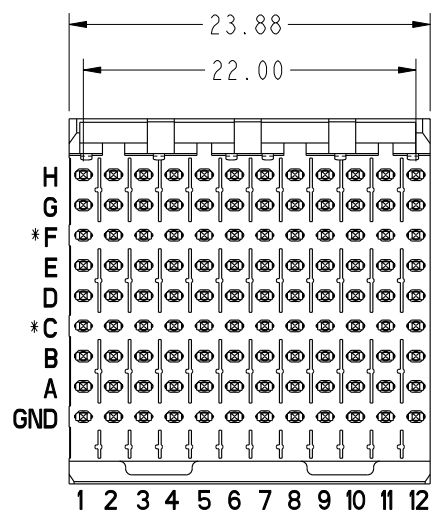
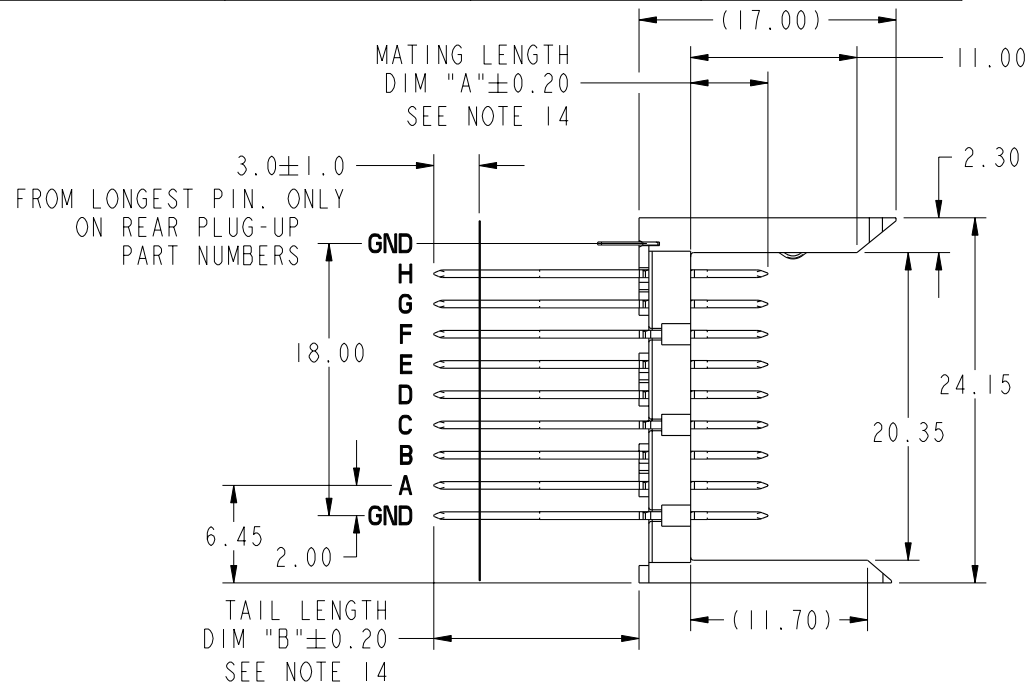
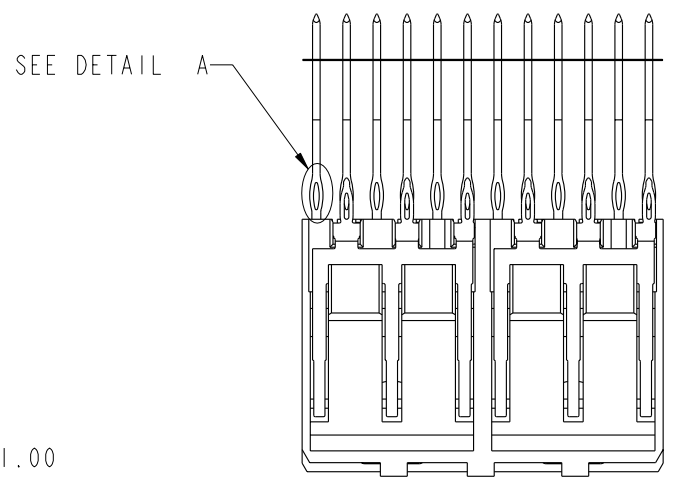


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PRODUCT NUMBER	PLATING PERFORMANCE LEVEL	PRESS FIT PIN TO PCB	FOR REAR PLUG-UP APPLICATIONS USE SHROUD
74983-102ZZZ	TELCORDIA CO	STANDARD	74993-102
74983-102ZZZLF		LEAD FREE	74993-102
74983-302ZZZ	CUSTOMER SPECIAL	STANDARD	74993-302
74983-302ZZZLF		LEAD FREE	74993-302LF
74983-502ZZZ	TELCORDIA UE	STANDARD	74993-502
74983-502ZZZLF		LEAD FREE	74993-502LF
74983-A02ZZZ	CUSTOMER SPECIAL	STANDARD	74993-102
74983-A02ZZZLF		LEAD FREE	74993-102LF



DETAIL A
 SCALE 4:1
 SEE NOTE 16

mat'l code SEE NOTE 5				tolerances unless otherwise specified			CUSTOMER		FCI www.fciconnect.com	
ltr	ecp no.	dr	date	linear	0.X ± 0.3	COPY		title		
W	V06-0544	DCH	2006-06-12		0.XX ± 0.13	projection		VERTICAL SIGNAL HDR 8 ROW		
X	V07-0175	DCH	2007-04-16		.XXX ± .051	MM		P.F. 96 POS. SPECIAL LOAD EXT.		
Y	V08-0024	HTB	2008-01-16	angles	0° ± 2°	scale		product family METRAL 1000		code
AA	V08-0130	LP	2008-03-25	dr	E. KROPER. 2001-01-15	1:1		size		213
-	-	-	-	enrg	J. VOLSTORF 2001-01-15			dwg no		sheet
U	V05-0192	DAI	2005-04-15	chr	J. VOLSTORF 2001-01-15			A		74983
V	V05-0735	TAB	2005-08-05	appd	J. VOLSTORF 2001-01-15					1 of 7
sheet index	revision sheet	AA	AA	AA	AA	AA	AA	AA	cage code	22526
		1	2	3	4	5	6	7		4

PIN NO.	DIM A MATING LENGTH	DIM B TAIL LENGTH	PCB THICKNESS RANGE ACCOMMODATED BY PIN'S TAIL LENGTH				
			WHEN MATING TO A 84854 SERIES METRAL 1000 RECEPTACLES		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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mat'l code SEE NOTE 5				tolerances unless otherwise specified		CUSTOMER	www.fciconnect.com	
ltr	ecn no.	dr	date	linear	0.X ±0.3	COPY	title	
AA				angles	0.XX ±0.13	projection	VERTICAL SIGNAL HDR 8 ROW	
				dr	.XXX ±.051		P.F. 96 POS. SPECIAL LOAD EXT.	
				engr	0° ±2°		product family	METRAL 1000
				chr	E. KROPER. 2001-01-15	MM	size	dwg no
				appd	J. VOLSTORF 2001-01-15	← MM →	A	74983
sheet index	revision sheet				J. VOLSTORF 2001-01-15	scale	1:1	213
								sheet
								2

PIN NO.	DIM A MATING LENGTH	DIM B TAIL LENGTH	PCB THICKNESS RANGE ACCOMMODATED BY PIN LENGTH				
			WHEN MATING TO A 84854 SERIES METRAL 1000 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
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

A

A



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B

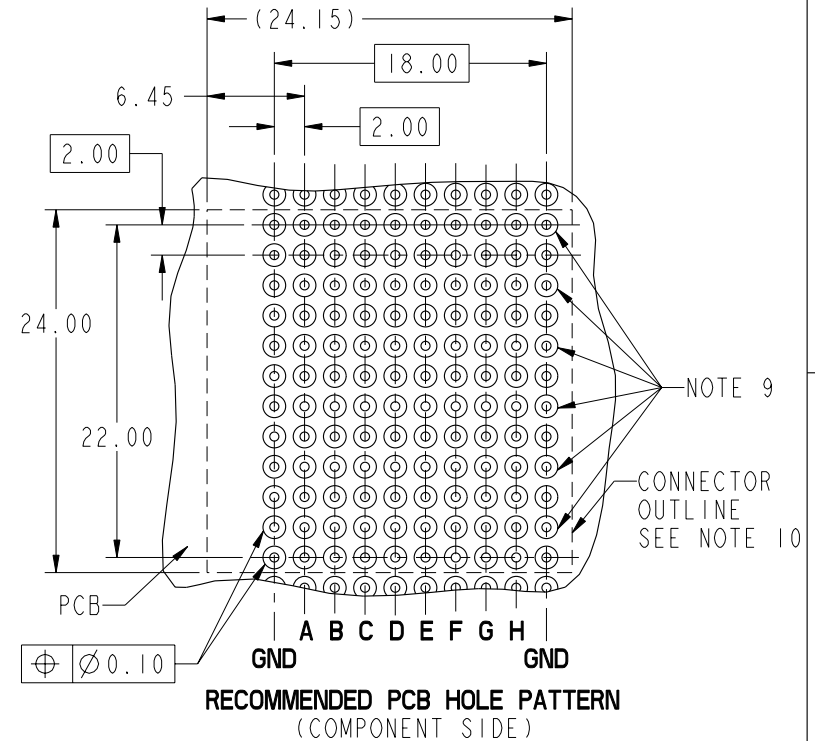
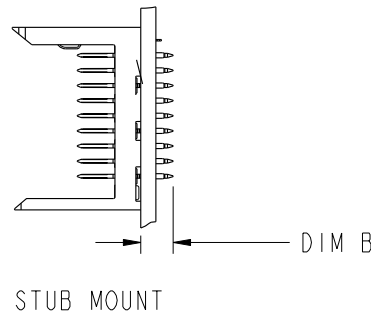
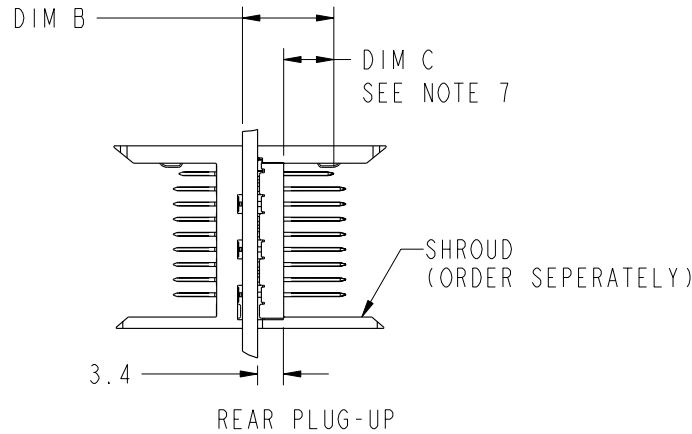
B

mat'l code		SEE NOTE 5		tolerances unless otherwise specified		CUSTOMER		www.fciconnect.com	
ltr	ecn no.	dr	date	linear	0.X ±0.3		COPY		title VERTICAL SIGNAL HDR 8 ROW P.F. 96 POS. SPECIAL LOAD EXT.
AA					0.XX ±0.13		projection		
					.XXX ±.051				
				angles	0° ±2°				product family METRAL 1000 code size dwg no 213 sheet 3
				dr	E. KROPER.	2001-01-15	MM 		
				engr	J. VOLSTORF	2001-01-15	scale 1:1 A 74983		
				chr	J. VOLSTORF	2001-01-15			
				appd	J. VOLSTORF	2001-01-15			
sheet index	revision sheet								

PRODUCT NUMBER
SEE SHEET 1

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

FOR OTHER OPTIONS SEE DRAWING
58351



mat'l code SEE NOTE 5				tolerances unless otherwise specified		CUSTOMER	FCj www.fciconnect.com		
ltr	ecm no.	dr	date	linear	0.X ±0.3	COPY	title		
AA				angles	0.XX ±0.13	projection	VERTICAL SIGNAL HDR 8 ROW		
					.XXX ±.051		P.F. 96 POS. SPECIAL LOAD EXT.		
				dr	0° ±2°		product family	METRAL 1000	code
				engr	E. KROPER. 2001-01-15	MM	size	dwg no	213
				chr	J. VOLSTORF 2001-01-15	scale	A	74983	sheet
				appd	J. VOLSTORF 2001-01-15	1:1			4
sheet index	revision sheet								

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SPECIAL LOAD PATTERNS		
PRODUCT #	ROW	PIN CODES
74983-X02001	H	01
	G	
	F	
	E	
	D	
	C	
	B	
	A	
74983-X02001LF SEE NOTE 15	GND	01
	H	
	G	
	F	
	E	
	D	
	C	
	B	
74983-X02004 *RPU	H	05
	G	
	F	
	E	
	D	
	C	
	B	
	A	
74983-X02004LF *RPU SEE NOTE 15	GND	05
	H	
	G	
	F	
	E	
	D	
	C	
	B	
74983-X02011	H	02
	G	
	F	
	E	
	D	
	C	
	B	
	A	
74983-X02011LF SEE NOTE 15	GND	01
	H	
	G	
	F	
	E	
	D	
	C	
	B	
74983-X02013 *RPU	H	06
	G	
	F	
	E	
	D	
	C	
	B	
	A	
74983-X02013LF *RPU SEE NOTE 15	GND	30
	H	
	G	
	F	
	E	
	D	
	C	
	B	
74983-X02050	H	02
	G	
	F	
	E	
	D	
	C	
	B	
	A	
74983-X02050LF SEE NOTE 15	GND	02
	H	
	G	
	F	
	E	
	D	
	C	
	B	
74983-X02054	H	02
	G	
	F	
	E	
	D	
	C	
	B	
	A	
74983-X02054LF SEE NOTE 15	GND	02
	H	
	G	
	F	
	E	
	D	
	C	
	B	

PCB THICKNESS
RANGE FOR REAR
PLUG UP
APPLICATIONS:
4.00 - 5.30

PCB THICKNESS
RANGE FOR REAR
PLUG UP
APPLICATIONS:
3.25 - 5.30

SPECIAL LOAD PATTERNS		
PRODUCT #	ROW	PIN CODES
74983-X02051	H	03
	G	
	F	
	E	
	D	
	C	
	B	
	A	
74983-X02051LF SEE NOTE 15	GND	02
	H	
	G	
	F	
	E	
	D	
	C	
	B	
74983-X02052	H	02
	G	
	F	
	E	
	D	
	C	
	B	
	A	
74983-X02052LF SEE NOTE 15	GND	02
	H	
	G	
	F	
	E	
	D	
	C	
	B	
74983-X02053 *RPU	H	06
	G	
	F	
	E	
	D	
	C	
	B	
	A	
74983-X02053LF *RPU SEE NOTE 15	GND	06
	H	
	G	
	F	
	E	
	D	
	C	
	B	
74983-X02054	H	02
	G	
	F	
	E	
	D	
	C	
	B	
	A	
74983-X02054LF SEE NOTE 15	GND	02
	H	
	G	
	F	
	E	
	D	
	C	
	B	

PCB THICKNESS
RANGE FOR REAR
PLUG UP
APPLICATIONS:
4.00 - 5.30



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mat'l code SEE NOTE 5				tolerances unless otherwise specified				CUSTOMER		FCI www.fciconnect.com	
ltr	ecr no.	dr	date	linear	0.X ± 0.3		COPY		title VERTICAL SIGNAL HDR 8 ROW P.F. 96 POS. SPECIAL LOAD EXT.		
AA					0.XX ± 0.13		projection				
					.XXX ± .051						
				angles	0° ± 2°				product family METRAL 1000 code		
				dr	E. KROPER.	2001-01-15	MM		size	213	
				engr	J. VOLSTORF	2001-01-15			dwg no	5	
				chr	J. VOLSTORF	2001-01-15	scale		A	74983	
				appd	J. VOLSTORF	2001-01-15	1:1				
sheet index	revision sheet										

* REAR PLUG-UP PART NUMBERS

1 | 2

3 |

4

SPECIAL LOAD PATTERNS

PRODUCT #	ROW	PIN CODES
74983-X02056 *RPU	H	22
	G	
	F	
	E	
	D	
	C	
	B	
	A	
74983-X02056LF *RPU SEE NOTE 15	GND	22
	H	
	G	
	F	
	E	
	D	
	C	
	B	
74983-X02057	A	02
	GND	
	H	
	G	
	F	
	E	
	D	
	C	
74983-X02057LF SEE NOTE 15	B	02
	A	
	GND	
	H	
	G	
	F	
	E	
	D	
74983-X02058 *RPU	C	06
	B	
	A	
	GND	
	H	
	G	
	F	
	E	
74983-X02058LF *RPU SEE NOTE 15	D	06
	C	
	B	
	A	
	GND	
	H	
	G	
	F	
74983-X02059 **	E	03
	F	19
	D	04
	C	19
	B	04
	A	04
	GND	02
	H	03
74983-X02059LF ** SEE NOTE 15	G	03
	F	11
	E	41
	D	24
	C	41
	B	24
	A	24
	GND	49

PCB THICKNESS RANGE FOR REAR PLUG UP APPLICATIONS: 2.95 - 3.80

PCB THICKNESS RANGE FOR REAR PLUG UP APPLICATIONS: 4.00 - 5.30

PCB THK RANGE FOR REAR PLUG UP APPLICATIONS: *2.30 - 6.70

* REAR PLUG-UP PART NUMBERS
** CANNOT BE MATED TO A METRAL 4000 RECEPTACLE

SPECIAL LOAD PATTERNS

PRODUCT #	ROW	PIN CODES
74983-X02061 *RPU	H	35
	G	
	F	
	E	
	D	
	C	
	B	
	A	
74983-X02061LF *RPU SEE NOTE 15	GND	35
	H	
	G	
	F	
	E	
	D	
	C	
	B	
	A	05
	GND	

PCB THICKNESS RANGE FOR REAR PLUG UP APPLICATIONS: 4.05 - 5.70



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mat'l code SEE NOTE 5				tolerances unless otherwise specified		CUSTOMER	FCI www.fciconnect.com	
ltr	ecr no.	dr	date	linear	0.X ±0.3	COPY	title	
AA				linear	0.XX ±0.13	projection	VERTICAL SIGNAL HDR 8 ROW	
				angles	.XXX ±.051		P.F. 96 POS. SPECIAL LOAD EXT.	
				dr	0° ±2°		product family	METRAL 1000
				enrg	E. KROPER. 2001-01-15	scale	size	dwg no
				chr	J. VOLSTORF 2001-01-15	1:1	A	74983
				appd	J. VOLSTORF 2001-01-15		code	213
sheet index	revision sheet						sheet	6

Pro/E

3 |

cage code 22526

4

PRODUCT NUMBER

SEE SHEET 1

NOTES:

- 1. SEE APPLICATION SPECIFICATION GS-20-010 FOR INFORMATION ON AVAILABLE TOOLING, CURCUIT 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 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: PHOSPHER BRONZE
GROUND SPRING MATERIAL: PHOSPHER 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 OTHERS 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 IN THE HEADER DIRECTLY OPPOSE THE GROUND SPRING OF THE SHROUD. THE MIN PCB THICKNESS FROM 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 73983-X02ZZZLF



- 14. AFTER INSERTION INTO CIRCUIT BOARD WITH QUALIFIED TOOL.
- 15. THE 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 240°C FOR 60 SECONDS IN A CONVECTION, INFRA-RED OR VAPOR PHASE REFLOW OVEN.

- 16. PIN TYPE IS AT THE MANUFACTURERS OPTION AND CAN BE EITHER BABY-H OR EYE OF THE NEEDLE STYLE



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mat'l code SEE NOTE 5				tolerances unless otherwise specified		CUSTOMER		FCI www.fciconnect.com		
ltr	ecr no.	dr	date	linear	0.X ±0.3	COPY		title VERTICAL SIGNAL HDR 8 ROW P.F. 96 POS. SPECIAL LOAD EXT.	product family METRAL 1000	
AA					0.XX ±0.13	projection				code 213
					.XXX ±.051	MM				
				angles	0° ±2°	MM		size 74983	sheet 7	
				dr	E. KROPER. 2001-01-15	scale 1:1				
				engr	J. VOLSTORF 2001-01-15					
				chr	J. VOLSTORF 2001-01-15					
				appd	J. VOLSTORF 2001-01-15					
sheet index	revision sheet									

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Pro/E

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