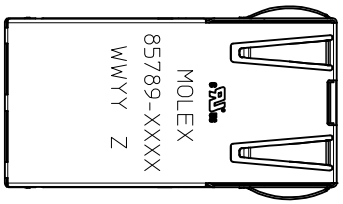
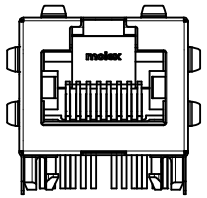
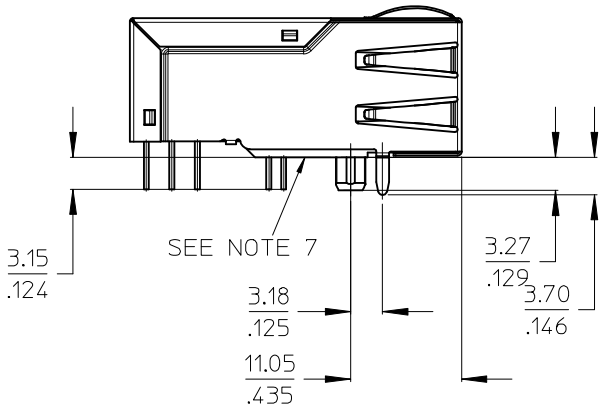
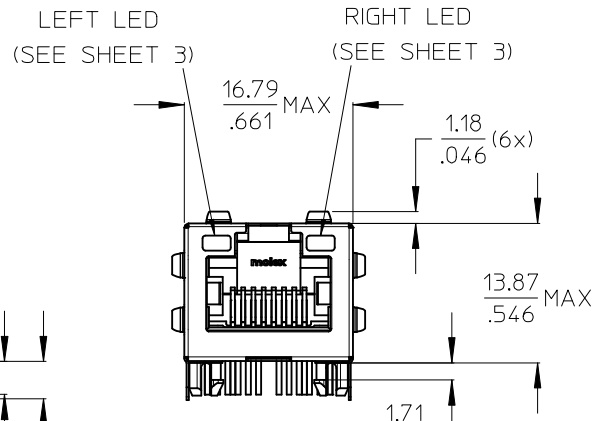
GIGABIT SINGLE PORT MAGNETIC JACK
PoE+ MAGNETICS ACC. TO IEEE802.3at
FOR PSE OR PD APPLICATIONS



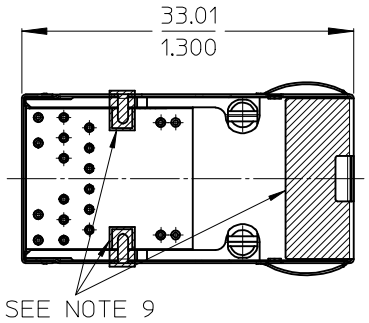


FRONT VIEW
NON LED VERSION
P/N 85789-1020

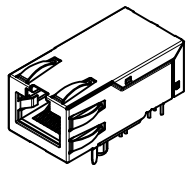




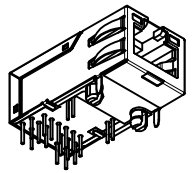
FRONT VIEW
LED VERSION
P/N SEE BOM ON SHEET 3



NOTES:
1 - SHIELD MATERIAL: STAINLESS STEEL
(GROUND PINS ARE SOLDER DIPPED)
2 - PLASTIC MATERIAL: PBT, BLACK, UL 94V-0
3 - TERMINALS MATERIAL: PHOSPOR BRONZE
RJ45 CONTACTS PLATING: 0.76 MICROMETER GOLD
OVER 1.9 MICROMETER NICKEL ON MATING AREA
SOLDER TERMINALS: 3 MICROMETER TIN
4 - MATING INTERFACE ACCORDING TO IEC 60603-7
5 - PRODUCT SPECIFICATION: PS-85789-001
6 - PACKAGING SPECIFICATION: PK-85759-001
7 - STAND OFF TO SYSTEM BOARD
8 - RECOMMENDED PCB THICKNESS: 1.6mm / 0.067inch
9 - SHIELD AND SHIELD LATCHES: AVOID TO ROUTE
TRACES OR TO PLACE ANY VIAS OR PADS IN THIS AREA.
10 - INSCRIPTION MARKED BY LASER:
UL LOGO
1st : MOLEX
2st : P/N (SEE BOM)
3rd : DATE CODE(WEEK/YEAR)
Z=> MANUFACTURER CODE



NON LED VERSION
SCALE 1:1



LED VERSION
SCALE 1:1

NOTES UPDATE
EC NO: DESCRIPTION REV
DRWN:MMANGARUDOV 2014/11/28
CHKD:DBYRNES 2014/12/05
APPR:SSTEINKE 2014/12/22
D

QUALITY SYMBOLS
▼=0
Ⓒ=0

GENERAL TOLERANCES (UNLESS SPECIFIED)

	mm	INCH
4 PLACES	± ---	± ---
3 PLACES	± ---	± .010
2 PLACES	± 0.25	± .020
1 PLACE	± 0.5	± ---
0 PLACE	±	±

ANGULAR ± .5 °

DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS

DIMENSION STYLE: MM/IN
SCALE: 2:1
DESIGN UNITS: METRIC
THIRD ANGLE PROJECTION

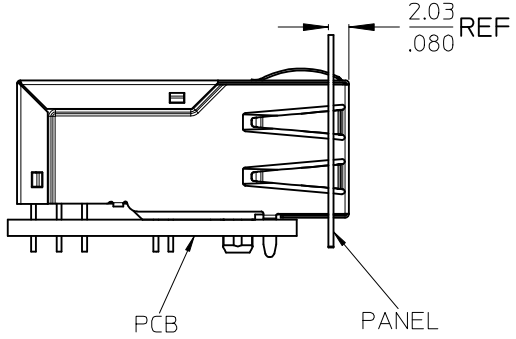
DRAWN BY: JBADER DATE: 2010/01/14
CHECKED BY: MMANGARUDOV DATE: 2010/01/14
APPROVED BY: SSTEINKE DATE: 2010/03/09

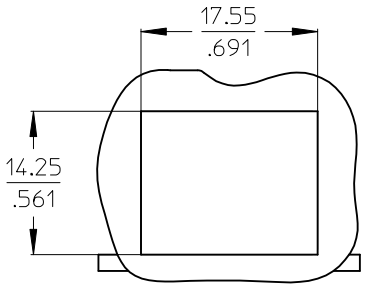
TITLE: GIGABIT MAGNETIC JACK
POE PLUS ENABLED 1X1

molex

MATERIAL NO.: SEE SHEET 3/4
DOCUMENT NO.: SD-85789-001
SHEET NO.: 1 OF 4
SIZE: A3

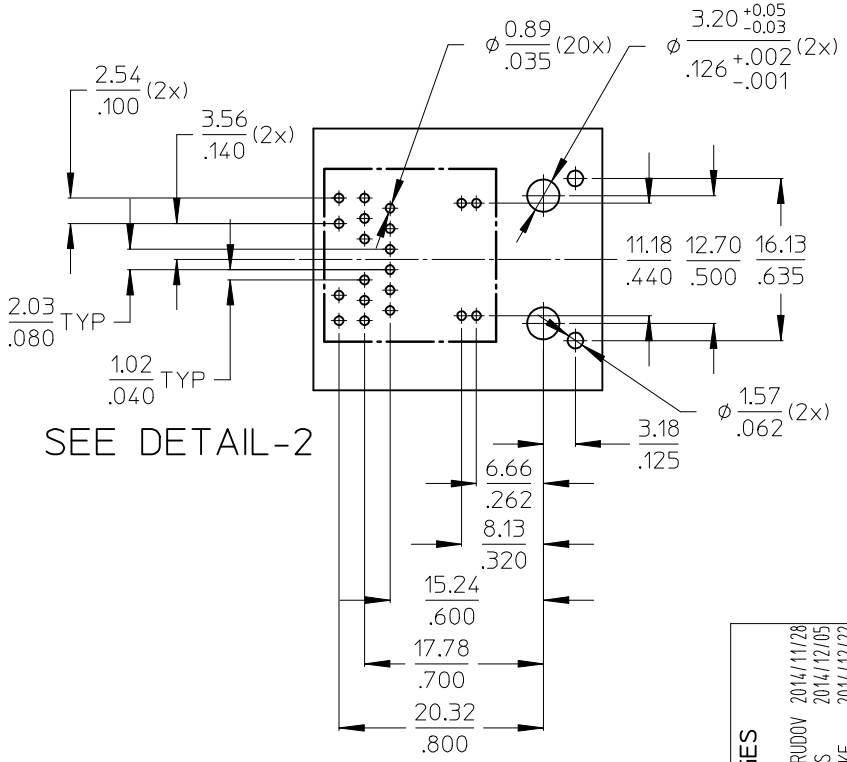
THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION



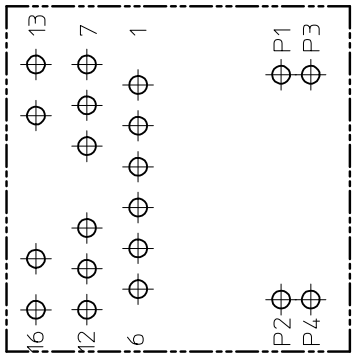


SUGGESTED PANEL CUTOUT

SUGGESTED BOARD LAYOUT - COMPONENT SIDE

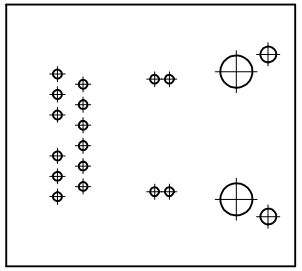


PIN CONFIGUARTION



DETAIL-2
SCALE 4:1

SUGGESTED BOARD LAYOUT
NON LED VERSION



NO CHANGES	EC NO:	DRWN:MMANGARUDOV 2014/11/28	CH'KD:DBYRNES 2014/12/05	APPR:SSTEINKE 2014/12/22	DESCRIPTION	REV
						D

QUALITY SYMBOLS
▼=0
Ⓒ=0

GENERAL TOLERANCES (UNLESS SPECIFIED)

	mm	INCH
4 PLACES	± ---	± ---
3 PLACES	± ---	± .010
2 PLACES	± 0.25	± .020
1 PLACE	± 0.5	± ---
0 PLACE	±	±

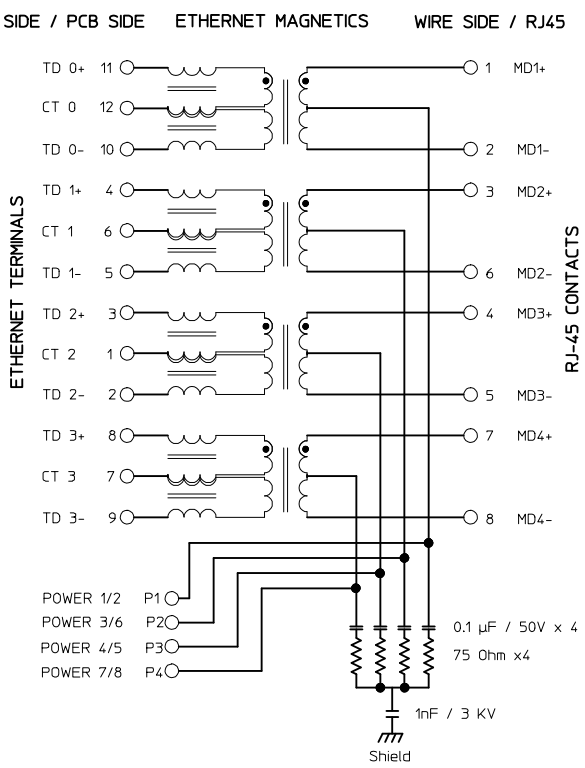
ANGULAR ± .5 °

DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS

DIMENSION STYLE	MM/IN
SCALE	2:1
DESIGN UNITS	METRIC
	THIRD ANGLE PROJECTION
DRAWN BY	JBADER
DATE	2010/01/14
CHECKED BY	MMANGARUDOV
DATE	2010/01/14
APPROVED BY	SSTEINKE
DATE	2010/03/09
MATERIAL NO.	SEE SHEET 3/4
TITLE	GIGABIT MAGNETIC JACK POE PLUS ENABLED 1X1
	molex
DOCUMENT NO.	SD-85789-001
SHEET NO.	2 OF 4
SIZE	A3

THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION

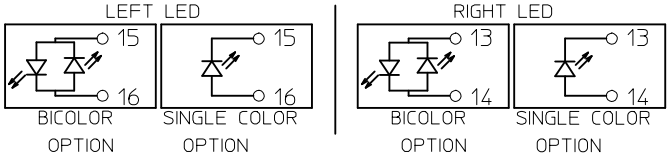
Electrical Specifications @25°C		
Operating temperature (0°C to +70°C)		
Description	Value	
OCL POE+TRANSF. 20mA bias (0°C to +70°C)	350µH min.	
OCL NONPOE TRANSF. 8mA bias (0°C to +70°C)	350µH min.	
Turns Ratio	1CT:1CT	
Insertion Loss		
Frequency (MHz)	Limits (dB max.)	Typical Values (dB max.)
1.0-9.9 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	LED1 POLARITY LEFT LED PIN15	LED1 POLARITY LEFT LED PIN16	LED1 POLARITY LEFT LED COLOR	LED2 POLARITY RIGHT LED PIN13	LED2 POLARITY RIGHT LED PIN14	LED2 POLARITY RIGHT LED COLOR
85789-1001	-	+	GREEN	-	+	GREEN
85789-1003	-	+	GREEN	-	+	GREEN
	+	-	ORANGE			
85789-1006	-	+	GREEN	-	+	YELLOW
85789-1007	-	+	GREEN	-	+	GREEN
	+	-	YELLOW			
85789-1012	-	+	YELLOW	-	+	GREEN
	+	-	GREEN			
85789-1013	-	+	YELLOW	-	+	YELLOW
	+	-	GREEN	+	-	GREEN
85789-1014	-	+	YELLOW	-	+	GREEN
85789-1015	-	+	YELLOW	-	+	GREEN
	+	-	GREEN			
85789-1017	-	+	GREEN	-	+	YELLOW
	+	-	ORANGE			
85789-1020	NON LED					

ADDITIONAL LED COLORS AND CONFIGURATIONS AVAILABLE ON REQUEST

SEE TABLE FOR LED OPTIONS



NO CHANGES
EC NO:
DRWN:MMANGARUDOV 2014/11/28
CHKD:DBYRNES 2014/12/05
APPR:SSTEINKE 2014/12/22
DESCRIPTION
D
REV

QUALITY SYMBOLS
▼=0
Ⓒ=0

GENERAL TOLERANCES (UNLESS SPECIFIED)

	mm	INCH
4 PLACES	± ---	± ---
3 PLACES	± ---	± .010
2 PLACES	± 0.25	± .020
1 PLACE	± 0.5	± ---
0 PLACE	±	±

ANGULAR ± .5 °

DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS

DIMENSION STYLE: MM/IN
SCALE: 5:1
DESIGN UNITS: METRIC
THIRD ANGLE PROJECTION

DRAWN BY: JBADER DATE: 2010/01/14
CHECKED BY: MMANGARUDOV DATE: 2010/01/14
APPROVED BY: SSTEINKE DATE: 2010/03/09
MATERIAL NO.: SEE BOM

TITLE: GIGABIT MAGNETIC JACK POE PLUS ENABLED 1X1

molex

DOCUMENT NO.: SD-85789-001
SHEET NO.: 3 OF 4

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 (-40°C to +85°C)		
Description	Value	
OCL POE+TRANSF. 20mA bias (-40°C to +85°C)	350µH min.	
OCL NONPOE TRANSF. 8mA bias (-40°C to +85°C)	350µH min.	
Turns Ratio	1CT:1CT	
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Frequency (MHz)	Limits (dB max.)	Typical Values (dB max.)
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Frequency (MHz)	Limits (dB min.)	TYPICAL Values (dB min.)
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10-100 MHz	27-17*log(F/10)	10 @ 100MHz
CMR		
Frequency (MHz)	Limits (dB min.)	TYPICAL Values (dB min.)
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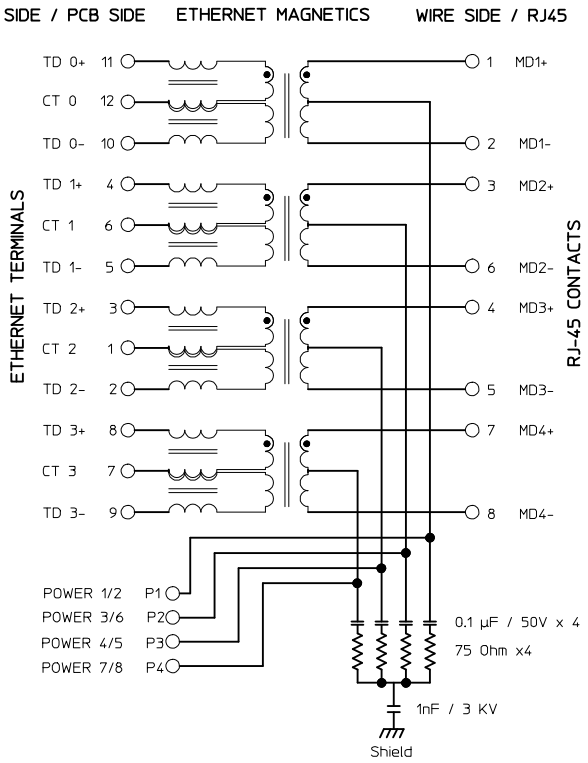
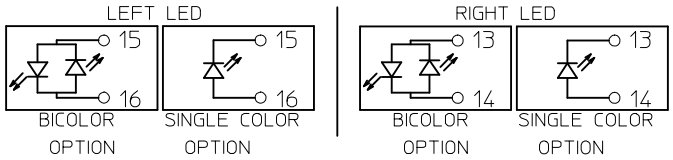
NEXT		
Frequency (MHz)	Limits (dB min.)	TYPICAL Values (dB min.)
1-5.9 MHz	50	50 @ 6MHz
6-49.9 MHz	45-16*log(F/10)	34 @ 50MHz
50-100 MHz	25-30*log(F/100)	25 @ 100MHz
Isolation PHY to Wire side	2.25kVDC/60sec	



PART NUMBER	LED1 POLARITY LEFT LED PIN15	LED1 POLARITY LEFT LED PIN16	LED1 POLARITY LEFT LED COLOR	LED2 POLARITY RIGHT LED PIN13	LED2 POLARITY RIGHT LED PIN14	LED2 POLARITY RIGHT LED COLOR
85789-3006	-	+	GREEN	-	+	YELLOW
85789-3016	-	+	GREEN	+	-	GREEN
	+	-	YELLOW			

ADDITIONAL LED COLORS AND CONFIGURATIONS AVAILABLE ON REQUEST



SEE TABLE FOR LED OPTIONS

BOM CHANGED
EC NO:
DRWN:MMANGARUDOV 2014/11/28
CH'KD:DBYRNES 2014/12/05
APPR:SSTEINKE 2014/12/22
DESCRIPTION
REV
D

QUALITY SYMBOLS
▼=0
Ⓒ=0

GENERAL TOLERANCES (UNLESS SPECIFIED)

	mm	INCH
4 PLACES	± ---	± ---
3 PLACES	± ---	± .010
2 PLACES	± 0.25	± .020
1 PLACE	± 0.5	± ---
0 PLACE	±	±

ANGULAR ± .5 °

DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS

DIMENSION STYLE: MM/IN
SCALE: 5:1
DESIGN UNITS: METRIC
THIRD ANGLE PROJECTION

DRAWN BY: JBADER DATE: 2010/01/14
CHECKED BY: MMANGARUDOV DATE: 2010/01/14
APPROVED BY: SSTEINKE DATE: 2010/03/09
MATERIAL NO.: SEE BOM

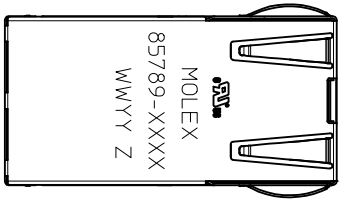
TITLE: GIGABIT MAGNETIC JACK POE PLUS ENABLED 1X1

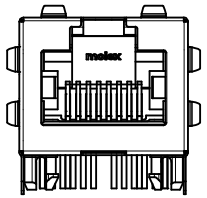
molex

DOCUMENT NO.: SD-85789-001
SHEET NO.: 4 OF 4
SIZE: A3

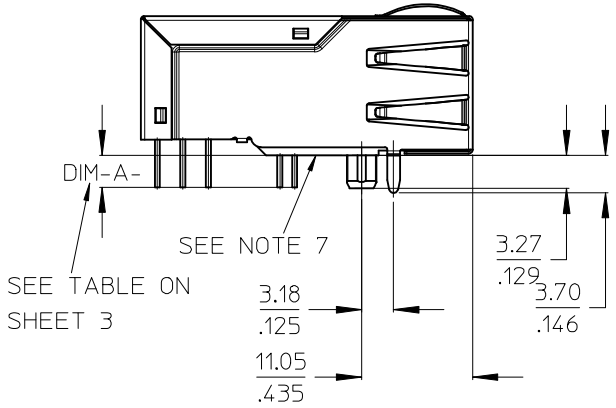
THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION

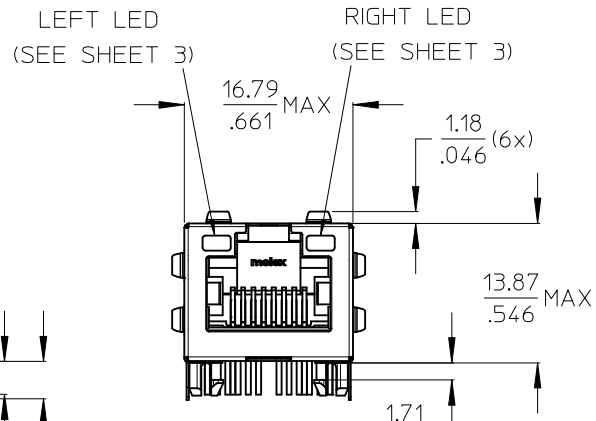
GIGABIT SINGLE PORT MAGNETIC JACK
PoE+ MAGNETICS ACC. TO IEEE802.3at
FOR PSE OR PD APPLICATIONS



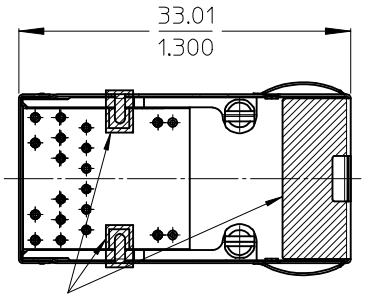


FRONT VIEW
NON LED VERSION
P/N SEE BOM ON SHEET 3





FRONT VIEW
LED VERSION
P/N SEE BOM ON SHEET 3



NOTES:
1 - SHIELD MATERIAL: STAINLESS STEEL
(GROUND PINS ARE SOLDER DIPPED)
2 - PLASTIC MATERIAL: PBT, BLACK, UL 94V-0
3 - TERMINALS MATERIAL: PHOSPOR BRONZE
RJ45 CONTACTS PLATING: 0.76 MICROMETER GOLD
OVER 1.9 MICROMETER NICKEL ON MATING AREA
SOLDER TERMINALS: 3 MICROMETER TIN
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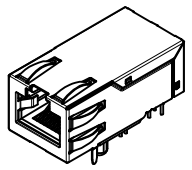
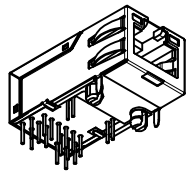


NON LED VERSION
SCALE 1:1



LED VERSION
SCALE 1:1

NOTES UPDATE
EC NO: DESCRIPTION
DRWN:MMANGARUDOV 2014/11/28
CHKD:DBYRNES 2014/12/05
APPR:SSTEINKE 2014/12/22
REV B

QUALITY SYMBOLS
▼=0
Ⓒ=0

GENERAL TOLERANCES (UNLESS SPECIFIED)

	mm	INCH
4 PLACES	± ---	± ---
3 PLACES	± ---	± .010
2 PLACES	± 0.25	± .020
1 PLACE	± 0.5	± ---
0 PLACE	±	±
ANGULAR ± .5 °		

DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS

DIMENSION STYLE	MM/IN
SCALE	2:1
DESIGN UNITS	METRIC
	THIRD ANGLE PROJECTION
DRAWN BY / DATE	JBADER 2014/04/25
CHECKED BY / DATE	MMANGARUDOV 2014/05/05
APPROVED BY / DATE	SSTEINKE 2014/06/11
MATERIAL NO.	SEE SHEET 3
DOCUMENT NO.	SD-85789-401
SHEET NO.	1 OF 3
SIZE	A3

TITLE
GIGABIT MAGNETIC JACK
POE PLUS ENABLED 1X1

molex

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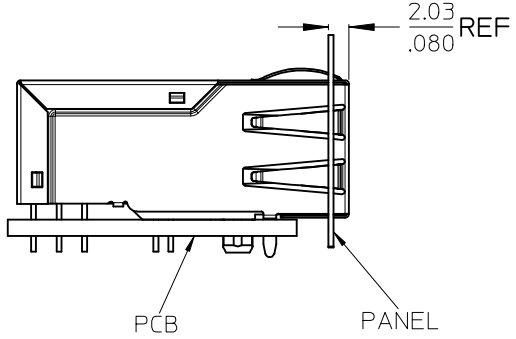
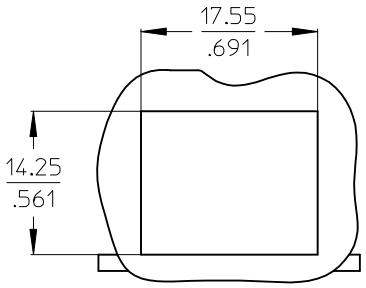
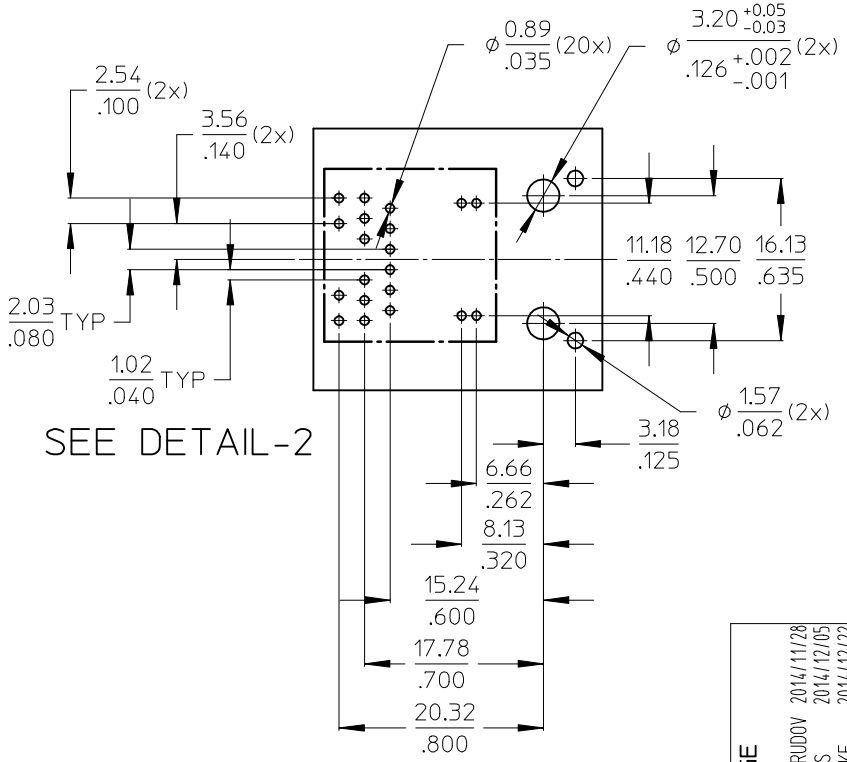




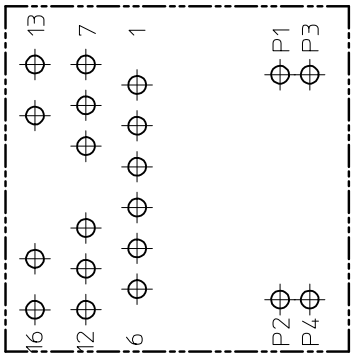
SUGGESTED PANEL CUTOUT

SUGGESTED BOARD LAYOUT - COMPONENT SIDE



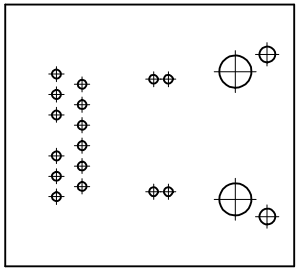
SEE DETAIL-2

PIN CONFIGUARTION



DETAIL-2
SCALE 4:1

SUGGESTED BOARD LAYOUT
NON LED VERSION



NO CHANGE
EC NO:
DRWN:MMANGARUDOV 2014/11/28
CH'KD:DBYRNES 2014/12/05
APPR:SSTEINKE 2014/12/22
DESCRIPTION
REV
B

QUALITY SYMBOLS
▼=0
Ⓒ=0

GENERAL TOLERANCES (UNLESS SPECIFIED)	mm	INCH
4 PLACES	± ---	± ---
3 PLACES	± ---	± .010
2 PLACES	± 0.25	± .020
1 PLACE	± 0.5	± ---
0 PLACE	±	±
ANGULAR ± .5 °		

DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS

DIMENSION STYLE: MM/IN
SCALE: 2:1
DESIGN UNITS: METRIC
THIRD ANGLE PROJECTION

DRAWN BY: JBADER DATE: 2014/04/25
CHECKED BY: MMANGARUDOV DATE: 2014/05/05
APPROVED BY: SSTEINKE DATE: 2014/06/11
MATERIAL NO.: SEE SHEET 3

TITLE: GIGABIT MAGNETIC JACK
POE PLUS ENABLED 1X1

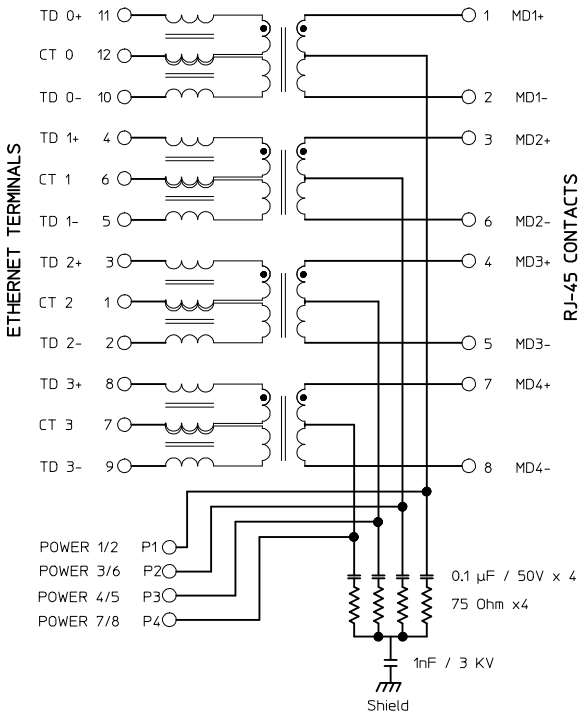
molex

DOCUMENT NO.: SD-85789-401
SHEET NO.: 2 OF 3
SIZE: A3

THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION

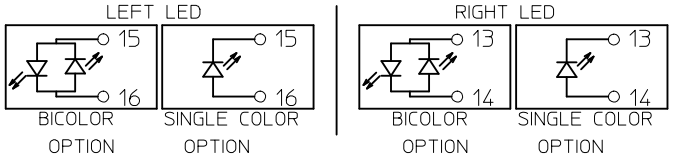
Electrical Specifications @25°C		
Operating temperature (-40°C to +85°C)		
Description	Value	
OCL POE+TRANSF. 20mA bias (-40°C to +85°C)	350μH min.	
OCL NONPOE TRANSF. 8mA bias (-40°C to +85°C)	350μH min.	
Turns Ratio	1CT:1CT	
Insertion Loss		
Frequency (MHz)	Limits (dB max.)	Typical Values (dB max.)
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	

PHY SIDE / PCB SIDE ETHERNET MAGNETICS WIRE SIDE / RJ45



PART NUMBER	DIM-A-SHEET 1	LED1 POLARITY LEFT LED PIN15	LED1 POLARITY LEFT LED PIN16	LED1 POLARITY LEFT LED COLOR	LED2 POLARITY RIGHT LED PIN13	LED2 POLARITY RIGHT LED PIN14	LED2 POLARITY RIGHT LED COLOR
85789-4008	2.50mm	-	+	GREEN	-	+	GREEN
		+	-	YELLOW	+	-	YELLOW
85789-4020	2.50mm	NON LED					

ADDITIONAL LED COLORS AND CONFIGURATIONS ARE AVAILABLE ON REQUEST



SEE TABLE FOR LED OPTIONS

BOM UPDATE
EC NO:
DRWN:MMANGARUDOV 2014/11/28
CH'KD:DBYRNES 2014/12/05
APPR:SSTEINKE 2014/12/22
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0 PLACE	±	±
ANGULAR ± .5 °		

DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS

DIMENSION STYLE: MM/IN
SCALE: 5:1
DESIGN UNITS: METRIC
THIRD ANGLE PROJECTION

DRAWN BY: JBADER DATE: 2014/04/25
CHECKED BY: MMANGARUDOV DATE: 2014/05/05
APPROVED BY: SSTEINKE DATE: 2014/06/11
MATERIAL NO.: SEE BOM

TITLE: GIGABIT MAGNETIC JACK POE PLUS ENABLED 1X1

molex

DOCUMENT NO.: SD-85789-401
SHEET NO.: 3 OF 3
SIZE: A3

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OCEAN CHIPS
Океан Электроники
Поставка электронных компонентов

Компания «Океан Электроники» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Поставка оригинальных импортных электронных компонентов напрямую с производств Америки, Европы и Азии, а так же с крупнейших складов мира;
- Широкая линейка поставок активных и пассивных импортных электронных компонентов (более 30 млн. наименований);
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Помощь Конструкторского Отдела и консультации квалифицированных инженеров;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Поставка электронных компонентов под контролем ВП;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- При необходимости вся продукция военного и аэрокосмического назначения проходит испытания и сертификацию в лаборатории (по согласованию с заказчиком);
- Поставка специализированных компонентов военного и аэрокосмического уровня качества (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Actel, Aeroflex, Peregrine, VPT, Syfer, Eurofarad, Texas Instruments, MS Kennedy, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Компания «Океан Электроники» является официальным дистрибьютором и эксклюзивным представителем в России одного из крупнейших производителей разъемов военного и аэрокосмического назначения «**JONHON**», а так же официальным дистрибьютором и эксклюзивным представителем в России производителя высокотехнологичных и надежных решений для передачи СВЧ сигналов «**FORSTAR**».

AVIC JONHON

«JONHON» (основан в 1970 г.)

Разъемы специального, военного и аэрокосмического назначения:

(Применяются в военной, авиационной, аэрокосмической, морской, железнодорожной, горно- и нефтедобывающей отраслях промышленности)

«FORSTAR» (основан в 1998 г.)

ВЧ соединители, коаксиальные кабели, кабельные сборки и микроволновые компоненты:

(Применяются в телекоммуникациях гражданского и специального назначения, в средствах связи, РЛС, а так же военной, авиационной и аэрокосмической отраслях промышленности).

FORSTAR®

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