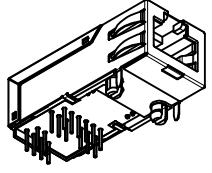
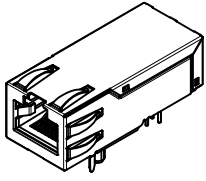
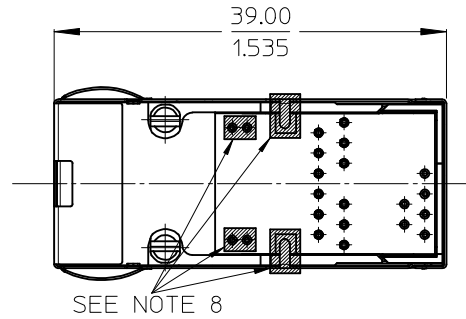
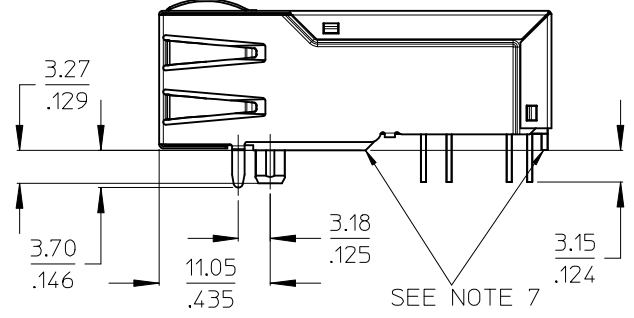
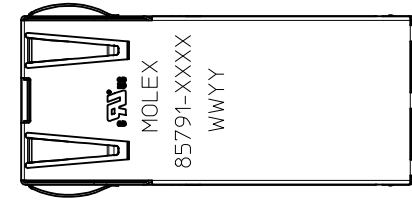
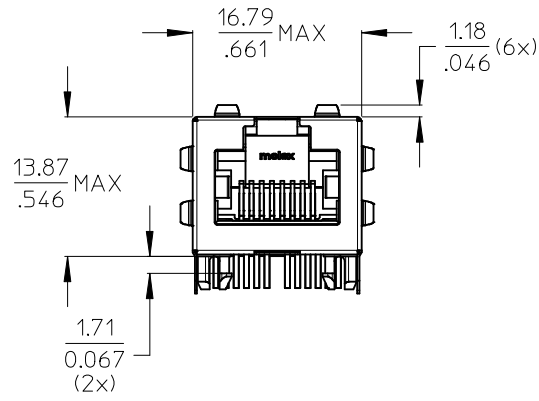


PDJack™ GIGABIT SINGLE PORT MAGNETIC JACK WITH INTEGRATED POWER OVER ETHERNET PLUS POWERED DEVICE (PD) CONTROLLER AND BRIDGE RECTIFIERS



SCALE 1:1

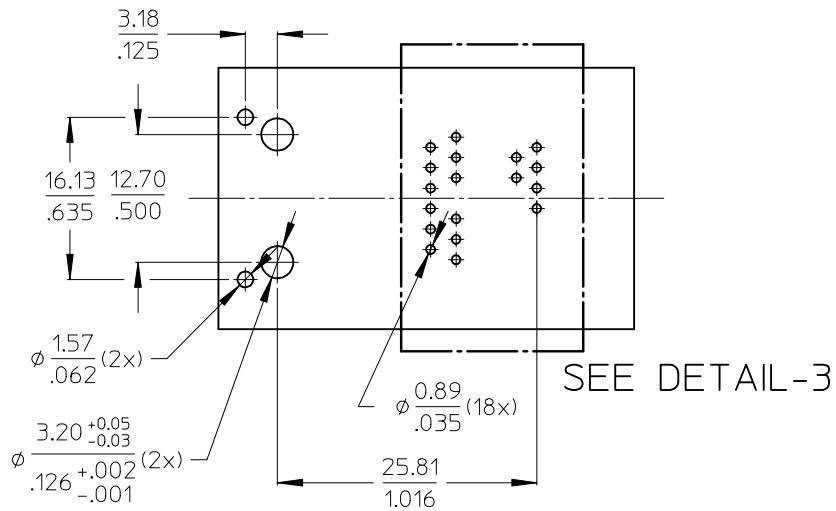


- NOTES:
- 1 - SHIELD MATERIAL: STAINLESS STEEL (GROUND PINS ARE TIN DIPPED)
 - 2 - PLASTIC MATERIAL: PBT, BLACK, UL 94V-0
 - 3 - EXCEEDS PRODUCT REQUIREMENTS BASED ON PRODUCT SPECIFICATION PS-85791-001
CONTACTS MATERIAL: PHOSPHOR BRONZE
CONTACT PLATING: GOLD OR GOLD FLASH OVER PALLADIUM NICKEL
 - 4 - MATING INTERFACE ACCORDING TO IEC 60603-7
 - 5 - PRODUCT SPECIFICATION: PS-85791-001
 - 6 - PACKAGING SPECIFICATION: PK-85759-001
 - 7 - STAND OFF TO SYSTEM BOARD
 - 8 - STUBBED PINS AND SHIELD LATCHES:
AVOID TO ROUTE TRACES OR TO PLACE ANY VIAS OR PAD IN THIS AREA
 - 9 - RECOMMENDED PCB THICKNESS: 1.6mm / 0.067inch
 - 10 - INSCRIPTION MARKED BY LASER:
1st : MOLEX
2st : P/N (SEE BOM)
3rd : DATE CODE(WEEK/YEAR)
UL LOGO (OPTIONAL)

ENTER DESCRIPTION EC NO: MG2011-0056 DRWN: JBADER 2013/02/08 CHKD: MMANGARUDOV 2013/04/05 APPR: SSTEINKE 2014/04/25	DESCRIPTION REV	QUALITY SYMBOLS	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE MM ONLY		SCALE 2:1	DESIGN UNITS METRIC	THIRD ANGLE PROJECTION	
		▼=0 □=0	mm	INCH	DRAWN BY MMANGARUDOV	DATE 2012/04/25	TITLE GIGABIT POE PLUS PDJACK(TM) 1X1			
			4 PLACES ± --- ± ---	3 PLACES ± --- ± ---	CHECKED BY JBADER	DATE 2012/04/25	MOLEX INCORPORATED			
			2 PLACES ± 0.25 ± ---	1 PLACE ± 0.50 ± ---	APPROVED BY SSTEINKE	DATE 2012/06/18	DOCUMENT NO. SD-85791-002			
		ANGULAR ± .5 °		MATERIAL NO.		SHEET NO. 1 OF 3				
		DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		SEE SHEET 3		THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION				

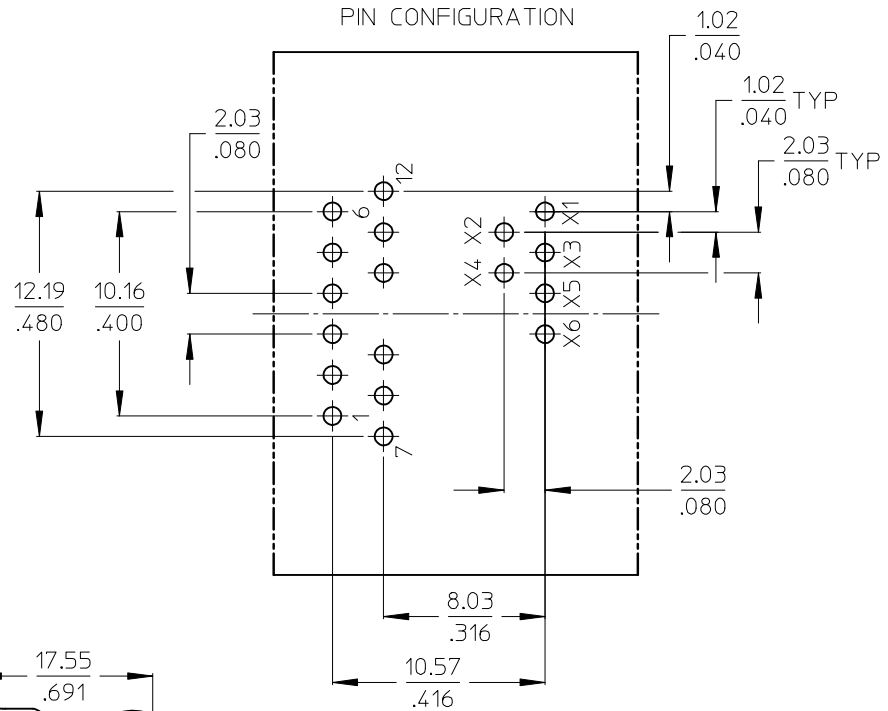
10 9 8 7 6 5 4 3 2 1

SUGGESTED BOARD LAYOUT - COMPONENT SIDE

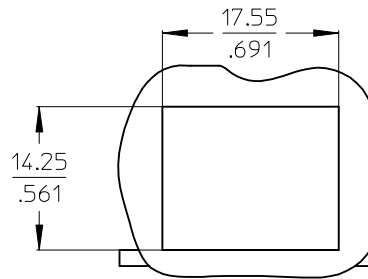
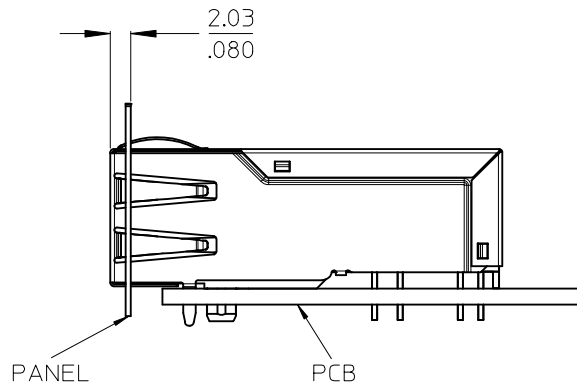


SEE DETAIL-3

PIN CONFIGURATION



DETAIL-3
SCALE 4:1

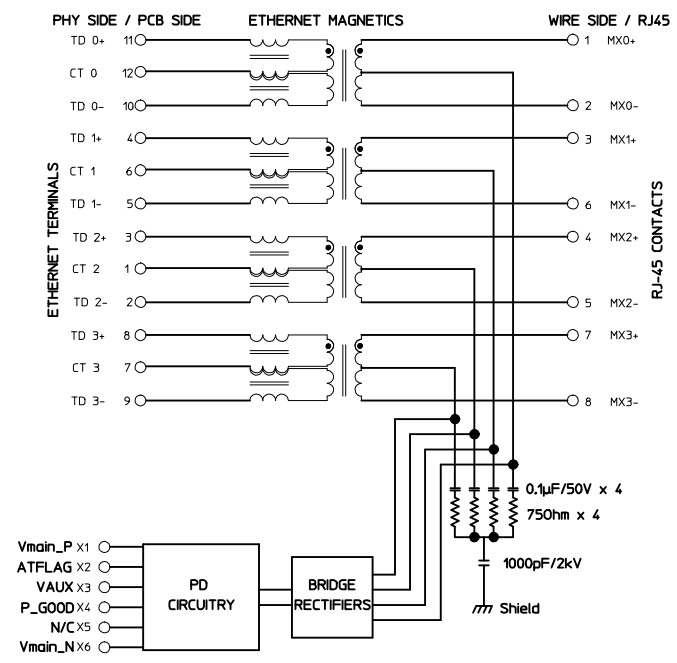


SUGGESTED PANEL CUTOUT

ENTER DESCRIPTION EC NO: MG2011-0056 DRWN: JBADER 2013/02/08 CHKD: MMANGARUDOV 2013/04/05 APPR: SSTEINKE 2014/04/25	QUALITY SYMBOLS ▽=0 ◻=0	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE MM ONLY	SCALE 2:1	DESIGN UNITS METRIC	THIRD ANGLE PROJECTION	
		4 PLACES ± --- ± ---	mm INCH	DRAWN BY DATE MMANGARUDOV 2012/04/25	TITLE GIGABIT POE PLUS PDJACK(TM) 1X1			
		3 PLACES ± --- ± ---		CHECKED BY DATE JBADER 2012/04/25	MOLEX INCORPORATED			
		2 PLACES ± 0.25 ± --- 1 PLACE ± 0.50 ± --- ANGULAR ± .5 °		APPROVED BY DATE SSTEINKE 2012/06/18	MATERIAL NO. SEE SHEET 3	DOCUMENT NO. SD-85791-002	SHEET NO. 2 OF 3	
DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION						

9 8 7 6 5 4 3 2 1

Electrical Specifications @25°C		
Operating temperature (SEE PART NUMBER)		
Description	Value	
OCL_POE+TRANSF_20mA_bias	350µH min.	0/70°(0/55°CClass4)
Turns Ratio	1CT:1CT	
Insertion Loss		Typical Values (dB max.)
Frequency (MHz)	Limits (dB max.)	0.5 @ 10MHz
1.0-9.9 MHz	0.4+0.1*log(F)	0.7 @ 50MHz
10-49.9 MHz	0.5+0.3*log(F/10)	1.0 @ 80MHz
50-79.9 MHz	1+1.4*log(F/80)	1.3 @ 100MHz
80-100 MHz	1.3+3*log(F/100)	
Return Loss		TYPICAL Values (dB min.)
Frequency (MHz)	Limits (dB min.)	27 @ 10MHz
1-9.9 MHz	27dB min.	10 @ 100MHz
10-100 MHz	27-17*log(F/10)	
CMR		TYPICAL Values (dB min.)
Frequency (MHz)	Limits (dB min.)	34 @ 10MHz
1-9.9 MHz	34dB min.	27 @ 80MHz
10-79.9 MHz	27dB min.	21.5 @ 200MHz
80-199.9 MHz	27-14.5*log(F/80)	10 @ 400MHz
200-399.9 MHz	21.5-39*log(F/200)	10 @ 1000MHz
400-1000 MHz	10	
NEXT		TYPICAL Values (dB min.)
Frequency (MHz)	Limits (dB min.)	50 @ 6MHz
1-5.9 MHz	50	34 @ 50MHz
6-49.9 MHz	45-16*log(F/10)	25 @ 100MHz
50-100 MHz	25-30*log(F/100)	
Isolation PHY to Wire side	2.25kVDC/60sec	

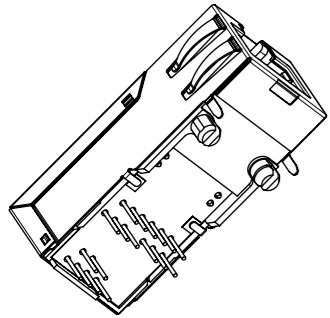
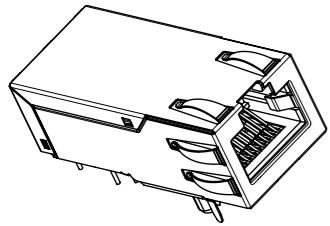


PIN	NAME	FUNCTION
X1	Vmain_P	Output voltage from PDJack(TM)
X2	ATFLAG (LOW)	Indicates 2 Event Classification was detected. Indicates PoE+ power levels available (Class 4 devices only)
X3	VAUX	Nominal voltage of 10.5V. Used as a startup supply for an external DC/DC controller.
X4	P_GOOD (LOW)	Indicates power good status
X5	N/C	
X6	Vmain_N	Vmain reference

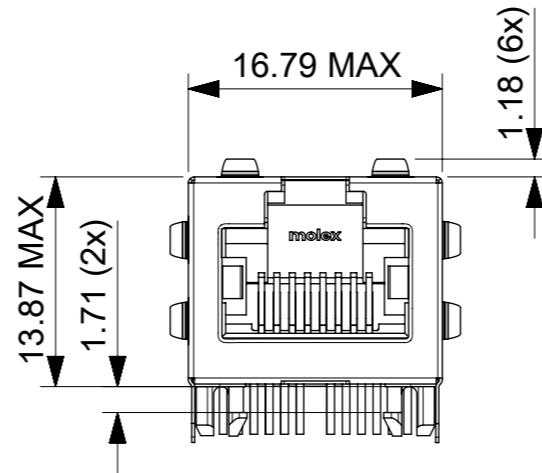
PART NUMBER	CONNECTOR CONFIGURATION	CLASS / MAX POWER	OPERATING TEMPERATURE
85791-0020	GIGABIT POE PLUS PDJack(TM)-ICM	0 / 13W	0°C TO +70°C
85791-1020	GIGABIT POE PLUS PDJack(TM)-ICM	1 / 3,84W	0°C TO +70°C
85791-2020	GIGABIT POE PLUS PDJack(TM)-ICM	2 / 6,49W	0°C TO +70°C
85791-3020	GIGABIT POE PLUS PDJack(TM)-ICM	3 / 13W	0°C TO +70°C
85791-4020	GIGABIT POE PLUS PDJack(TM)-ICM	4 / 25,5W	0°C TO +55°C

ENTER DESCRIPTION EC NO: MGZ011-0056 DRWN: JBADER 2013/02/08 CHKD: MMANGARUDOV 2013/04/05 APPR: SSTEINKE 2014/04/25	QUALITY SYMBOLS ▽=0 ◻=0	GENERAL TOLERANCES (UNLESS SPECIFIED) DIMENSION STYLE: MM ONLY SCALE: 5:1 DESIGN UNITS: METRIC THIRD ANGLE PROJECTION
		DRAWN BY: MMANGARUDOV DATE: 2012/04/25 CHECKED BY: JBADER DATE: 2012/04/25 APPROVED BY: SSTEINKE DATE: 2012/06/18
		TITLE: GIGABIT POE PLUS PDJACK(TM) 1X1 MOLEX INCORPORATED DOCUMENT NO: SD-85791-002 SHEET NO: 3 OF 3
		DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS SEE BOM THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION

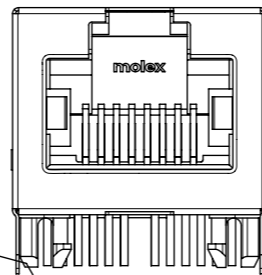
PDJack™ GIGABIT SINGLE PORT MAGNETIC JACK WITH
INTEGRATED POWER OVER ETHERNET PLUS POWERED
DEVICE (PD) CONTROLLER AND BRIDGE RECTIFIERS



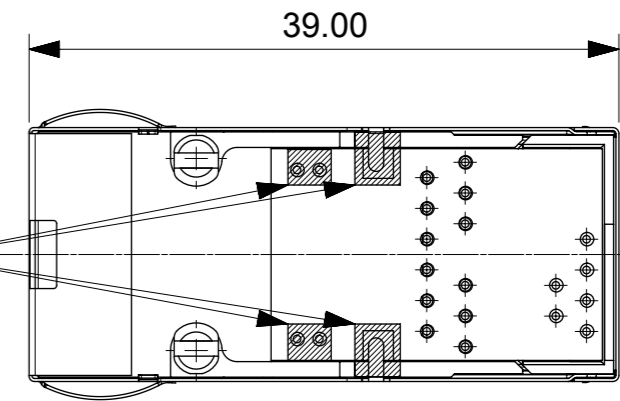
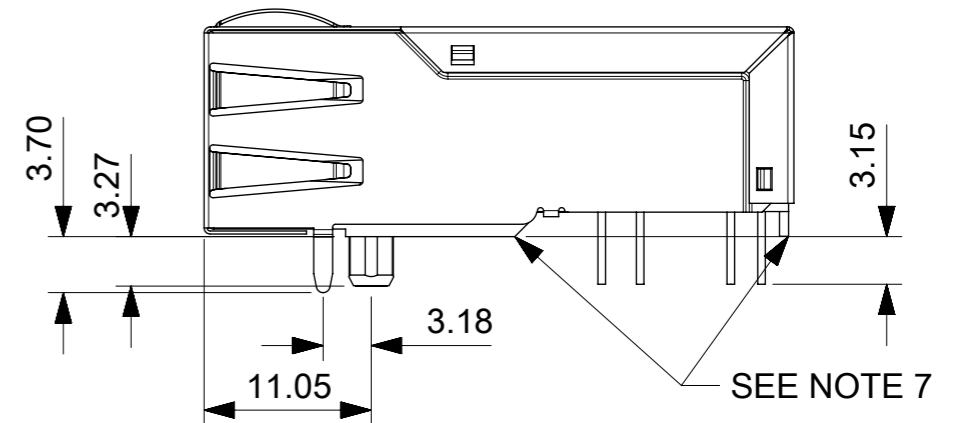
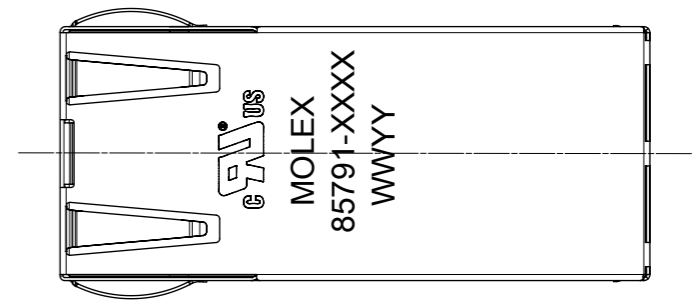
SCALE 1:1



NO SHIELD
SPRING VERSION
85791-4420



PRE-RELEASE
REFERENCE
USE ONLY



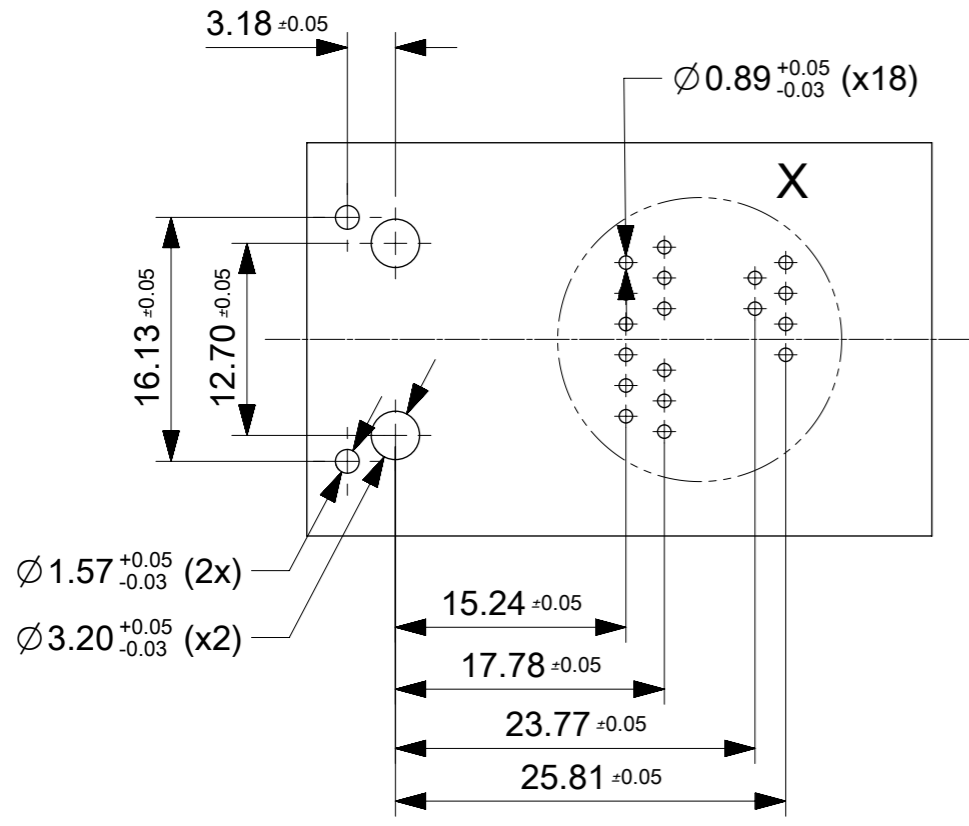
NOTES:

- 1 - SHIELD MATERIAL: STAINLESS STEEL
(GROUND PINS ARE TIN 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-85791-001
- 6 - PACKAGING SPECIFICATION: PK-85759-001
- 7 - STAND OFF TO SYSTEM BOARD
- 8 - STUBBED PINS AND SHIELD LATCHES:
AVOID TO ROUTE TRACES OR
TO PLACE ANY VIAS OR PAD IN THIS AREA
- 9 - RECOMMENDED PCB THICKNESS: 1.6mm
- 10 - INSCRIPTION MARKED BY LASER:
UL LOGO
1st : MOLEX
2st : P/N (SEE BOM)
3rd : DATE CODE(WEEK/YEAR)

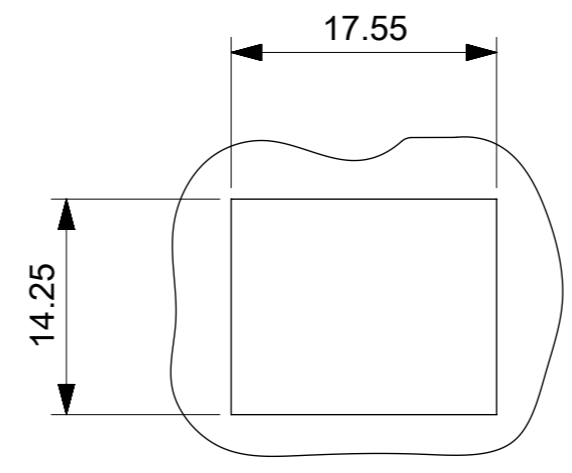
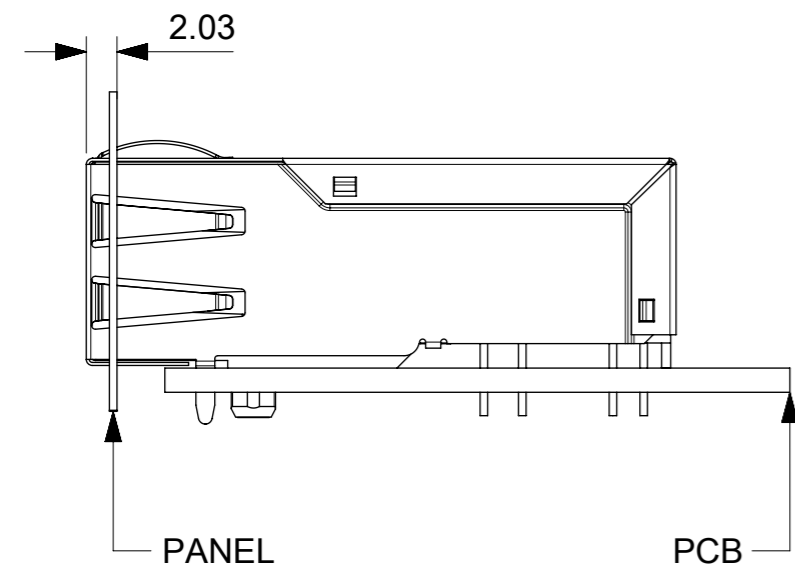
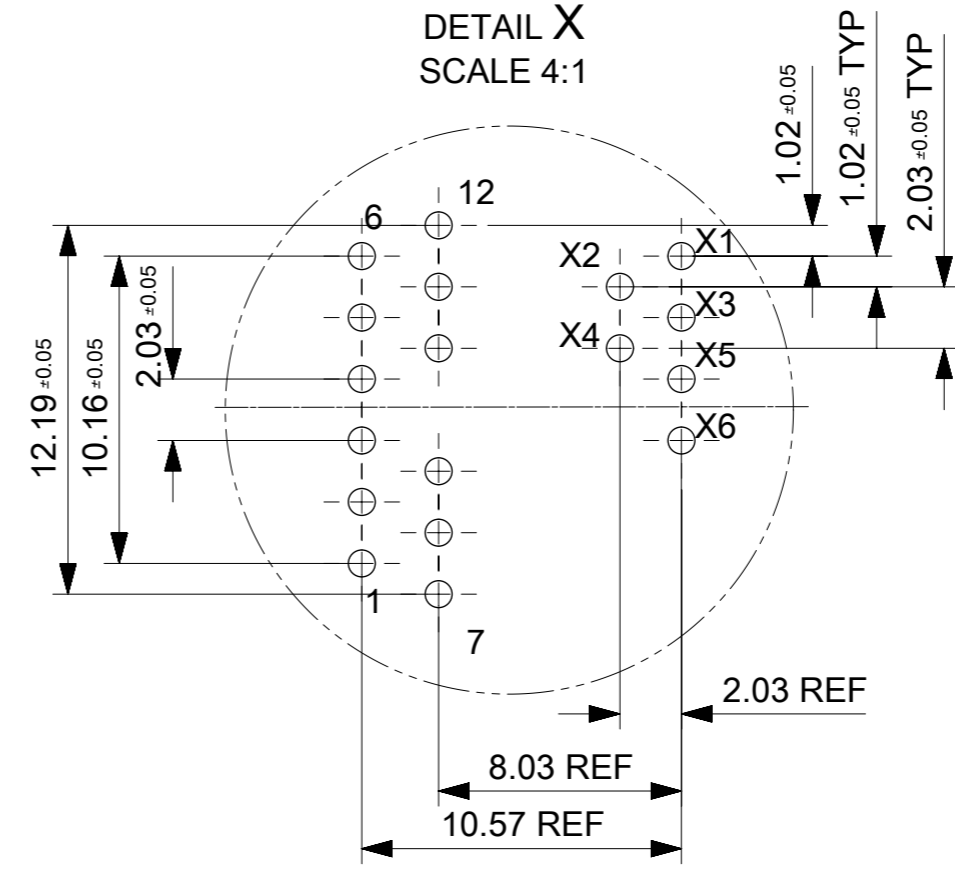
THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION

EC DESCRIPTION EC NO: 102944 DRWN: MFURKEL CHK'D: REV APPR:	2015/09/28	QUALITY SYMBOLS ▽ = 0 ▽ = 0 ▽ = 0 ▼ = 0 ▽ = 0 ☒ = 0 ■ = 0 ▽ = 0	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION UNITS	SCALE	molex			
				MM	2:1	GIGABIT POE PLUS PDJACK (TM) 1X1				
				ANGULAR TOL ± 0.5 °	4 PLACES ±	DRWN BY	DATE	PRODUCT CUSTOMER DRAWING		
				3 PLACES ±	2 PLACES ± 0.25	MFURKEL	2015/06/10	SERIES	MATERIAL NUMBER	CUSTOMER
		1 PLACE ± 0.5	0 PLACES ±	CHK'D BY	DATE	85791	SEE BOM / SHEET 3			
		DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		APPR BY	DATE	DOCUMENT NUMBER				
						857910020				
						DOC TYPE	DOC PART	SHEET NUMBER		
						PSD	000	1 OF 3		

SUGGESTED BOARD LAYOUT - COMPONENT SIDE



PIN CONFIGURATION

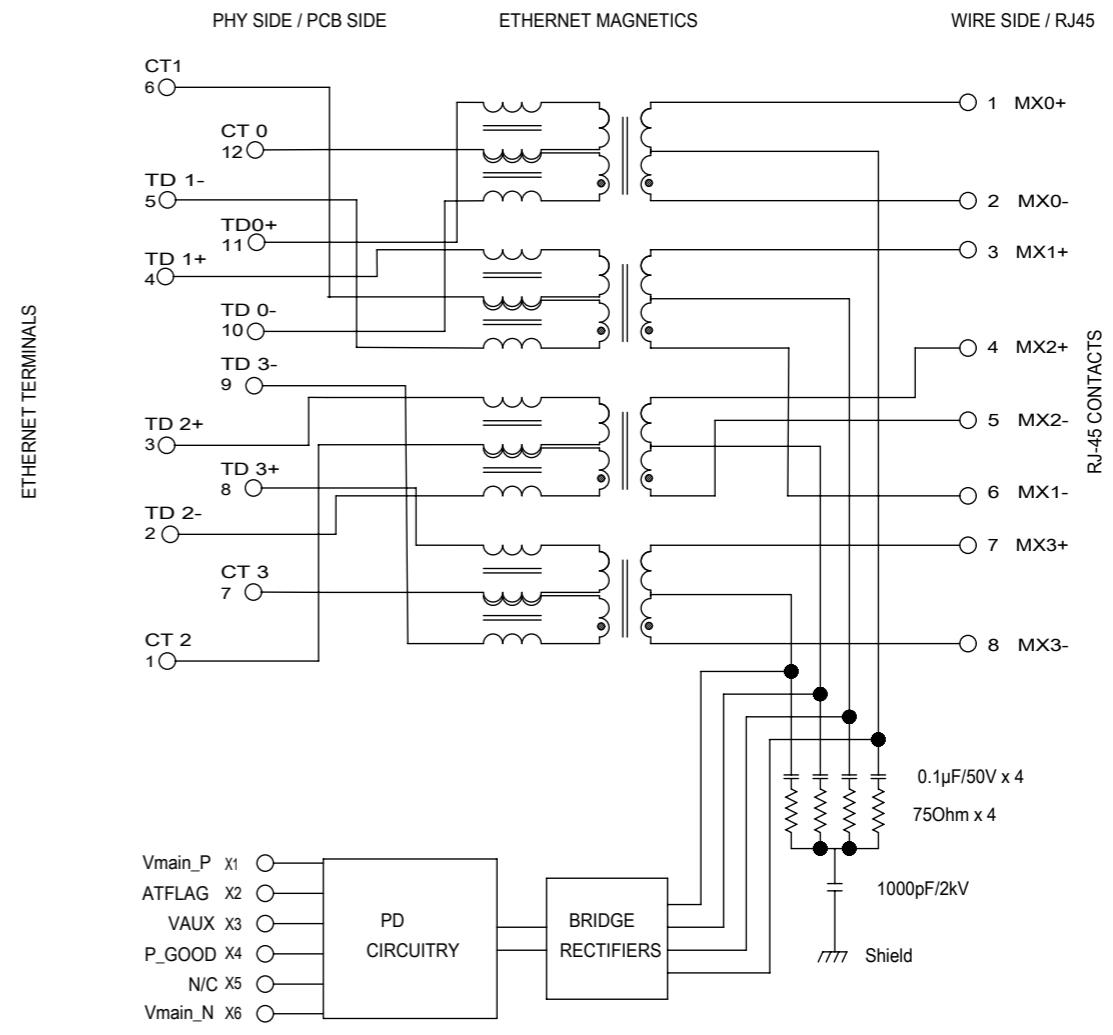


SUGGESTED PANEL CUTOUT

PRE-RELEASE
REFERENCE
USE ONLY

THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION											
EC DESCRIPTION EC NO: 102944 DRWN: MFURKEL CHK'D: APPR:	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	DATE	GIGABIT POE PLUS PDJACK (TM) 1X1					
		3 PLACES ±		MFURKEL	2015/06/10						
2 PLACES ± 0.25		CHK'D BY	DATE	PRODUCT CUSTOMER DRAWING							
1 PLACE ± 0.5		APPR BY	DATE								
0 PLACES ±		DRAWING SIZE		THIRD ANGLE PROJECTION		SERIES	MATERIAL NUMBER	CUSTOMER			
DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		A3				85791	SEE BOM / SHEET 3				
REV						DOCUMENT NUMBER	DOC TYPE	DOC PART	SHEET NUMBER		
F						857910020	PSD	000	2 OF 3		

Electrical Specifications @25°C		
Operating temperature (SEE PART NUMBER)		
Description	VALUE	
OCL POE+TRANSF. 20mA bias	350µH min.	0/70°(0/55°Class4)
Turns Ratio	1CT:1CT	
Insertion Loss		Typical Values (dB max.)
Frequency (MHz)	Limits (dB max.)	0.5 @ 10MHz
1.0-9.9 MHz	0.4+0.1*log(F)	0.7 @ 50MHz
10-49.9 MHz	0.5+0.3*log(F/10)	1.0 @ 80MHz
50-79.9 MHz	1+1.4*log(F/80)	1.3 @ 100MHz
80-100 MHz	1.3+3*log(F/100)	
Return Loss		TYPICAL Values (dB min.)
Frequency (MHz)	Limits (dB min.)	27 @ 10MHz
1-9.9 MHz	27dB min.	10 @ 100MHz
10-100 MHz	27-17*log(F/10)	
CMR		TYPICAL Values (dB min.)
Frequency (MHz)	Limits (dB min.)	34 @ 10MHz
1-9.9 MHz	34dB min.	27 @ 80MHz
10-79.9 MHz	27dB min.	21.5 @ 200MHz
80-199.9 MHz	27-14.5*log(F/80)	10 @ 400MHz
200-399.9 MHz	21.5-39*log(F/200)	10 @ 1000MHz
400-1000 MHz	10	
NEXT		TYPICAL Values (dB min.)
Frequency (MHz)	Limits (dB min.)	50 @ 6MHz
1-5.9 MHz	50	34 @ 50MHz
6-49.9 MHz	45-16*log(F/10)	25 @ 100MHz
50-100 MHz	25-30*log(F/100)	
Isolation PHY to Wire side	2.25kVDC/60sec	



PIN	NAME	FUNCTION
X1	Vmain_P	Output voltage from PDJack(TM)
X2	ATFLAG (LOW)	Indicates 2 Event Classification was detected. Indicates PoE+ power levels available (Class 4 devices only)
X3	VAUX	Nominal voltage of 10.5V. Used as a startup supply for an external DC/DC controller.
X4	P_GOOD (LOW)	Indicates power good status
X5	N/C	
X6	Vmain_N	Vmain reference

PRE-RELEASE
REFERENCE
USE ONLY

PART NUMBER	CONNECTOR CONFIGURATION	CLASS / MAX POWER	OPERATING TEMPERATURE
857910020	GIGABIT POE PLUS PDJack(TM)-ICM	0 / 13W	0°C TO +70°C
857911020	GIGABIT POE PLUS PDJack(TM)-ICM	1 / 3,84W	0°C TO +70°C
857912020	GIGABIT POE PLUS PDJack(TM)-ICM	2 / 6,49W	0°C TO +70°C
857913020	GIGABIT POE PLUS PDJack(TM)-ICM	3 / 13W	0°C TO +70°C
857914020	GIGABIT POE PLUS PDJack(TM)-ICM	4 / 25,5W	0°C TO +55°C
857914420	GIGABIT POE PLUS PDJack(TM)-ICM NO SHIELD SPRINGS / PAGE 1	4 / 25,5W	0°C TO +55°C

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

EC DESCRIPTION 2015/09/28 EC NO: 102944 DRWN: MFURKEL CHK'D: REV APPR:	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 ± DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS	MM	5:1	
	DRWN BY	DATE	MFURKEL	2015/06/10	
	CHK'D BY	DATE			
			APP'R BY	DATE	
			DRAWING SIZE	THIRD ANGLE PROJECTION	
			A3		

PRODUCT CUSTOMER DRAWING		
SERIES	MATERIAL NUMBER	CUSTOMER
85791	SEE BOM / SHEET 3	
DOCUMENT NUMBER	DOC TYPE	DOC PART SHEET NUMBER
857910020	PSD	000 3 OF 3