

A

B

C

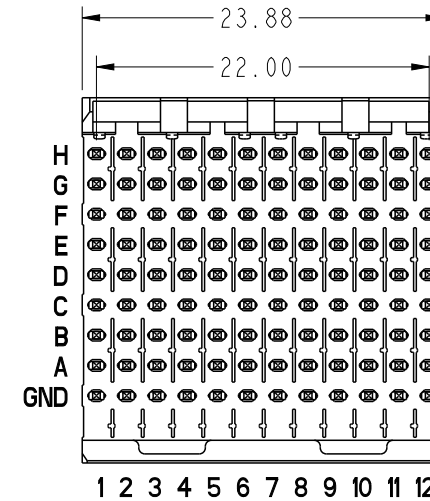
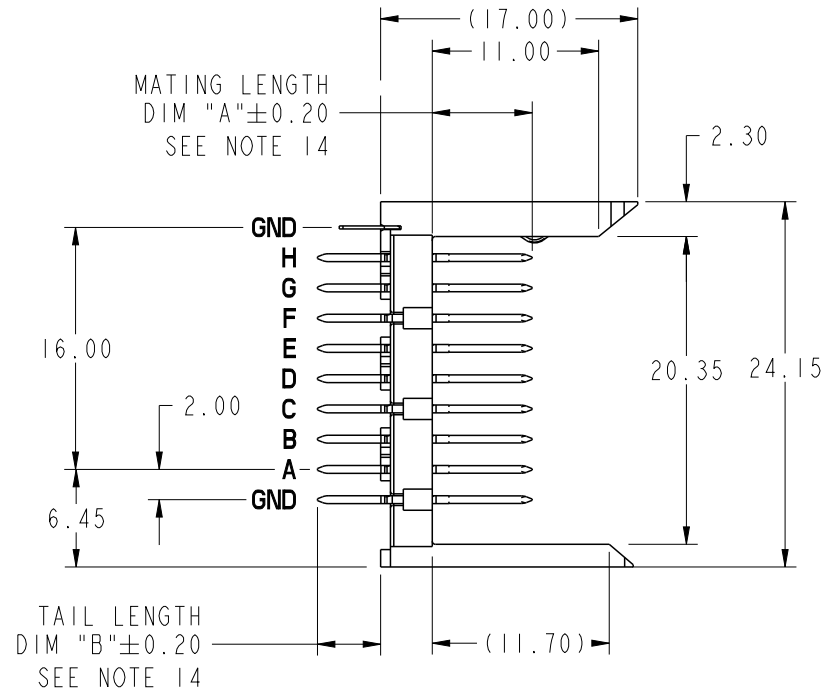
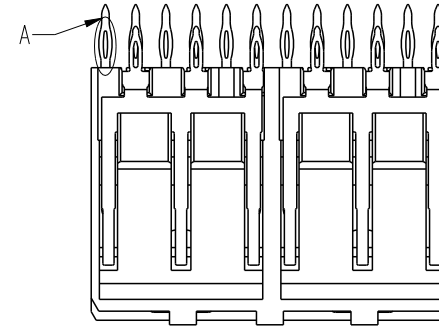
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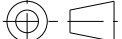
PRODUCT NUMBER	PLATING PERFORMANCE LEVEL	FOR REAR PLUG-UP APPLICATIONS USE SHROUD
10114820-1YYY	TELCORDIA CO	74993-102
10114820-1YYYLF	TELCORDIA CO	74993-102LF

EYE OF NEEDLE
PRESS FIT SECTION

DETAIL A
SCALE 4:1
SEE NOTE 16

SEE DETAIL A



spec ref -		dr P-Mathew Nebu		2012/05/11		projection 	MM 	size A4	scale 2:1	
tolerance std ISO 406 ISO 1101	TOLERANCES UNLESS OTHERWISE SPECIFIED			eng Stalin Alosius	2018/03/14			ecn no ELX-I-29544-1		
				chr -	-			rel level Released		
		appr K-Paul Biju		2018/03/14		product family METRAL 1000				
surface ISO 1302	linear	0.X	±0.3	Amphenol FCI	title VERTICAL SIGNAL HDR 8 ROW P.F. 96 POS. SELECT LOAD EXT.			dwg no 10114820	rev B	
		0.XX	±0.13							
		0.XXX	±0.051							
	angular	0°	±2°		cat. no. -	Product - Customer Drw			sheet 1 of 7	

A

B

C

D

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

spec ref -		dr P-Mathew Nebu		2012/05/11		projection 	MM 	size A4	scale 2:1	
tolerance std ISO 406 ISO 1101	TOLERANCES UNLESS OTHERWISE SPECIFIED			eng Stalin Alosius	2018/03/14			ecn no ELX-I-29544-1		
				chr -	-			rel level Released		
				appr K-Paul Biju		2018/03/14	product family METRAL 1000			
surface ISO 1302	linear	0.X	±0.3	Amphenol FCi	title VERTICAL SIGNAL HDR 8 ROW P.F. 96 POS. SELECT LOAD EXT.			dwg no 10114820	rev B	
		0.XX	±0.13							
		0.XXX	±0.051							
	angular	0°	±2°	cat. no. -	Product - Customer Drw			sheet 2 of 7		

A

B

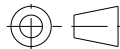
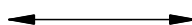
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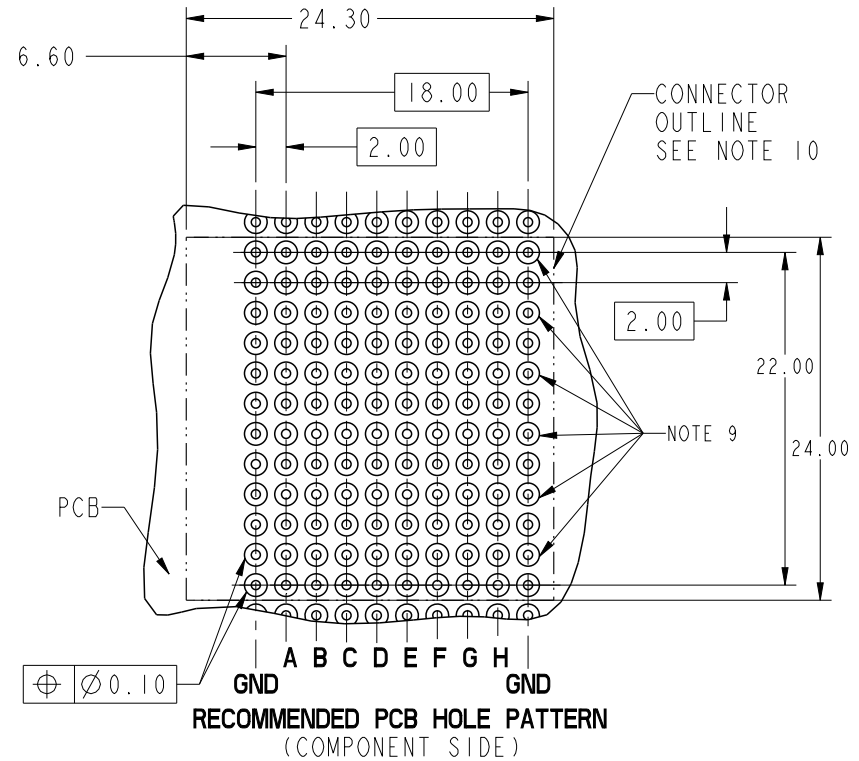
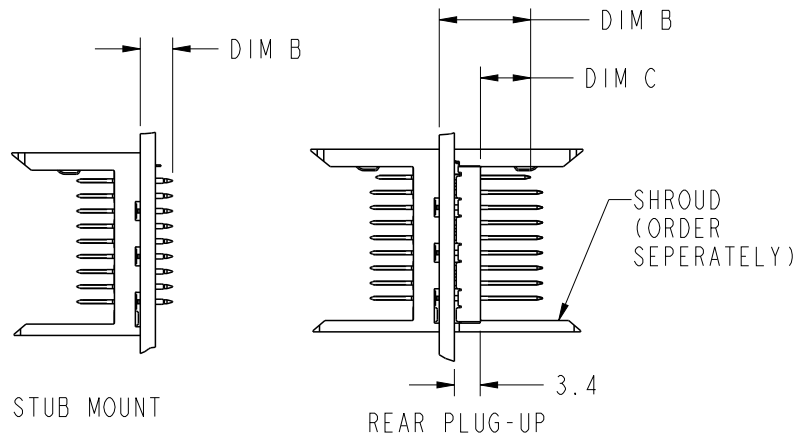
D

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.

spec ref -		dr P-Mathew Nebu		2012/05/11		projection 	MM 	size A4	scale 2:1		
tolerance std ISO 406 ISO 1101	TOLERANCES UNLESS OTHERWISE SPECIFIED		eng Stalin Alosius		2018/03/14			ecn no ELX-I-29544-1			
			chr -		-			rel level Released			
			appr K-Paul Biju		2018/03/14						product family METRAL 1000
surface ISO 1302	linear 	0.X	±0.3		Amphenol FCI	title VERTICAL SIGNAL HDR 8 ROW P.F. 96 POS. SELECT LOAD EXT.	dwg no 10114820	rev B			
		0.XX	±0.13								
		0.XXX	±0.051								
angular	0°	±2°			cat. no. -	Product - Customer Drw			sheet 3 of 7		

PRODUCT NUMBER
SEE SHEET 1* SEE PRINT 58351 FOR
ADDITIONAL PCB INFO.

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

spec ref	-	dr	P-Mathew Nebu	2012/05/11	projection	MM	size	A4	scale	1:1
tolerance std	ISO 406 ISO 1101	eng	Stalin Alosius	2018/03/14			ecn no	ELX-I-29544-1		
	TOLERANCES UNLESS OTHERWISE SPECIFIED	chr	-	-			rel level	Released		
		appr	K-Paul Biju	2018/03/14	product family					
surface	linear	0.X	± 0.3	Amphenol FCi	title	VERTICAL SIGNAL HDR 8 ROW P.F. 96 POS. SELECT LOAD EXT.	dwg no	10114820	rev	B
		0.XX	± 0.13							
		0.XXX	± 0.051							
ISO 1302	angular	0°	$\pm 2^\circ$		cat. no.	Product - Customer Drw			sheet 4 of 7	

PRODUCT NUMBER

SEE SHEET I

NOTES:

- SEE APPLICATION SPECIFICATION GS-20-010 FOR INFORMATION ON AVAILABLE TOOLING, CIRCUIT BOARD DESIGN CONSIDERATIONS, REPAIR PROCEDURES AND PRODUCT OFFERINGS.
- SEE FCI PUBLICATION 950511-028 FOR "ELECTRICAL PERFORMANCE DATA FOR DIFFERENTIAL APPLICATIONS."
- SEE FCI PUBLICATION 950511-028 FOR "ELECTRICAL PERFORMANCE DATA FOR SINGLE-ENDED APPLICATION."
- UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS AND TOLERANCES ARE IN ACCORDANCE WITH ASME Y14.5M, 1994
- HOUSING MATERIAL: LIQUID CRYSTAL POLYMER, 30% GLASS FILLED, FLAME RETARDANT PER UL 94-V0.
PIN MATERIAL: PHOSPHOR BRONZE
GROUND SPRING MATERIAL: PHOSPHOR BRONZE
- PLATING INFORMATION: PLATING ON CONTACT AREA MEETS THE PERFORMANCE LEVELS SHOWN IN TABLE ON SHEET I. PLATING ON "LF" TAILS IS Sn. PLATING ON ALL OTHER TAILS IS SnPb.
- 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
- 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.

- THESE HOLES ARE NEEDED FOR REAR PLUG-UP DESIGNS USING A SHROUD AND MAY BE OMITTED FOR FRONT PLUG-UP ONLY DESIGNS.
- 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

LEAD FREE (OPTIONAL)
SELECT LOAD PATTERN
PLATING CODE

- AFTER INSERTION INTO CIRCUIT BOARD WITH QUALIFIED TOOL.
- 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.

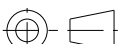
- PIN TYPE IS OF EYE OF THE NEEDLE STYLE

spec ref	-	dr	P-Mathew Nebu	2012/05/11	projection	MM	size	A4	scale	1:1
tolerance std	TOLERANCES UNLESS OTHERWISE SPECIFIED	eng	Stalin Alosius	2018/03/14			ecn no	ELX-I-29544-1		
ISO 406		chr	-	-			rel level	Released		
ISO 1101		appr	K-Paul Biju	2018/03/14	product family					
surface	linear	0.X	±0.3	Amphenol FCI	title	VERTICAL SIGNAL HDR 8 ROW	dwg no	10114820	rev	B
		0.XX	±0.13			P.F. 96 POS. SELECT LOAD EXT.				
		0.XXX	±0.051							
ISO 1302	angular	0°	±2°		cat. no.	Product - Customer Drw			sheet 5 of 7	

[illegible]

METRAL P/N	ROW	CONTACT CODE											
		1	2	3	4	5	6	7	8	9	10	11	12
10114820-X005	H	03	03	03	03	03	03	02	02	02	02	02	02
	G	03	03	03	03	03	03	02	02	02	02	02	02
	F	03	03	03	03	03	03	02	02	02	02	02	02
	E	03	03	03	03	03	03	02	02	02	02	02	02
	D	03	03	03	03	03	03	02	02	02	02	02	02
	C	03	03	03	03	03	03	02	02	02	02	02	02
	B	03	03	03	03	03	03	02	02	02	02	02	02
	A	03	03	03	03	03	03	02	02	02	02	02	02
	GND	01	01	01	01	01	01	01	01	01	01	01	01
FOR LEAD FREE SEE NOTE 15													
METRAL P/N	ROW	CONTACT CODE											
		1	2	3	4	5	6	7	8	9	10	11	12
10114820-X006	H	01	02	02	02	02	02	01	02	02	02	02	03
	G	01	02	02	02	02	02	01	02	02	02	02	03
	F	01	02	02	02	02	02	01	02	02	02	02	03
	E	02	02	02	02	02	02	02	02	02	02	02	03
	D	02	02	02	02	02	02	02	02	02	02	02	03
	C	02	02	02	02	02	02	02	02	02	02	02	03
	B	02	02	02	02	02	02	02	02	02	02	02	03
	A	02	02	02	02	02	02	02	02	02	02	02	03
	GND	01	01	01	01	01	01	01	01	01	01	01	01
FOR LEAD FREE SEE NOTE 15													
METRAL P/N	ROW	CONTACT CODE											
		1	2	3	4	5	6	7	8	9	10	11	12
10114820-X007	H	02	02	02	02	02	02	02	02	02	02	02	02
	G	01	01	01	01	01	01	01	01	01	01	01	01
	F	02	02	02	02	02	02	02	02	02	02	02	02
	E	02	02	02	02	02	02	02	02	02	02	02	02
	D	02	02	02	02	02	02	02	02	02	02	02	02
	C	01	01	01	01	01	01	01	01	01	01	01	01
	B	02	02	02	02	02	02	02	02	02	02	02	02
	A	02	02	02	02	02	02	02	02	02	02	02	02
	GND	01	01	01	01	01	01	01	01	01	01	01	01
FOR LEAD FREE SEE NOTE 15													
METRAL P/N	ROW	CONTACT CODE											
		1	2	3	4	5	6	7	8	9	10	11	12
10114820-X008	H	02	02	02	01	02	02	02	02	02	02	02	02
	G	02	02	02	01	02	02	02	02	02	02	02	02
	F	02	02	02	01	02	02	02	02	02	02	02	02
	E	02	02	02	01	02	02	02	02	02	02	02	02
	D	02	02	02	02	02	02	02	02	02	02	02	02
	C	02	02	02	01	02	02	02	02	02	02	02	02
	B	02	02	02	01	02	02	02	02	02	02	02	02
	A	02	02	02	01	02	02	02	02	02	02	02	02
	GND	01	01	01	01	01	01	01	01	01	01	01	01
FOR LEAD FREE SEE NOTE 15													

[illegible]

spec ref		-		dr	P-Mathew Nebu	2012/05/11	projection 	MM 	size	A4	scale	1:1
tolerance std ISO 406 ISO 1101	TOLERANCES UNLESS OTHERWISE SPECIFIED			eng	Stalin Alosius	2018/03/14			ecn no	ELX-I-29544-1		
				chr	-	-						
				appr	K-Paul Biju	2018/03/14			product family		rel level Released	
surface  ISO 1302	linear	0.X	±0.3	Amphenol FCI	title	VERTICAL SIGNAL HDR 8 ROW P.F. 96 POS. SELECT LOAD EXT.			dwg no	10114820		rev B
		0.XX	±0.13									
		0.XXX	±0.051									
	angular	0°	±2°		cat. no.	Product - Customer Drw				sheet 6 of 7		

METRAL P/N	ROW	CONTACT CODE											
		1	2	3	4	5	6	7	8	9	10	11	12
10114820-X013 FOR LEAD FREE SEE NOTE 15	H	01	02	02	02	02	02	02	02	04	04	03	03
	G	02	02	02	02	02	02	02	02	04	04	03	03
	F	02	02	02	02	02	02	02	02	04	04	03	03
	E	02	02	02	02	02	02	02	02	04	04	04	04
	D	02	02	02	02	02	02	02	02	04	04	04	04
	C	02	02	02	02	02	02	02	02	04	04	04	04
	B	02	02	02	02	02	02	02	02	04	04	04	04
	A	02	02	02	02	02	02	02	02	04	04	04	04
	GND	01	01	01	01	01	01	01	01	01	01	01	01
METRAL P/N	ROW	CONTACT CODE											
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10114820-X014 FOR LEAD FREE SEE NOTE 15	H	02	02	02	02	02	02	02	02	02	02	02	02
	G	02	02	02	02	02	02	02	02	02	02	02	02
	F	02	02	02	02	02	02	02	02	02	02	02	02
	E	02	02	02	02	02	02	02	02	02	02	02	02
	D	02	02	02	02	02	02	02	02	02	02	02	02
	C	02	02	02	02	02	02	02	02	02	02	02	02
	B	02	02	02	02	02	02	02	02	02	02	02	02
	A	02	02	02	02	02	02	02	02	02	02	02	01
	GND	01	01	01	01	01	01	01	01	01	01	01	01
METRAL P/N	ROW	CONTACT CODE											
		1	2	3	4	5	6	7	8	9	10	11	12
10114820-X015 FOR LEAD FREE SEE NOTE 15	H	02	02	02	02	02	02	02	02	02	02	02	02
	G	02	02	02	02	02	02	02	02	02	02	02	02
	F	02	02	02	02	02	02	02	02	02	02	02	02
	E	02	02	02	02	02	02	02	02	02	02	02	02
	D	06	06	06	06	06	06	06	06	06	06	06	06
	C	06	06	06	06	06	06	06	06	06	06	06	06
	B	06	06	06	06	06	06	06	06	06	06	06	06
	A	06	06	06	06	06	06	06	06	06	06	06	06
	GND	05	05	05	05	05	05	05	05	05	05	05	05
METRAL P/N	ROW	CONTACT CODE											
		1	2	3	4	5	6	7	8	9	10	11	12
10114820-X016 FOR LEAD FREE SEE NOTE 15	H	06	06	06	06	06	06	06	06	06	06	06	06
	G	06	06	06	06	06	06	06	06	06	06	06	06
	F	06	06	06	06	06	06	06	06	06	06	06	06
	E	06	06	06	06	06	06	06	06	06	06	06	06
	D	06	06	06	06	06	06	06	06	06	06	06	06
	C	06	06	06	06	06	06	06	06	06	06	06	06
	B	06	06	06	06	06	06	06	06	06	06	06	06
	A	02	02	02	02	06	06	06	06	06	06	06	06
	GND	05	05	05	05	05	05	05	05	05	05	05	05

spec ref -		dr P-Mathew Nebu		2012/05/11		projection 	MM 	size A4	scale 1:1	
tolerance std ISO 406 ISO 1101	TOLERANCES UNLESS OTHERWISE SPECIFIED			eng Stalin Alosius	2018/03/14			ecn no ELX-I-29544-1		
				chr -	-			rel level Released		
		appr K-Paul Biju		2018/03/14		product family				
surface 	linear	0.X	±0.3	Amphenol FCi	title VERTICAL SIGNAL HDR 8 ROW P.F. 96 POS. SELECT LOAD EXT.	dwg no 10114820	rev B			
		0.XX	±0.13							
		0.XXX	±0.051							
	ISO 1302	angular	0°						±2°	cat. no.