

**PLEASE CHECK WWW.MOLEX.COM FOR LATEST PART INFORMATION**

**Part Number:** [0857591006](#)  
**Status:** **Active**  
**Description:** PoE PLUS PSE ICM 1x1 LEDs: YELLOW - 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

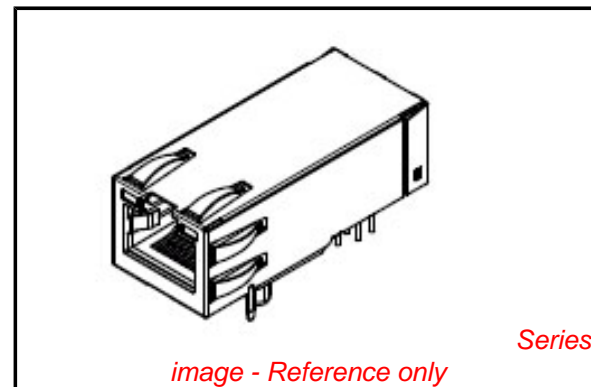
**Electrical**

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
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*image - Reference only*

**EU RoHS**

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

**China RoHS**



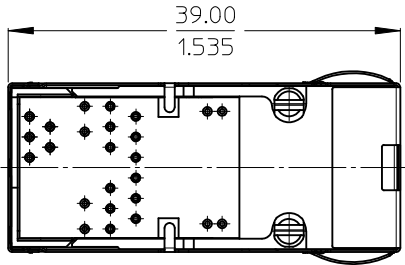
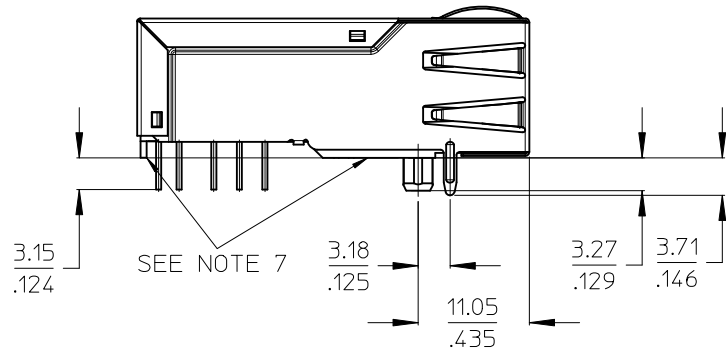
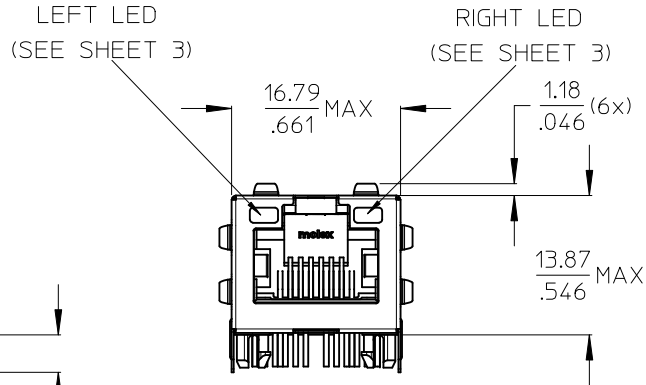
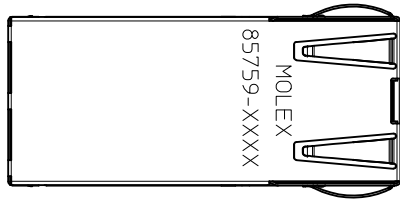
**Need more information on product  
environmental compliance?**

Email [productcompliance@molex.com](mailto: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.

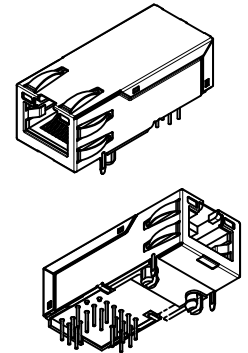
**Search Parts in this Series**  
[85759Series](#)

GIGABIT SINGLE PORT MAGNETIC JACK WITH LED<sub>S</sub> AND  
 INTEGRATED POWER OVER ETHERNET PLUS CONTROL CIRCUITRY  
 ACCORDING TO IEEE802.3at



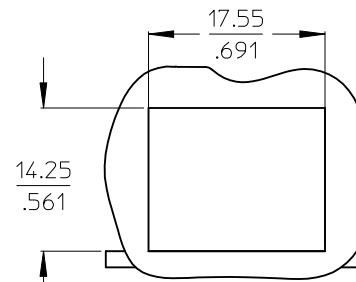
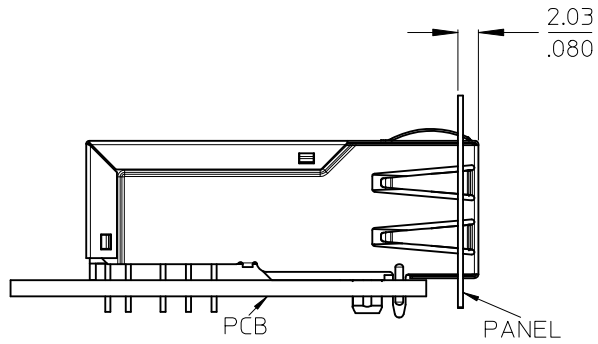
NOTES:

- 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



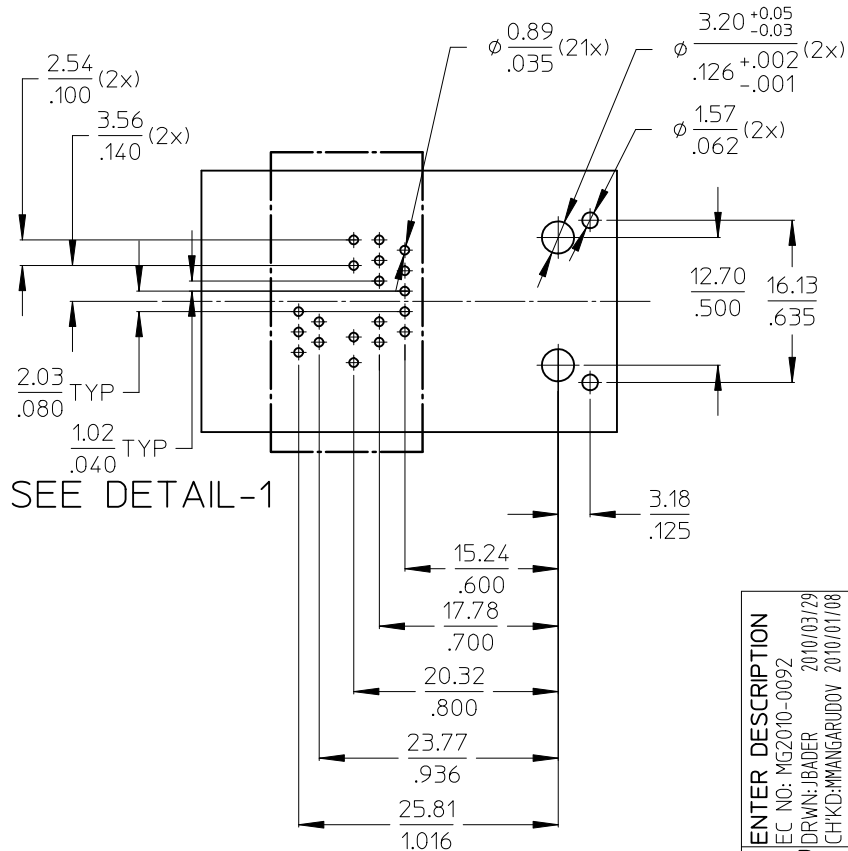
SCALE 1:1

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 MM ONLY	SCALE 2:1	DESIGN UNITS METRIC	THIRD ANGLE PROJECTION		
		4 PLACES	± ---	± ---	DRAWN BY JBADER	DATE 2009/11/13	TITLE HYPERJACK POE PLUS PSE ICM 1X1		
		3 PLACES	± ---	± ---	CHECKED BY MMANGARUDOV	DATE 2010/01/08	MOLEX INCORPORATED		
2 PLACES	± 0.05	± ---	APPROVED BY SSTEINKE	DATE 2010/03/09	DOCUMENT NO. SD-85759-001	SHEET NO. 1 OF 3			
1 PLACE	± 0.10	± ---	ANGULAR ± .5 °		SEE SHEET 3				
DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		SIZE A3		THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION					

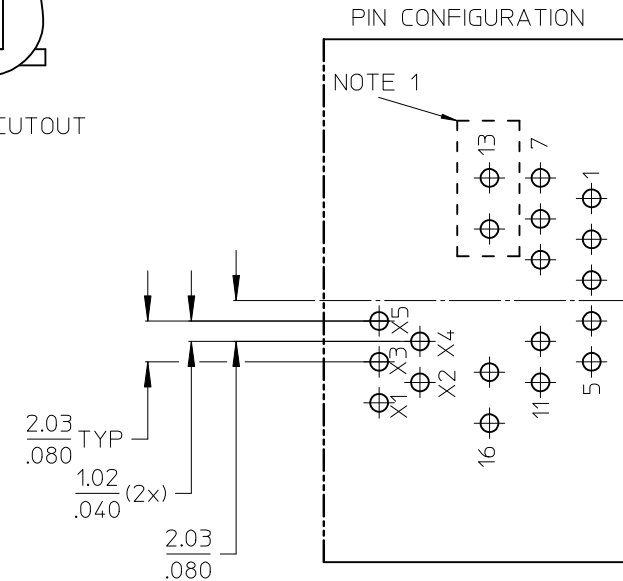


SUGGESTED PANEL CUTOUT

SUGGESTED BOARD LAYOUT - COMPONENT SIDE



SEE DETAIL-1

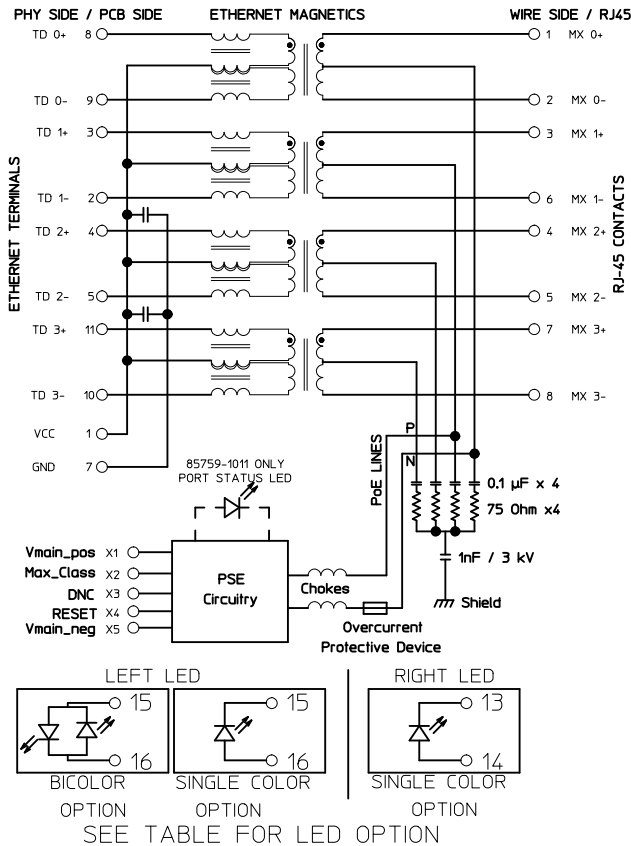


DETAIL-1  
SCALE 4:1

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

ENTER DESCRIPTION EC NO: MG2010-0092 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 JBADER 2009/11/13	TITLE HYPERJACK POE PLUS PSE ICM 1X1				
3	REV	4 PLACES	± ---	± ---	CHECKED BY DATE MMANGARUDOV 2010/01/08	MOLEX INCORPORATED			
		3 PLACES	± ---	± ---	APPROVED BY DATE SSTEINKE 2010/03/09	DOCUMENT NO. SD-85759-001	SHEET NO. 2 OF 3		
DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		ANGULAR ± .5 °		SIZE A3	THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION				

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	-	+	ORANGE	-	+	ORANGE	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	PIN13	PIN14	COLOR	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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		4 PLACES ± --- ± --- 3 PLACES ± --- ± --- 2 PLACES ± 0.05 ± --- 1 PLACE ± 0.10 ± ---	mm INCH ± --- ± --- ± 0.05 ± --- ± 0.10 ± ---	DRAWN BY JBADER	DATE 2009/11/13	<b>TITLE</b> HYPERJACK POE PLUS PSE ICM 1X1			
		ANGULAR ± .5 °		CHECKED BY MMANGARUDOV	DATE 2010/01/08	<b>MOLEX INCORPORATED</b>			
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