



## Power over Ethernet Plus 12-port (2x6) and 8 port (2x4) RJ45 magnetic jacks supporting Gigabit Ethernet connectivity in accordance with IEEE802.3ab deliver up to 30W of power to networked devices

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. PoE+ is the new IEEE 802.3at Power over Ethernet standard. It provides the opportunity for switch makers to increase port-power output to 30 watts and will supersede the previous 15 watt 802.3af standard. The specification of this new 802.3at standard is backward compatible, supporting legacy 802.3af devices.

The 85732 series, 12-port and 85735, 8 port PoE+ Enabled Gigabit Magnetic Jacks with integrated gigabit magnetics are designed for use in high port-count gigabit switches and routers and extend Molex's product offering for multi-port magnetic jacks to meet a wider range of customer applications.

The modules are designed with through-hole pins for wave soldering. Transmission is according to the IEEE802.3ab standard. For more information please visit: [www.molex.com/product/magneticmodularjacks.html](http://www.molex.com/product/magneticmodularjacks.html)

### Features and Benefits

Integrated Power over Ethernet Plus magnetics according to most recent IEEE802.3at standard	Capable of delivering up to 30 Watts of Power over Ethernet power to networked devices
Ganged 12-port (2x6) and 8-port (2x4) RJ45 modules	High-density port-count Lower placement costs
Compliant with IEEE802.3ab standard	Capable of 10/100/1000Mbit transmission
Gigabit magnetics compatible with a variety of Gigabit Ethernet transceiver PHYs	Proven parametric and EMI solution for leading PHY vendors
Industry-standard footprint	Drop-in replacement for competitor products; second source for customer
Two single- or bi-colour LED's per port	Supports a full range of customer LED configuration requirements
Fully parametric, HiPot and DC tested modules with excellent EMI filtering	Ensures high-reliability and low yield-loss in customer applications Easier IEEE and regulatory qualifications

### Applications

Gigabit Ethernet switch and router applications:

- Datacom/ telecommunications
- Industrial networking
- Consumer / small office / home office



Network Switches



Routers

## Magnetic Jacks: PoE Plus Enabled Gigabit 12-Port (2x6) and 8-Port (2x4) RJ45 with LEDs

### PoE+ Enabled Gigabit Magnetic Jacks with LEDs

85732 12-Port (2x6)

85735 8-Port (2x4)



PoE+ Enabled Gigabit Magnetic 12-Port (2x6) Ganged RJ45 Jack with LEDs



PoE+ Enabled Gigabit Magnetic 8-Port (2x4) Ganged RJ45 Jack with LEDs

## MOLEX GANGED MAGNETIC JACK COMPARISON

**Magnetic Jacks:  
PoE Plus Enabled  
Gigabit 12-Port  
(2x6) and 8-Port  
(2x4) RJ45 with  
LEDs**

85719 and 85729 Series PoE+ PSE Integrated Connector Module (ICM) 2x6 and 2x4	85728 Series Ganged Magnetic Jack 2x6	85732 and 85735 PoE+ Enabled Connector Module 2x6 and 2x4
-	Integrated magnetics	-
Integrated PoE+ magnetics		Integrated PoE+ magnetics
Meets PoETec V2 footprint	Meets PoETec V2 footprint	Meets PoETec V2 footprint
Integrated PoE+ controllers	-	-
Integrated PoE+ isolation circuitry	-	-
Integrated PoE+ power-line protection circuitry	-	-
Integrated bi-colour LEDs	Integrated bi-colour LEDs	Integrated bi-colour LEDs

## Specifications

### REFERENCE INFORMATION

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

### LEDs

Connection: Single or bi-polar (Refer to Sales Drawings)  
Colours: Multiple options available  
Forward voltage: 2.4V max. at 20mA

### ELECTRICAL

HiPot isolation: 2250V DC  
OCL:  
Non PoE - 350µH at 8mA min.  
PoE - 350µH at 18mA min  
Insertion loss: -0.80 at 100 MHz (typical)  
Return loss: -15.0 at 100 MHz (typical)  
NEXT: -33 at 100 MHz (typical)  
CMR: -40 at 100 MHz (typical)

### PoE OUTPUT POWER

Power:  
30W per port supplied over RJ45 contacts  
1 and 2 (-) and 3 and 6 (+)  
All PoE+ parameters according to IEEE802.3at

### PHYSICAL

Housing: E-85572-088 PBT 30% Green  
Shield: C2680 – pre-plated brass  
Contact: Phosphor Bronze CuSn8 (Wieland B18)  
Plating:  
Contact Area — Gold (Au)  
Solder Tail Area — Tin (Sn)  
PCB Thickness: 2.21mm  
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

## Ordering Information

Order No. 12-Port (2x6)	Order No. 8-Port (2x4)	Attribute	LEDs
85732-XXXX	85735-XXXX	Gigabit Magnetics	Yes Refer to SD / molex.com for details