

A

B

C

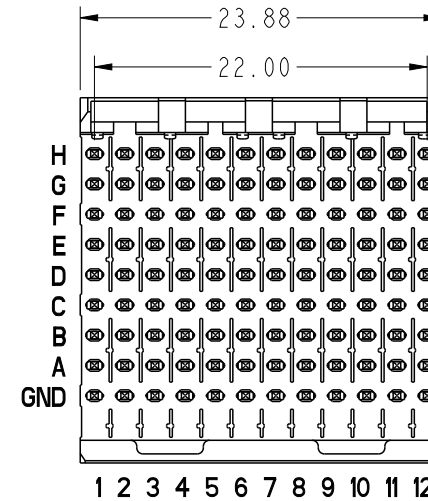
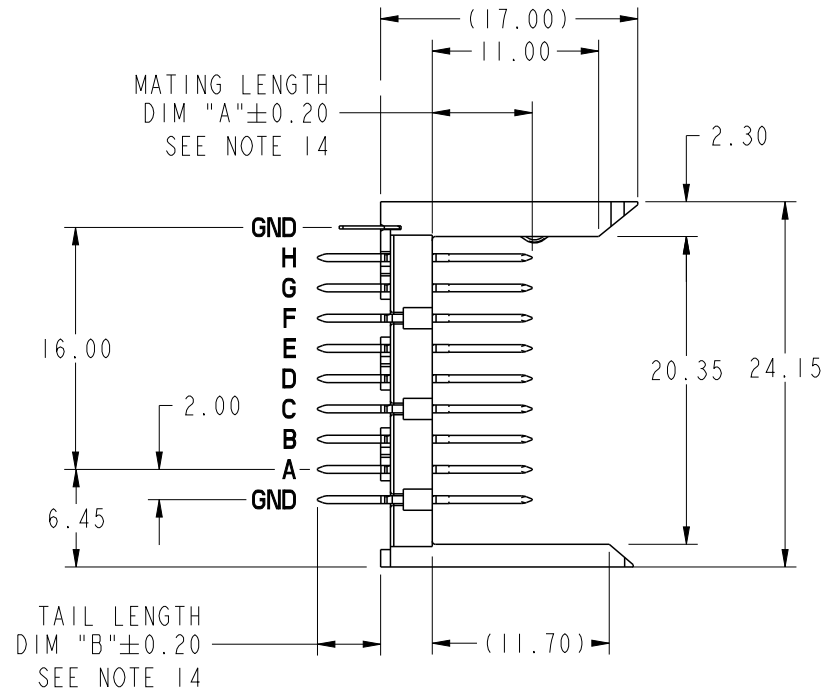
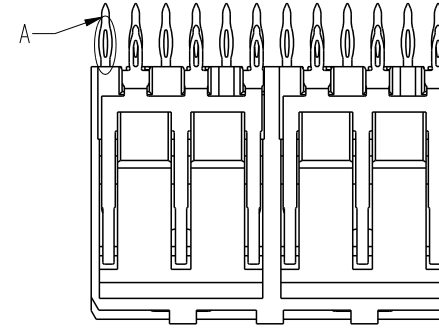
D

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

Creo File - REV E - 2016-02-12

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

C

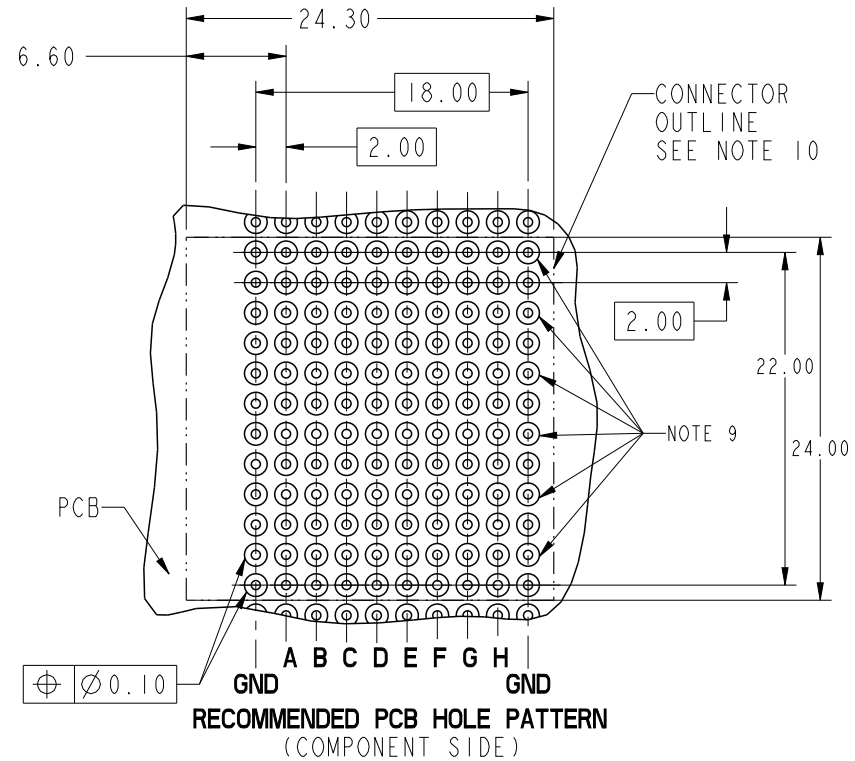
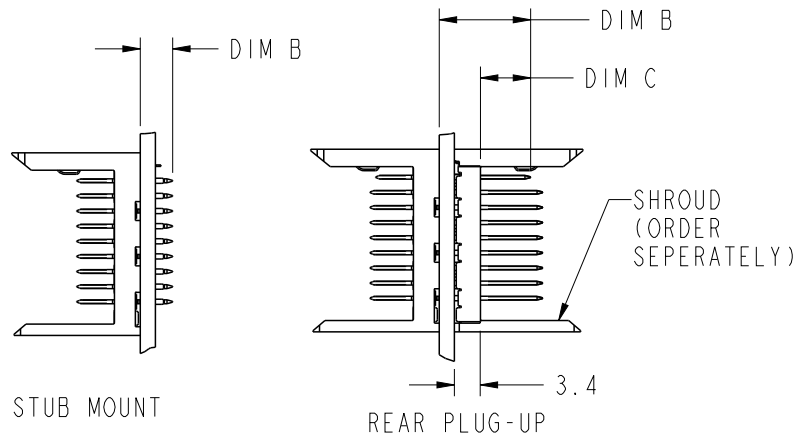
D

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		TOLERANCES UNLESS OTHERWISE SPECIFIED	eng	Stalin Alosius	2018/03/14			ecn no ELX-I-29544-1			
ISO 406 ISO 1101			chr	-	-			rel level Released			
surface -			appr	K-Paul Biju	2018/03/14	product family		METRAL 1000			
linear		0.X	±0.3	Amphenol FCi	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	
ISO 1302											

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	TOLERANCES UNLESS OTHERWISE SPECIFIED			eng	Stalin Alosius	2018/03/14					ecn no	ELX-I-29544-1		
				chr	-	-								
ISO 406				appr	K-Paul Biju	2018/03/14	product family			rel level Released				
ISO 1101														
surface	linear	0.X	±0.3	Amphenol FCI	title	VERTICAL SIGNAL HDR 8 ROW			dwg no	10114820		rev	B	
		0.XX	±0.13											
		0.XXX	±0.051											
ISO 1302	angular	0°	±2°		cat. no.	Product - Customer Drw			sheet 4 of 7					

PRODUCT NUMBER

SEE SHEET I

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 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 I. 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

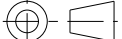
13. P/N 10114820-XXXXLF

LEAD FREE (OPTIONAL)
SELECT LOAD PATTERN
PLATING CODE

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

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 5 of 7		

A

B

C

D

METRAL P/N	ROW	CONTACT CODE											
		1	2	3	4	5	6	7	8	9	10	11	12
10114820-X013	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											
		1	2	3	4	5	6	7	8	9	10	11	12
10114820-X014	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	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	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 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		sheet 7 of 7	
		0.XX	±0.13							
		0.XXX	±0.051							
	angular	0°	±2°							cat. no.