



RLH Industries, Inc.

fiberopticlink.com

## PRODUCT DATA SHEET

DS-087 2025-1001

# 4+2 Unmanaged 10/100 PoE+ Fixed Fiber Industrial Switch

ETH-42P-XX-1

## Slim, PoE+ (802.3at 30 Watts), C1D2 Design with Rugged Metal Housing

RLH industrial switches are engineered to provide reliable network performance in demanding environments. The 4+2 Fiber PoE+ switch provides four Ethernet ports providing PoE+ power to networked equipment and two fiber ports. It is environmentally hardened to operate in a wide temperature range, which is the standard for RLH equipment.

The PoE+ ports provide up to 30 Watts of power to end devices following the IEEE 802.3af/at standard. The switch also comes with redundant power inputs and fault alarm relay for reliability.

Our industrial switches robust construction and features meet the demands of a variety of applications, and are an ideal solution for a wide range of utility and automation environments.

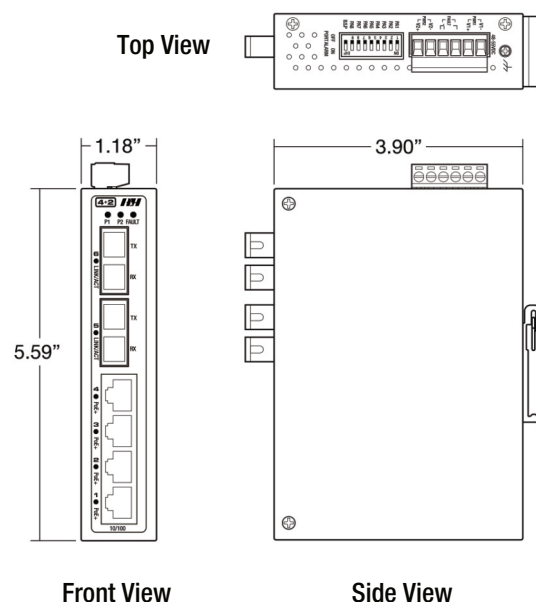


4+2 Unmanaged 10/100 PoE+ Fixed Fiber ST

## Features

- Hardened to operate in -40°C to +75°C (-40°F to +167°F)
- 2 Fiber 100BaseFX ports
- Multimode and single-mode fiber, ST or SC connectors
- Extend Ethernet over fiber, up to 74 miles (120km)
- 4 PoE+ ports with up to 30 watts per port
- IEEE 802.3af/at Power Over Ethernet
- PoE Mode A (End Span)
- Auto MDI/MDI-X
- 48-55VDC redundant power inputs with built-in alarm
- 2kV surge protection
- DIN rail & wall mountable
- UL Listed

## Dimensions





## General Specifications

|                        |                                                                                                                  |                                                                                                                                                             |                                                                                |                |                                                          |
|------------------------|------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|----------------|----------------------------------------------------------|
| Data Process:          | Store & Forward, CSMA/CD, IEEE 802.3x flow control, back pressure flow control                                   |                                                                                                                                                             |                                                                                |                |                                                          |
| Standards:             | IEEE 802.3 10BaseT (Ethernet)<br>IEEE 802.3u 100BaseTX (Fast Ethernet)<br>IEEE 802.3af Power over Ethernet (PoE) |                                                                                                                                                             | IEEE 802.3af Power over Ethernet Plus (PoE+)<br>IEEE 100BaseFX 100Mbps (Fiber) |                |                                                          |
| Transfer Rates:        | 14,880pps - Ethernet port,<br>148,800pps - Fast Ethernet port                                                    |                                                                                                                                                             |                                                                                |                |                                                          |
| Transmission Distance: | Up to 100 Meters over twisted pair                                                                               |                                                                                                                                                             |                                                                                |                |                                                          |
| Transmission Speed:    | Up to 100Mbps                                                                                                    |                                                                                                                                                             |                                                                                |                |                                                          |
| MAC Address:           | 8k table size                                                                                                    |                                                                                                                                                             |                                                                                |                |                                                          |
| Fiber Specifications:  | Fiber Type                                                                                                       | Mode                                                                                                                                                        | Fiber Diameter                                                                 | Connector Type | Distance                                                 |
|                        | Single Fiber Bi-Directional                                                                                      | Singlemode                                                                                                                                                  | 9/125 μm                                                                       | SC             | 20km / 12.4miles<br>60km / 36 miles                      |
|                        | Dual Fiber                                                                                                       | Multimode                                                                                                                                                   | 62.5/125 μm<br>50/125 μm                                                       | ST/SC          | 2km / 1.2 miles                                          |
|                        |                                                                                                                  | Single Mode                                                                                                                                                 | 9/125 μm                                                                       | ST/SC          | 20km / 12.4 miles<br>60km / 36 miles<br>120km / 74 miles |
|                        |                                                                                                                  | Note: Distances equated using industry standard fiber and connector attenuation of 3dB/Km. Fiber condition, splices and connectors may affect actual range. |                                                                                |                |                                                          |
|                        | Ethernet Interface:                                                                                              | Auto MDI/MDI-X, Auto Speed & Duplex Negotiation                                                                                                             |                                                                                |                |                                                          |
| Ethernet Ports:        | (4) 10/100 Mbps PoE+<br>(2) Fiber 100BaseFX                                                                      |                                                                                                                                                             |                                                                                |                |                                                          |
| PoE Power:             | 30 Watts (Mode A / End Span)                                                                                     |                                                                                                                                                             |                                                                                |                |                                                          |
| PoE Pin Assignment:    | Positive (VCC+) – RJ-45 Pins 1, 2                                                                                |                                                                                                                                                             |                                                                                |                |                                                          |
|                        | Negative (VCC-) – RJ-45 Pins 3, 6                                                                                |                                                                                                                                                             |                                                                                |                |                                                          |
|                        | Data: Pin 1, 2, 3, 6                                                                                             |                                                                                                                                                             |                                                                                |                |                                                          |
| LED Status Indicators: | Power 1 (P1), Power 2 (P2), Fault                                                                                |                                                                                                                                                             |                                                                                |                |                                                          |
|                        | Ethernet Ports (Link and Activity), PoE+ (On and Off)                                                            |                                                                                                                                                             |                                                                                |                |                                                          |
| Power Protection:      | Over Current, Power Reversal, Polarity Protection                                                                |                                                                                                                                                             |                                                                                |                |                                                          |
| DIP Switch Settings:   | ON:                                                                                                              | Enables the corresponding PORT alarm<br>*If the port’s link fails, the relay will form an open circuit and the fault LED will turn ON                       |                                                                                |                |                                                          |
|                        | OFF:                                                                                                             | Disables the corresponding PORT alarm<br>*The relay will form a closed circuit and the fault LED will remain OFF                                            |                                                                                |                |                                                          |
|                        | B.S.P. ON:                                                                                                       | Enables broadcast storm protection                                                                                                                          |                                                                                |                |                                                          |
|                        | B.S.P. OFF:                                                                                                      | Disables broadcast storm protection                                                                                                                         |                                                                                |                |                                                          |
| Power Input:           | 48~55VDC redundant power inputs (pluggable terminal block)                                                       |                                                                                                                                                             |                                                                                |                |                                                          |
| Power Consumption:     | 130 Watts Max. (assuming full PoE load)                                                                          |                                                                                                                                                             |                                                                                |                |                                                          |
| Fault Output:          | 1 Relay output rated for 24VDC @ 1 Amp                                                                           |                                                                                                                                                             |                                                                                |                |                                                          |
| Operating Temperature: | -40°C to 75°C (-40°F to 167°F)                                                                                   |                                                                                                                                                             |                                                                                |                |                                                          |
| Storage Temperature:   | -40°C to 85°C (-40°F to 185°F)                                                                                   |                                                                                                                                                             |                                                                                |                |                                                          |
| Operating Humidity:    | 5% to 95% (Non-Condensing)                                                                                       |                                                                                                                                                             |                                                                                |                |                                                          |
| Construction:          | Powder coated IP30 steel housing                                                                                 |                                                                                                                                                             |                                                                                |                |                                                          |



## General Specifications (cont.)

|                           |                                                                                                                                                                                      |
|---------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Case Dimensions:</b>   | 1.18" (W) x 3.90" (D) x 5.59" (H), (30mm x 99mm x 142mm) *Not including connectors or DIN bracket                                                                                    |
| <b>Installation:</b>      | Standard DIN rail (TS-35) or wall mount *Wall mount brackets included                                                                                                                |
| <b>EMI:</b>               | FCC Part 15 Subpart B Class A, CE EN55022 Class A, IEC61000-4-2 (ESD), IEC61000-4-3 (RS), IEC61000-4-4 (EFT), IEC61000-4-5 (Surge), IEC61000-4-6 (CS), IEC61000-4-8 (Magnetic Field) |
| <b>Stability Testing:</b> | IEC60068-2-32 (Free fall), IEC60068-2-27 (Shock), IEC60068-2-6 (Vibration)                                                                                                           |
| <b>Safety:</b>            | CE, FCC Class A, UL508 File Number: E480850, UL Class 1/Div.2, ISA 12.12.01                                                                                                          |
| <b>Compliance:</b>        | NDAA, TAA, RoHS and REACH compliant                                                                                                                                                  |
| <b>Warranty:</b>          | 5 Years - Visit <a href="http://www.fiberopticlink.com">www.fiberopticlink.com</a> for warranty details                                                                              |

## Ordering Information

| Description | Connector | Fibers                | Wavelength    | Distance        | Part Number         |
|-------------|-----------|-----------------------|---------------|-----------------|---------------------|
| Multimode   | SC        | Dual Fibers           | 1310nm        | 2km/1.2 miles   | <b>ETH-42P-03-1</b> |
|             | ST        | Dual Fibers           | 1310nm        | 2km/1.2 miles   | <b>ETH-42P-04-1</b> |
| Singlemode  | SC        | Single Fiber - Side A | T-1310/R-1550 | 20km/12.4 miles | <b>ETH-42P-10-1</b> |
|             |           | Single Fiber - Side B | R-1310/T-1550 | 20km/12.4 miles | <b>ETH-42P-11-1</b> |
| Singlemode  | SC        | Single Fiber - Side A | T-1310/R-1550 | 60km/37 miles   | <b>ETH-42P-14-1</b> |
|             |           | Single Fiber - Side B | R-1310/T-1550 | 60km/37 miles   | <b>ETH-42P-15-1</b> |
| Singlemode  | SC        | Dual Fibers           | 1310nm        | 20km/12.4 miles | <b>ETH-42P-40-1</b> |
|             |           |                       |               | 60km/37 miles   | <b>ETH-42P-41-1</b> |
|             |           |                       | 1550nm        | 120km/74 miles  | <b>ETH-42P-45-1</b> |
| Singlemode  | ST        | Dual Fibers           | 1310nm        | 20km/12.4 miles | <b>ETH-42P-50-1</b> |
|             |           |                       |               | 60km/37 miles   | <b>ETH-42P-51-1</b> |
|             |           |                       | 1550nm        | 120km/74 miles  | <b>ETH-42P-55-1</b> |

## Contact

|                       |                                                                               |              |
|-----------------------|-------------------------------------------------------------------------------|--------------|
| <b>By Mail:</b>       | ATTN: Sales<br>RLH Industries, Inc.<br>936 N. Main Street<br>Orange, CA 92867 |              |
| <b>By Phone:</b>      | Local                                                                         | 714-532-1672 |
| <b>Sales/Service:</b> | Toll Free                                                                     | 800-877-1672 |
| <b>By Email:</b>      | <a href="mailto:info@fiberopticlink.com">info@fiberopticlink.com</a>          |              |
| <b>By Fax:</b>        | 714-532-1885                                                                  |              |

## Support

|                  |                                                                            |
|------------------|----------------------------------------------------------------------------|
| <b>By Email:</b> | <a href="mailto:support@fiberopticlink.com">support@fiberopticlink.com</a> |
| <b>By Phone:</b> | Toll Free 855-754-2497                                                     |