Power Injector

DC/DC 56V PoE Injector

Passive Power Over Ethernet (PoE) injectors supply power to a BreadCrumb® device over Ethernet cable. It accepts DC input 10-60V and output 56VDC. It supports Ethernet data speeds of 1000 Mbps, offering excellent throughput for Ethernet traffic such as mesh-to-wired network communications as well as BC|Commander® and Automatic Protocol Tunneling (APT) control traffic. This device is not sealed for ingress of dust or water, therefore, it must be used in indoor environments or outdoor NEMA enclosures. It is also recommended for static use only, not for vehicle installations.
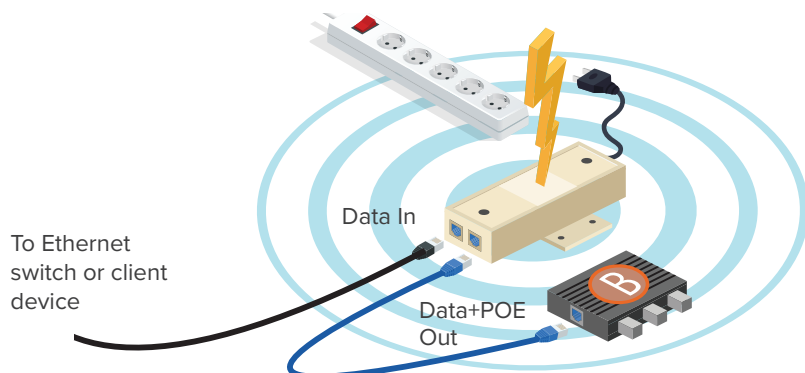
Power Injector Key Features

- High-power, passive PoE
- Remotely power equipment through Category 5 or better Ethernet cable up to 30 m length
- Built-in Ethernet surge protection
- Short circuit, over-current and over-voltage protection
- 1000 Mbps Ethernet data speeds
- High bandwidth for data, voice, and video applications
- Wide temperature range operation
- Compact size—floor, desktop, wall mount, and DIN rail mount

Power Injector Applications

To power a Rajant FE1 BreadCrumb, use one power injector per BreadCrumb as illustrated below in an indoor environment or weatherproof enclosure. Consult your BreadCrumb User Guide to ensure the BreadCrumb is a compatible model. Use this POE between an unregulated power source and the FE1.

Using the PoE Injector to Your Benefit

This injector is regulated to 56VDC PoE output to be compatible with devices that are higher voltages.

These are quality mid-span power sources for years of reliable operation. They accept data-in to a shielded RJ45 Jack and provide surge protected data-out and power on the shielded RJ45 output jack. They work by supplying power to the remote device on Ethernet pins 4-pair.

They supply regulated output with load regulation within 5%. They have protections for surge, short circuit, overload and overvoltage.

This POE has internal non-field replaceable fuses only. There are 2 DC inputs (V-, V-/V+, V+) for primary and backup power sources. FG earth ground shall be wired to a chassis ground return where available.

Data In

To Ethernet switch or client device

Data+POE Out

Rear View:

DIN Rail Adapters:

DEVICE PINOUT	RJ-45 Input (Data Only)		RJ-45 Output (Data & Power)		
Pin	Symbol	Description	Symbol	Description	POE
1	BI_DA+	Data Pair A+	BI_DA+, Vo+	Data Pair A+	Ch1 POE+
2	BI_DA-	Data Pair A-	BI_DA-, Vo+	Data Pair A-	Ch1 POE+
3	BI_DB+	Data Pair B+	BI_DB+, Vo-	Data Pair B+	Ch1 POE-
4	BI_DC+	Data Pair C+	BI_DC+, Vo+	Data Pair C+	Ch2 POE+
5	BI_DC-	Data Pair C-	BI_DC-, Vo+	Data Pair C-	Ch2 POE+
6	BI_DB-	Data Pair B-	BI_DB-, Vo-	Data Pair B-	Ch1 POE-
7	BI_DD+	Data Pair D+	BI_DD+, Vo-	Data Pair D+	Ch2 POE-
8	BI_DD-	Data Pair D-	BI_DD-, Vo-	Data Pair D-	Ch12POE-

Product	FE1 Peregrine and Hawk
POE	25-100179-001
Input Voltage	+/- 10VDC to 60VDC
DC Input Connector	Removable Screw Type Compression Wire Terminal, 5 Pin (12 AWG Max)
POE Specification	Passive (8 Wire / 4 Pair) 1245V+ 3678V-
Left LED	Green = Pins 1/2/3/6 are Powered
Right LED	Green = Pins 4/5/7/8 are Powered
RED LED	Output Not Powered
Output Voltage	56VDC (+/-2.5%)
Data in & Data/POE Output Connector	RJ45 (Shielded)
Output Current (max)	1.25A Total
Output Power (max)	70W Total
Self-Consumption	2W
Efficiency	85% Min (10VDC to 60VDC Input)
Line Regulation/Ripple/Noise	1%
Load Regulation	5%
EMC Standards	EN55032/55035
Safety Standards	EN62368-1
Operating Temperature	-40 to +70°C (-40 to +158°F)
Operating Humidity	5% - 90% (RH)
MTBF	96,022 Hours
Storage Temperature	-40 to +85°C (-40 to +185°F)
Dimensions (L x W x H)	86 x 139 x 40mm (3.4 x 5.5 x 1.57")
Weight	550g (19.4oz)
Warranty	90 Days

20+ YEARS OF GAME-CHANGING WIRELESS

RAJANT
*If it's **moving**, it's Rajant.*
*Industrial Wireless Networks **Unleashed.***