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Part Number: [0857591001](#)
Status: **Active**
Description: PoE PLUS PSE ICM 1x1 LEDs: GREEN - GREEN

Documents:

[Drawing \(PDF\)](#) [RoHS Certificate of Compliance \(PDF\)](#)

General

| | |
|---------------------------|---------------------|
| Product Family | Modular Jacks/Plugs |
| Series | 85759 |
| Component Type | PCB Jack |
| Magnetic | Yes |
| Performance Category | 5e |
| Power over Ethernet (PoE) | PoE+ |
| Product Name | HyperJack™PoE |

Physical

| | |
|--------------------------------|--------------------------|
| Durability (mating cycles max) | 750 |
| Inverted / Top Latch | Yes |
| Keying to Mating Part | Yes |
| Lightpipes/LEDs | LEDs |
| Orientation | Right Angle (Side Entry) |
| PCB Retention | None |
| Packaging Type | Tray |
| Panel Mount | No |
| Ports | 1 |
| Positions / Loaded Contacts | 8/8 |
| Surface Mount Compatible (SMC) | Yes |
| Temperature Range - Operating | -40°C to +80°C |
| Termination Interface: Style | Through Hole |
| Wire/Cable Type | N/A |

Electrical

| | |
|-------------------------------|------|
| Current - Maximum per Contact | 1.5A |
| Grounding to PCB | Yes |
| Shielded | Yes |
| Voltage - Maximum | 57V |

Material Info

Reference - Drawing Numbers

| | |
|---------------|--------------|
| Sales Drawing | SD-85759-001 |
|---------------|--------------|

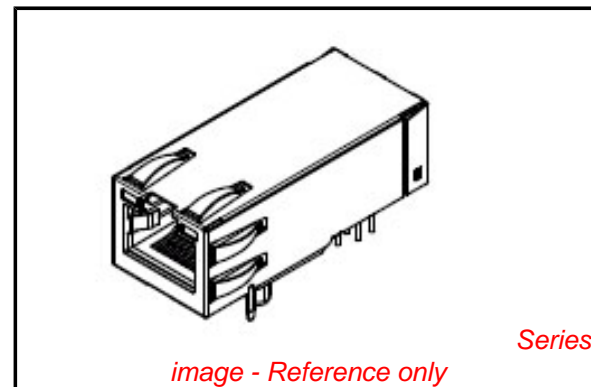


image - Reference only

EU RoHS

**ELV and RoHS
Compliant**
**REACH SVHC
Not Reviewed**
**Halogen-Free
Status
Not Reviewed**

China RoHS



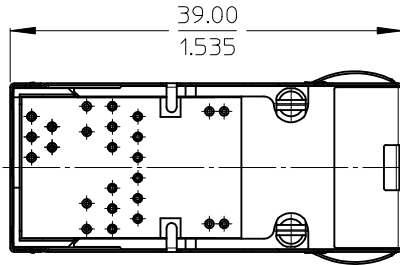
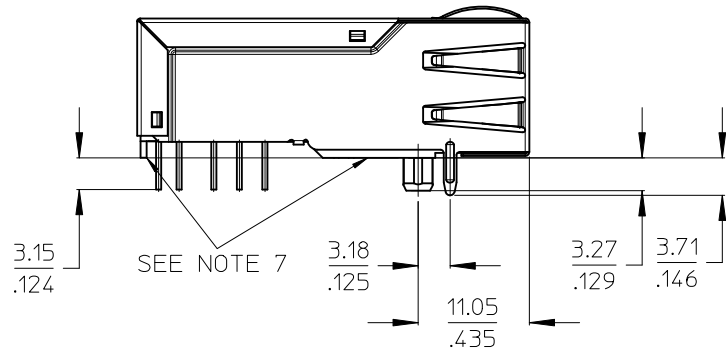
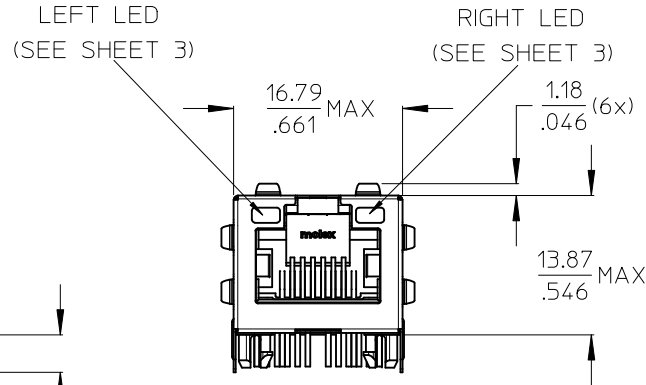
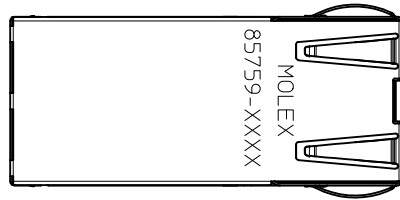
**Need more information on product
environmental compliance?**

Email productcompliance@molex.com
 For a multiple part number RoHS Certificate of
 Compliance, [click here](#)

Please visit the [Contact Us](#) section for any
 non-product compliance questions.

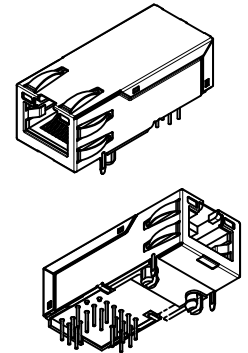
Search Parts in this Series
[85759Series](#)

GIGABIT SINGLE PORT MAGNETIC JACK WITH LEDS AND
 INTEGRATED POWER OVER ETHERNET PLUS CONTROL CIRCUITRY
 ACCORDING TO IEEE802.3at



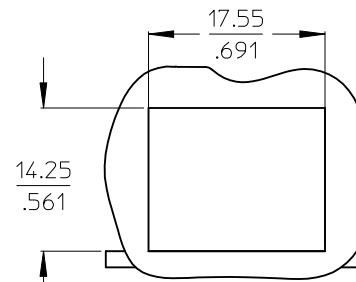
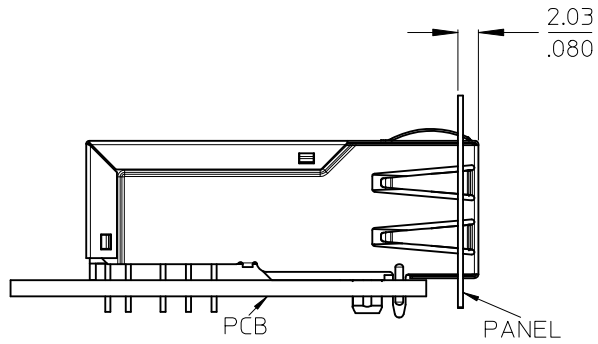
NOTES:

- 1 - SHIELD MATERIAL: STAINLESS STEEL
(GROUND PINS ARE SOLDER DIPPED)
- 2 - PLASTIC MATERIAL: PBT, BLACK, UL 94V-0
- 3 - TERMINALS MATERIAL: PHOSPHOR BRONZE CuSn8
RJ45 CONTACT PLATING: 1.27μm GOLD
OVER 1.9μm Ni ON MATING AREA
SOLDER TERMINALS: 34μm Sn
- 4 - JACK TO BE MATED WITH FCC 68.5 PLUGS /
IEC 60603-7 PLUGS
- 5 - PRODUCT SPECIFICATION: PS-85759-001
- 6 - PACKAGING SPECIFICATION: PK-85759-001
- 7 - STAND OFF TO SYSTEM BOARD



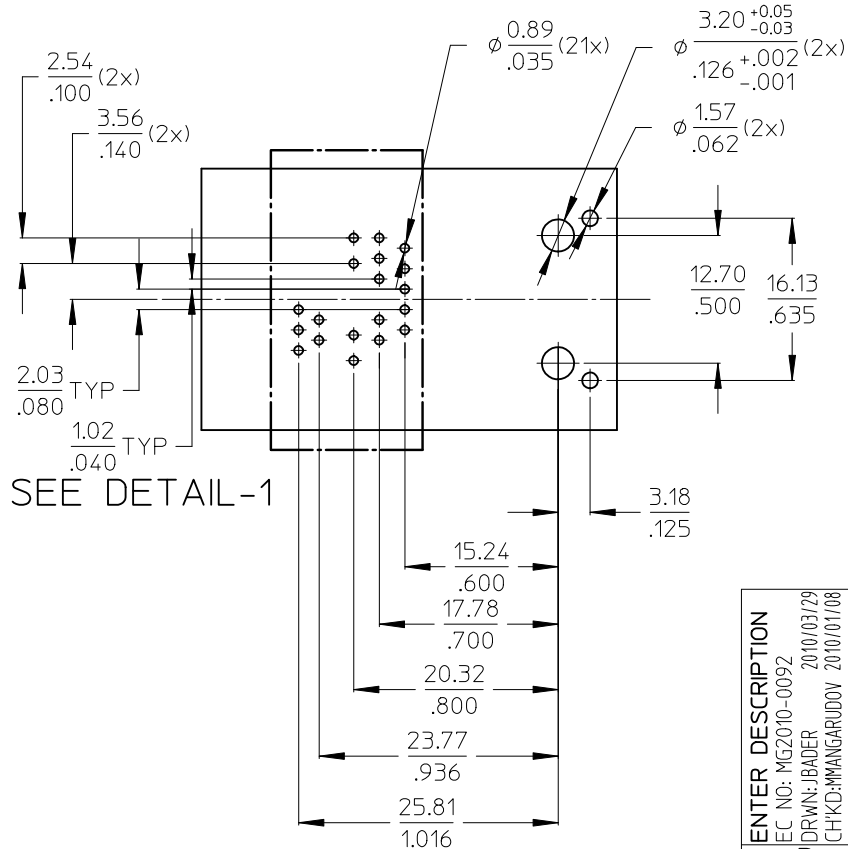
SCALE 1:1

| | | | | | | | | |
|--|-------------------------------|--|--------|-----------------|--------------------|-----------------------------------|------------------------|--|
| ENTER DESCRIPTION EC NO: MG2010-0092 DRWN: JBADER 2010/03/29 CHKD: MANGARUDOV 2010/01/08 APPR: SSTEINKE 2010/05/25 | QUALITY SYMBOLS ▽=0 □=0 | GENERAL TOLERANCES (UNLESS SPECIFIED) | | DIMENSION STYLE | SCALE | DESIGN UNITS | THIRD ANGLE PROJECTION | |
| | | | | MM ONLY | 2:1 | METRIC | | |
| | | | | DRAWN BY | DATE | TITLE | | |
| | | | | DATE | DATE | HYPERJACK POE PLUS PSE ICM 1X1 | | |
| | | 4 PLACES | ± --- | ± --- | JBADER | 2009/11/13 | | |
| | | 3 PLACES | ± --- | ± --- | CHECKED BY | DATE | | |
| | | 2 PLACES | ± 0.05 | ± --- | MANGARUDOV | 2010/01/08 | | |
| | | 1 PLACE | ± 0.10 | ± --- | APPROVED BY | DATE | | |
| | | ANGULAR ± .5 ° | | SSTEINKE | 2010/03/09 | | | |
| | | DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS | | MATERIAL NO. | MOLEX INCORPORATED | | | |
| | | | | SIZE | DOCUMENT NO. | | SHEET NO. | |
| | | | | A3 | SD-85759-001 | | 1 OF 3 | |
| | | THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION | | | | | | |

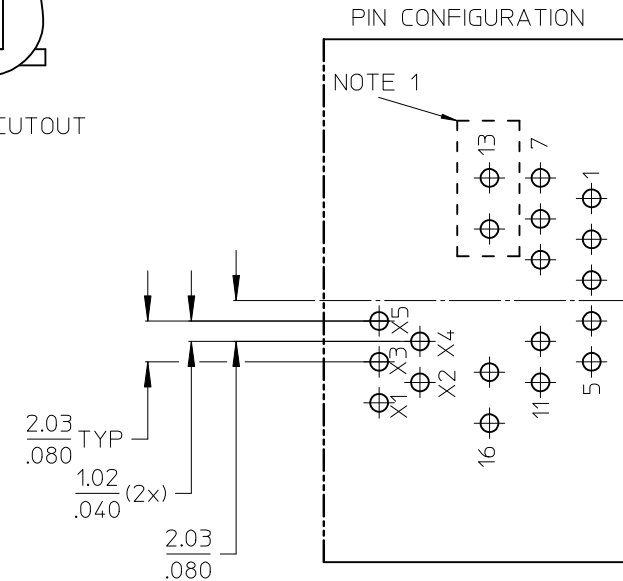


SUGGESTED PANEL CUTOUT

SUGGESTED BOARD LAYOUT - COMPONENT SIDE



SEE DETAIL-1



PIN CONFIGURATION

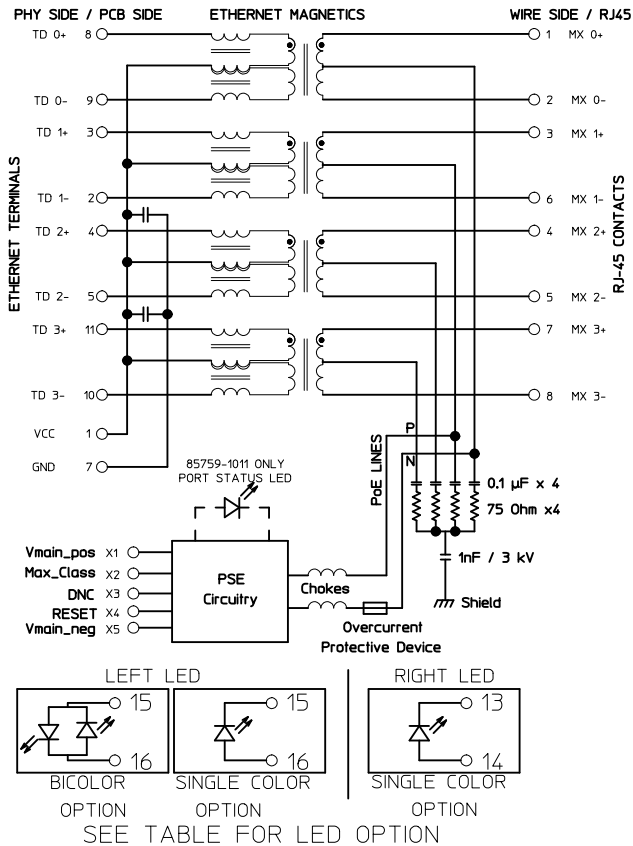
NOTE 1

DETAIL-1
SCALE 4:1

NOTE:
1 - PINS 13 AND 14 NOT PRESENT ON VERSION WITH INTEGRATED POWER INDICATION LED

| | | | | | | | | | | |
|---|--------------------------------------|--|----------------|---|------------|---------------------|--------------------------------|------------------------|--|-----------|
| ENTER DESCRIPTION EC NO: MG2010-0092 2010/03/29 DRWN: JBADER 2010/03/29 CHKD: MMANGARUDOV 2010/01/08 APPR: SSTEINKE 2010/05/25 | QUALITY SYMBOLS ▽=0 ◻=0 | GENERAL TOLERANCES (UNLESS SPECIFIED) | | DIMENSION STYLE MM ONLY | | SCALE 2:1 | DESIGN UNITS METRIC | THIRD ANGLE PROJECTION | | |
| | | | mm | INCH | DRAWN BY | DATE | TITLE | | | |
| | | 4 PLACES | ± --- | ± --- | JBADER | 2009/11/13 | HYPERJACK POE PLUS PSE ICM 1X1 | | | |
| | | 3 PLACES | ± --- | ± --- | CHECKED BY | DATE | | | | |
| | | | 2 PLACES | ± 0.05 | ± --- | MMANGARUDOV | 2010/01/08 | MOLEX INCORPORATED | | |
| | | | 1 PLACE | ± 0.10 | ± --- | APPROVED BY | DATE | DOCUMENT NO. | | |
| | | | ANGULAR ± .5 ° | | | SSTEINKE | 2010/03/09 | SD-85759-001 | | SHEET NO. |
| DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS | | SIZE | | THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION | | | | | | |
| | | A3 | | SEE SHEET 3 | | | | 2 OF 3 | | |

| Electrical Specifications @25°C | | |
|--|--------------------|--------------------------|
| Operating temperature (0°C to +70°C) | | |
| Description | Value | |
| OCL POE+TRANSF. 24mA bias (0°C to +70°C) | 350mH min. | |
| OCL NONPOE TRANSF. 8mA bias (0°C to +70°C) | 350mH min. | |
| Turns Ratio | 1CT:1CT | |
| Insertion Loss | | |
| Frequency (MHz) | Limits (dB max.) | Typical Values (dB max.) |
| 1.0-9.9 MHz | 0.4+0.1*log(F) | 0.5 @ 10MHz |
| 10-49.9 MHz | 0.5+0.3*log(F/10) | 0.7 @ 50MHz |
| 50-79.9 MHz | 1+1.4*log(F/80) | 1.0 @ 80MHz |
| 80-100 MHz | 1.3+3*log(F/100) | 1.3 @ 100MHz |
| Return Loss | | |
| Frequency (MHz) | Limits (dB min.) | TYPICAL Values (dB min.) |
| 1-9.9 MHz | 27dB min. | 27 @ 10MHz |
| 10-100 MHz | 27-17*log(F/10) | 10 @ 100MHz |
| CMR | | |
| Frequency (MHz) | Limits (dB min.) | TYPICAL Values (dB min.) |
| 1-9.9 MHz | 34dB min. | 34 @ 10MHz |
| 10-79.9 MHz | 27dB min. | 27 @ 80MHz |
| 80-199.9 MHz | 27-14.5*log(F/80) | 21.5 @ 200MHz |
| 200-399.9 MHz | 21.5-39*log(F/200) | 10 @ 400MHz |
| 400-1000 MHz | 10 | 10 @ 1000MHz |
| NEXT | | |
| Frequency (MHz) | Limits (dB min.) | TYPICAL Values (dB min.) |
| 1-5.9 MHz | 50 | 50 @ 6MHz |
| 6-49.9 MHz | 45-16*log(F/10) | 34 @ 50MHz |
| 50-100 MHz | 25-30*log(F/100) | 25 @ 100MHz |
| Isolation PHY to Wire side | 2.25kVDC/60sec | |



| PART NUMBER | LEFT LED | | | RIGHT LED | | | COLOR 1 |
|-------------|----------|-------|-------|-----------|-------|--------|---------|
| | PIN15 | PIN16 | COLOR | PIN13 | PIN14 | COLOR | |
| 85759-1001 | - | + | GREEN | - | + | GREEN | COLOR 2 |
| 85759-1003 | - | + | GREEN | - | + | GREEN | COLOR 2 |
| 85759-1006 | - | + | GREEN | - | + | YELLOW | COLOR 2 |

VERSION WITH INTEGRATED PoE POWER INDICATION LED

| PART NUMBER | POWER INDICATION | | | | | |
|-------------|------------------|-------|---------|-------------|--------|---------|
| | LEFT LED | | | RIGHT LED | | |
| | PIN15 | PIN16 | COLOR 1 | PIN13 | PIN14 | COLOR 1 |
| 85759-1011 | - | + | GREEN | NOT PRESENT | ORANGE | |

ADDITIONAL LED COLORS AND CONFIGURATIONS AVAILABLE ON REQUEST

| PIN | NAME | FUNCTION | PARAMETERS |
|-----|-------------------------|------------------------------------|--|
| X1 | Vmain_pos | Vmain 51 to 56V DC IN | min. 470mA (Class0-3), min. 1000mA (Class 4) |
| X2 | Max_Class / Port Status | INPUT (power up): Set Max Class | To be set by resistors to Vmain_neg |
| | | Class 1 only | 10k |
| | | Class 1 or 2 only | 20k |
| | | All except class 4 | 30k |
| | | All classes including class 4 | Open |
| | | OUTPUT (powered): Power indication | high if PD is powered up by 1x1 PSE |
| X3 | DNC | reserved | remain floating |
| X4 | Reset | Reset | Reset or to disable PSE |
| X5 | Vmain_neg | Vmain Reference | |

| | | | | | | | | | |
|--|----------------------------|---|--|-----------------------------------|---------------------|---|------------------------------|---------------------|--|
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| | | ANGULAR ± .5 ° | | CHECKED BY MMANGARUDOV | DATE 2010/01/08 | MOLEX INCORPORATED | | | |
| | | DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS | | APPROVED BY SSTEINKE | DATE 2010/03/09 | MATERIAL NO. SEE BOM | DOCUMENT NO. SD-85759-001 | SHEET NO. 3 OF 3 | |