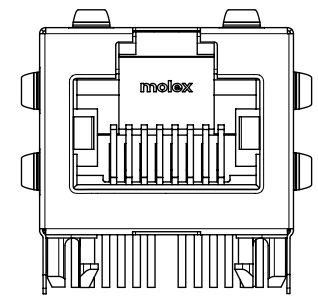
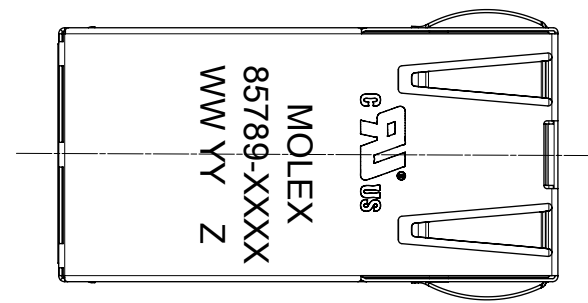
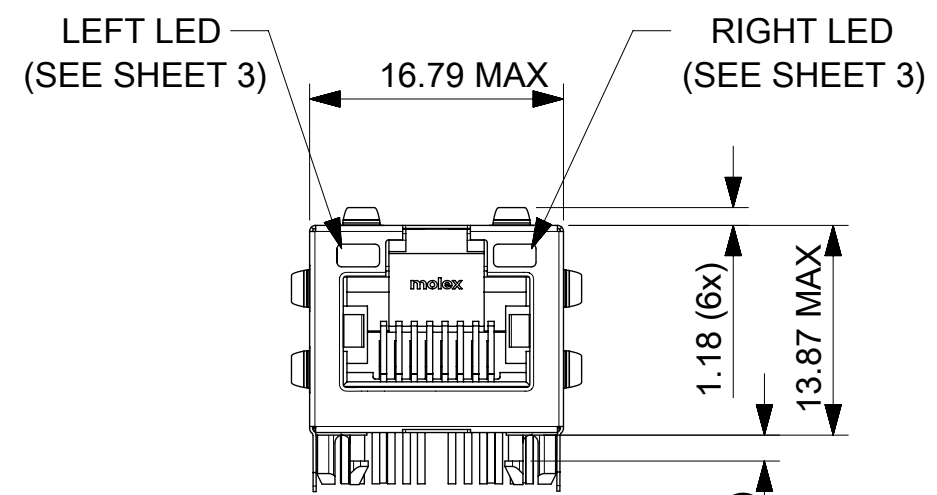
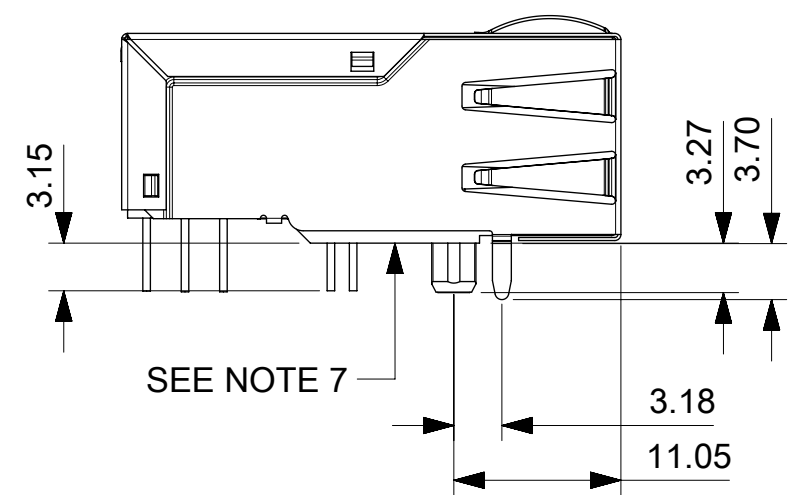


GIGABIT SINGLE PORT MAGNETIC JACK
PoE+ MAGNETICS ACC. TO IEEE802.3at
FOR PSE OR PD APPLICATIONS

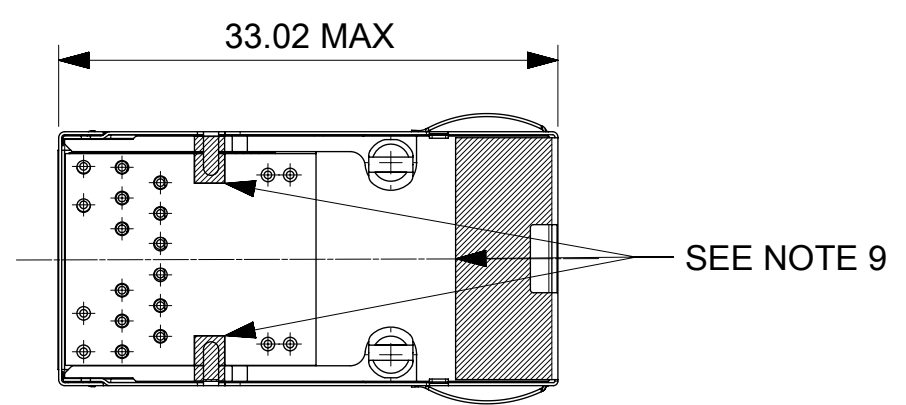
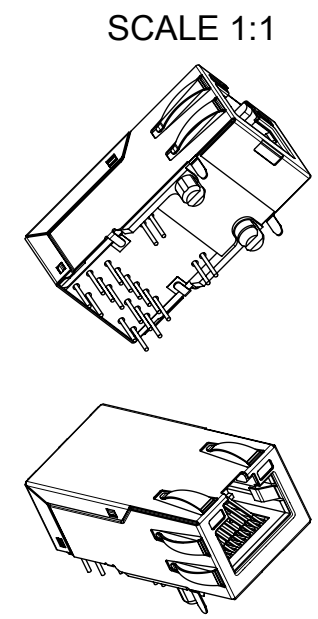
- NOTES:**
- 1 - SHIELD MATERIAL: STAINLESS STEEL
(GROUND PINS ARE SOLDER DIPPED)
 - 2 - PLASTIC MATERIAL: PBT, BLACK, UL 94V-0
 - 3 - RJ45 TERMINALS MATERIAL: COPPER ALLOY
CONTACT PLATING: 0.76 MICROMETER GOLD
PHY TERMINALS: TIN PLATED
 - 4 - MATING INTERFACE ACCORDING TO IEC 60603-7
 - 5 - PRODUCT 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



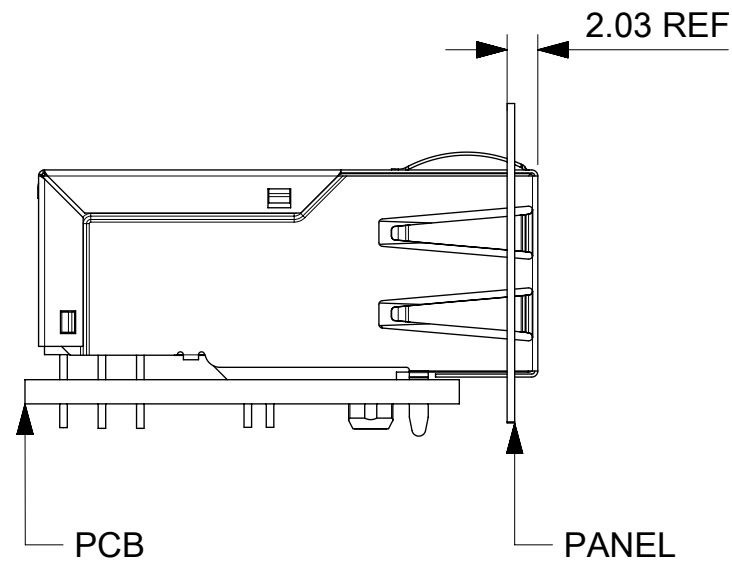
FRONT VIEW
NON LED VERSION
P/N 85789-1020



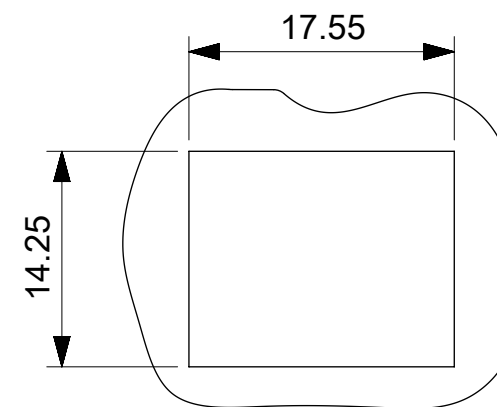
FRONT VIEW
LED VERSION
P/N SEE BOM ON SHEET 3



THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION											
EC DESCRIPTION EC NO: 102890 DRWN: MFURKEL CHK'D: RSILLER APPR: RSILLER	2015/09/28 2016/02/23 2016/02/23	QUALITY SYMBOLS ∇ = 0 ∇ = 0 ∇ = 0 ▼ = 0 ∇ = 0 ⊠ = 0 ■ = 0 ∇ = 0	GENERAL TOLERANCES (UNLESS SPECIFIED) ANGULAR TOL ± 0.5 ° 4 PLACES ± 3 PLACES ± 2 PLACES ± 0.25 1 PLACE ± 0.5 0 PLACES ± DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS	DIMENSION UNITS mm	SCALE 2:1						
	DRWN BY MFURKEL	DATE 2015/06/15	GIGABIT MAGNETIC JACK POE PLUS ENABLED								
	APPR BY RSILLER	DATE 2016/02/23	PRODUCT CUSTOMER DRAWING								
	DRAWING SIZE A3	THIRD ANGLE PROJECTION	SERIES 85789	MATERIAL NUMBER SEE BOM/SHEET 3/4	CUSTOMER	DOCUMENT NUMBER 857891001	DOC TYPE PSD	DOC PART 000	SHEET NUMBER 1 OF 4		

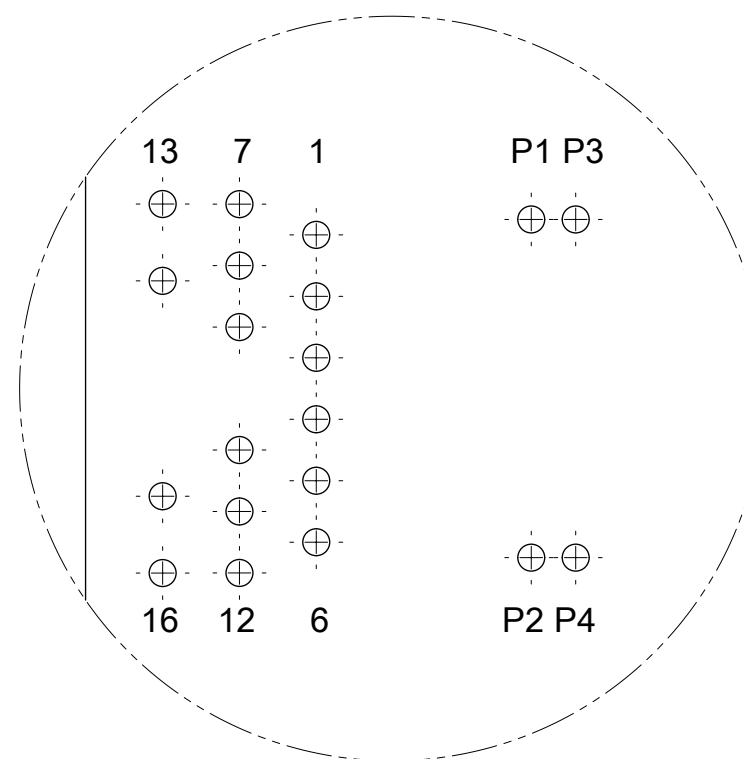


SUGGESTED PANEL CUTOUT

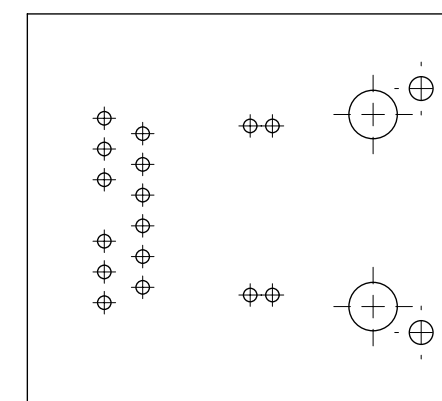


DETAIL X
SCALE 4:1

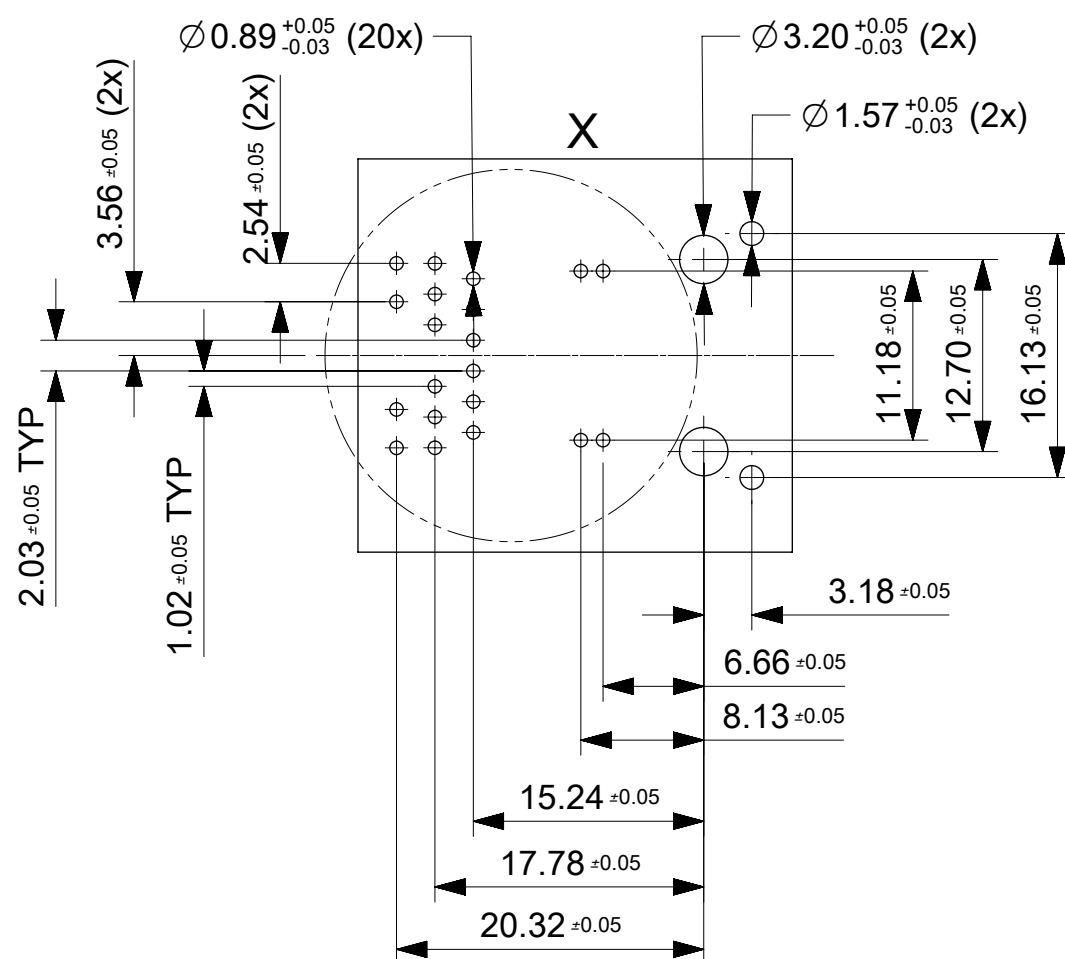
PIN CONFIGURATION



SUGGESTED BOARD LAYOUT
FOR NON LED VERSION

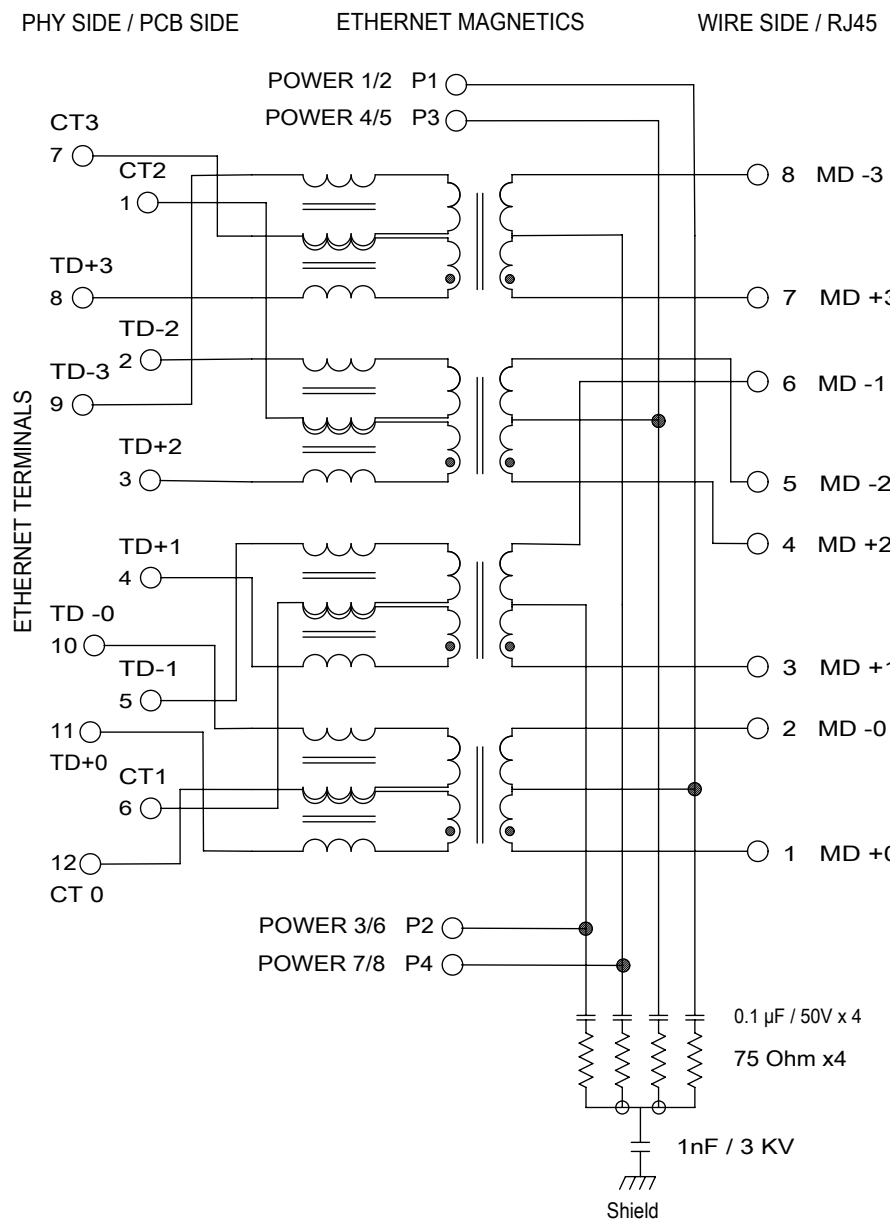


SUGGESTED BOARD LAYOUT- COMPONENT SIDE



THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION										
EC DESCRIPTION EC NO: 102890 DRWN: MFURKEL CHK'D: RSILLER APPR: RSILLER	2015/09/28	2016/02/23	2016/02/23	QUALITY SYMBOLS ▽ = 0 ▽ = 0 ▽ = 0 ▼ = 0 ▽ = 0 ☒ = 0 ■ = 0 ▽ = 0	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION UNITS	SCALE		
					ANGULAR TOL ± 0.5 °		mm	2:1		
					4 PLACES ±	DRWN BY MFURKEL		DATE 2015/06/15		
					3 PLACES ±	CHK'D BY		DATE		
			2 PLACES ± 0.25	APPR BY RSILLER		DATE 2016/02/23	PRODUCT CUSTOMER DRAWING			
			1 PLACE ± 0.5	DRAWING SIZE A3		THIRD ANGLE PROJECTION	SERIES 85789	MATERIAL NUMBER SEE BOM/SHEET 3/4	CUSTOMER	
			0 PLACES ±	DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS			DOCUMENT NUMBER 857891001	DOC TYPE PSD	DOC PART 000	SHEET NUMBER 2 OF 4

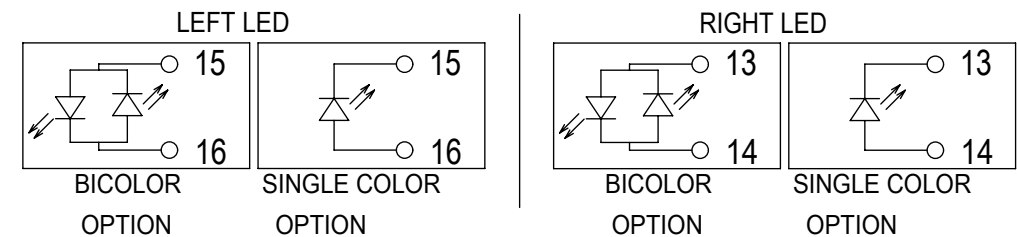
Electrical Specifications @25°C		
Operating temperature (0°C to +70°C)		
Description	VALUE	
OCL POE+TRANSF. 20mA bias (0°C to +70°C)	350µH min.	
OCL NONPOE TRANSF. 8mA bias (0°C to +70°C)	350µH min.	
Turns Ratio	1CT:1CT	
Insertion Loss		
Frequency (MHz)	Limits (dB max.)	Typical Values (dB max.)
1.0-9.9 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	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	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	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			LED2 POLARITY		
	LEFT LED		COLOR	RIGHT LED		COLOR
	PIN15	PIN16		PIN13	PIN14	
857891001	-	+	GRN	-	+	GRN
857891003	-	+	GRN	-	+	GRN
857891006	-	+	GRN	-	+	YW
857891007	-	+	GRN	-	+	GRN
857891012	-	+	YW	-	+	GRN
857891013	-	+	YW	-	+	YW
857891014	-	+	GRN	-	+	GRN
857891015	-	+	GRN	-	+	GRN
857891017	-	+	GRN	-	+	YW
857891020	NON LED					

ADDITIONAL LED COLORS AND CONFIGURATIONS ARE AVAILABLE ON REQUEST

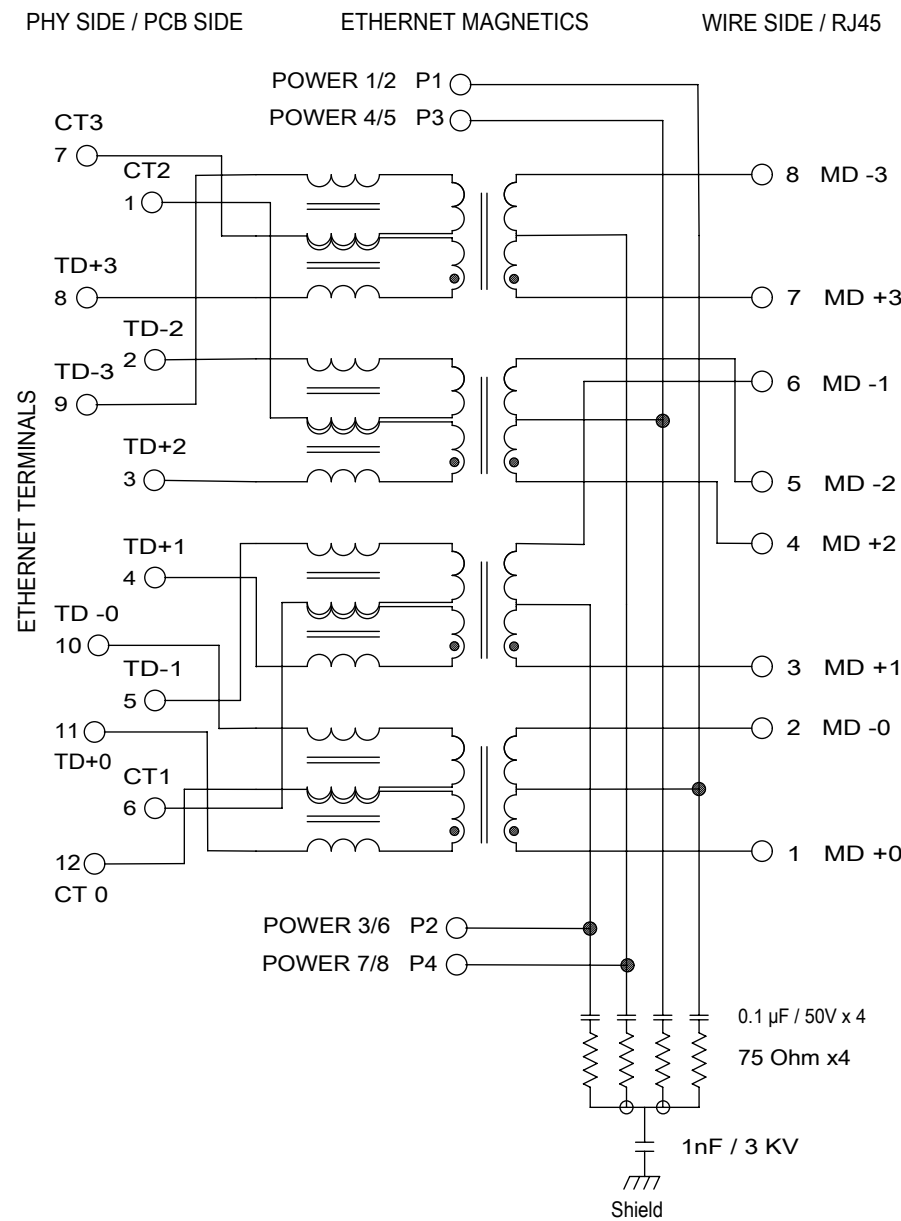
SEE TABLE FOR LED OPTIONS



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

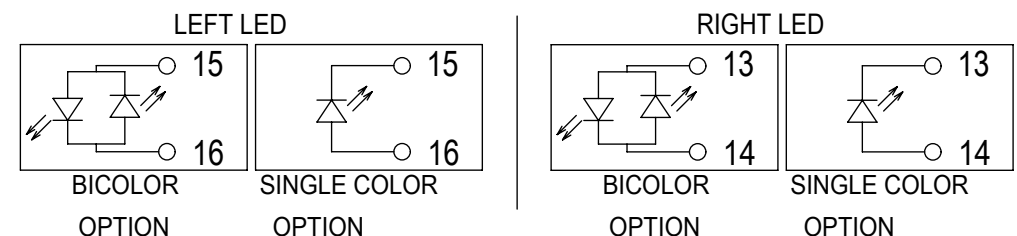
EC DESCRIPTION EC NO: 102890 DRWN: MFURKEL CHK'D: RSILLER APPR: RSILLER	2015/09/28 2016/02/23 2016/02/23	QUALITY SYMBOLS ▽ = 0 ▽ = 0 ▽ = 0 ▼ = 0 ▽ = 0 ☒ = 0 ■ = 0 ▽ = 0	GENERAL TOLERANCES (UNLESS SPECIFIED) ANGULAR TOL ± 0.5 ° 4 PLACES ± 3 PLACES ± 2 PLACES ± 0.25 1 PLACE ± 0.5 0 PLACES ± DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS	DIMENSION UNITS: mm SCALE: 5:1 DRWN BY: MFURKEL DATE: 2015/06/15 CHK'D BY: RSILLER DATE: 2016/02/23 APPR BY: RSILLER DATE: 2016/02/23 DRAWING SIZE: A3 THIRD ANGLE PROJECTION	
	PRODUCT CUSTOMER DRAWING			SERIES: 85789 MATERIAL NUMBER: SEE BOM/SHEET 3/4 CUSTOMER:	
	DOCUMENT NUMBER: 857891001		DOC TYPE: PSD DOC PART: 000 SHEET NUMBER: 3 OF 4		

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	Limits (dB min.)	TYPICAL Values (dB min.)
Frequency (MHz)		
1-9.9 MHz	27dB min.	27 @ 10MHz
10-100 MHz	27-17*log(F/10)	10 @ 100MHz
CMR	Limits (dB min.)	TYPICAL Values (dB min.)
Frequency (MHz)		
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	Limits (dB min.)	TYPICAL Values (dB min.)
Frequency (MHz)		
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			LED2 POLARITY		
	LEFT LED			RIGHT LED		
	PIN15	PIN16	COLOR	PIN13	PIN14	COLOR
857893006	-	+	GRN	-	+	YW
857893016	-	+	GRN	-	+	GRN
	+	-	YW			

ADDITIONAL LED COLORS AND CONFIGURATIONS ARE AVAILABLE ON REQUEST

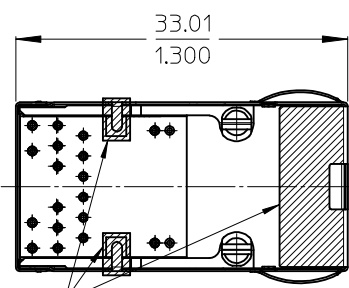
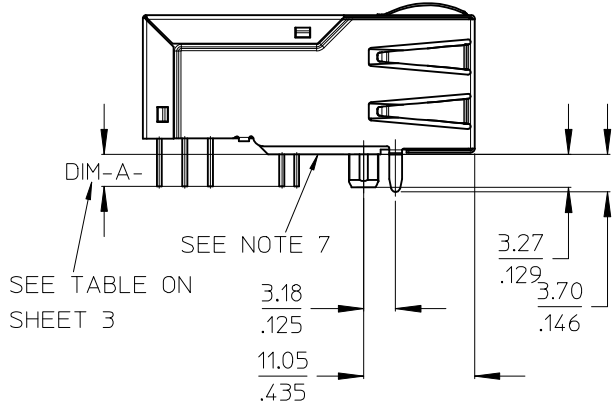
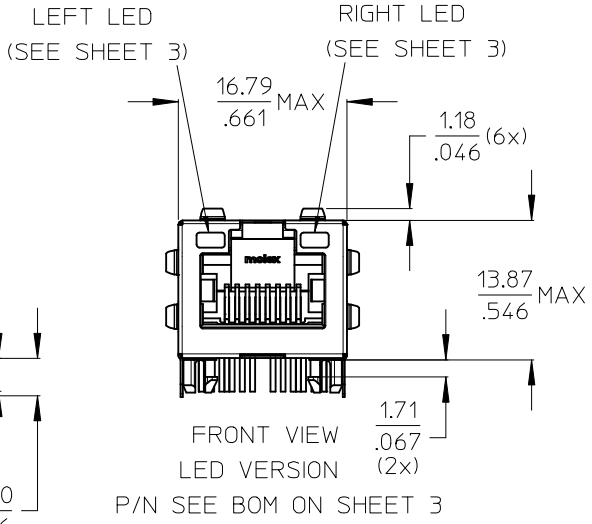
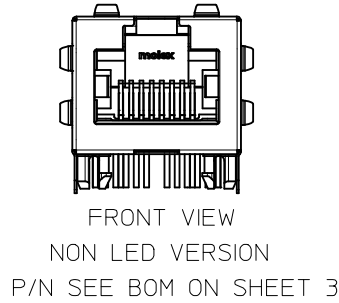
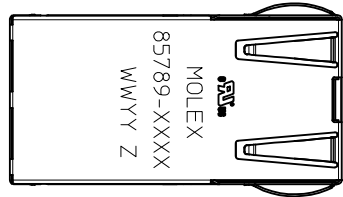


SEE TABLE FOR LED OPTIONS

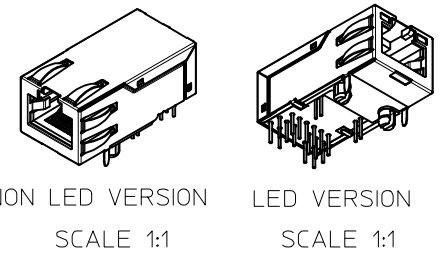
THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION

EC DESCRIPTION EC NO: 102890 DRWN: MFURKEL CHK'D: RSILLER APPR: RSILLER	2015/09/28 2016/02/23 2016/02/23	QUALITY SYMBOLS ▽ = 0 ▽ = 0 ▽ = 0 ▼ = 0 ▽ = 0 ☒ = 0 ■ = 0 ▽ = 0	GENERAL TOLERANCES (UNLESS SPECIFIED) ANGULAR TOL ± 0.5 ° 4 PLACES ± 3 PLACES ± 2 PLACES ± 0.25 1 PLACE ± 0.5 0 PLACES ± DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS	DIMENSION UNITS: mm SCALE: 5:1 DRWN BY: MFURKEL DATE: 2015/06/15 CHK'D BY: RSILLER DATE: 2016/02/23 APPR BY: RSILLER DATE: 2016/02/23 DRAWING SIZE: A3 THIRD ANGLE PROJECTION	
				GIGABIT MAGNETIC JACK POE PLUS ENABLED	
				PRODUCT CUSTOMER DRAWING	
	SERIES: 85789 MATERIAL NUMBER: SEE BOM/SHEET 3/4 CUSTOMER:		DOCUMENT NUMBER: 857891001 DOC TYPE: PSD DOC PART: 000 SHEET NUMBER: 4 OF 4		

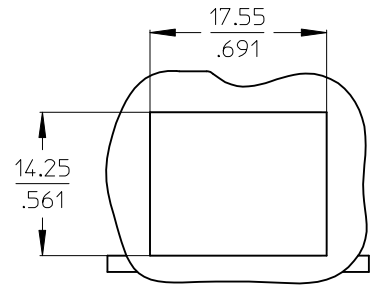
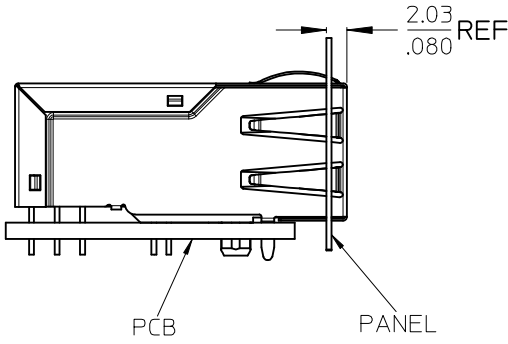
GIGABIT SINGLE PORT MAGNETIC JACK
PoE+ MAGNETICS ACC. TO IEEE802.3at
FOR PSE OR PD APPLICATIONS



- 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

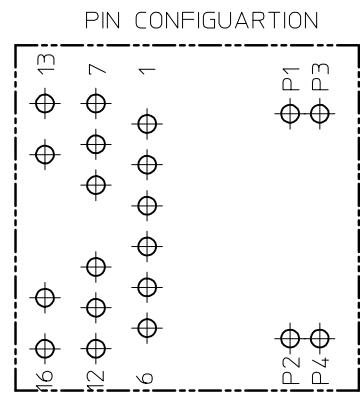
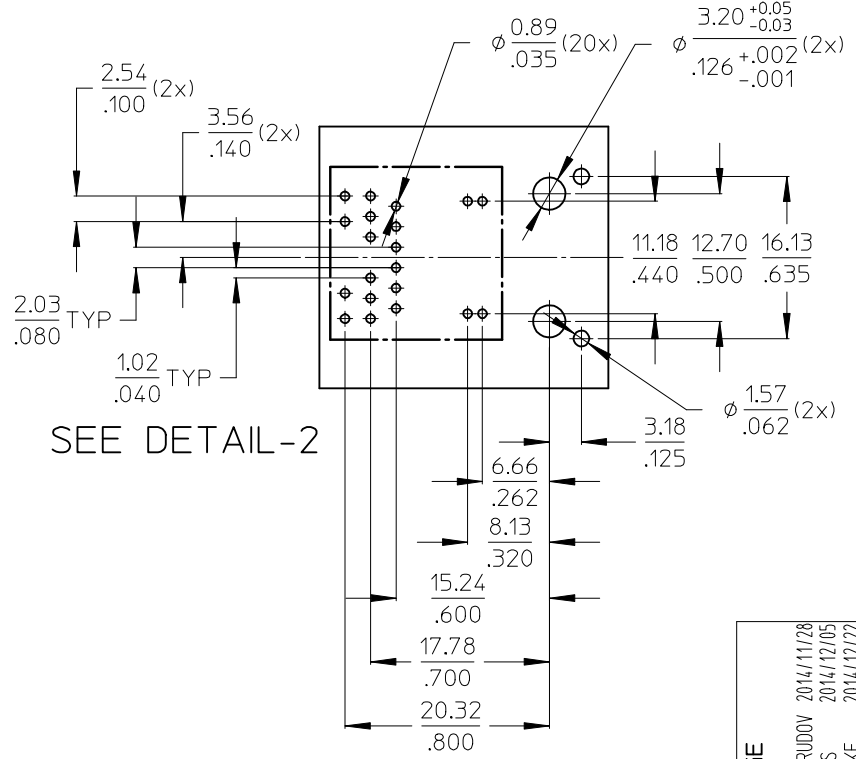


NOTES UPDATE IEC NO: DRWN:MMANGARUDOV 2014/11/28 CH'KD:DBYRNES 2014/12/05 APPR:SSSTE INKE 2014/12/22	QUALITY SYMBOLS ▽=0 ◻=0	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE MM/IN		SCALE 2:1	DESIGN UNITS METRIC	THIRD ANGLE PROJECTION			
		4 PLACES ± --- ± ---	mm INCH	DRAWN BY JBADER	DATE 2014/04/25	TITLE GIGABIT MAGNETIC JACK POE PLUS ENABLED 1X1					
		3 PLACES ± --- ± .010		CHECKED BY MMANGARUDOV	DATE 2014/05/05						
		2 PLACES ± 0.25 ± .020		APPROVED BY SSTE INKE	DATE 2014/06/11						
		1 PLACE ± 0.5 ± ---		MATERIAL NO. SEE SHEET 3		DOCUMENT NO. SD-85789-401				SHEET NO. 1 OF 3	
		0 PLACE ± ±		ANGULAR ± .5 °		THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION					
		DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		SIZE A3							



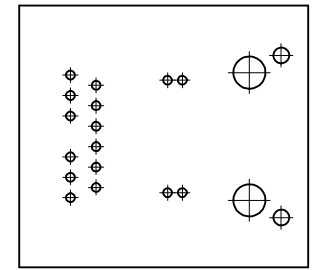
SUGGESTED PANEL CUTOUT

SUGGESTED BOARD LAYOUT - COMPONENT SIDE



DETAIL-2
SCALE 4:1

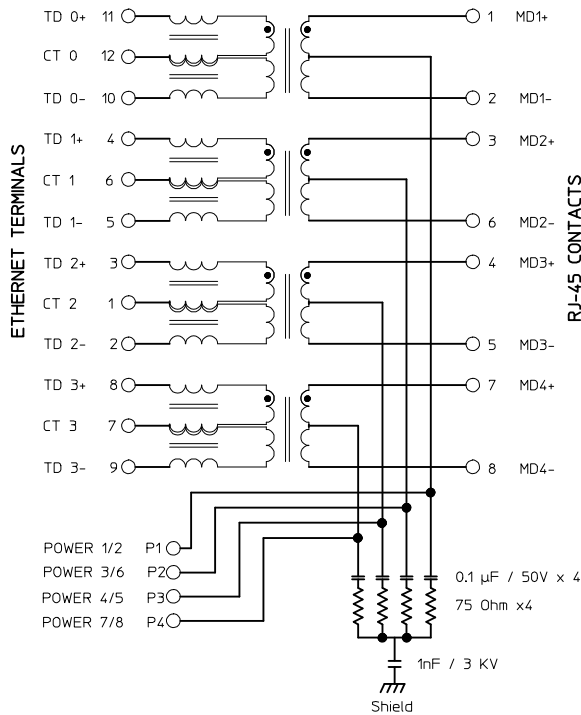
SUGGESTED BOARD LAYOUT
NON LED VERSION



NO CHANGE EC NO: DRW:MMANGARUDOV 2014/11/28 CHKD:DBYRNES 2014/12/05 APPR:SSSTEINKE 2014/12/22	QUALITY SYMBOLS	GENERAL TOLERANCES (UNLESS SPECIFIED)	DIMENSION STYLE	SCALE	DESIGN UNITS	THIRD ANGLE PROJECTION	
	▽=0 ◁=0	mm INCH	MM/IN	2:1	METRIC		
		4 PLACES ± --- ± --- 3 PLACES ± --- ± .010 2 PLACES ± 0.25 ± .020 1 PLACE ± 0.5 ± --- 0 PLACE ± ±	DRAWN BY DATE JBADER 2014/04/25	TITLE	GIGABIT MAGNETIC JACK POE PLUS ENABLED 1X1		
		ANGULAR ± .5 ° DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS	CHECKED BY DATE MMANGARUDOV 2014/05/05				
	SEE SHEET 3	APPROVED BY DATE SSTEINKE 2014/06/11		DOCUMENT NO. SD-85789-401			
			SIZE A3	THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION			

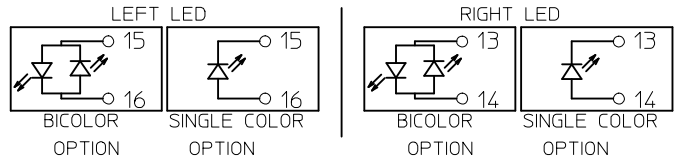
Electrical Specifications @25°C		
Operating temperature (-40°C to +85°C)		
Description	Value	
OCL POE+TRANSF. 20mA bias (-40°C to +85°C)	350μH min.	
OCL NONPOE TRANSF. 8mA bias (-40°C to +85°C)	350μH min.	
Turns Ratio	1CT:1CT	
Insertion Loss		
Frequency (MHz)	Limits (dB max.)	Typical Values (dB max.)
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			LED2 POLARITY		
		PIN15	PIN16	COLOR	PIN13	PIN14	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: DRWIN:MANGARUDOV 2014/11/28 CHKD:DBYRNES 2014/12/05 APPR:SSTEINKE 2014/12/22 REV DESCRIPTION	QUALITY SYMBOLS	GENERAL TOLERANCES (UNLESS SPECIFIED)	DIMENSION STYLE	SCALE	DESIGN UNITS	THIRD ANGLE PROJECTION	
	▽=0 ◻=0	mm INCH	MM/IN	5:1	METRIC		
		4 PLACES ± --- ± ---	DRAWN BY DATE	TITLE	GIGABIT MAGNETIC JACK POE PLUS ENABLED 1X1		
		3 PLACES ± --- ± .010	JBADER 2014/04/25				
		2 PLACES ± 0.25 ± .020	CHECKED BY DATE				
	1 PLACE ± 0.5 ± ---	MMANGARUDOV 2014/05/05					
	0 PLACE ± ±	APPROVED BY DATE		MATERIAL NO. DOCUMENT NO. SHEET NO.			
		ANGULAR ± .5 °	SIZE	SEE BOM SD-85789-401 3 OF 3			
		DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS	A3	THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION			