

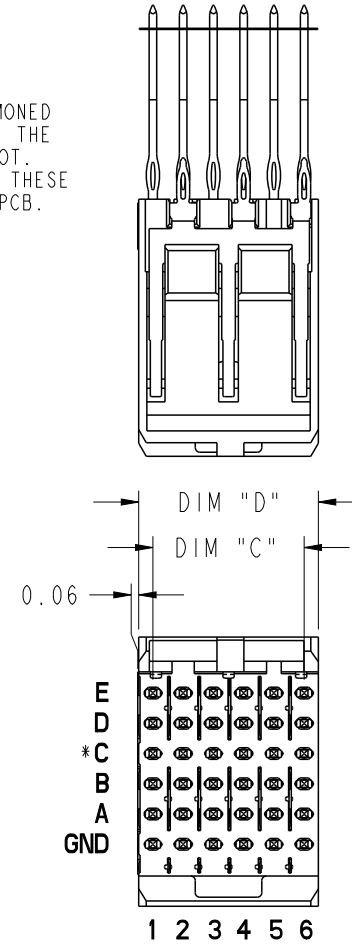
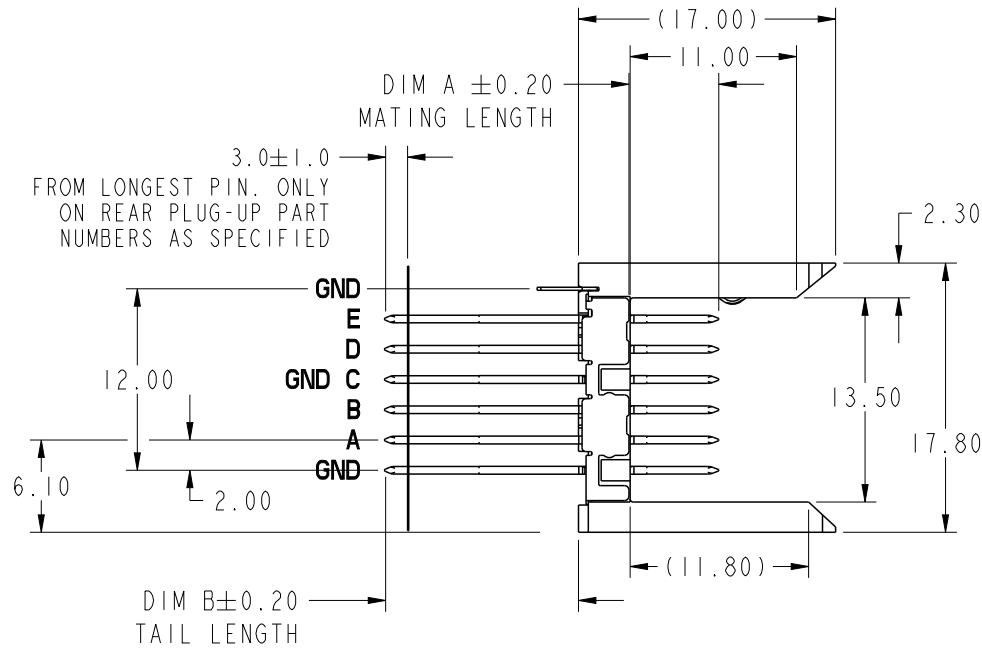
PRODUCT NUMBER

SEE BELOW AND TABLE ON SHEET 2

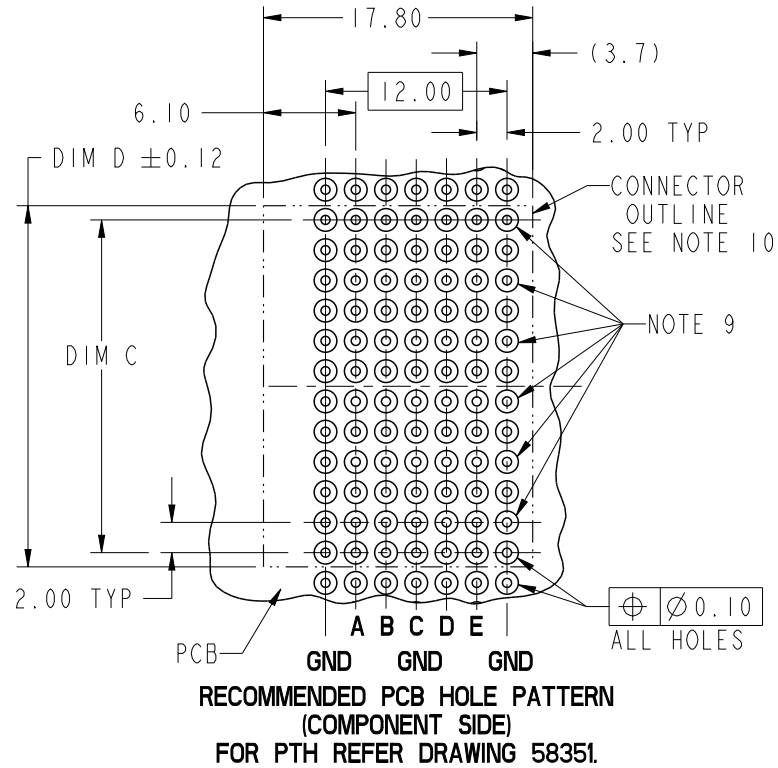
74977 - X YY ZZZ (L) LE
LEAD FREE
L REFER LUBRICATED (OPTIONAL)
SEE NOTE 6
SPECIAL LOAD PATTERN
SEE SHEETS 6-7
SIZE, SEE SHEET 2
X REFER PLATING PERFORMANCE
SEE NOTE 6

*ROW C INFORMATION

ODD NUMBER COLUMNS WITHIN ROW C ARE COMMONED TO GROUND INTERNALLY WITHIN THE HOUSING. THE EVEN NUMBER COLUMNS WITHIN ROW C ARE NOT. FOR MAXIMUM PERFORMANCE IT IS RECOMMENDED THESE EVEN COLUMNS BE GROUND COMMONED WITHIN PCB. SEE NOTE 11.



spec ref		dr		P-Mathew Nebu	2011/05/20	projection	MM	size	A4	scale	1:1	
tolerance std	TOLERANCES UNLESS OTHERWISE SPECIFIED			eng	Nirmal Sam-MB			2022/06/20	ecn no			ELX-I-45099-1
				chr	-			-	rel level			Released
ISO 406				appr	Kuriakose, San	2022/06/20	product family		METRAL 2000			
ISO 1101												
surface	linear	0.X	±0.3	Amphenol FCI	title			dwg no			rev	
		0.XX	±0.13									
		0.XXX	±0.050									
ISO 1302	angular	0°	±2°	amphenol-icc.com	cat. no.		Product - Customer Drw			sheet 1 of 8		
				VERTICAL SIGNAL HDR 5 ROW			74977			AH		
				PRESS-FIT, SPECIAL LOAD, STD.								



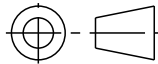
PRODUCT NUMBER	SHROUD TO USE FOR REAR PLUG-UP APPLICATIONS	LENGTH DIM D	PIN FIELD DIM C	CONNECTOR SIZE
74977-X01ZZZLF	84621-X01LF	11.88	10.00	1 MOD
74977-X02ZZZLF	84621-X02LF	23.88	22.00	2 MOD
74977-X03ZZZLF	84621-X03LF	35.88	34.00	3 MOD
74977-X04ZZZLF	84621-X04LF	47.88	46.00	4 MOD

X REFER PLATING PERFORMANCE
SEE NOTE 6

spec ref				dr	P-Mathew Nebu	2011/05/20	projection	MM	size	A4	scale	1:1			
tolerance std	TOLERANCES UNLESS OTHERWISE SPECIFIED			eng	Nirmal Sam-MB	2022/06/20			ecn no	ELX-I-45099-1					
				chr	-	-			rel level			Released			
				appr		Kuriakose, San			2022/06/20	product family		METRAL 2000			
surface	linear	0.X	±0.3	Amphenol FCI	title				VERTICAL SIGNAL HDR 5 ROW		dwg no	74977		rev	AH
		0.XX	±0.13												
		0.XXX	±0.050												
	ISO 1302	angular	0°	±2°	amphenol-icc.com	cat. no.			Product - Customer Drw			sheet 2 of 8			

NOTES:

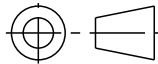
1. SEE APPLICATION SPECIFICATION GS-20-010 FOR INFORMATION ON AVAILABLE TOOLING, CIRCUIT BOARD DESIGN CONSIDERATIONS, REPAIR PROCEDURES AND PRODUCT OFFERINGS.
2. SEE FCI PUBLICATION 950511-028 FOR "ELECTRICAL PERFORMANCE DATA FOR DIFFERENTIAL APPLICATIONS."
3. SEE FCI PUBLICATION 950511-029 FOR "ELECTRICAL PERFORMANCE DATA FOR SINGLE-ENDED APPLICATION."
4. UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS AND TOLERANCES ARE IN ACCORDANCE WITH ASME Y14.5, 1994
5. MATERIAL : BODY : THERMOPLASTIC UL94-V0.
: CONTACT : COPPER ALLOY.
6. FOR PLATING PERFORMANCE REFER DRAWING # 10159408
7. DIMENSIONAL RESTRICTIONS OF PINS IN HEADERS.
DIM A : 5.0mm MIN, 8.0mm MAX FOR ROWS A-E
DIM A : 5.0mm MIN, 6.3mm MAX FOR ROW GND NEXT TO ROW A
DIM C : 5.0mm MIN, 8.0mm MAX FOR ROWS A-E
DIM C : 4.6mm MIN, 6.3mm MAX FOR ROW GND NEXT TO ROW A
8. THE MIN PCB THICKNESS FOR REAR PLUG-UP APPLICATIONS IS 2.9mm SINCE THE COMPLAINT 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. FOR FRONT PLUG-UP APPLICATIONS, THE EVEN NUMBERED PINS IN ROW 'C' CAN BE USED FOR POWER AS WELL AS FOR GROUND. IF THE SURROUNDING PINS ARE NOT USED FOR POWER, THEN EACH PIN CAN CARRY 3 AMPS. IF THE SURROUNDING PINS ARE USED FOR POWER, THEN EACH PIN CAN CARRY 1 AMP. WHEN THE SURROUNDING PINS ARE USED ONLY FOR LOW SPEED SIGNALS, THEN THE EVEN NUMBERED 'C' ROW PINS CAN ALSO BE USED FOR LOW SPEED SIGNALS. THIS IS NOT TRUE FOR REAR PLUG-UP APPLICATIONS USING METRAL 2000 SHROUD AS IN THIS CASE ALL 'C' ROW PINS ARE COMMON TO GROUND.
12. THE 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	2011/05/20			size	A4	scale	1:1		
tolerance std ISO 406 ISO 1101	TOLERANCES UNLESS OTHERWISE SPECIFIED			eng	Nirmal Sam-MB			2022/06/20	ecn no				ELX-I-45099-1
				chr	-			-	rel level				Released
				appr	Kuriakose, San			2022/06/20	product family		METRAL 2000		
surface ISO 1302		linear	0.X	±0.3		title	VERTICAL SIGNAL HDR 5 ROW PRESS-FIT, SPECIAL LOAD, STD.		dwg no	74977		rev	AH
			0.XX	±0.13									
			0.XXX	±0.050									
		angular	0°	±2°	amphenol-icc.com	cat. no.	Product - Customer Drw			sheet 3 of 8			

PIN NO.	DIM A MATING LENGTH	DIM B TAIL LENGTH	PCB THICKNESS RANGE ACCOMMODATED BY PIN'S TAIL LENGTH				
			WHEN MATING TO A 73981 OR 84688 SERIES RECEPTACLE		WHEN MATING TO A 52057 SERIES METRAL 4000 RECEPTACLE		
			ROWS A,B,C,D,E	GROUND ROW	ROWS:A,B,D,E	ROW C	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

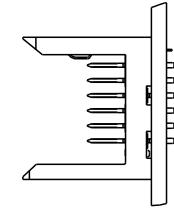
* STUB PINS - NO REAR PLUG-UP

** THE GREATEST RANGE OCCURS WHEN THE B DIMENSION OF
PIN 'GND' IS ONE SIZE SHORTER THAN THE OTHER PINS.

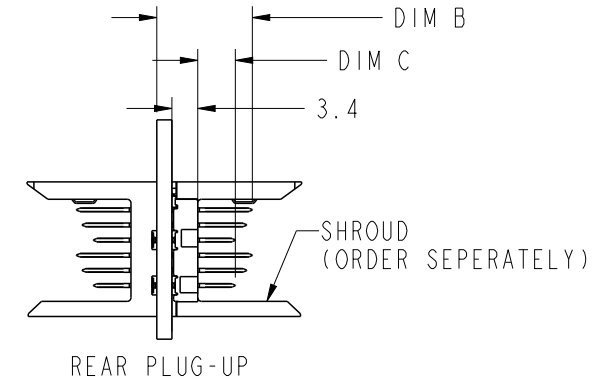
spec ref		dr		P-Mathew Nebu	2011/05/20	projection 	MM 	size	A4	scale	1:1	
tolerance std	TOLERANCES UNLESS OTHERWISE SPECIFIED		eng	Nirmal Sam-MB	2022/06/20			ecn no	ELX-I-45099-1			
			chr	-	-			rel level	Released			
ISO 406 ISO 1101		appr		Kuriakose, San	2022/06/20	product family		METRAL 2000				
surface	linear	0.X	±0.3	Amphenol FCI	title	VERTICAL SIGNAL HDR 5 ROW		dwg no	74977		rev	AH
		0.XX	±0.13									
		0.XXX	±0.050									
ISO 1302	angular	0°	±2°	amphenol-icc.com	cat. no.	Product - Customer Drw			sheet 4 of 8			

Crea File:ELX-MC-AAC,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 73981 OR 84688 SERIES RECEPTACLE		WHEN MATING TO A 52057 SERIES METRAL 4000 RECEPTACLE		
			ROWS A,B,C,D,E	GROUND ROW	ROWS:A,B,D,E	ROW C	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 MOUNT



spec ref		dr		P-Mathew Nebu	2011/05/20	projection	MM	size	A4	scale	1:1		
tolerance std	TOLERANCES UNLESS OTHERWISE SPECIFIED			eng	Nirmal Sam-MB			2022/06/20	ecn no	ELX-I-45099-1			
				chr	-			-		rel level	Released		
ISO 406 ISO 1101		appr		Kuriakose, San	2022/06/20	product family							
surface	linear	0.X	±0.3	Amphenol FCi	title	VERTICAL SIGNAL HDR 5 ROW PRESS-FIT, SPECIAL LOAD, STD.			dwg no	74977		rev	AH
		0.XX	±0.13										
		0.XXX	±0.050										
	ISO 1302	angular	0°	±2°	amphenol-icc.com	cat. no.	Product - Customer Drw			sheet 5 of 8			

SPECIAL LOAD PATTERNS

PRODUCT #	ROW	PIN CODES
74977-XY001LF	E	01
	D	
	C	
	B	
	A	
	GND	
74977-XY002LF *RPU	E	22
	D	
	C	
	B	
	A	
	GND	
74977-XY003LF *RPU	E	30
	D	
	C	
	B	
	A	
	GND	
74977-XY011LF	E	02
	D	
	C	
	B	
	A	
	GND	
	GND	01

PCB THICKNESS
RANGE FOR REAR
PLUG UP
APPLICATIONS
2.95 TO 3.80mm

PCB THICKNESS
RANGE FOR REAR
PLUG UP
APPLICATIONS
3.25 TO 4.55mm

74977-XY012LF *RPU	E	OBSOLETE
	D	
	C	
	B	
	A	
	GND	
74977-XY013LF *RPU	E	06
	D	
	C	
	B	
	A	
	GND	
74977-XY021LF	E	03
	D	
	C	
	B	
	A	
	GND	
74977-XY050LF	E	02
	D	
	C	
	B	
	A	
	GND	

PCB THICKNESS RANGE
FOR REAR PLUG UP
APPLICATIONS 2.95 TO 3.80mm

PCB THICKNESS
RANGE FOR REAR
PLUG UP
APPLICATIONS
3.25 TO 4.55mm

74977-XY051LF *RPU	E	OBSOLETE
	D	
	C	
	B	
	A	
	GND	

PCB THICKNESS
RANGE FOR REAR
PLUG UP
APPLICATIONS
5.50 TO 7.20mm

* REAR PLUG-UP PART NUMBER

spec ref		dr		P-Mathew Nebu	2011/05/20	projection	MM	size	A4	scale	1:1	
tolerance std ISO 406 ISO 1101	TOLERANCES UNLESS OTHERWISE SPECIFIED			eng	Nirmal Sam-MB			2022/06/20	ecn no			ELX-I-45099-1
				chr	-			-	rel level			Released
				appr	Kuriakose, San	2022/06/20	product family			METRAL 2000		
surface ISO 1302 ✓	linear	0.X	±0.3	Amphenol FCI	title VERTICAL SIGNAL HDR 5 ROW PRESS-FIT, SPECIAL LOAD, STD.			dwg no	74977		rev AH	
		0.XX	±0.13									
		0.XXX	±0.050									
	angular	0°	±2°	amphenol-icc.com	cat. no.		Product - Customer Drw			sheet 6 of 8		

SPECIAL LOAD PATTERNS

PRODUCT #	ROW	PIN CODES
74977-XY052LF	E	01
	D	
	C	03
	B	01
	A	
	GND	
74977-XY053LF	E	02
	D	
	C	
	B	
	A	
	GND	-
74977-XY054LF *RPU	E	25
	D	
	C	
	B	
	A	
	GND	-
74977-XY055LF *RPU	E	06
	D	
	C	
	B	
	A	
	GND	02

PCB THICKNESS
RANGE FOR REAR
PLUG UP
APPLICATIONS
*4.30 TO 7.30mm

PCB THICKNESS
RANGE FOR REAR
PLUG UP
APPLICATIONS
*2.95 TO 5.30mm

SPECIAL LOAD PATTERNS

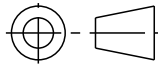
PRODUCT #	ROW	PIN CODES
74977-XY056LF *RPU	E	22
	D	
	C	45
	B	22
	A	
	GND	
74977-XY057LF	E	02
	D	
	C	
	B	
	A	
	GND	02
74977-XY058LF ***RPU	E	22
	D	45
	C	
	B	22
	A	
	GND	
74977-XY059LF	E	03
	D	
	C	19
	B	03
	A	
	GND	02

PCB THICKNESS
RANGE FOR REAR
PLUG UP
APPLICATIONS
2.95 TO 3.80mm

SPECIAL LOAD PATTERNS

PRODUCT #	ROW	PIN CODES
74977-XY060LF	E	02
	D	
	C	
	B	
	A	
	GND	

*REAR PLUG-UP PART NUMBER
WITH PIN ALIGNER
***REAR PLUG-UP PART NUMBER
WITHOUT PIN ALIGNER

spec ref				dr	P-Mathew Nebu	2011/05/20			size	A4	scale	1:1	
tolerance std ISO 406 ISO 1101	TOLERANCES UNLESS OTHERWISE SPECIFIED			eng	Nirmal Sam-MB	2022/06/20			ecn no	ELX-I-45099-1			
				chr	-	-			rel level			Released	
				appr	Kuriakose, San	2022/06/20			product family				
surface ISO 1302	linear	0.X	±0.3		title VERTICAL SIGNAL HDR 5 ROW PRESS-FIT, SPECIAL LOAD, STD.				dwg no	74977		rev AH	
		0.XX	±0.13										
		0.XXX	±0.050										
	angular	0°	±2°	amphenol-icc.com	cat. no.			Product - Customer Drw			sheet 7 of 8		

SPECIAL LOAD PATTERNS

PRODUCT #	ROW	PIN CODES
74977-XY061LF	E	31
	D	
	C	
	B	
	A	
	GND	

PCB THICKNESS
RANGE FOR REAR
PLUG UP
APPLICATIONS
3.25 TO 4.55mm



spec ref				dr	P-Mathew Nebu	2011/05/20	projection	MM	size	A4	scale	1:1				
tolerance std	TOLERANCES UNLESS OTHERWISE SPECIFIED			eng	Nirmal Sam-MB	2022/06/20			ecn no	ELX-I-45099-1						
				chr	-	-										
				appr	Kuriakose, San	2022/06/20						product family		rel level	Released	
surface	linear	0.X	±0.3	Amphenol FCI	title	VERTICAL SIGNAL HDR 5 ROW			dwg no	74977		rev	AH			
		0.XX	±0.13													
		0.XXX	±0.050													
	ISO 1302	angular	0°	±2°	amphenol-icc.com	cat. no.	Product - Customer Drw			sheet 8 of 8						