

spec ref -		dr P-Mathew Nebu 2012/05/11		projection 	MM ←→	size A4	scale 2:1		
tolerance std ISO 406 ISO 1101		eng Rahul Mohan-M 2021/08/16				ecn no ELX-I-41745-1			
TOLERANCES UNLESS OTHERWISE SPECIFIED		chr -				rel level Released			
surface -		appr Kuriakose, San 2021/08/16		product family METRAL 1000		rev			
ISO 1302	linear	0.X	±0.3	Amphenol FCi		VERTICAL SIGNAL HDR 8 ROW		dwg no 10114820	rev D
		0.XX	±0.13						
		0.XXX	±0.051						
	angular	0°	±2°	cat. no. -		Product - Customer Drw		sheet 1 of 7	

Creo F:14:ELX-NC:AC, REV F, 2020-12-21

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 Rahul Mohan-M	2021/08/16			ecn no ELX-I-41745-1		
		chr -	-					
surface ISO 1302	linear	0.X	±0.3	product family METRAL 1000	rel level Released			
		0.XX	±0.13					
		0.XXX	±0.051					
	angular	0°	±2°	Amphenol FCI		VERTICAL SIGNAL HDR 8 ROW	10114820	rev D
		cat. no. -		Product - Customer Drw		sheet 2 of 7		

Creo F-119;ELX-MC;AC;REV F;2020-12-21

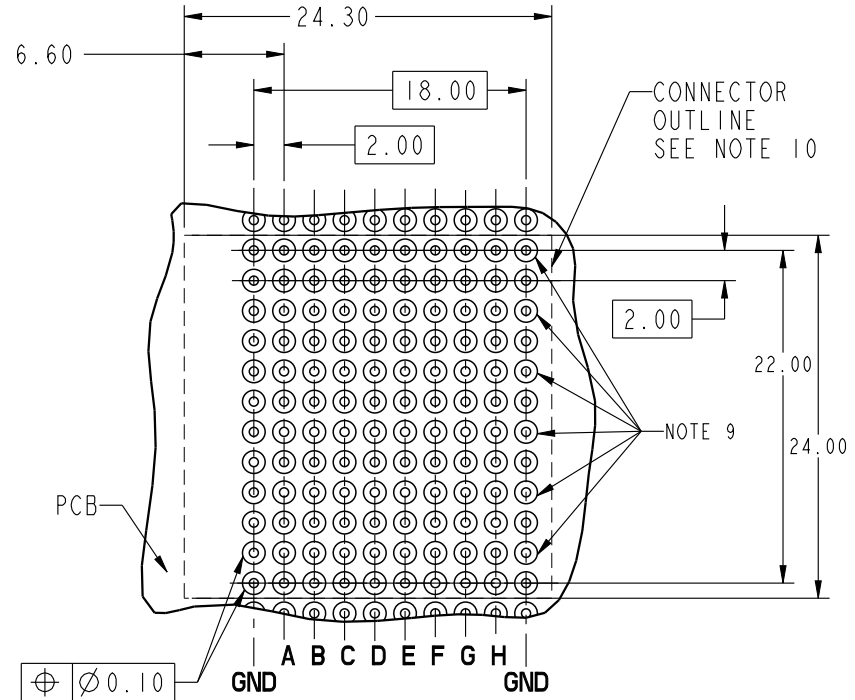
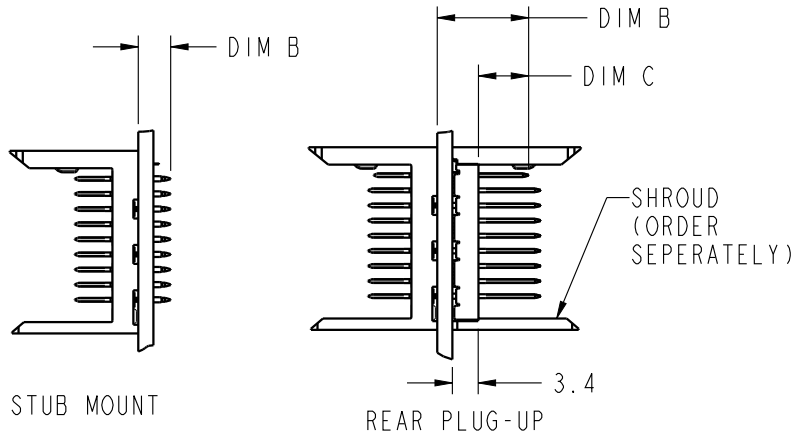
PIN NO.	DIM A MATING LENGTH	DIM B TAIL LENGTH	PCB THICKNESS RANGE ACCOMMODATED BY PIN LENGTH				
			WHEN MATING TO A 74981 SERIES RECEPTACLE		WHEN MATING TO A 52066 SERIES METRAL 4000 RECEPTACLE		
			ROWS A,B,C, D,E,F,G & H	GROUND ROW	ROWS:A,B, D,E,G & H	ROW C & F	GROUND ROW
04*	7.25	4.30	1.60 MIN	1.60 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
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 Rahul Mohan-M	2021/08/16			ecn no ELX-I-41745-1	
		chr -	-			rel level Released	
surface ISO 1302	linear	0.X	±0.3	Amphenol FCI	VERTICAL SIGNAL HDR 8 ROW	dwg no 10114820	rev D
		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




RECOMMENDED PCB HOLE PATTERN
(COMPONENT SIDE)
FOR PTH DETAILS REFER DRAWING 58351

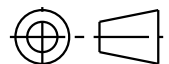

spec ref		-		dr	P-Mathew Nebu	2012/05/11	projection 	MM 	size	A4	scale	1:1
tolerance std		TOLERANCES UNLESS OTHERWISE SPECIFIED		eng	Rahul Mohan-M	2021/08/16			ecn no	ELX-I-41745-1		
ISO 406 ISO 1101				chr	-	-				rel level		Released
surface	linear	0.X	±0.3	Amphenol FCI	title	VERTICAL SIGNAL HDR 8 ROW		dwg no	10114820		rev	D
		0.XX	±0.13			P.F. 96 POS. SELECT LOAD EXT.						
		0.XXX	±0.051			cat. no.						
ISO 1302	angular	0°	±2°									

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. MATERIAL : BODY : THERMOPLASTIC UL94-V0.
: CONTACT : COPPER ALLOY.
6. FOR PLATING PERFORMANCE REFER DRAWING # 10159408.
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. AFTER INSERTION INTO CIRCUIT BOARD WITH QUALIFIED TOOL.
12. PRODUCTS MEET EUROPEAN UNION DIRECTIVES AND OTHER COUNTRY REGULATIONS AS DESCRIBED IN GS-47-0004.
13. ALL PRODUCTS WILL WITHSTAND EXPOSURE TO 260°C FOR 60 SECONDS IN A CONVECTION, INFRA-RED OR VAPOR PHASE REFLOW OVEN.
14. A  SYMBOL WILL BE NEXT TO ANY DIMENSION, VIEW, OR NOTE WHICH HAS BEEN MODIFIED WITH THE CURRENT DRAWING REVISION.

spec ref		-		dr	P-Mathew Nebu	2012/05/11	projection 	MM 	size	A4	scale	1:1
tolerance std		TOLERANCES UNLESS OTHERWISE SPECIFIED		eng	Rahul Mohan-M	2021/08/16			ecn no	ELX-I-41745-1		
ISO 406 ISO 1101				chr	-	-			rel level	Released		
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 D	
		0.XX	±0.13									
		0.XXX	±0.051									
ISO 1302	angular	0°	±2°	cat. no.	Product - Customer Drw			sheet 5 of 7				

A

B

C

D

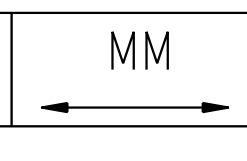
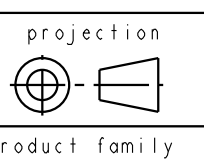
METRAL P/N	ROW	CONTACT CODE											
		1	2	3	4	5	6	7	8	9	10	11	12
10114820-X001LF	H	01	02	02	02	02	02	01	02	02	02	02	03
	G	02	02	02	02	02	02	02	02	02	02	02	03
	F	02	02	02	02	02	02	02	02	02	02	02	03
	E	02	02	02	02	02	02	02	02	02	02	02	03
	D	02	02	02	02	02	02	02	02	02	02	02	03
	C	02	02	02	02	02	02	02	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

METRAL P/N	ROW	CONTACT CODE											
		1	2	3	4	5	6	7	8	9	10	11	12
10114820-X005LF	H	03	03	03	03	03	03	02	02	02	02	02	
	G	03	03	03	03	03	03	02	02	02	02	02	
	F	03	03	03	03	03	03	02	02	02	02	02	
	E	03	03	03	03	03	03	02	02	02	02	02	
	D	03	03	03	03	03	03	02	02	02	02	02	
	C	03	03	03	03	03	03	02	02	02	02	02	
	B	03	03	03	03	03	03	02	02	02	02	02	
	A	03	03	03	03	03	03	02	02	02	02	02	
	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-X009LF	H	01	02	02	02	02	02	02	02	02	02	02	
	G	02	02	02	02	02	02	02	02	02	02	02	
	F	02	02	02	02	02	02	02	02	02	02	02	
	E	03	02	02	02	02	02	02	02	02	02	02	
	D	03	02	02	02	02	02	02	02	02	02	02	
	C	03	02	02	02	02	02	02	02	02	02	02	
	B	03	02	02	02	02	02	02	02	02	02	02	
	A	03	02	02	02	02	02	02	02	02	02	02	
	GND	01	01	01	01	01	01	01	01	01	01	01	01

spec ref		-	
tolerance std	ISO 406 ISO 1101	TOLERANCES UNLESS OTHERWISE SPECIFIED	
surface	linear angular	0.X 0.XX 0.XXX	±0.3 ±0.13 ±0.051
		0°	±2°

dr	P-Mathew Nebu	2012/05/11
eng	Rahul Mohan-M	2021/08/16
chr	-	-
appr	Kuriakose, San	2021/08/16



size	A4	scale	1:1
ecn no	ELX-I-41745-1	rel level	Released

Amphenol FCI	VERTICAL SIGNAL HDR 8 ROW P.F. 96 POS. SELECT LOAD EXT.	dwg no	10114820	rev	D
cat. no.	Product - Customer Drw	sheet	6 of 7		

A

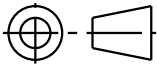

B

C

D

Creo F11x:ELX-MC;REV F, 2020-12-21

METRAL P/N	ROW	CONTACT CODE											
		1	2	3	4	5	6	7	8	9	10	11	12
10114820-X013LF	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											
10114820-X014LF	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											
10114820-X015LF	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											
10114820-X016LF	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	Rahul Mohan-M	2021/08/16			ecn no	ELX-I-41745-1		
		chr	-	-			rel level	Released		
surface ✓ ISO 1302	linear 0.X ±0.3 0.XX ±0.13 0.XXX ±0.051 angular 0° ±2°	appr	Kuriakose, San	2021/08/16	product family		rev	D		
		Amphenol FCI title VERTICAL SIGNAL HDR 8 ROW P.F. 96 POS. SELECT LOAD EXT.		cat. no.		Product - Customer Drw		dwg no 10114820	sheet 7 of 7	

Creo F-114;ELX-NC;AAC;REV F;2020-12-21