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

**Features and Benefits**

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

**Applications**

Gigabit Ethernet switch and router applications:
- Datacom/ telecommunications
- Industrial networking
- Consumer / small office / home office

**Magnetic Jacks:**
- **PoE Plus 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

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

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: -0.8Ω 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: PBT 30% Green
- Shield: Pre-plated brass
- Contact: Phosphor Bronze
- 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**

<table>
<thead>
<tr>
<th>Order No. 12-Port (2x6)</th>
<th>Order No. 8-Port (2x4)</th>
<th>Attribute</th>
<th>LEDs</th>
</tr>
</thead>
<tbody>
<tr>
<td>85732-XXXX</td>
<td>85735-XXXX</td>
<td>Gigabit Magnetics</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Refer to SD / molex.com for details

www.molex.com/product/magneticmodularjacks.html

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