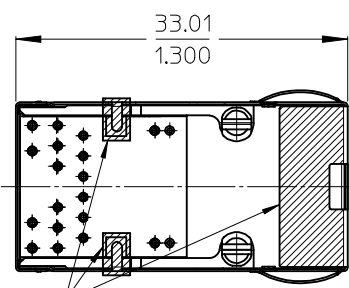
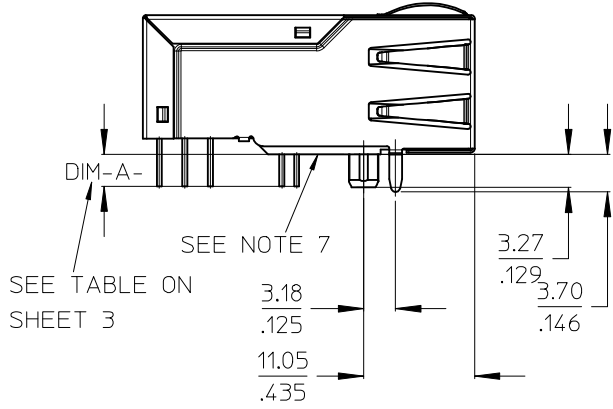
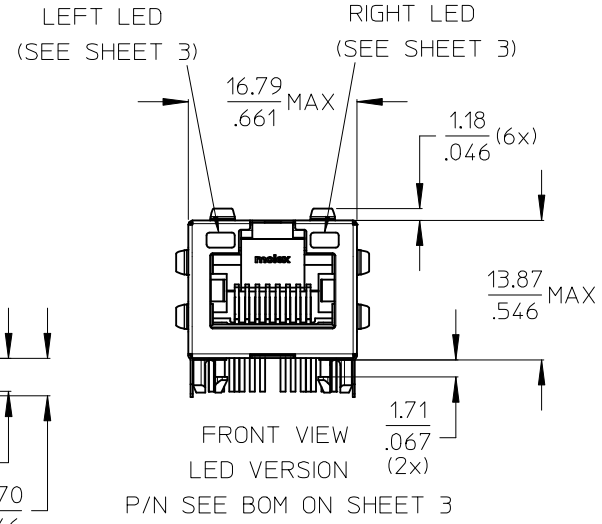
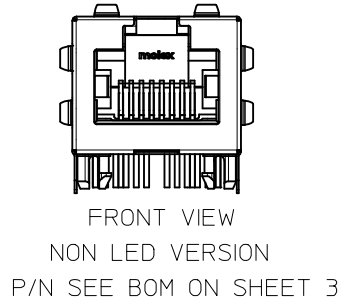
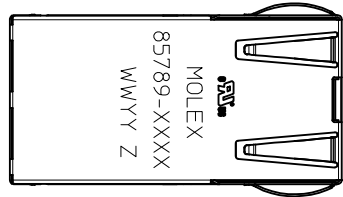
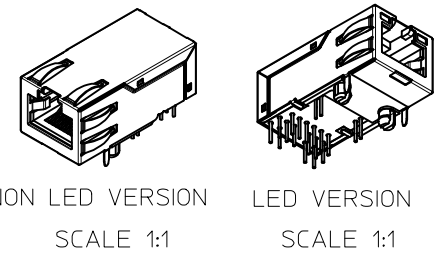


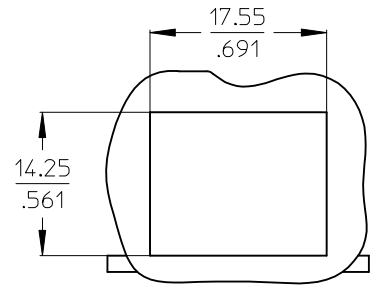
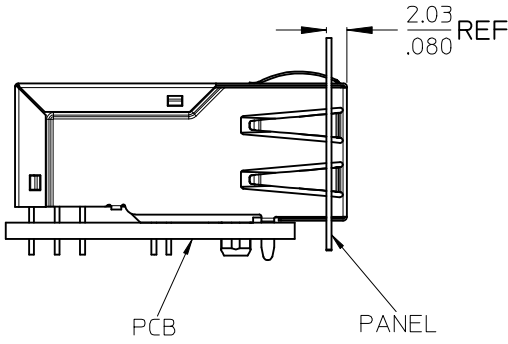
GIGABIT SINGLE PORT MAGNETIC JACK
PoE+ MAGNETICS ACC. TO IEEE802.3at
FOR PSE OR PD APPLICATIONS



- 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

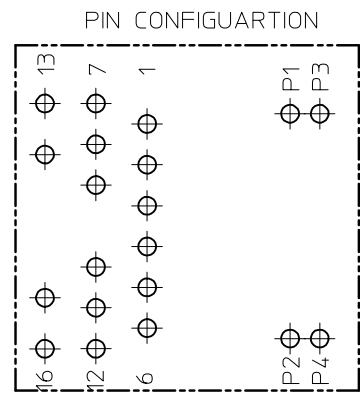
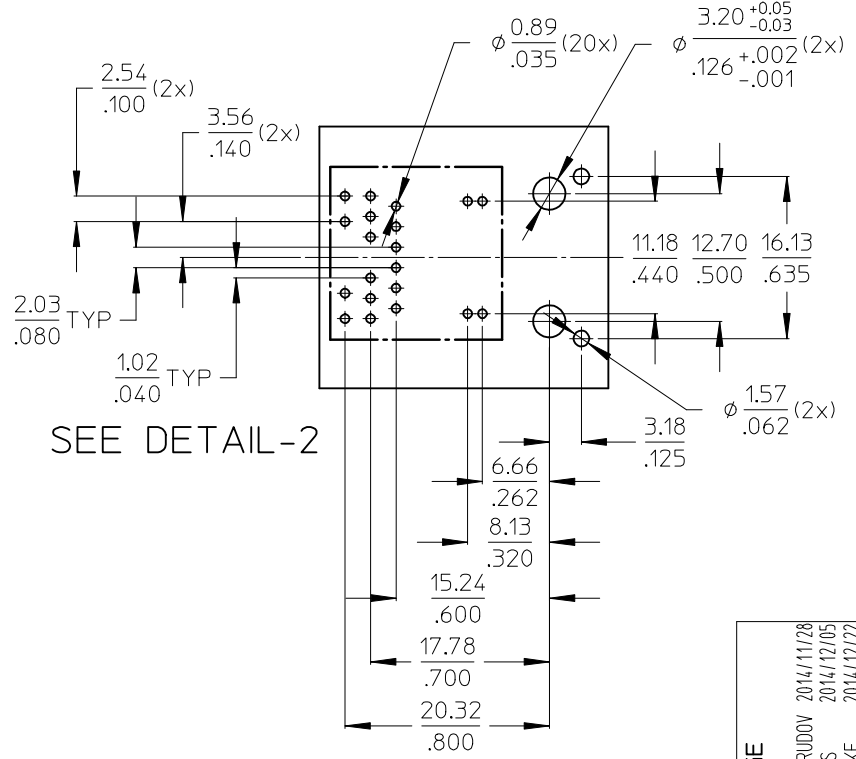


NOTES UPDATE IEC NO: DRWN:MMANGARUDOV 2014/11/28 CH'KD:DBYRNES 2014/12/05 APPR:SSSTE INKE 2014/12/22	QUALITY SYMBOLS ▽=0 ◻=0	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE MM/IN	SCALE 2:1	DESIGN UNITS METRIC	THIRD ANGLE PROJECTION	
		4 PLACES ± --- ± --- 3 PLACES ± --- ± .010 2 PLACES ± 0.25 ± .020 1 PLACE ± 0.5 ± --- 0 PLACE ± ±	mm INCH	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	MATERIAL NO. SEE SHEET 3			DOCUMENT NO. SD-85789-401
				APPROVED BY DATE SSTE INKE 2014/06/11	SHEET NO. 1 OF 3			



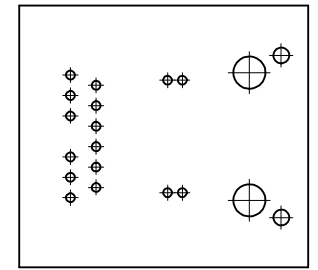
SUGGESTED PANEL CUTOUT

SUGGESTED BOARD LAYOUT - COMPONENT SIDE



DETAIL-2
SCALE 4:1

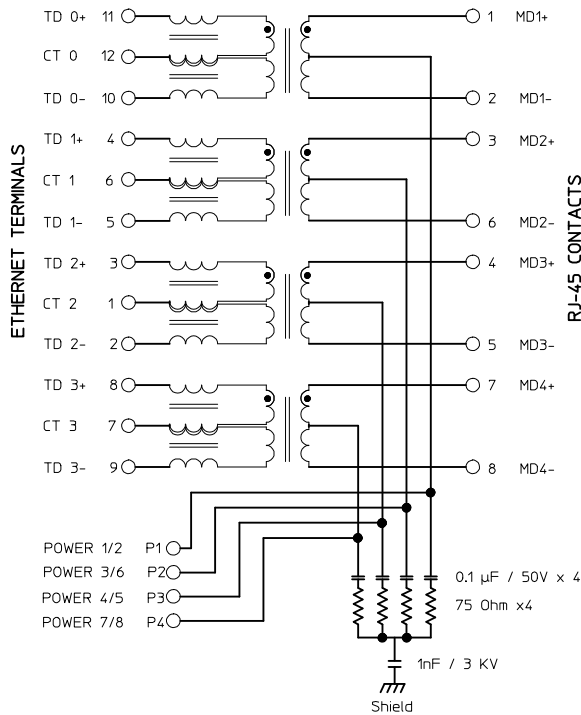
SUGGESTED BOARD LAYOUT
NON LED VERSION



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 CHECKED BY DATE MMANGARUDOV 2014/05/05 APPROVED BY DATE SSTEINKE 2014/06/11	TITLE	GIGABIT MAGNETIC JACK POE PLUS ENABLED 1X1	
		ANGULAR ± .5 ° DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS	MATERIAL NO. SEE SHEET 3	DOCUMENT NO. SD-85789-401	SHEET NO. 2 OF 3	
B	REV	SIZE	THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION			

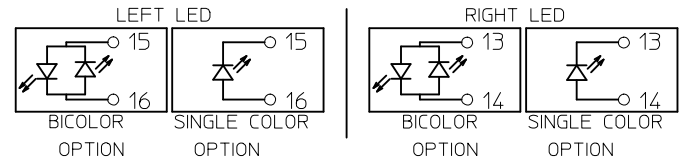
Electrical Specifications @25°C		
Operating temperature (-40°C to +85°C)		
Description	Value	
OCL POE+TRANSF. 20mA bias (-40°C to +85°C)	350μH min.	
OCL NONPOE TRANSF. 8mA bias (-40°C to +85°C)	350μH min.	
Turns Ratio	1CT:1CT	
Insertion Loss		
Frequency (MHz)	Limits (dB max.)	Typical Values (dB max.)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

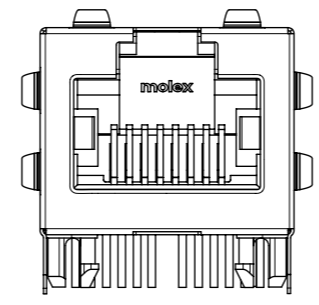
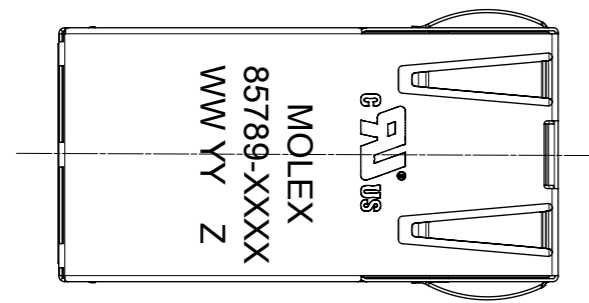


SEE TABLE FOR LED OPTIONS

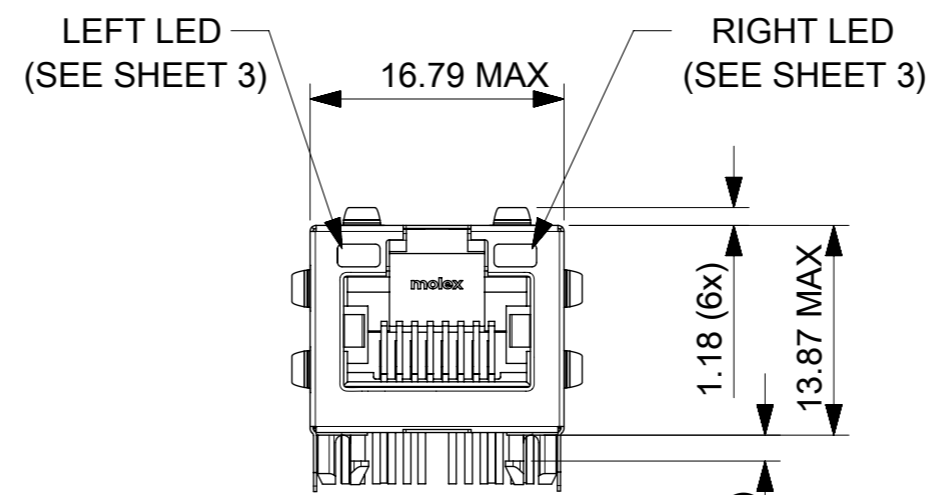
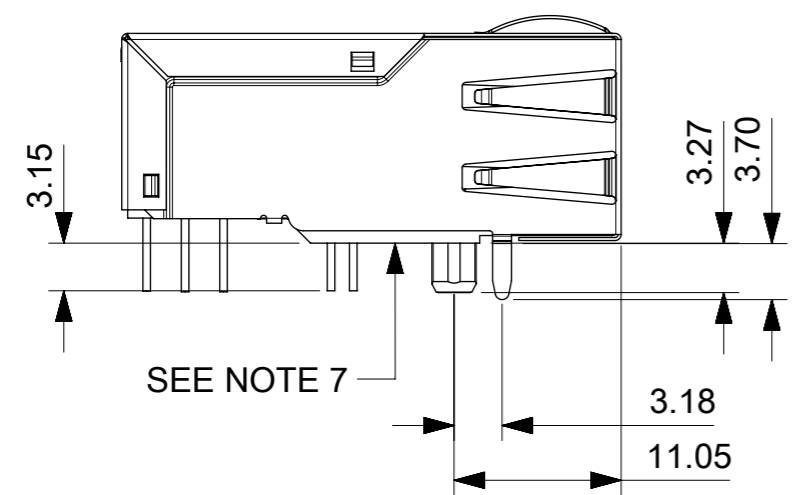
BOM UPDATE EC NO: DRWIN:MANGARUDOV 2014/11/28 CHKD:DBYRNES 2014/12/05 APPR:SSTEINKE 2014/12/22	QUALITY SYMBOLS	GENERAL TOLERANCES (UNLESS SPECIFIED)	DIMENSION STYLE	SCALE	DESIGN UNITS	THIRD ANGLE PROJECTION																		
		<table border="1"> <tr> <th></th> <th>mm</th> <th>INCH</th> </tr> <tr> <td>4 PLACES</td> <td>± ---</td> <td>± ---</td> </tr> <tr> <td>3 PLACES</td> <td>± ---</td> <td>± .010</td> </tr> <tr> <td>2 PLACES</td> <td>± 0.25</td> <td>± .020</td> </tr> <tr> <td>1 PLACE</td> <td>± 0.5</td> <td>± ---</td> </tr> <tr> <td>0 PLACE</td> <td>±</td> <td>±</td> </tr> </table>		mm	INCH	4 PLACES	± ---	± ---	3 PLACES	± ---	± .010	2 PLACES	± 0.25	± .020	1 PLACE	± 0.5	± ---	0 PLACE	±	±	MM/IN	5:1	METRIC	
		mm	INCH																					
	4 PLACES	± ---	± ---																					
3 PLACES	± ---	± .010																						
2 PLACES	± 0.25	± .020																						
1 PLACE	± 0.5	± ---																						
0 PLACE	±	±																						
ANGULAR ± .5 °	DRAWN BY: JBADER DATE: 2014/04/25	TITLE: GIGABIT MAGNETIC JACK POE PLUS ENABLED 1X1																						
DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS	CHECKED BY: MMANGARUDOV DATE: 2014/05/05																							
	APPROVED BY: SSTEINKE DATE: 2014/06/11																							
	MATERIAL NO. SEE BOM	DOCUMENT NO. SD-85789-401																						
	SIZE: A3	SHEET NO. 3 OF 3																						
	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

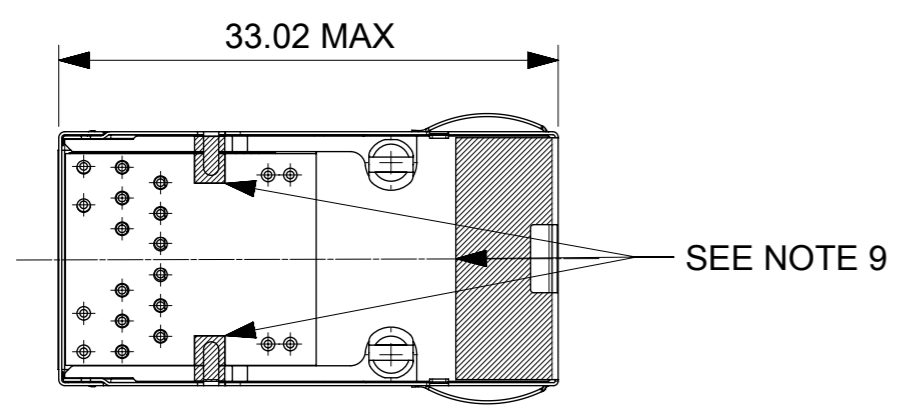
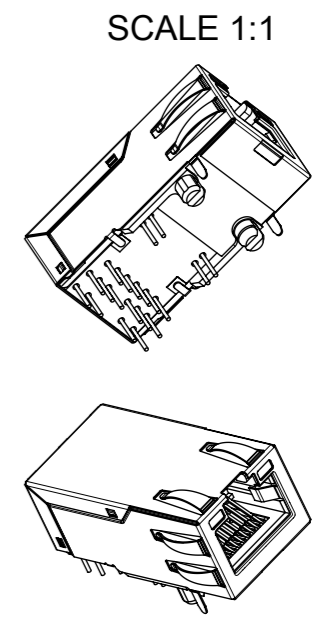
- NOTES:**
- 1 - SHIELD MATERIAL: STAINLESS STEEL
(GROUND PINS ARE SOLDER DIPPED)
 - 2 - PLASTIC MATERIAL: PBT, BLACK, UL 94V-0
 - 3 - RJ45 TERMINALS MATERIAL: COPPER ALLOY
CONTACT PLATING: 0.76 MICROMETER GOLD
OVER 1.9 MICROMETER NICKEL
PHY TERMINALS: TIN PLATED
 - 4 - MATING INTERFACE ACCORDING TO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



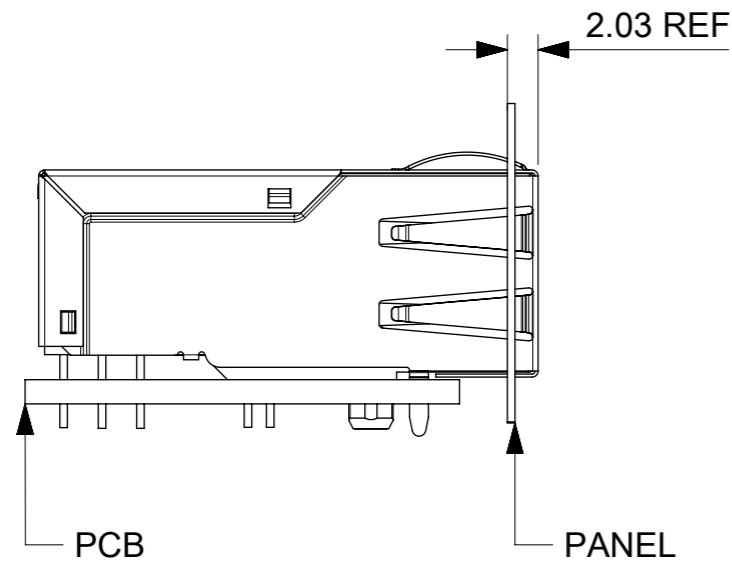
FRONT VIEW
NON LED VERSION
P/N 85789-1020



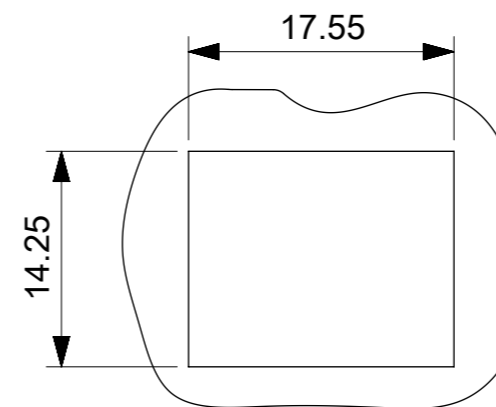
FRONT VIEW
LED VERSION
P/N SEE BOM ON SHEET 3



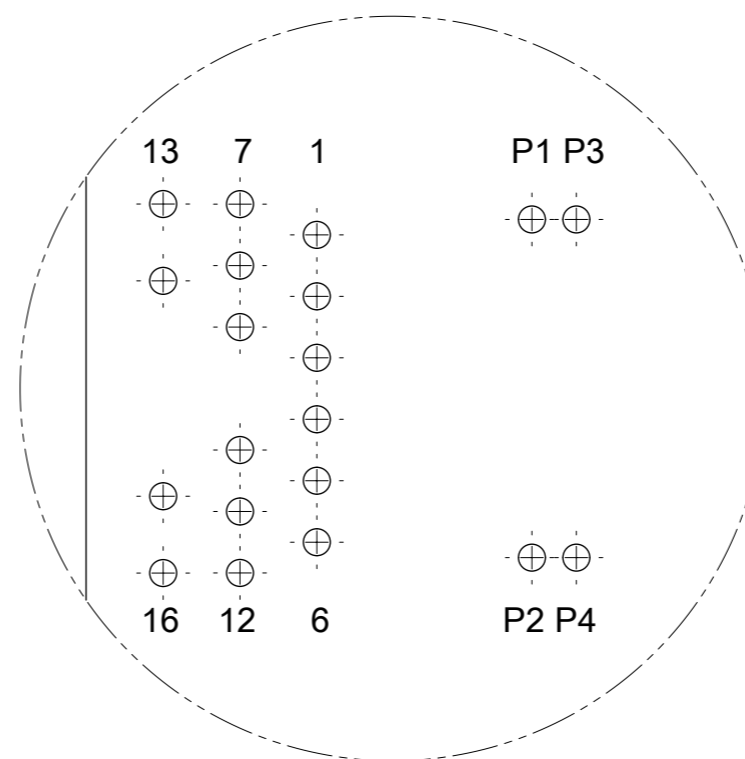
THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION									
EC DESCRIPTION EC NO: 102890 DRWN: MFURKEL CHK'D: APPR: RSILLER	2015/09/28 2016/02/23	QUALITY SYMBOLS	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION UNITS	SCALE			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



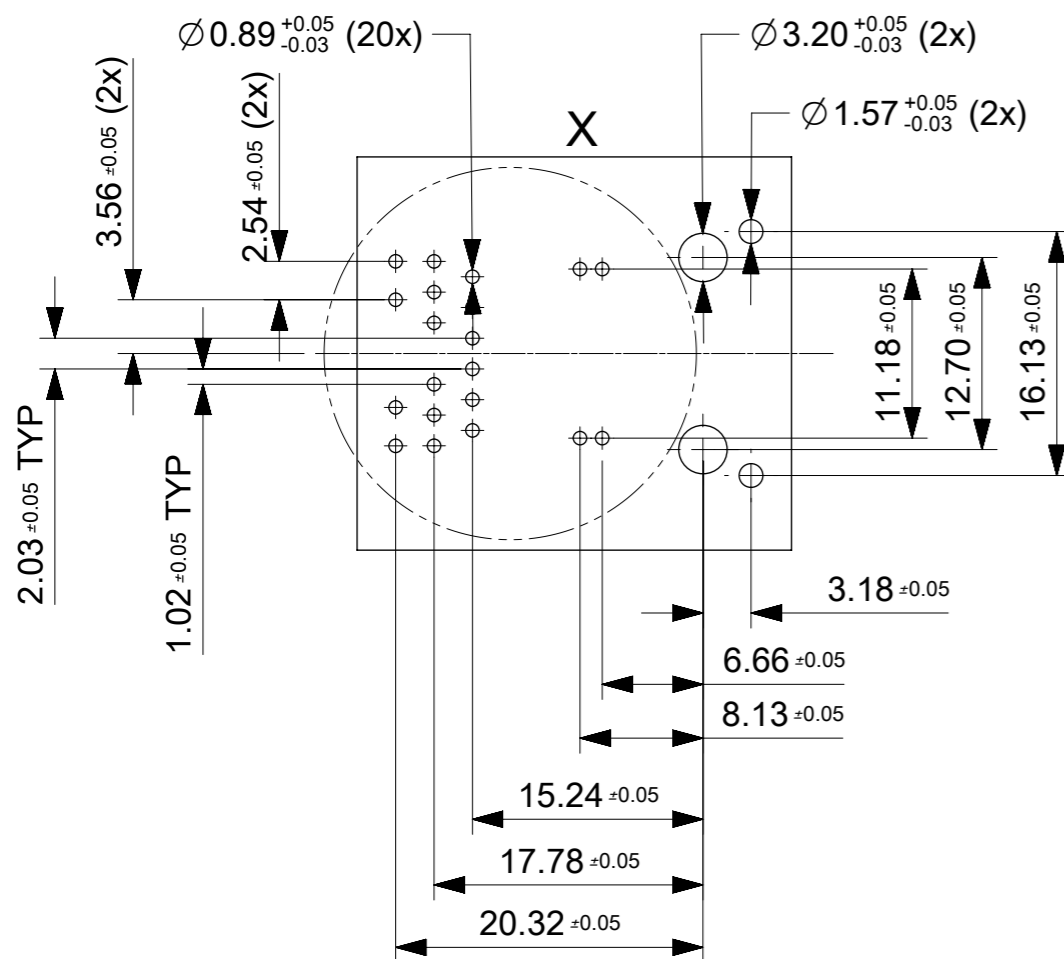
SUGGESTED PANEL CUTOUT



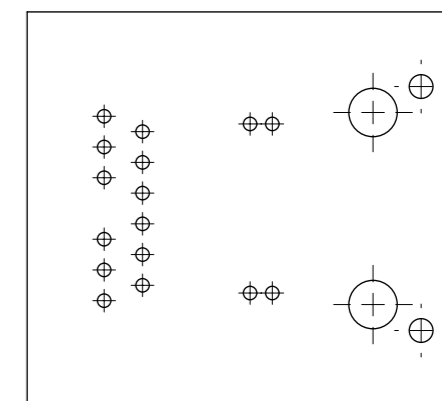
DETAIL X
SCALE 4:1
PIN CONFIGURATION



SUGGESTED BOARD LAYOUT- COMPONENT SIDE

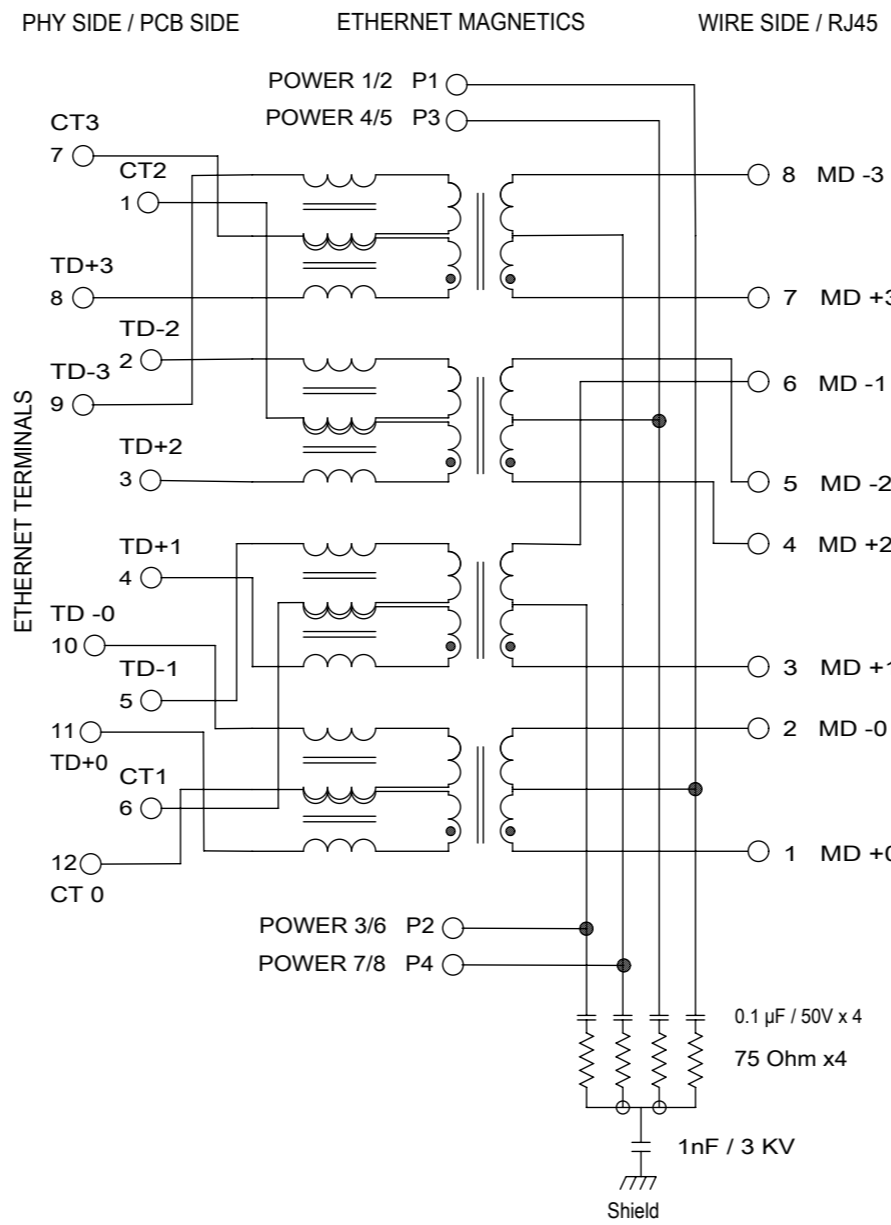


SUGGESTED BOARD LAYOUT FOR NON LED VERSION



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

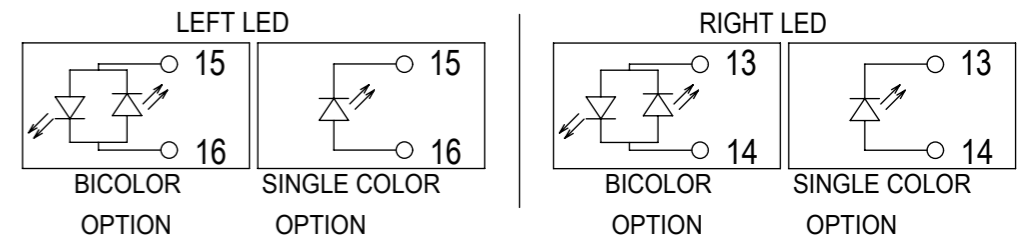
Electrical Specifications @25°C		
Operating temperature (0°C to +70°C)		
Description	VALUE	
OCL POE+TRANSF. 20mA bias (0°C to +70°C)	350µH min.	
OCL NONPOE TRANSF. 8mA bias (0°C to +70°C)	350µH min.	
Turns Ratio	1CT:1CT	
Insertion Loss		
Frequency (MHz)	Limits (dB max.)	Typical Values (dB max.)
1.0-9.9 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		
	PIN15	PIN16	COLOR	PIN13	PIN14	COLOR
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

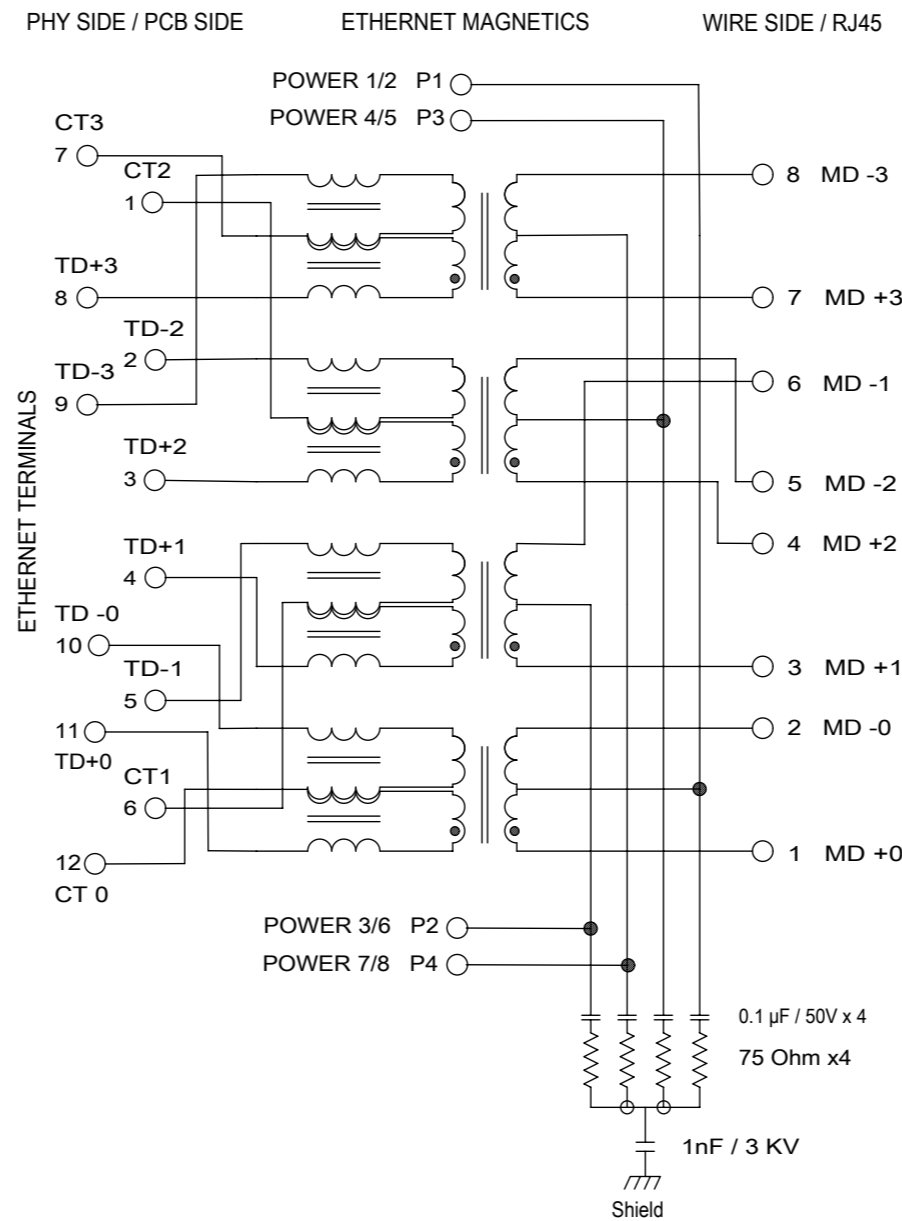
SEE TABLE FOR LED OPTIONS



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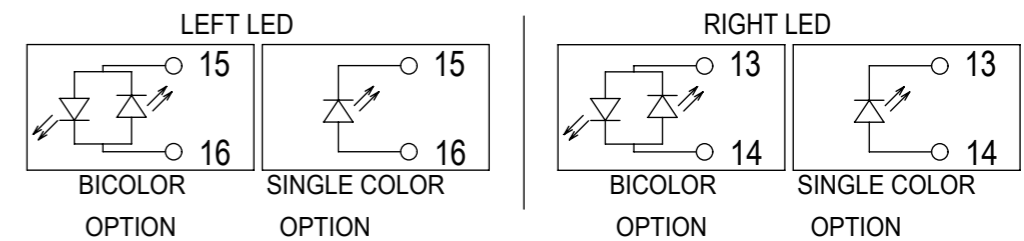
EC DESCRIPTION EC NO: 102890 DRWN: MFURKEL CHK'D: APPR: RSILLER	QUALITY SYMBOLS ▽ = 0 ▽ = 0 ▽ = 0 ▼ = 0 ▽ = 0 ☒ = 0 ■ = 0 ▽ = 0	GENERAL TOLERANCES (UNLESS SPECIFIED) ANGULAR TOL ± 0.5 ° 4 PLACES ± 3 PLACES ± 2 PLACES ± 0.25 1 PLACE ± 0.5 0 PLACES ± DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS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