molex®

Single-port, integrated magnetic RJ45 jacks support Gigabit Ethernet and PoE Plus connectivity in accordance with IEEE802.3at and are drop-in solutions for a wide range of applications in data/telecom, networking and home entertainment applications

Magnetic Jacks: Gigabit and Gigabit PoE Plus-Enabled, Single-Port

Magnetic jack connectors are integrated devices that combine network magnetics and RJ45 connectors. In addition to connectivity, magnetic jacks provide signal conditioning, electromagnetic interference (EMI) suppression and signal isolation.

Gigabit and Gigabit PoE Plus-Enabled, single-port jacks are widely used in telecom, data, networking and home entertainment for a wide range of applications including servers, routers, printers, PCs, set-top boxes and digital LCD TVs.

The 85793 series Gigabit Magnetic Jack with integrated gigabit magnetics can feature LEDs in multiple colours to meet customer requirements.

The 85789 series Gigabit PoE (Power over Ethernet) Enabled Magnetic Jack features integrated gigabit PoE magnetics and multiple LEDs. Four extra pins are added to the jack allowing the customer to connect PoE circuitry to power PDs (Power Devices), such as security cameras or VOIP phones. Alternatively the connector can deliver power from a PSE, (Power Sourcing Equipment) such as a switch or router.
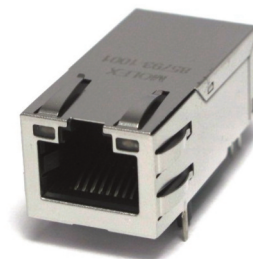
Power over Ethernet (PoE) is a technology that defines the transmission of both data and power to networked devices over a standard Ethernet cable, eliminating the need for separate power supplies. The 85789 series Gigabit PoE Enabled Magnetic Jack meets the PoE Plus 30Watt IEEE802.3at standard with backward compatibility to the 15Watt IEEE802.3af standard.

Both jacks are designed with through-hole pins for wave soldering. PoE Plus according to the IEEE standard requires Cat5 cable or higher. For more information please visit www.molex.com/product/poe.html.
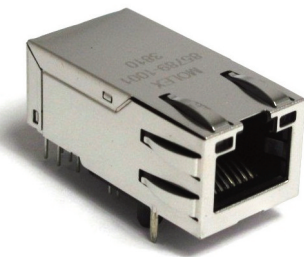
85793   1x1 Gigabit Magnetic Jack, Optional LEDs
85789   1x1 Gigabit Magnetic Jack, PoE Plus-Enabled, LEDs

Gigabit Magnetic Jack with LEDs Series 85793

FEATURES AND BENEFITS

• IEEE802.3af and IEEE802.3at compliant	• 15Watt PoE and 30Watt PoE Plus PSE power capability
• Gigabit magnetics	• Capable of 10/100/1000Mbit transmission
• Industry standard footprint	• Cross-reference from multiple competitor footprints
• Multiple LED colours including bi-colour	• Multiple status indicators • Supports multiple customer colour requirements
• HiPot, DC, return loss and insertion loss tested	• Quality assured products with high reliability
• Integrated magnetics	• No external transformers required and improved EMI performance

Gigabit, PoE Plus-Enabled Magnetic Jack with LEDs. Series 85789

MARKETS AND APPLICATIONS

• Datacomm/ telecommunications
 - PoE power injectors
 - Low PoE port-count switches
 - Server peripheral communication and power

• Security
 - IP enabled devices (security devices)
 - Wireless access points

• Industrial
 - Building automation

• Consumer / Small Office/ Home Office
 - Desktop computers
 - Office or home broadband routers
 - Set-top boxes

Microwave & 3G Indoor Antenna

Set-Top Box

Security Systems

PoE Injector/Midspan

PoE PCI Desktop / Server Card

Low PoE Port-Count Switch for Office / Home Applications

SPECIFICATIONS

Packaging: Tray
UL File No.: Pending
Mates With:
    Plugs according to IEC 60603-7
    (series 95043, 44915, 85568)
Designed In: Millimetres
RoHS: Yes

LEDs

Connection: Single or Bi-polar
Colours: Multiple options available
Forward voltage: 2.4V max. at 20mA

Electrical

OCL: 350µH at 20mA min.
Insertion loss: -1.00dB at 100MHz
Return loss: -10.00dB at 100MHz
NEXT: -25.00dB at 100MHz
CMR: -25.50dB at 100MHz

Physical

Housing: Nagase-D-Valox 420 SED Black
UL94-0\5V
Shield: Stainless Steel
Contact: Phosphor Bronze (CuSn8)
Plating:
    Contact Area —1.27um Gold (Au)
    over 1.9um Nickel (Ni)
    Solder Tail Area —3um Tin (Sn)
PCB Thickness: 3.56mm (.140")
Operating Temperature: 0 to +70°C

Mechanical

Connector insertion and removal force: 20N
(4.5 lbf)
Locking force: 50N (11 lbf) min.
Durability: 750 cycles

Magnetic Jacks:
Gigabit and Gigabit PoE
Plus-Enabled, Single-Port

85793 1x1 Gigabit Magnetic Jack, Optional LEDs
85789 1x1 Gigabit Magnetic Jack, PoE Plus-Enabled, LEDs

ORDERING INFORMATION

Order No.	Attribute	LED Colour* Right	LED Colour* Left	Ports
85793-1001	Gigabit	Green	Green	1
85793-1003		Green	Green / Orange	
85793-1006		Yellow	Green	
85793-1007		Green	Green / Yellow	
85793-1012		Green	Yellow / Green	
85793-1013		Yellow / Green	Yellow / Green	
85793-1020		No LED	No LED	
85789-1001	Gigabit PoE+ Enabled	Green	Green	
85789-1003		Green	Green / Orange	
85789-1006		Yellow	Green	

*Additional LED configurations available. Please check the SD or contact the Global Product Manager

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