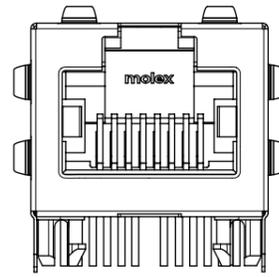
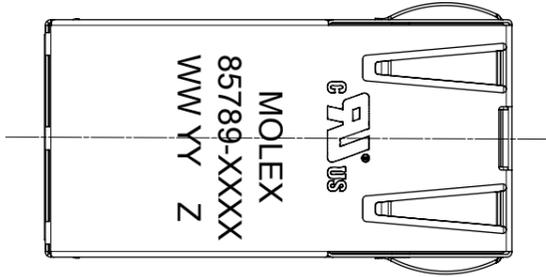
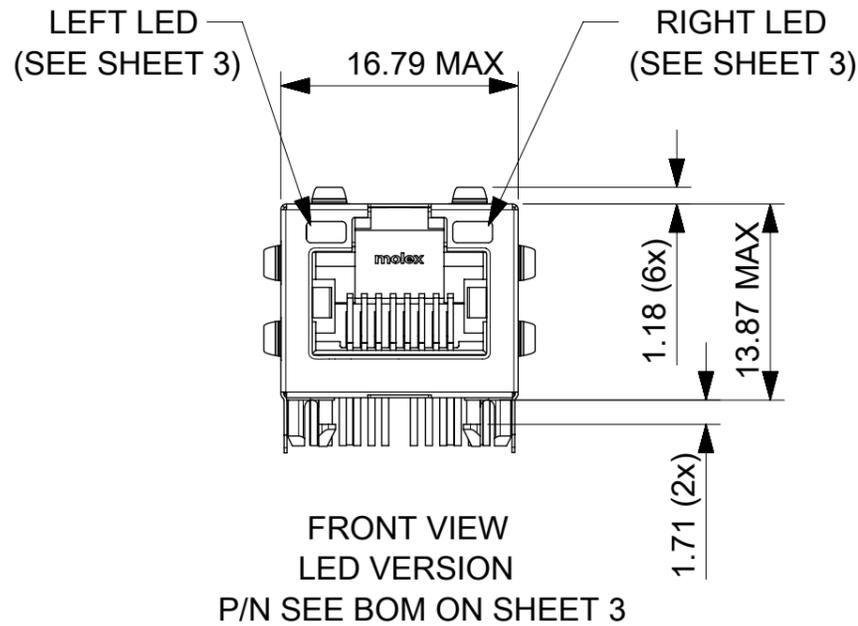
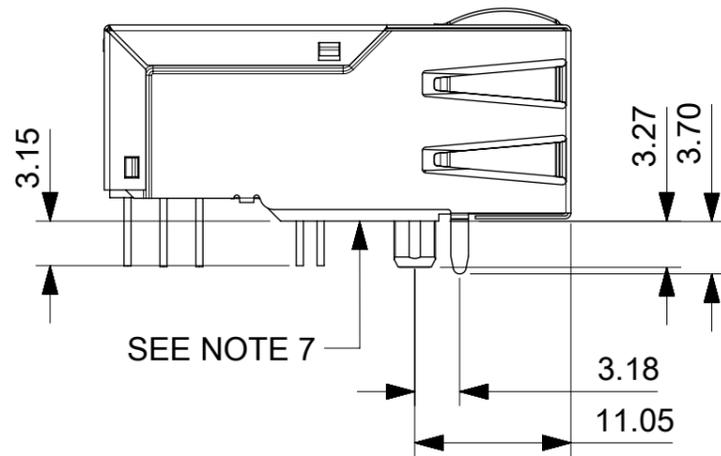


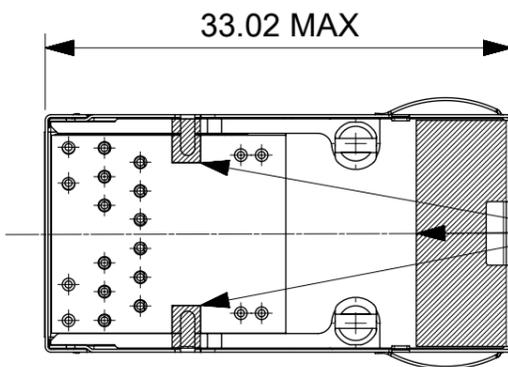
GIGABIT SINGLE PORT MAGNETIC JACK
PoE+ MAGNETICS ACC. TO IEEE802.3at
FOR PSE OR PD APPLICATIONS



FRONT VIEW
NON LED VERSION
P/N 85789-1020



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

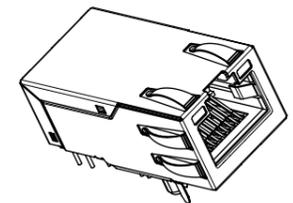


SEE NOTE 9

NOTES:

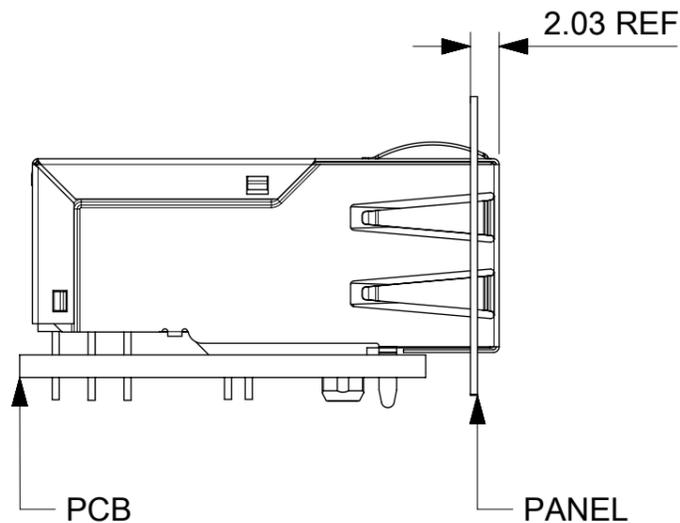
- 1 - SHIELD MATERIAL: STAINLESS STEEL
(GROUND PINS ARE SOLDER DIPPED)
- 2 - PLASTIC MATERIAL: PBT, BLACK, UL 94V-0
- 3 - RJ45 TERMINALS MATERIAL: COPPER ALLOY
CONTACT PLATING: 0.76 MICROMETER GOLD
OVER 1.9 MICROMETER NICKEL
PHY TERMINALS: TIN PLATED
- 4 - MATING INTERFACE ACCORDING TO IEC 60603-7
- 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

SCALE 1:1

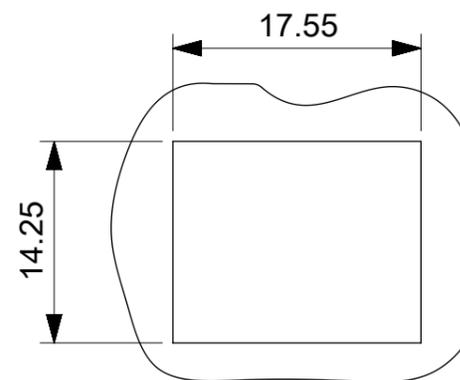


THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION

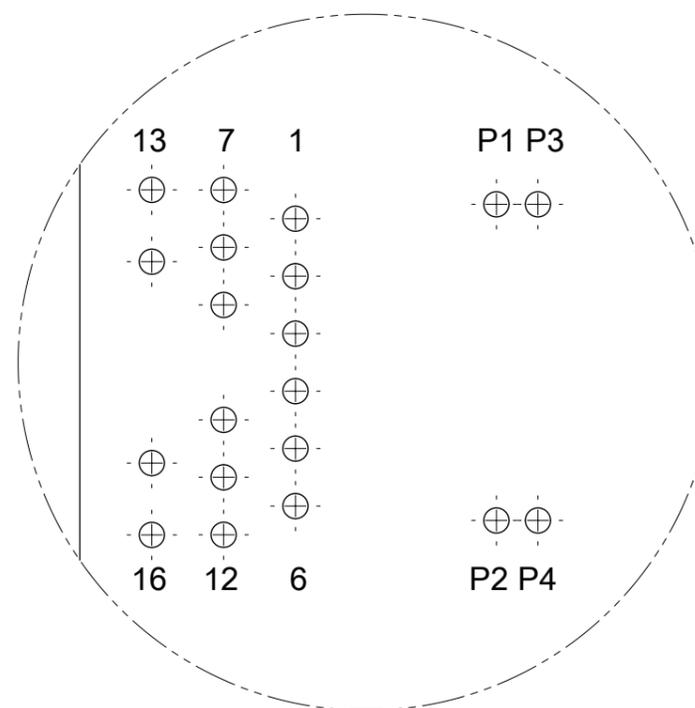
EC DESCRIPTION EC NO: 102890 DRWN: MFURKEL CHK'D: APPR: RSILLER	2015/09/28 2016/02/23	QUALITY SYMBOLS ▽ = 0 ▽ = 0 ▽ = 0 ▼ = 0 ◁ = 0 ⊠ = 0 ■ = 0 ▽ = 0	GENERAL TOLERANCES (UNLESS SPECIFIED) ANGULAR TOL ± 0.5 ° 4 PLACES ± 3 PLACES ± 2 PLACES ± 0.25 1 PLACE ± 0.5 0 PLACES ± DRAFT WHERE APPLICABLE MUST REMAIN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



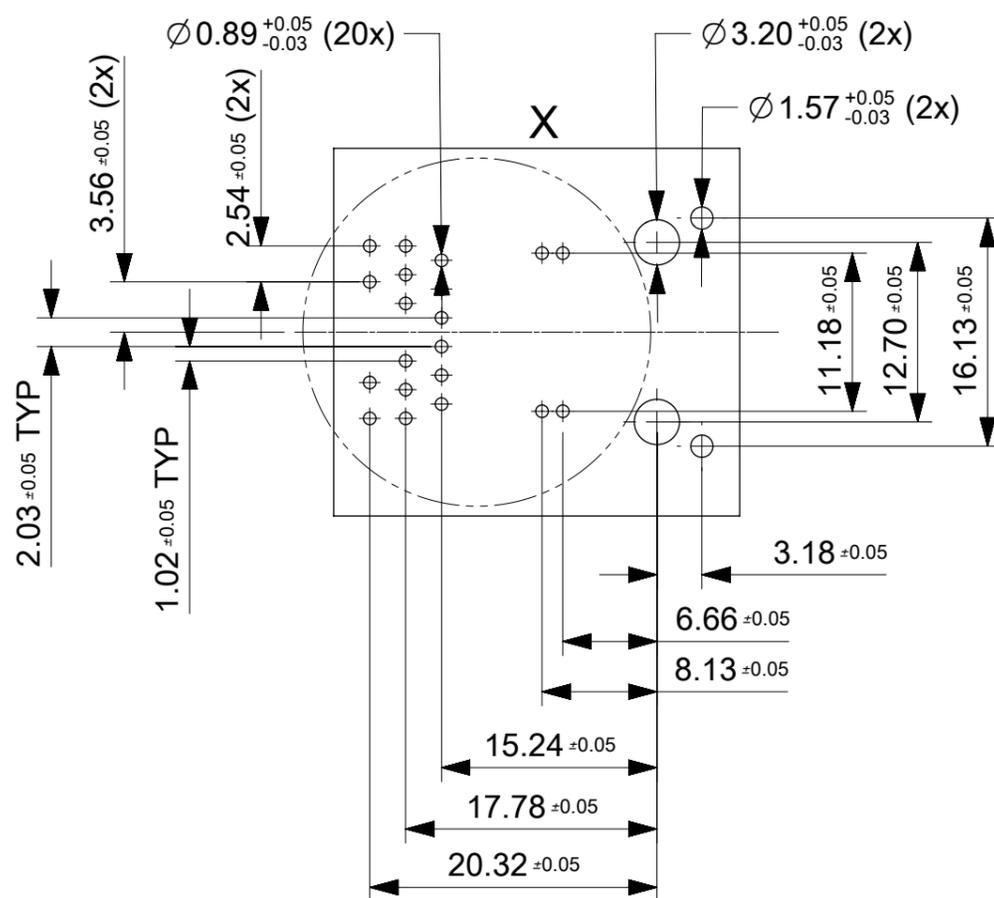
SUGGESTED PANEL CUTOUT



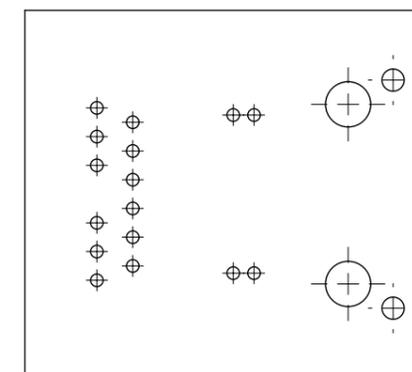
DETAIL X
SCALE 4:1
PIN CONFIGURATION



SUGGESTED BOARD LAYOUT- COMPONENT SIDE

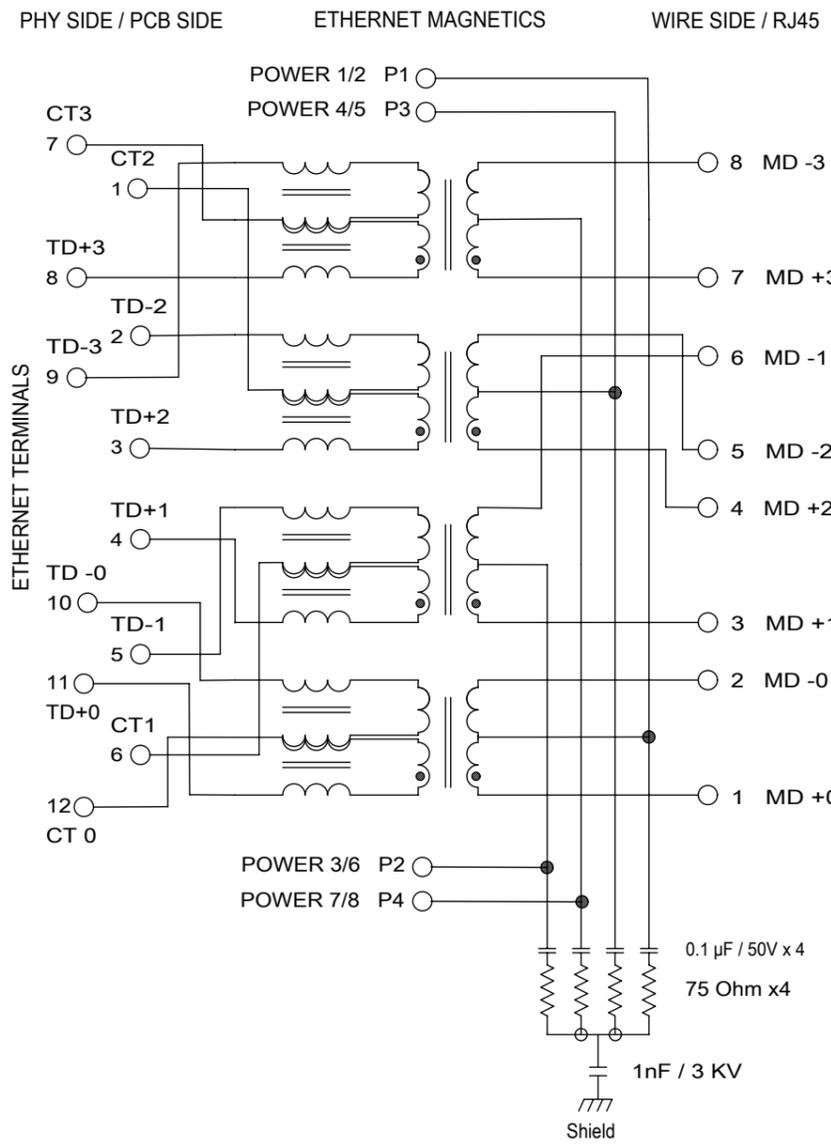


SUGGESTED BOARD LAYOUT FOR NON LED VERSION



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: REV: F	2015/09/28	2016/02/23	QUALITY SYMBOLS	GENERAL TOLERANCES (UNLESS SPECIFIED)	DIMENSION UNITS	SCALE	molex				
			▽ = 0	ANGULAR TOL ± 0.5 °	MM	2:1					
			▽ = 0	4 PLACES ±	DRWN BY	DATE	GIGABIT MAGNETIC JACK POE PLUS ENABLED				
			▽ = 0	3 PLACES ±	MFURKEL	2015/06/15					
▽ = 0	2 PLACES ± 0.25	CHK'D BY	DATE	PRODUCT CUSTOMER DRAWING							
▽ = 0	1 PLACE ± 0.5	APPR BY	DATE								
□ = 0	0 PLACES ±	DRAWING SIZE	THIRD ANGLE PROJECTION	SERIES	MATERIAL NUMBER	CUSTOMER					
■ = 0	DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS	A3		85789	SEE BOM/SHEET 3/4						
▽ = 0				DOCUMENT NUMBER	DOC TYPE	DOC PART	SHEET NUMBER				
				857891001	PSD	000	2 OF 4				

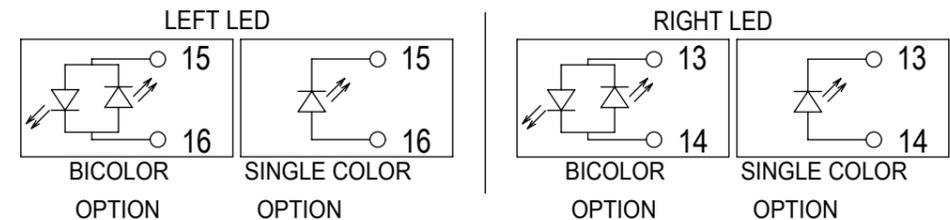
Electrical Specifications @25°C		
Operating temperature (0°C to +70°C)		
Description	VALUE	
OCL POE+TRANSF. 20mA bias (0°C to +70°C)	350µH min.	
OCL NONPOE TRANSF. 8mA bias (0°C to +70°C)	350µH min.	
Turns Ratio	1CT:1CT	
Insertion Loss		
Frequency (MHz)	Limits (dB max.)	Typical Values (dB max.)
1.0-9.9 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

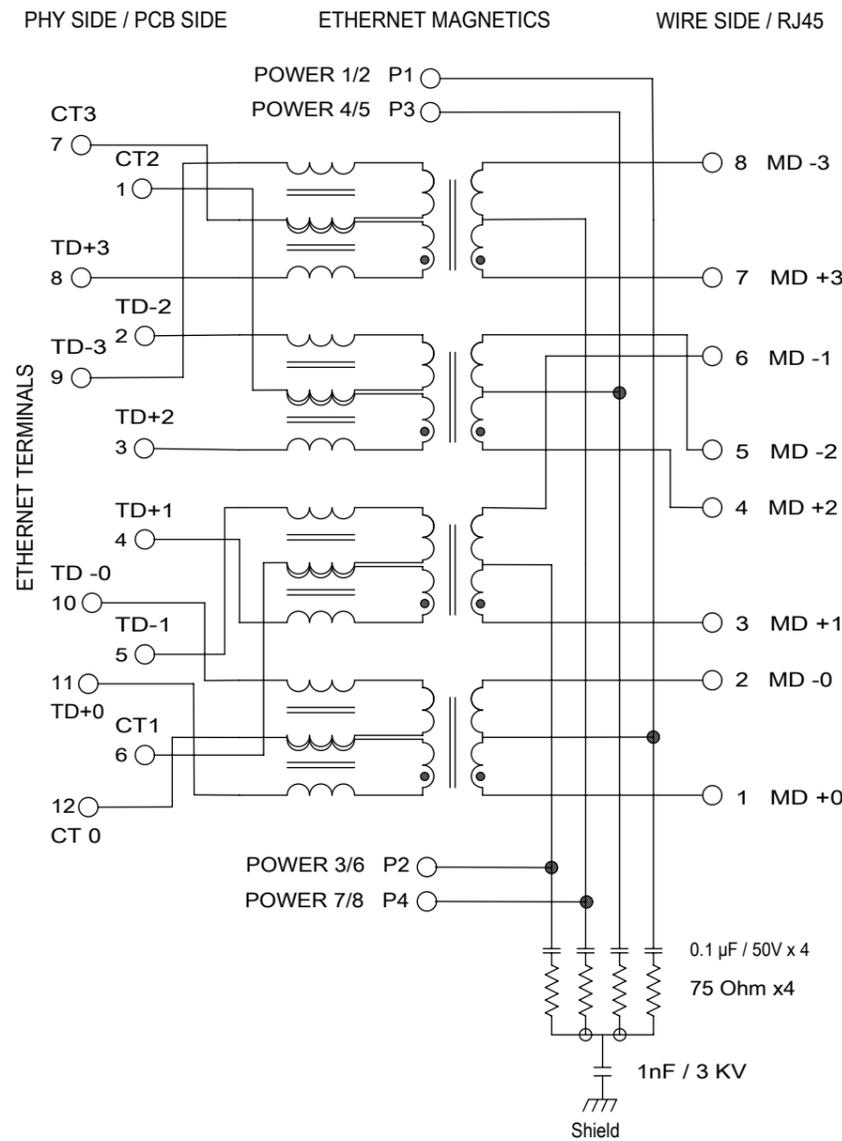
SEE TABLE FOR LED OPTIONS



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

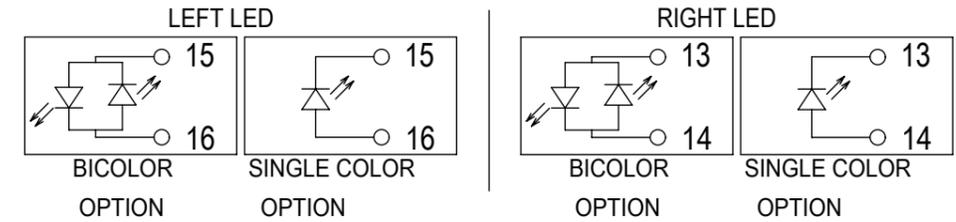
EC DESCRIPTION EC NO: 102890 DRWN: MFURKEL CHK'D: APPR: RSILLER REV: F	2015/09/28 2016/02/23	QUALITY SYMBOLS ▽ = 0 ▽ = 0 ▽ = 0 ▼ = 0 ▽ = 0 □ = 0 ■ = 0 ▽ = 0	GENERAL TOLERANCES (UNLESS SPECIFIED) ANGULAR TOL ± 0.5 ° 4 PLACES ± 3 PLACES ± 2 PLACES ± 0.25 1 PLACE ± 0.5 0 PLACES ± DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS	DIMENSION UNITS: MM SCALE: 5:1 DRWN BY: MFURKEL DATE: 2015/06/15 CHK'D BY: DATE: APPR BY: DATE: 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: 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



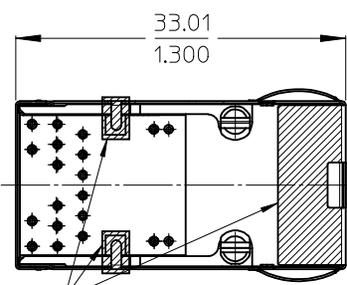
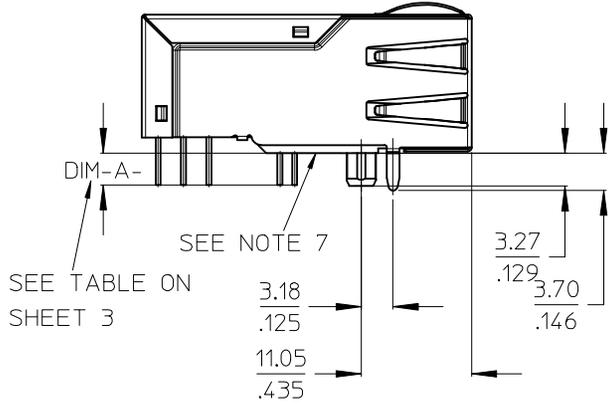
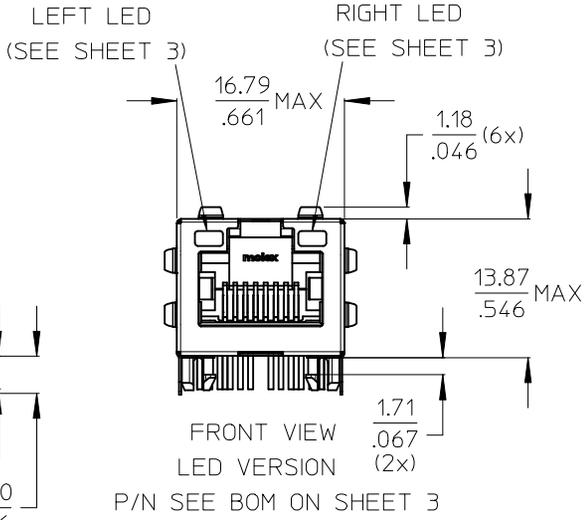
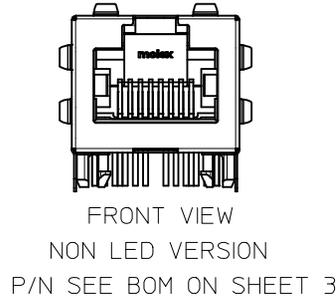
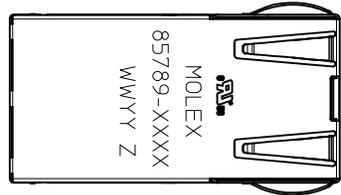
SEE TABLE FOR LED OPTIONS

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

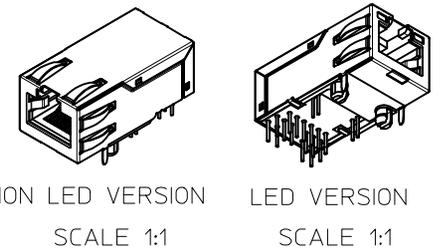
EC DESCRIPTION EC NO: 102890 DRWN: MFURKEL CHK'D: APPR: RSILLER	2015/09/28	QUALITY SYMBOLS ▽ = 0 ▽ = 0 ▽ = 0 ▼ = 0 ▽ = 0 □ = 0 ■ = 0 ▽ = 0	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION UNITS	SCALE	
			ANGULAR TOL ± 0.5 °		MM	5:1	
			4 PLACES ±	DRWN BY	DATE		
			3 PLACES ±	MFURKEL	2015/06/15		
	2 PLACES ± 0.25	CHK'D BY	DATE				
	1 PLACE ± 0.5	APPR BY	DATE				
	0 PLACES ±	DRAWING SIZE	THIRD ANGLE PROJECTION				
		A3					
		DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS					

GIGABIT MAGNETIC JACK POE PLUS ENABLED		
PRODUCT CUSTOMER DRAWING		
SERIES	MATERIAL NUMBER	CUSTOMER
85789	SEE BOM/SHEET 3/4	
DOCUMENT NUMBER	DOC TYPE	DOC PART SHEET NUMBER
857891001	PSD	000 4 OF 4

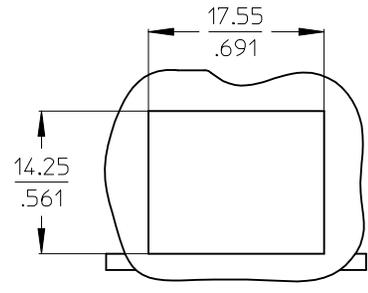
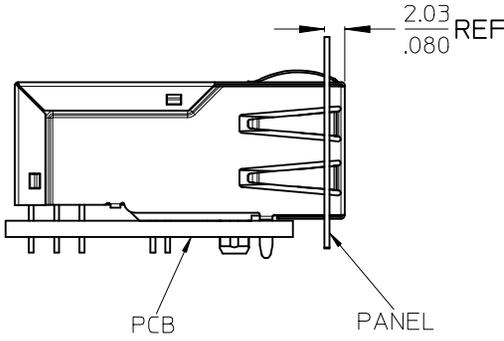
GIGABIT SINGLE PORT MAGNETIC JACK
PoE+ MAGNETICS ACC. TO IEEE802.3at
FOR PSE OR PD APPLICATIONS



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

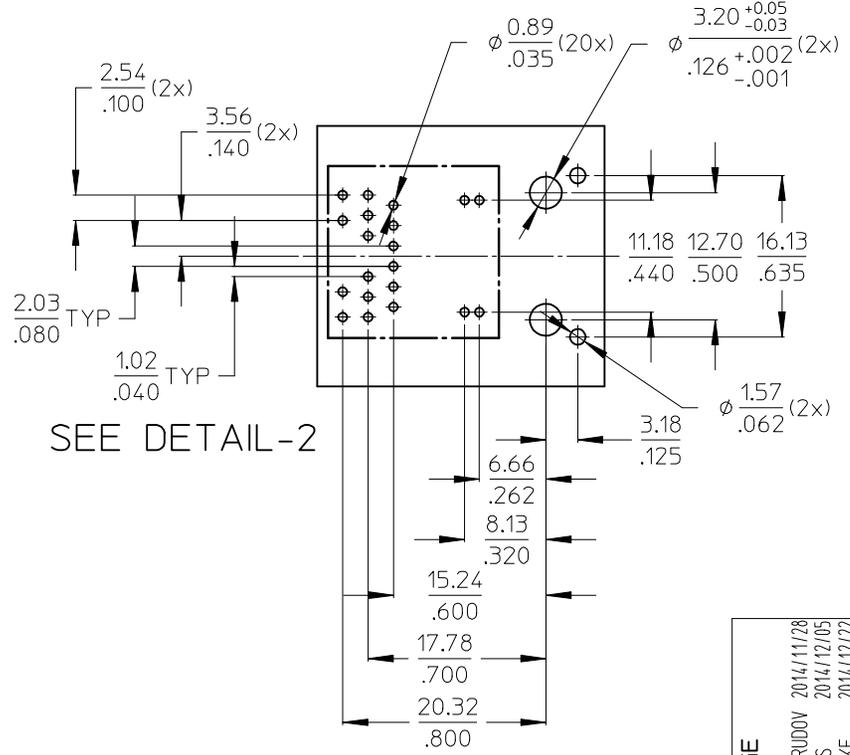


NOTES UPDATE IEC NO: DRWN:MMANGARUDOV 2014/11/28 CH'KD:DBYRNES 2014/12/05 APPR:SSSTE INKE 2014/12/22	QUALITY SYMBOLS ▽=0 ◻=0	GENERAL TOLERANCES (UNLESS SPECIFIED) mm INCH 4 PLACES ± --- ± --- 3 PLACES ± --- ± .010 2 PLACES ± 0.25 ± .020 1 PLACE ± 0.5 ± --- 0 PLACE ± ± ANGULAR ± .5 ° DRAFT WHERE APPLICABLE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

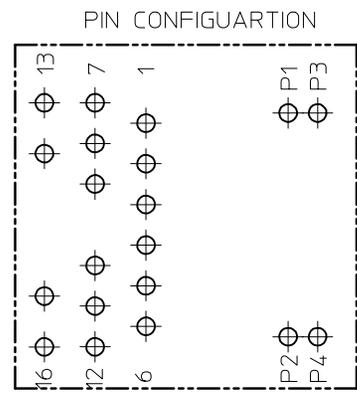


SUGGESTED PANEL CUTOUT

SUGGESTED BOARD LAYOUT - COMPONENT SIDE

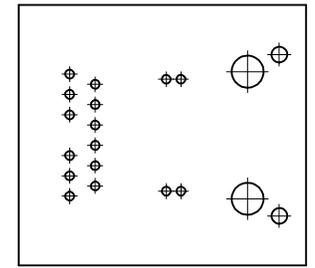


SEE DETAIL-2



DETAIL-2
SCALE 4:1

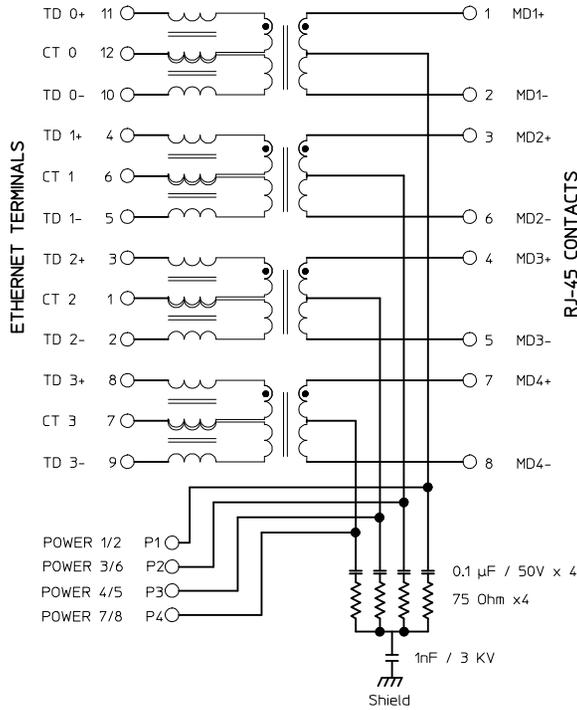
SUGGESTED BOARD LAYOUT
NON LED VERSION



NO CHANGE EC NO: DRW:MMANGARUDOV 2014/11/28 CHK:DJBRYNES 2014/12/05 APPR:SSTEINKE 2014/12/22	DESCRIPTION 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 ± ±	DIMENSION STYLE MM/IN DRAWN BY: JBADER DATE: 2014/04/25 CHECKED BY: MMANGARUDOV DATE: 2014/05/05 APPROVED BY: SSTEINKE DATE: 2014/06/11	SCALE 2:1	DESIGN UNITS METRIC	THIRD ANGLE PROJECTION	TITLE GIGABIT MAGNETIC JACK POE PLUS ENABLED 1X1 molex DOCUMENT NO. SD-85789-401 SHEET NO. 2 OF 3		
		ANGULAR ± .5 °	DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS	MATERIAL NO.	SEE SHEET 3	THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION				

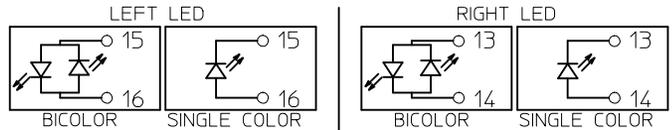
Electrical Specifications @25°C		
Operating temperature (-40°C to +85°C)		
Description	Value	
OCL POE+TRANSF. 20mA bias (-40°C to +85°C)	350μH min.	
OCL NONPOE TRANSF. 8mA bias (-40°C to +85°C)	350μH min.	
Turns Ratio	1CT:1CT	
Insertion Loss		
Frequency (MHz)	Limits (dB max.)	Typical Values (dB max.)
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:SSSTEINKE 2014/12/22	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.			
		SSSTEINKE 2014/06/11		SEE BOM SD-85789-401 3 OF 3			
		ANGULAR ± .5 °	SIZE	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	A3				