

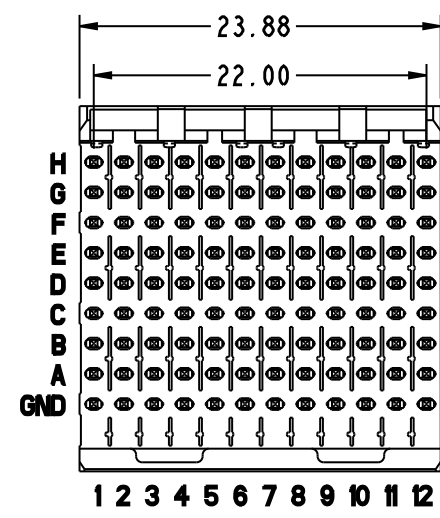
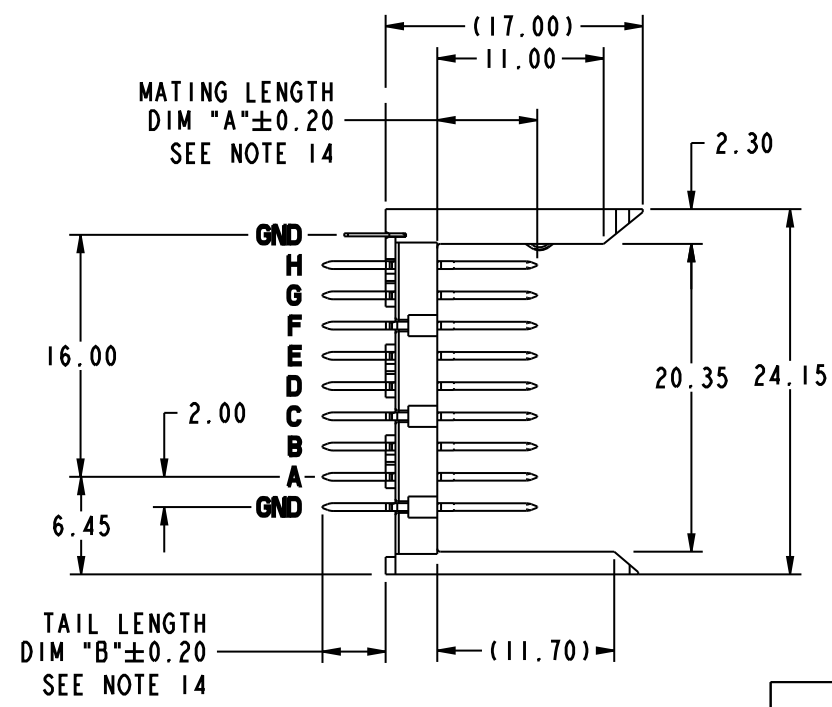
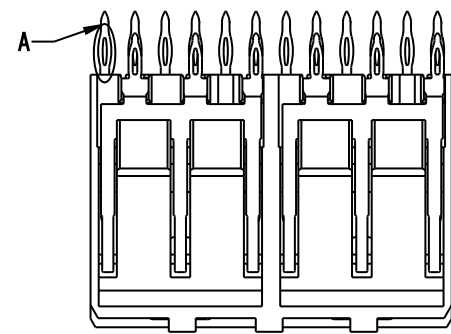
PRODUCT NUMBER	PLATING PERFORMANCE LEVEL	FOR REAR PLUG-UP APPLICATIONS USE SHROUD
10114820-1YYY	TELCORDIA CO	74993-102
10114820-1YYYLF	TELCORDIA CO	74993-102LF



EYE OF NEEDLE
PRESS FIT SECTION

DETAIL A
SCALE 4:1
SEE NOTE 16

SEE DETAIL A



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www.fciconnect.com		surface ISO 1302	tolerance std ISO 406 ISO 1101	projection ⊕	MM ↔
		TOLERANCES UNLESS OTHERWISE SPECIFIED		size A4	Scale 2:1
Dr	RAJKRISHNAN.V	04-05-2010	ANGULAR	0.X	±0.3
Eng	RAJKRISHNAN.V	04-05-2010	LINEAR	0.XX	±0.13
Chr	S ALOSIUS	28-09-2011	0° ±2°	0.XXX	±0.051
Appr	BIJU K PAUL	28-09-2011	Product family METRAL1000		Spec ref -
FCI		title METRAL(TM) 7+2 ROW HEADER PF SIGNAL		eng no 10114820	Rev. A
		catalog no		CUSTOMER	sheet 1 of 6

rev	ecn no	dr	date
A	111-0185	SAL	2011-11-11
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-

PIN NO.	DIM A MATING LENGTH	DIM B TAIL LENGTH	PCB THICKNESS RANGE ACCOMMODATED BY PIN'S TAIL LENGTH				
			WHEN MATING TO A 74981 SERIES RECEPTACLE		WHEN MATING TO A 52066 SERIES METRAL 4000 RECEPTACLE		
			ROWS A,B,C,D,E,F,G & H	GROUND ROW	ROWS:A,B,D,E,G & H	ROW C & F	GROUND ROW
01*	5.00	4.30	1.60 MIN	1.60 MIN	1.60 MIN	1.60 MIN	1.60 MIN
22		12.20	2.95 - 3.80	2.95 - 4.20	2.95 - 3.80	2.95 - 3.80	2.95 - 4.20
30		12.95	2.95 - 4.55	3.25 - 4.95	2.95 - 4.55	2.95 - 4.55	3.25 - 4.95
05		13.70	2.95 - 5.30	4.00 - 5.70	3.30 - 5.30	2.95 - 5.30	4.00 - 5.70
35		14.45	3.05 - 6.05	4.75 - 6.45	4.05 - 6.05	3.05 - 6.05	4.75 - 6.45
48		15.20	3.80 - 6.80	5.50 - 7.20	4.80 - 6.80	3.80 - 6.80	5.50 - 7.20
40		15.70	4.30 - 7.30	6.00 - 7.70	5.30 - 7.30	4.30 - 7.30	6.00 - 7.70
65		16.40	5.00 - 8.00	6.70 - 8.40	6.00 - 8.00	5.00 - 8.00	6.70 - 8.40
09		17.10	5.70 - 8.70	7.40 - 9.10	6.70 - 8.70	5.70 - 8.70	7.40 - 9.10
02*	5.75	4.30	1.60 MIN	1.60 MIN	1.60 MIN	1.60 MIN	1.60 MIN
44		12.20	2.95 - 3.80	2.95 - 4.20	2.95 - 3.80	2.95 - 3.80	2.95 - 4.20
31		12.95	2.95 - 4.55	3.25 - 4.95	2.95 - 4.55	2.95 - 4.55	3.25 - 4.95
06		13.70	2.95 - 5.30	4.00 - 5.70	3.30 - 5.30	2.95 - 5.30	4.00 - 5.70
36		14.45	3.05 - 6.05	4.75 - 6.45	4.05 - 6.05	3.05 - 6.05	4.75 - 6.45
49		15.20	3.80 - 6.80	5.50 - 7.20	4.80 - 6.80	3.80 - 6.80	5.50 - 7.20
25		15.70	4.30 - 7.30	6.00 - 7.70	5.30 - 7.30	4.30 - 7.30	6.00 - 7.70
66		16.40	5.00 - 8.00	6.70 - 8.40	6.00 - 8.00	5.00 - 8.00	6.70 - 8.40
10		17.10	5.70 - 8.70	7.40 - 9.10	6.70 - 8.70	5.70 - 8.70	7.40 - 9.10
03*	6.50	4.30	1.60 MIN	1.60 MIN	1.60 MIN	1.60 MIN	1.60 MIN
45		12.20	2.95 - 3.80	2.95 - 4.20	2.95 - 3.80	2.95 - 3.80	2.95 - 4.20
32		12.95	2.95 - 4.55	3.25 - 4.95	2.95 - 4.55	2.95 - 4.55	3.25 - 4.95
07		13.70	2.95 - 5.30	4.00 - 5.70	3.30 - 5.30	2.95 - 5.30	4.00 - 5.70
37		14.45	3.05 - 6.05	4.75 - 6.45	4.05 - 6.05	3.05 - 6.05	4.75 - 6.45
50		15.20	3.80 - 6.80	5.50 - 7.20	4.80 - 6.80	3.80 - 6.80	5.50 - 7.20
41		15.70	4.30 - 7.30	6.00 - 7.70	5.30 - 7.30	4.30 - 7.30	6.00 - 7.70
24		16.40	5.00 - 8.00	6.70 - 8.40	6.00 - 8.00	5.00 - 8.00	6.70 - 8.40
11		17.10	5.70 - 8.70	7.40 - 9.10	6.70 - 8.70	5.70 - 8.70	7.40 - 9.10



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www.fciconnect.com		surface <input checked="" type="checkbox"/> ISO 1302	tolerance std ISO 406 ISO 1101	projection	MM
		TOLERANCES UNLESS OTHERWISE SPECIFIED			
Dr	RAJKRISHNAN.V	04-05-2010	ANGULAR	LINEAR	0.X ±0.3
Eag	RAJKRISHNAN.V	04-05-2010			0.XX ±0.13
Chr	S ALOSIOUS	28-09-2011	0° ±2°	0.XXX ±0.051	size A4
Appr	BIJU K PAUL	28-09-2011	Product family		Scale 2:1
title METRAL(TM) 7+2 ROW HEADER PF SIGNAL					ECN 111-0185
catalog no					Spec ref -
					eng no 10114820
					Rev. A
				CUSTOMER	sheet 2 of 6

PIN NO.	DIM A MATING LENGTH	DIM B TAIL LENGTH	PCB THICKNESS RANGE ACCOMMODATED BY PIN LENGTH				
			WHEN MATING TO A 74981 SERIES RECEPTACLE		WHEN MATING TO A 52066 SERIES METRAL 4000 RECEPTACLE		
			ROWS A,B,C, D,E,F,G & H	GROUND ROW	ROWS:A,B, D,E,G & H	ROW C & F	GROUND ROW
04*	7.25	4.30	1.60 MIN	1.60 MIN	1.60 MIN	1.60 MIN	1.60 MIN
46		12.20	2.95 - 3.80	2.95 - 4.20	2.95 - 3.80	2.95 - 3.80	2.95 - 4.20
33		12.95	2.95 - 4.55	3.25 - 4.95	2.95 - 4.55	2.95 - 4.55	3.25 - 4.95
08		13.70	2.95 - 5.30	4.00 - 5.70	3.30 - 5.30	2.95 - 5.30	4.00 - 5.70
38		14.45	3.05 - 6.05	4.75 - 6.45	4.05 - 6.05	3.05 - 6.05	4.75 - 6.45
51		15.20	3.80 - 6.80	5.50 - 7.20	4.80 - 6.80	3.80 - 6.80	5.50 - 7.20
42		15.70	4.30 - 7.30	6.00 - 7.70	5.30 - 7.30	4.30 - 7.30	6.00 - 7.70
67		16.40	5.00 - 8.00	6.70 - 8.40	6.00 - 8.00	5.00 - 8.00	6.70 - 8.40
12		17.10	5.70 - 8.70	7.40 - 9.10	6.70 - 8.70	5.70 - 8.70	7.40 - 9.10
19*	8.00	4.30	1.60 MIN	1.60 MIN	1.60 MIN	1.60 MIN	1.60 MIN
47		12.20	2.95 - 3.80	2.95 - 4.20	2.95 - 3.80	2.95 - 3.80	2.95 - 4.20
34		12.95	2.95 - 4.55	3.25 - 4.95	2.95 - 4.55	2.95 - 4.55	3.25 - 4.95
20		13.70	2.95 - 5.30	4.00 - 5.70	3.30 - 5.30	2.95 - 5.30	4.00 - 5.70
39		14.45	3.05 - 6.05	4.75 - 6.45	4.05 - 6.05	3.05 - 6.05	4.75 - 6.45
52		15.20	3.80 - 6.80	5.50 - 7.20	4.80 - 6.80	3.80 - 6.80	5.50 - 7.20
43		15.70	4.30 - 7.30	6.00 - 7.70	5.30 - 7.30	4.30 - 7.30	6.00 - 7.70
68		16.40	5.00 - 8.00	6.70 - 8.40	6.00 - 8.00	5.00 - 8.00	6.70 - 8.40
21		17.10	5.70 - 8.70	7.40 - 9.10	6.70 - 8.70	5.70 - 8.70	7.40 - 9.10



- STUB PINS - NO REAR PLUG-UP
- THE GREATEST RANGE OCCURS WHEN THE B DIMENSION OF PIN 'GND' IS ONE SIZE SHORTER THEN THE OTHER PINS.

www.fciconnect.com			surface ISO 1302	<input checked="" type="checkbox"/>	tolerance std ISO 406 ISO 1101	projection ⊕	MM
			TOLERANCES UNLESS OTHERWISE SPECIFIED				
Dr	RAJKRISHNAN.V	04-05-2010	ANGULAR	LINEAR	0.X	±0.3	size A4
Eag	RAJKRISHNAN.V	04-05-2010			0.XX	±0.13	Scale 2:1
Chr	S ALOSIOUS	28-09-2011	0°	±2°	0.XXX	±0.051	ECN 111-0185
Appr	BIJU K PAUL	28-09-2011	Product family			Spec ref -	
FCI		title METRAL(TM) 7+2 ROW HEADER PF SIGNAL			eng no 10114820		Rev. A
		catalog no			CUSTOMER		sheet 3 of 6

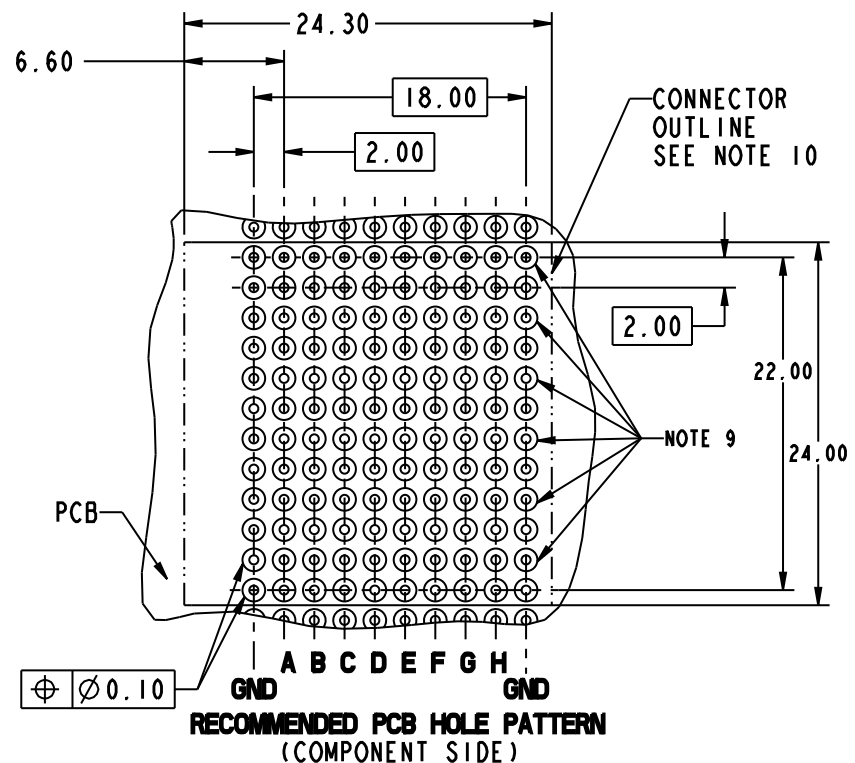
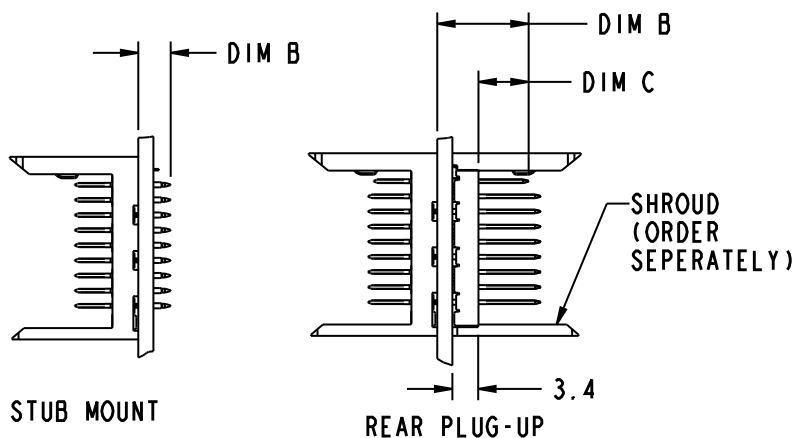
PRODUCT NUMBER
SEE SHEET 1

A

B

C

D



PRESS-FIT HOLES *	OPTION 1
HOLE DIAMETER AFTER PLATING	$\varnothing 0.65-0.80$
DRILLED HOLE	$\varnothing 0.81-0.86$ ($\varnothing 0.85$ DRILL)
COPPER PLATING	0.025 MIN
SnPb PLATING	0.005-0.015

* SEE PRINT 58351 FOR ADDITIONAL PCB INFO.

www.fciconnect.com		surface ISO 1302	tolerance std ISO 406 ISO 1101	projection MM
		TOLERANCES UNLESS OTHERWISE SPECIFIED		⊕
Dr	RAJKRISHNAN.V 04-05-2010	ANGULAR	0.X ±0.3	size A4
Eag	RAJKRISHNAN.V 04-05-2010	LINEAR	0.XX ±0.13	Scale 2:1
Chr	S ALOSIOUS 28-09-2011	0° ±2°	0.XXX ±0.051	ECN 111-0185
Appr	BIJU K PAUL 28-09-2011	Product family		Spec ref -
FCI		METRAL (TM) 7+2 ROW HEADER PF SIGNAL		eng no 10114820
catalog no		CUSTOMER		Rev. A
				sheet 4 of 6

PRODUCT NUMBER

SEE SHEET 1

NOTES:

1. SEE APPLICATION SPECIFICATION GS-20-010 FOR INFORMATION ON AVAILABLE TOOLING, CIRCUIT BOARD DESIGN CONSIDERATIONS, REPAIR PROCEDURES AND PRODUCT OFFERINGS.
2. SEE FCI PUBLICATION 950511-028 FOR "ELECTRICAL PERFORMANCE DATA FOR DIFFERENTIAL APPLICATIONS."
3. SEE FCI PUBLICATION 950511-028 FOR "ELECTRICAL PERFORMANCE DATA FOR SINGLE-ENDED APPLICATION."
4. UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS AND TOLERANCES TOLERANCES ARE IN ACCORDANCE WITH ASME Y14.5M, 1994
5. HOUSING MATERIAL: LIQUID CRYSTAL POLYMER, 30% GLASS FILLED, FLAME RETARDANT PER UL 94-V0.
PIN MATERIAL: PHOSPHOR BRONZE
GROUND SPRING MATERIAL: PHOSPHOR BRONZE
6. PLATING INFORMATION: PLATING ON CONTACT AREA MEETS THE PERFORMANCE LEVELS SHOWN IN TABLE ON SHEET 1. PLATING ON "LF" TAILS IS Sn. PLATING ON ALL OTHER TAILS IS SnPb.
7. DIMENSIONAL RESTRICTIONS OF PINS IN HEADERS.
FOR MATING WITH METRAL 1000 RECEPTACLES
DIM A : 5.00mm MIN, 8.00mm MAX FOR ROWS A-H
DIM A : 5.00mm MIN, 5.75mm MAX FOR ROW GND NEXT TO ROW A
DIM C : 5.00mm MIN, 8.00mm MAX FOR ROWS A-H
DIM C : 4.60mm MIN, 6.30mm MAX FOR ROW GND NEXT TO ROW A
FOR MATING WITH METRAL 4000 RECEPTACLES
DIM A : 5.00mm MIN, 6.50mm MAX FOR ROWS A, B, D, E, G & H
DIM A : 5.00mm MIN, 8.00mm MAX FOR ROW C & F
DIM A : 5.00mm MIN, 5.75mm MAX FOR ROW GND NEXT TO ROW A
DIM C : 5.00mm MIN, 7.00mm MAX FOR ROWS A, B, D, E, G & H
DIM C : 5.00mm MIN, 8.00mm MAX FOR ROW C & F
DIM C : 4.60mm MIN, 6.30mm MAX FOR ROW GND NEXT TO ROW A
8. THE MIN PCB THICKNESS FOR REAR PLUG-UP APPLICATIONS IS 2.9mm SINCE THE COMPLIANT SECTIONS OF THE GROUND SPRING OF THE HEADER DIRECTLY OPPOSE THE GROUND SPRING OF THE SHROUD. THE MIN PCB THICKNESS FOR FRONT PLUG-UP ONLY APPLICATIONS IS 1.6mm.

9. THESE HOLES ARE NEEDED FOR REAR PLUG-UP DESIGNS USING A SHROUD AND MAY BE OMITTED FOR FRONT PLUG-UP ONLY DESIGNS.
10. THE 'CONNECTOR OUTLINE' IS THE MIN OUTLINE REQUIRED. TO DETERMINE THE OUTLINE NECESSARY TO PERMIT THE VARIOUS TYPES OF REPAIR OPERATIONS, SEE APPLICATION SPECIFICATION GS-20-010.
11. CURRENT RATING : 1 AMP PER PIN
12. TEMPERATURE RANGE : -55°C TO +105°C
13. P/N 10114820-XXXXLF
14. AFTER INSERTION INTO CIRCUIT BOARD WITH QUALIFIED TOOL.
15. PRODUCTS WHERE THE PART NUMBER ENDS IN LF MEET EUROPEAN UNION DIRECTIVES AND OTHER COUNTRY REGULATIONS AS DESCRIBED IN GS-22-008.



- ALL PRODUCTS WILL WITHSTAND EXPOSURE TO 260°C FOR 60 SECONDS IN A CONVECTION, INFRA-RED OR VAPOR PHASE REFLOW OVEN.
16. PIN TYPE IS OF EYE OF THE NEEDLE STYLE

www.fciconnect.com			surface ISO 1302	tolerance std ISO 406 ISO 1101	projection ⊕	MM ↔
			TOLERANCES UNLESS OTHERWISE SPECIFIED			
Dr	RAJKRISHNAN.V	04-05-2010	ANGULAR	0.X	±0.3	size A4 Scale 12:1
Eng	RAJKRISHNAN.V	04-05-2010	LINEAR	0.XX	±0.13	
Chr	S ALOSIOUS	28-09-2011	0° ±2°	0.XXX	±0.051	ECN 111-0185
Appr	BIJU K PAUL	28-09-2011	Product family		Spec ref -	
FCI			title METRAL(TM) 7+2 ROW HEADER PF SIGNAL		eng no 10114820	Rev. A
			catalog no		CUSTOMER	sheet 5 of 6



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[10114820-1007LF](#) [10114820-1009LF](#) [10114820-1011LF](#)