



# Quick Installation Guide

## Industrial Ethernet Media Converter - EMC-21 Series

QS-015 2024A

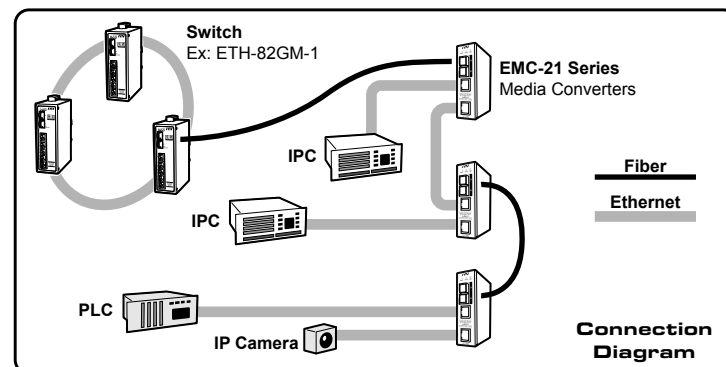
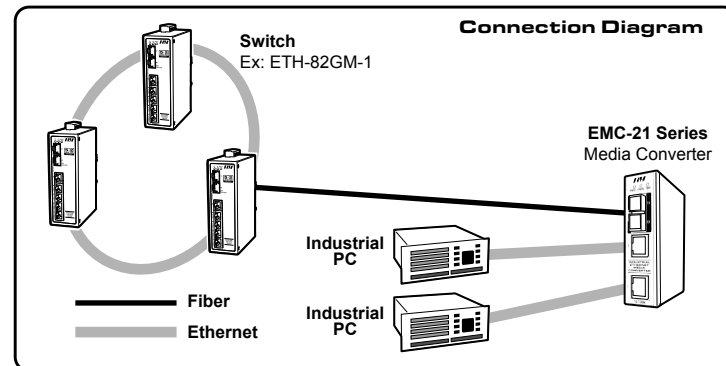
### Introduction

The RLH **EMC-21** series is an industrial Ethernet media converter that forwards data between two 10/100Base-T(X) copper ports, and through a single 100Base-FX fiber port. The rugged IP-30 housing is designed to be either T35 DIN Rail or wall mounted, and is engineered to operate over a wide temperature range of -40°C to +75°C. It offers dual power inputs for redundant powering and is available with Multimode or Singlemode optics to satisfy the demands of most operating environments.

### Features

- ▶ 2x 10/100Base-T(X) copper ports with Auto-Negotiation and Auto MDI/MDI-X
- ▶ 1x 100Base-FX fiber port, supporting transmission distances up to 2km (multimode) or 20km (singlemode)
- ▶ IEEE 802.1Q VLAN Tagging Compliant/Pass-Through
- ▶ Available with Singlemode or Multimode optics
- ▶ Dual redundant Power Inputs
- ▶ Rugged IP-30 Case Design
- ▶ DIN Rail and wall-mountable
- ▶ LEDs for input power status and Ethernet link activity

### Application Diagram



### Specifications

Physical Ports	
10/100 Base-T(X) Ports	(Port 1/2) RJ45, Auto-Negotiation, Auto MDI/MDI-X
100Base-FX Fiber Port	(FBR Port) Dual Fiber Optics
Technology	
Ethernet Standards	IEEE 802.3 for 10Base-T, IEEE 802.3u for 100Base-TX and 100Base-FX IEEE 802.1Q for VLAN Tag Pass-Through
LED Indicators	
Power Indicator	(PWR1/PWR2 LEDs) Green for sufficient power
Copper Port Indicator	(Port 1/2 LEDs) Solid amber for Ethernet Link, flashing green for Ethernet Activity
Fiber Port Indicator	(FBR LED) Solid green for Ethernet Link, flashing green for Ethernet Activity
Power	
Input Power	Dual 12~48 VDC power inputs on 4-pin terminal block
Power Consumption (Typ.)	2 Watts
Protection	Current Overload Protection Reverse Polarity Protection
Physical Characteristics	
Enclosure	IP-30
Dimension (W x D x H)	1.03" (W) x 2.76" (D) x 3.74" (H) (26.1mm x 70mm x 95mm)
Weight	0.46 lbs (210 g)
Environmental	
Storage Temperature	-40° to 85°C (-40° to 185°F)
Operating Temperature	-40° to 75°C (-40° to 167°F)
Operating Humidity	5% to 90% Non-condensing
Regulatory Approvals	
EMI	FCC Class A, Title 47 CFR Part 15, CISPR 32 / EN55032, ICES-003 Issue 7
EMS	EN 55035 IEC/EN 61000-4-2 (ESD) IEC/EN 61000-4-3 (RS) IEC/EN 61000-4-4 (EFT) IEC/EN 61000-4-5 (Surge) IEC/EN 61000-4-6 (CS) IEC/EN 61000-4-8 (PFMF) IEC/EN 61000-4-11(Dips)
Schock	IEC 60068-2-27
Free Fall	IEC 60068-2-31
Vibration	IEC 60068-2-6
Safety	EN 62368-1
Warranty	5 years

### Connector and Pin Definition

#### • 10/100 Base-T(X) Ethernet Ports (MDI/MDI-X)

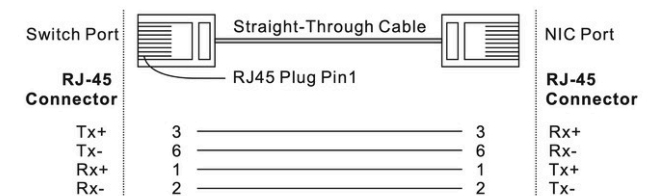
##### ■ RJ45 (8-pin, MDI) Port Pinouts

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

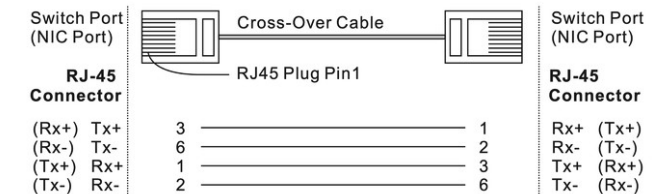
##### ■ RJ45 (8-pin, MDI-X) Port Pinouts

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

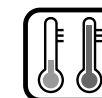
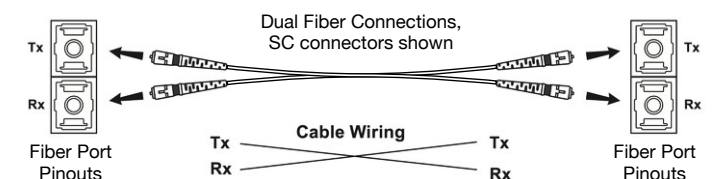
##### ■ RJ45 (8-pin) to RJ45 (8-Pin) Straight-Through Cable Wiring



##### ■ RJ45 (8-pin) to RJ45 (8-Pin) Cross-Over Cable Wiring



##### ■ Fiber Optic Cable Connections



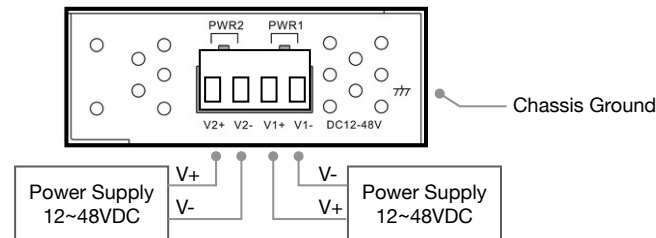
Printed on Recycled Paper



# Quick Installation Guide

## Industrial Ethernet Media Converter - EMC-21 Series

### Power Connections



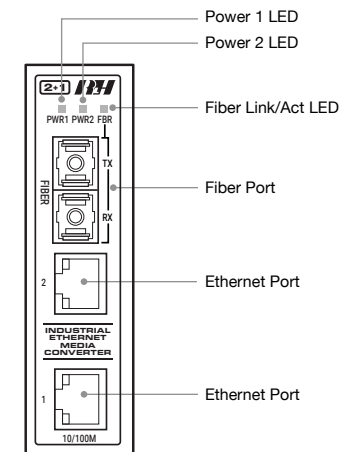
### Accessories

- ① 4 Position Terminal Connector
- ② RJ-45 Dust Caps
- ③ Wall Mount Ears
- ④ DIN Rail Clip
- ⑤ Power Cable with Power Jack
- ⑥ Quick Install Guide
- ⑦ M3 x 3 Screw

### Packing List

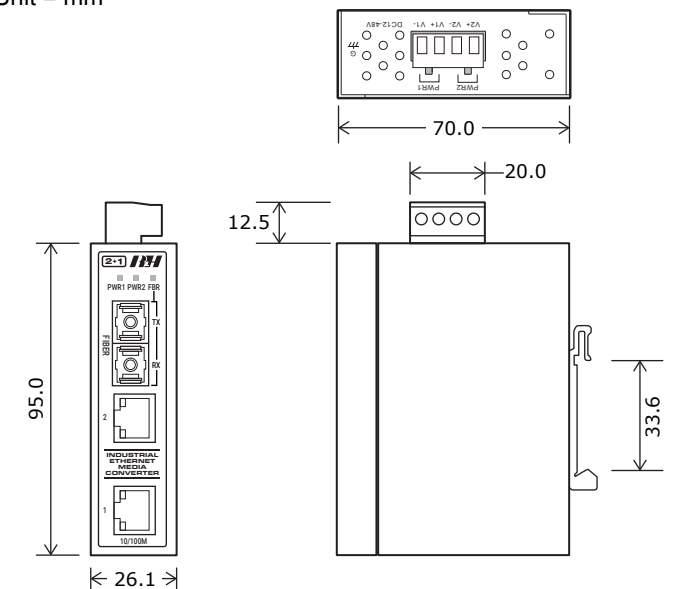
Model	Description	Accessory
EMC-21 Series	2+1 10/100 Industrial Ethernet Media Converter	① X 1 ② X 2 ③ X 2 ④ X 1 ⑤ X 1 ⑥ X 1 ⑦ X 8

### Front Panel



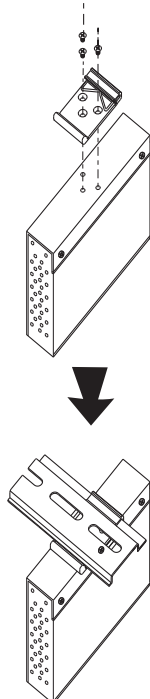
### Dimensions

Unit = mm



### Installation

#### DIN Rail



#### Wall Mount

