

**PLEASE CHECK WWW.MOLEX.COM FOR LATEST PART INFORMATION**

**Part Number:** [0850131029](#)  
**Status:** **Active**  
**Overview:** [din\\_41612](#)  
**Description:** 2.54mm (.100") Pitch DIN 41612 Header, Style R/2 Reverse, 0.6µm (24µ") Selective Gold (Au), 48 Circuits, with Beveled Metal Pins, Lead free

**Documents:**

[3D Model](#) [RoHS Certificate of Compliance \(PDF\)](#)  
[Drawing \(PDF\)](#)

**Agency Certification**

CSA LR19980  
 UL E29179

**General**

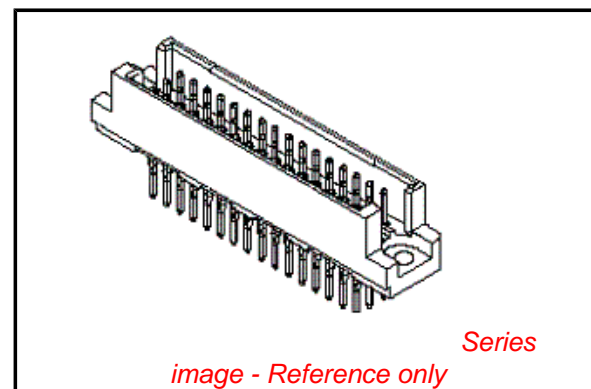
Product Family Backplane Connectors  
 Series [85013](#)  
 Application Backplane  
 Component Type PCB Header  
 Overview [din\\_41612](#)  
 Product Name IEC 603-2/DIN 41612  
 Style R/2

**Physical**

Circuits (Loaded) 48  
 Circuits (maximum) 48  
 Circuits Detail Rows A, B, & C  
 Durability (mating cycles max) 400  
 First Mate / Last Break No  
 Flammability 94V-0  
 Guide to Mating Part No  
 Keying to Mating Part Yes  
 Number of Columns 16  
 Number of Pairs Open Pin Field  
 Number of Rows 3  
 Orientation Vertical  
 PC Tail Length (in) 0.114 In  
 PC Tail Length (mm) 2.90 mm  
 PCB Locator No  
 PCB Retention Yes  
 PCB Thickness Recommended (in) 0.062 In  
 PCB Thickness Recommended (mm) 1.60 mm  
 Packaging Type Bag  
 Pitch - Mating Interface (in) 0.100 In  
 Pitch - Mating Interface (mm) 2.54 mm  
 Pitch - Term. Interface (in) 0.100 In  
 Pitch - Term. Interface (mm) 2.54 mm  
 Plating min: Mating (µin) 24  
 Plating min: Mating (µm) 0.6  
 Surface Mount Compatible (SMC) No  
 Temperature Range - Operating -55°C to +125°C

**Electrical**

Current - Maximum per Contact 1.5A  
 Data Rate 622.0 Mbps  
 Voltage - Maximum 1000V (RMS)



**EU RoHS**

**ELV and RoHS Compliant**  
**REACH SVHC**  
 Not Reviewed  
**Halogen-Free Status**  
 Not Reviewed

**China RoHS**



**Need more information on product environmental compliance?**

Email [productcompliance@molex.com](mailto:productcompliance@molex.com)  
 For a multiple part number RoHS Certificate of Compliance, [click here](#)

Please visit the [Contact Us](#) section for any non-product compliance questions.

**Search Parts in this Series**

[85013Series](#)

**Mates With**

[85042](#) DIN 41612 Receptacle . [85052](#) DIN 41612 Header

**Material Info**

**Reference - Drawing Numbers**

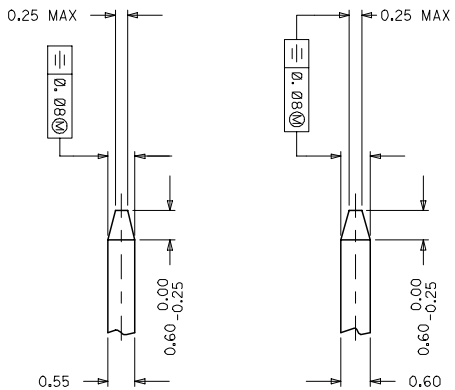
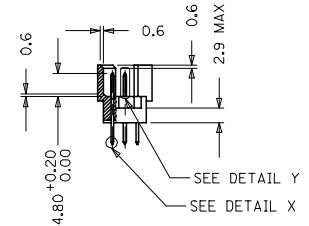
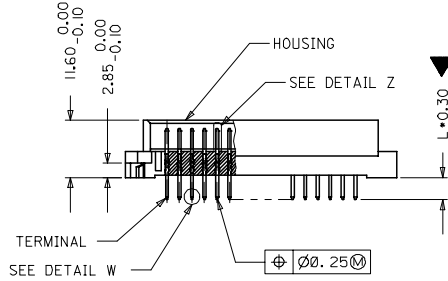
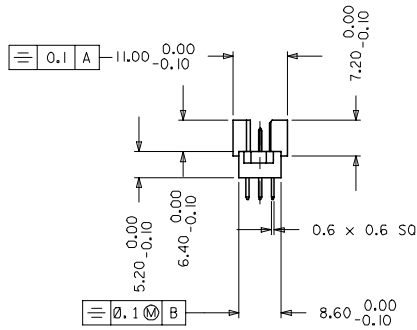
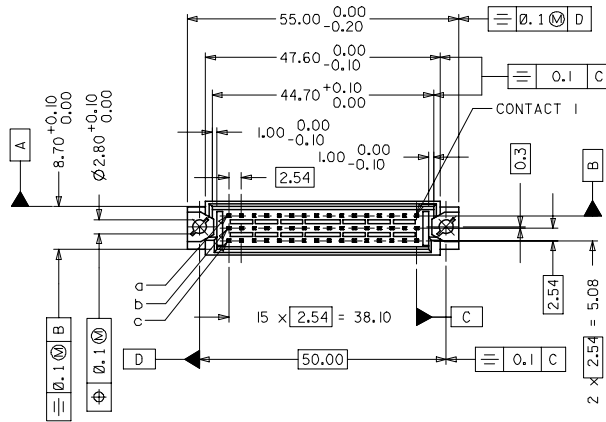
Sales Drawing

E-85013-0002, E-85013-1029, SD-85013-0002,  
SD-85013-1029, SDA-85013-0002, SDA-85013-1029

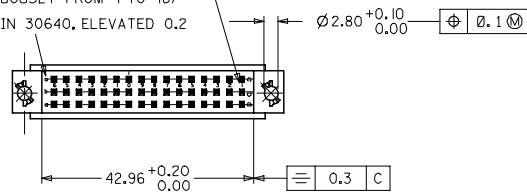
This document was generated on 05/17/2010

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- NOTES:  
 1. MATERIAL NUMBER, BATCH CODE, UL CSA MARKING TO BE PRINTED ON THE CONNECTOR AS PER E-36502-005  
 2. PRODUCT SPECIFICATION PS:85013-001  
 3. PACKING SPECIFICATION PK: 36512-001  
 4. CUT FACES OF TIP WITHOUT PLATING IS PERMITTED  
 5. REFERENCE AREA OF PLATING  
 6. GAUGE DRAWING REFER E-36500-100



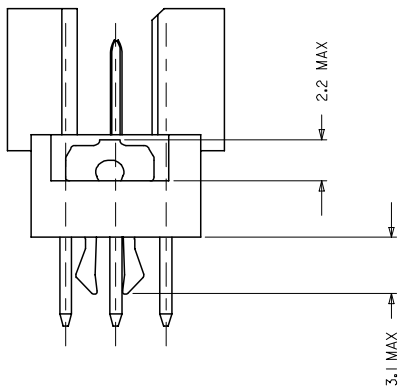
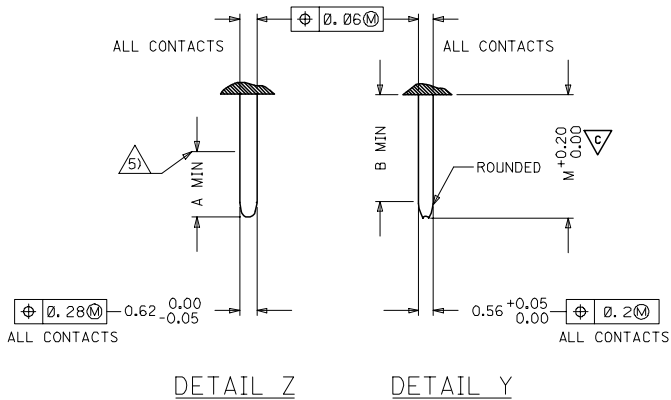
SCRIPT E1.25-5 DIN 30640, ELEVATED 0.2  
 (NUMBERED CONTINUOUSLY FROM 1 TO 16)  
 SCRIPT E1.5-6 DIN 30640, ELEVATED 0.2



EC NO. 12005-0092 DRAWN BY DRWNSHIVASHA CHKD PRASAD APP:RSSUDHIR	2004/11/23	2004/11/23	2004/11/23	QUALITY SYMBOLS ▽=1 ▽=0	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE MM ONLY		SCALE 2:1	DESIGN UNITS METRIC	THIRD ANGLE PROJECTION	
	mm	INCH	DRAWN BY NS		DATE 2004/03/31	TITLE 48 POS. MALE CONNECTOR ACC. DIN 41612 STYLE R/2 CONTACTS						
DESCRIPTION 48 POS. MALE CONNECTOR ACC. DIN 41612 STYLE R/2 CONTACTS	4 PLACES ±	±	CHECKED BY GJLOWE	DATE 2004/03/31	APPROVED BY GJLOWE	DATE 2004/03/31	MATERIAL NO. SEE CHART	DOCUMENT NO. E-85013-0002	SHEET NO. 1 OF 2	MOLEX MOLEX INCORPORATED	THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION	
	3 PLACES ±0.005	±	DATE 2004/03/31	DATE 2004/03/31								
		2 PLACES ±0.05	±									
		1 PLACE ±0.1	±									
		ANGULAR ± 2°										
			DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS									

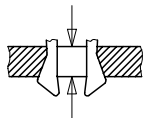
PRE MATING CONTACTS	5.4	4.1	4.8
NORMAL CONTACTS	4.8	3.5	4.2
	M	A	B

### MALE CONNECTOR WITH MOUNTING CLIPS



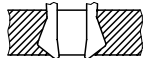
CLIPS SNAP UNDER  
PC - BOARD OF  
1.5 to 1.8 mm  
 $F_m < 60N$   
 $F_r >= 20N$   
 $F_r >= 200N$ , WHEN  
SOLDERED IN  
PLATED - THROUGH  
FIXING HOLES

$F_m$  = MOUNTING FORCE  
(FOR ONE CONNECTOR = 2 CLIPS)



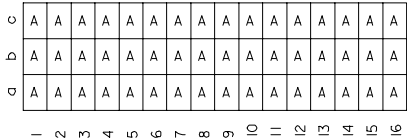
$F_r$  = RETENTION FORCE  
(FOR ONE CONNECTOR = 2 CLIPS)

CLIPS STICK IN  
FIXING HOLE OF  
PC - BOARDS  
OVER 1.8 mm  
 $F_m < 60N$   
 $F_r >= 16N$



IEC NO. 12005-0092 DRW:SHYASHA 2004/11/23 CHK:KPRASAD 2004/11/23 APPR:SSUDHIR 2004/11/23	QUALITY SYMBOLS	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE	SCALE	DESIGN UNITS	THIRD ANGLE PROJECTION
	$\nabla=0$ $\nabla=1$	mm	INCH	MM ONLY	2:1	METRIC	
		4 PLACES ±	±		DRAWN BY	DATE	TITLE
		3 PLACES ±0.005	±		NS	2004/03/31	48 POS. MALE CONNECTOR ACC. DIN 41612 STYLE R/2 CONTACTS
	2 PLACES ±0.05	±		CHECKED BY	DATE		
	1 PLACE ±0.1	±		G.JLOWE	2004/03/31		
	ANGULAR ± 2°			APPROVED BY	DATE		
				G.JLOWE	2004/03/31		
	DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS			MATERIAL NO.	DOCUMENT NO.		SHEET NO.
				SEE CHART	E-85013-0002		2 OF 2
				SIZE A1	THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION		

VIEW ON MATING SIDE



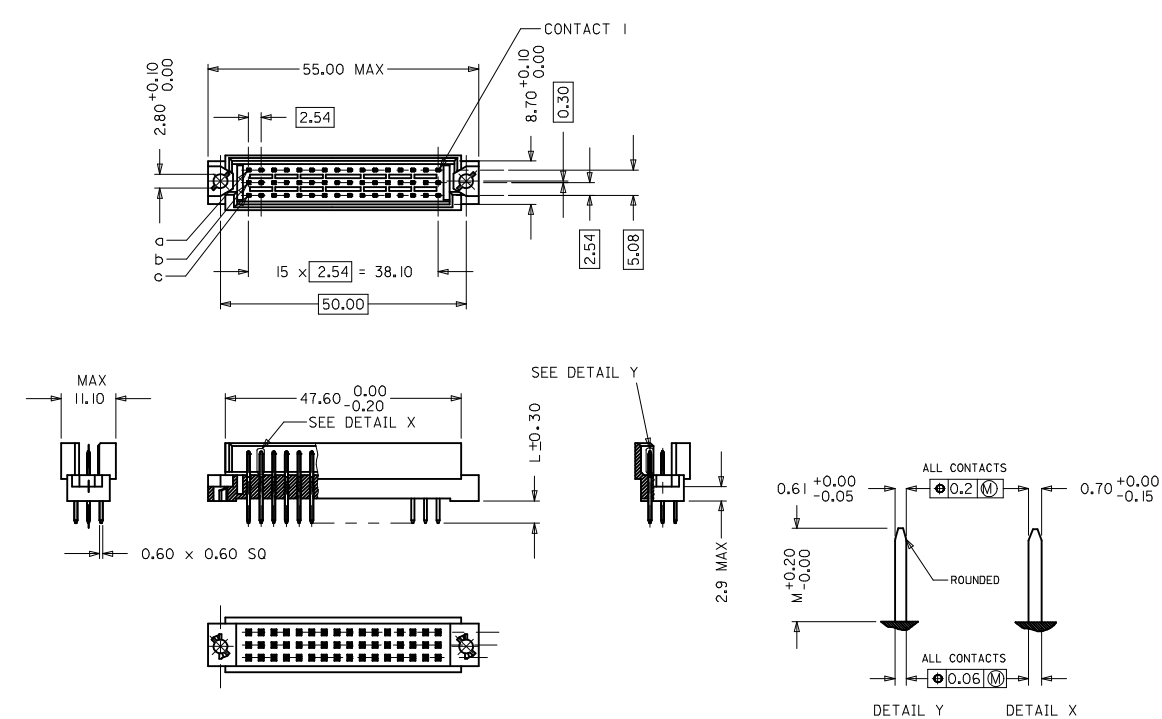
A = 48 STANDARD CONTACTS L = 2.9

MARKING	STANDARD
PERFORMANCE LEVEL	G2/0 = CONTACT AREA LEVEL2 / TERMINATION TIN
FLUX PROOF	NO
FIXING CLIP	YES
DIMENSIONS	SD-85013-0002 SHT 1

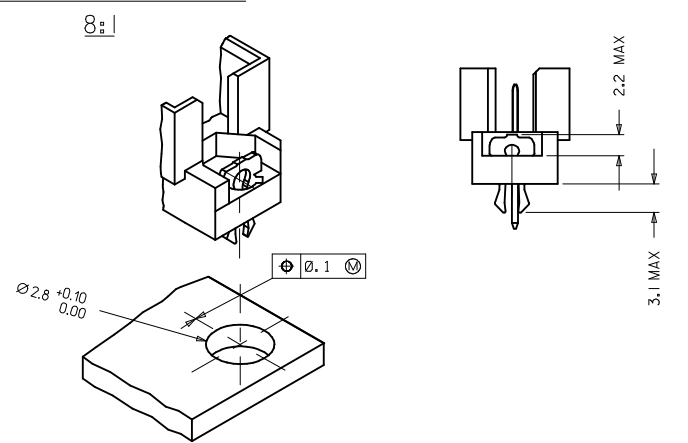
A	G2/0	a1-16 b1-16 c1-16
CONTACT SYMBOL	PERFORMANCE LEVEL	CONTACT POSITION NUMBER

SL. NO.	DESCRIPTION	CONTACT SYMBOL	PART NUMBER	QTY
1	HOUSING		36520-0002	1
2	TERMINAL	A	36527-0005	48
3	FIXING CLIP	B	36526-0001	2

EC NO. I 2004-XXXX DRAWN L.S. 31/03/04 CHK G.L. 31/03/04 APPR. L.S. 31/03/04	QUALITY SYMBOLS MAJOR CRITICAL	GENERAL TOLERANCES: (UNLESS SPECIFIED)		SCALE	DESIGN UNITS	DIMENSIONS: mm <input type="checkbox"/> INCH <input type="checkbox"/> mm ONLY <input checked="" type="checkbox"/> INCH ONLY <input type="checkbox"/>	THIRD ANGLE PROJECTION <input checked="" type="checkbox"/>	SHT 1 REV		
		4 PLACES $\pm 0.1$ mm $\pm 0.004$ INCH 3 PLACES $\pm 0.2$ mm $\pm 0.008$ INCH 2 PLACES $\pm 0.3$ mm $\pm 0.012$ INCH 1 PLACE $\pm 0.5$ mm $\pm 0.020$ INCH		DRAWN BY & DATE NLS 31/03/04	CHECKED BY & DATE G.L. 31/03/04				TITLE: 48 POS MALE CONNECTOR ACCORDING DIN 41612 STYLE R/2 CONTACTS ARRANGEMENT	REVISIONS REVISE ON CAD ONLY
		APPROVED BY & DATE G.L. 31/03/04		CAD FILENAME E-85013-1029.S01	MATERIAL NO. 85013-1029				DRAWING NO. E-85013-1029	SHEET NO. 1 OF 1
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.								



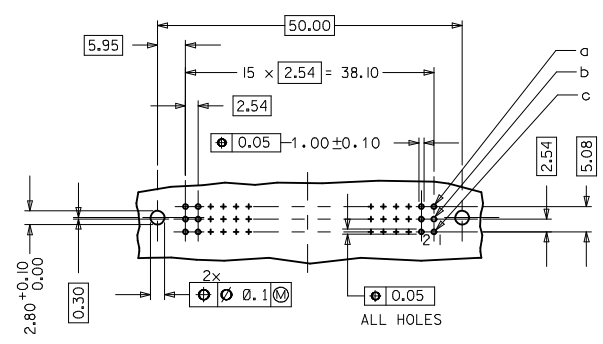
WITH MOUNTING CLIPS



- NOTES:
- 1) MATERIALS: THERMOPLASTIC POLYESTER, GLASS FILLED, UL94V-0. COLOUR: PEBBLE GREY RAL 7032  
TERMINAL - BRASS  
MOUNTING CLIP: STEEL
  - 2) FINISH: CONTACT AREA
    1. PERFORMANCE LEVEL 1: SELECTIVE GOLD (Au), THICKNESS = 1.1 MICROMETER OVER NICKEL, THICKNESS = 1.25 MICROMETER
    2. PERFORMANCE LEVEL 2: SELECTIVE GOLD (Au), THICKNESS = 0.6 MICROMETER OVER NICKEL, THICKNESS = 1.25 MICROMETER
    3. PERFORMANCE LEVEL 3: SELECTIVE GOLD (Au), THICKNESS = 0.3 MICROMETER OVER NICKEL, THICKNESS = 1.25 MICROMETER
  - 3) MOUNTING CLIP:-  
TIN (Sn), THICKNESS = 5-10 MICROMETER,  
OVER NICKEL (Ni), THICKNESS = 2.5 MICROMETER
  - 4) FOR NON MOUNTING CLIP OPTION, CONNECTOR TO BE SECURED WITH RIVETS: 2 TUBULAR RIVETS 2.5 x 0.3 ... DIN 7340  
SCREWS: 2 CHEESEHEAD SCREWS M2.5 x ... DIN 84 AND 2 HEXAGONAL NUTS M2.5 DIN 934
  - 5) STANDARD MARKING : MOLEX, MATERIAL NUMBER, BATCH CODE
  - 6) CUT FACE OF TIP WITHOUT PLATING PERMITTED
  - 7) PRODUCT SPECIFICATION PS : 85103-0001

RECOMMENDED PCB LAYOUT  
COMPONENT SIDE

LMFB CONTACTS	4,2
FMLB CONTACTS	5,4
NORMAL CONTACTS	4,8
	M



RoHS COMPLIANT

EC NO: I2007-0172 DRAWN BY: JAYENGG CHKD BY: SUDHIR APPR: KRASAO 2009/06/07 2009/06/19 2009/01/22	QUALITY SYMBOLS ▽=0 ▽=0	GENERAL TOLERANCES (UNLESS SPECIFIED) mm INCH 4 PLACES ± --- ± --- 3 PLACES ± 0.05 ± --- 2 PLACES ± 0.1 ± --- 1 PLACE ± 0.15 ± --- ANGULAR ± 2 °	DIMENSION STYLE MM ONLY	SCALE 2:1	DESIGN UNITS METRIC	THIRD ANGLE PROJECTION
	DRAWN BY: SS DATE: 1999/09/14 CHECKED BY: GJLOWE DATE: 1999/09/14 APPROVED BY: GJLOWE DATE: 1999/09/14 MATERIAL NO.	TITLE 48 POS. MALE CONNECTOR ACC. DIN 41612 STYLE R/2 CONTACTS MOLEX INCORPORATED	DOCUMENT NO. SD-85013-0002	SHEET NO. 1 OF 1		
	DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS	SEE CHART	THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION			
	SIZE A1					

20 19 18 17 16 15 14 13 12 11 9 8 7 6 5 4 3 2 1

VIEW ON MATING SIDE

⊖	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	
⊖	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	
⊖	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	
	-	2	3	4	5	6	7	8	9	10	=	12	13	14	15	16

A = 48 STANDARD CONTACTS L = 2.9

MARKING	STANDARD
PERFORMANCE LEVEL	G2/0 = CONTACT AREA LEVEL2 / TERMINATION TIN
FLUX PROOF	NO
FIXING CLIP	YES
DIMENSIONS	SD-85013-0002 SHT 1

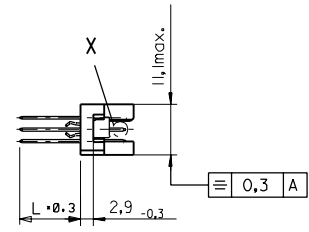
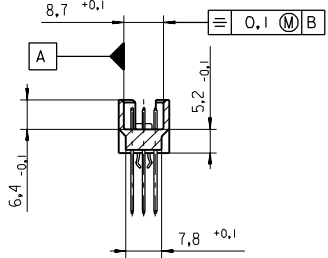
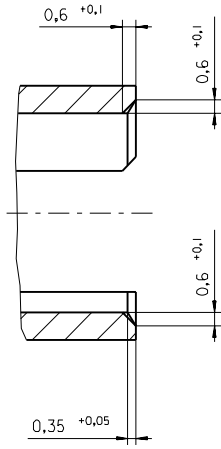
A	G2/0	a1-16	b1-16	c1-16
CONTACT SYMBOL	PERFORMANCE LEVEL	CONTACT POSITION NUMBER		

EC NO. I 2004-XXXX DRAWN L.S. 31/03/04 CHK G.L. 31/03/04 APPROV. L.S. 31/03/04	QUALITY SYMBOLS	GENERAL TOLERANCES: (UNLESS SPECIFIED)	SCALE	DESIGN UNITS	DIMENSIONS: <input type="checkbox"/> MM <input checked="" type="checkbox"/> INCH	THIRD ANGLE PROJECTION	SHEET NO. 1 OF 1	REV
	MAJOR CRITICAL	4 PLACES ±0. ± 3 PLACES ±0. ± 2 PLACES ±0. ± 1 PLACE ±0. ±	mm inch	mm inch				
B	DESCRIPTION	DRAWN BY & DATE NLS 13/06/03	CAD FILENAME	CHECKED BY & DATE G.L. 13/06/03	MATERIAL NO.	TITLE: 48 POS MALE CONNECTOR ACCORDING DIN 41612 STYLE R/2 CONTACTS ARRANGEMENT	SIZE D	
	REVISIONS	APPROVED BY & DATE G.L. 13/06/03	SD-850131029.S01	G.L. 13/06/03	SD-85013-1029	MOLEX INCORPORATED		
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.						

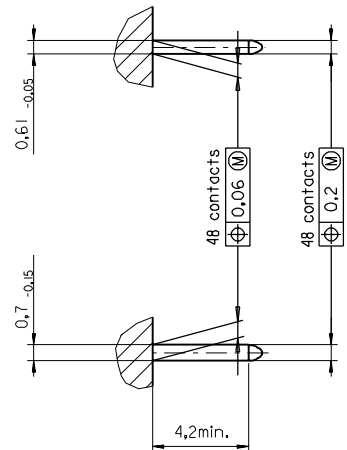
19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1

PART NO.  
DWG. NO.

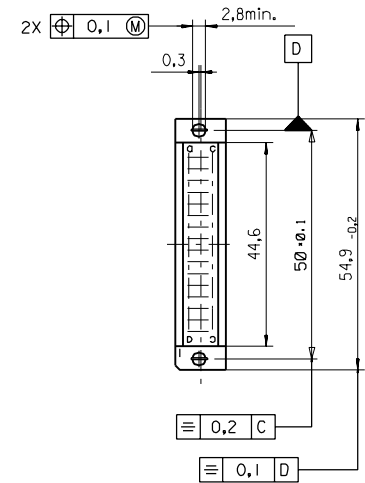
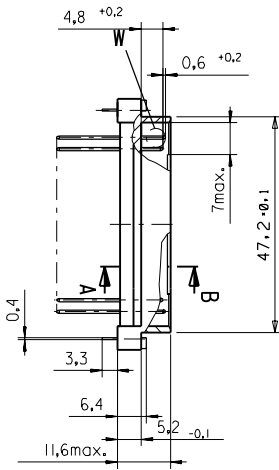
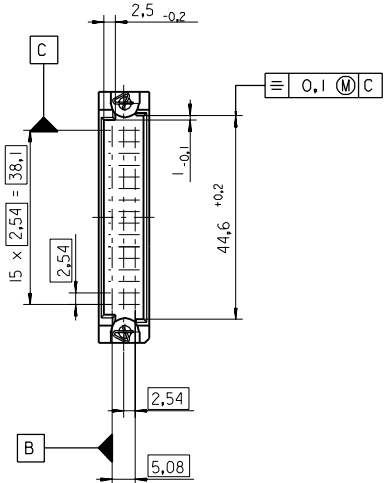
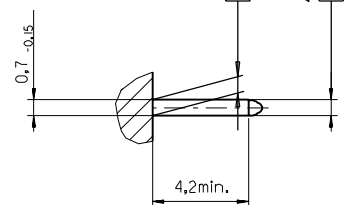
Section A - B  
5:1



View X  
5:1



View W  
5:1



FIRST ANGLE PROJECTION REVISE ONLY ON CAD SYSTEM SH. REV.

first release  
see ECN No. 1887

LTR	REVISIONS	UNLESS OTHERWISE SPECIFIED TOLERANCES: ANGULAR ±2°	DRWG BY	SIGN	CAD/CAM PROJECT NAME	THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INC. & SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION
	FOR PREVIOUS REVISIONS SEE MRI LIST	INCH METRIC	Ca		85013000 821	
BI	3 PLACE	± . ±	CHK'D BY	SIGN	TITLE	
	2 PLACE	± . ±	KN		48 pos. Male connector acc. DIN 41612 style R/2 Dimensions	
	1 PLACE	± . ±	APP'D BY	SIGN	MOLEX EUROPE	
	DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS				SHEET NO. DATE	
	DESIGN DIMENSION <input checked="" type="checkbox"/> MM		SCALE		1 OF 95/06/08	
	EQUIVALENT DIMENSION <input type="checkbox"/> MM				PART NO. DWG NO. SIZE	
	IF TWO DIMENSIONS ARE SHOWN THE UPPER IS THE DESIGN DIMENSION, LOWER IS SECONDARY				SDA-85013-0002 B	



VIEW ON MATING SIDE

⊂	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
⊃	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
⊄	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

A = 48 STANDARD CONTACTS L-2,9

Marking	Standard
Performance level	G2/0 = Contact area perform. level2 / Termination tin
Flux proof	no
Fixing clip	yes
Dimensions	SDA-85013-0002 sht.1
Technical Data	PS-85013-0001

A	G2/0	a1-16	b1-16	c1-16
Contact symbol	Perform. level	Contact position number		

first release see ECN No. 2351	REVISIONS		FOR PREVIOUS REVISIONS SEE MRI LIST	
	LTR	Δ		
UNLESS OTHERWISE SPECIFIED TOLERANCES: ANGULAR ± 2° INCH METRIC		DRWG BY	SIGN	
3 PLACE ± .		Ca		
2 PLACE ± .		CHK'D BY	SIGN	
1 PLACE ± .		KN		
DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		APP'D BY	SIGN	
DESIGN DIMENSION <input type="checkbox"/> MM <input type="checkbox"/> IN.		JB		
EQUIVALENT DIMENSION <input type="checkbox"/> MM <input type="checkbox"/> IN.		SCALE		
IF TWO DIMENSIONS ARE SHOWN, THE UPPER IS THE DESIGN DIMENSION, LOWER IS SECONDARY				
REVISE ONLY ON CAD SYSTEM		SH. REV.		
CAD/CAM PROJECT NAME		THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INC. & SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION		
s8501310		s21		
TITLE		SHEET NO.		DATE
48 pos. Male connector acc. DIN 41612 style R/2 contacts arrangement		1 OF 1		96/12/05
MOLEX EUROPE		DWG NO.		SIZE
PART NO.		SDA-85013-1029		A