC as default Distance: MMF=2km,SMF =20km,
Dip-switch	Dip1 ON + Dip2 ON = Modified Cut-through Mode Dip1 ON + Dip2 Off = Converter Mode Dip1 Off + Dip2 ON = Cut-through Dip1 Off + Dip2 off = Store and forward mode Dip4 ON = LFP Enable; Dip4 Off = LFP Disable
LED indicators	PWR1: ON=Power Connected PWR2: ON= Power Connected FL/A: ON=Fiber Connected; Active=Data Transmitting TL/A: ON=Copper Connected; Active= Data Transmitting 100M: ON=100M Data Rate Transmitting POE: ON=Power Working; Off=No Power
Power	Input Voltage: 12~56 VDC, redundant power inputs Power Consumption: <5W (POE excluded) Protection: Overload Current; Reverse Polarity Connector: Terminal Block
Environment	Operating Temperature:-40 ˚C ~ +85 ˚C Storage Temperature: -40 ˚C ~ +95 ˚C Relative humidity: 5-95% (no condensation)
Physical Characteristics	Housing: IP40 Protection; Aluminum Alloy Installation: DIN-Rail , Wall-Mounted Dimension: 125*93*35mm(Total Size ; Terminal Block, Connector) Weight: 0.30kg

12. Specification(Industrial POE Switch)

Standards	IEEE802.3 10BaseT, IEEE802.3u 100BaseT(X) IEEE802.3x Flow control and back pressure, IEEE802.1d Spanning Tree, IEEE802.1Q VLANs IEEE802.3af/at POE
Performance	Processing Type : Store and Forward MAC Table Size: 1024bit Buffer Space: 512Kbit Back bandwidth: 200M Time Delay: ＜150μs
Copper Port	Data Rate: 10/100M Connector: RJ45 x 4 Distance: 100m
Fiber Port	Data Rate: 155M Connector: SC as default, FC/ST/SFP optional Distance: MMF=2km; SMF=20km Bi-Di=20km
LED indicators	PWR1: ON=Power Connected PWR2: ON= Power Connected FL/A: ON=Fiber Connected; Active=Data Transmitting TL/A: ON=Copper Connected; Active= Data Transmitting POE: ON=Power Working; Off=No Power
Power	Input Voltage: 12~56 VDC, redundant power inputs Power Consumption: <5W (POE excluded) Protection: Overload Current; Reverse Polarity Connector: Terminal Block
Environment	Operating Temperature: -40 ˚C ~ +85 ˚C Storage Temperature: -40 ˚C ~ +95 ˚C Relative humidity: 5-95% (no condensation)
Physical Characteristics	Housing: IP40 Protection, Aluminum Alloy Installation: DIN-Rail , Wall-Mounted Dimension: 138*107*45mm(Total Size ; Terminal Block, Connector) Weight: 0.50kg