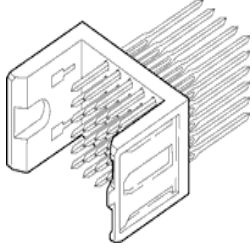


89006-110LF - METRAL® : 5
Row Signal Header, Straight,
Press-Fit, Wide body



www.fci.com

Mating Half

▷ 72478-1111LF

▷ 89047-102LF

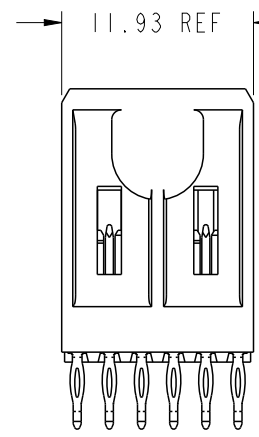
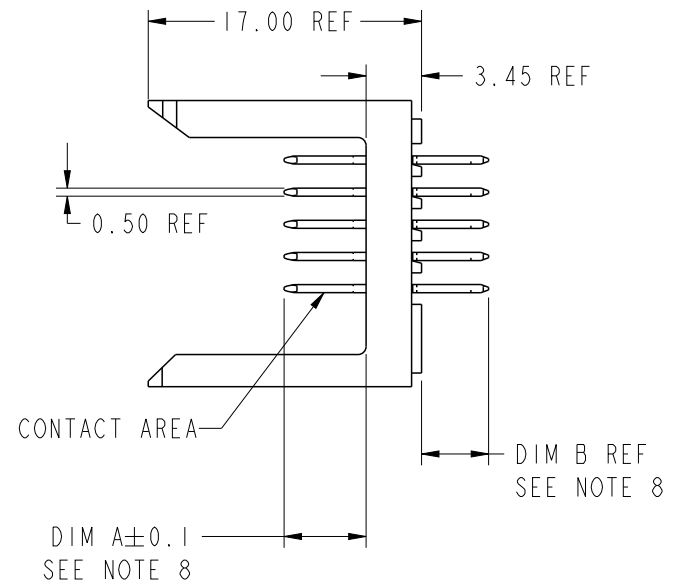
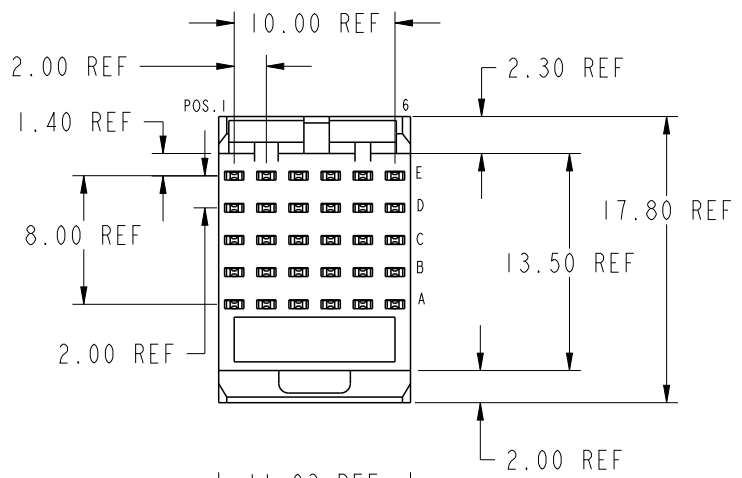
▷ 85761-1101LF

Specifications

General	
Contact type	Signal
Number of contacts (Total)	30
Number of rows	5
Orientation	Straight
Product Type	Header
Termination Style	Press-Fit
Rear Plug Up	Yes
Dimensional	
Length (Overall)	12 mm (0.47 in.)
Electrical	
Withstanding Voltage	1000V rms
Current rating	1A
Resistance (Insulation)	5 G-ohms initially; 1 G-ohms after test
Mechanical	
Insertion force	< 0.37N Per contact
Withdrawal Force	> 0.15N Per contact
Insertion force (Press-fit)	< 65N Per contact
Retention force	> 20N Per contact
Mounting	
Retention feature (Board)	Press-Fit Peg
Solder process	Vapor-phase IR
Termination	Board
Physical	
Color (Housing)	Natural / White
Material (Contact)	Phosphor Bronze
Material (Housing)	Glass - Filled LCP
Plating (Contact area)	TELCORDIA GR 1217 CORE Level 5 Central Office (CO)
Plating (Tail)	TELCORDIA GR 1217 CORE Level 5 Central Office (CO)

Temperature (Range)	-55°C to +125°C
Approvals / Certifications	
Approvals / Certifications	UL and CSA Approved
Other Features	
Packaging (Type)	Tube

PRODUCT NUMBER
89006-XYX
89006-XYXLF



rev	ecn no	dr	date
AY	ELX-DG-13476-1	AL	2012-11-15
-	-	-	-
AT	DG09-0256	TER	2009-08-19
AU	DG10-0413	TER	2010-11-23
AV	DG-007842	TAO	2011-11-09
AW	ELX-DG-009301-1	AL	2012-01-04
AX	ELX-DG-011219-1	AL	2012-04-05

spec ref	*	dr	Terran Huang	2010/07/08	projection	mm	size	A4	scale	2:1
tolerance std	TOLERANCES UNLESS OTHERWISE SPECIFIED	eng	Andy Lu	2012/11/21			ecn no		ELX-DG-13476-1	
ISO 406		chr	Sun Richard	2012/11/25			rel level		Released	
ISO 1101		appr	Pei-Ming Zheng	2012/11/27	product family		METRAL			
surface	3.2			title		METRAL SIGNAL HEADER		dwg no		89006
ISO 1302	linear	0.X	±0.3	1 MOD, 5 ROW PRESS-FIT		rev		AY		
	angular	0°	±2°	cat. no.	-	Product - Customer Drw		sheet 1 of 9		
		www.fci.com								

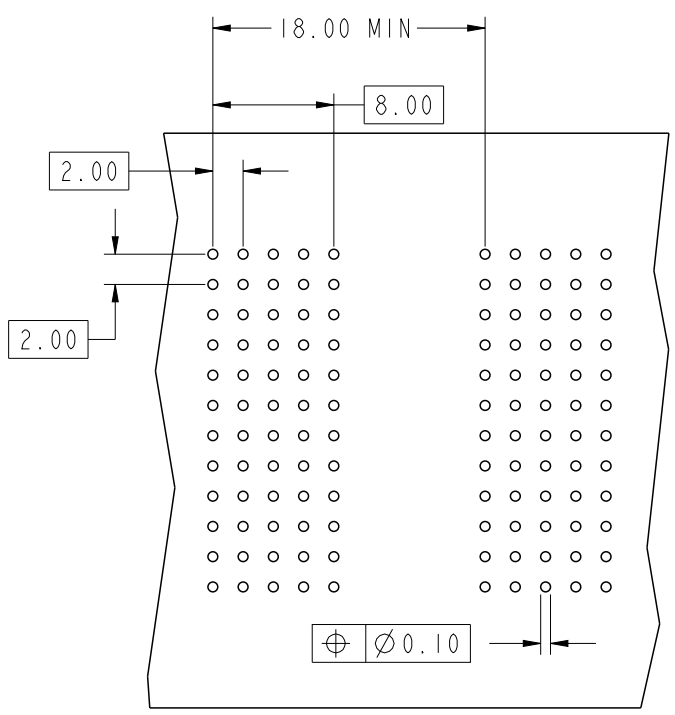
PreE File - REV C - 2009-06-09



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REQUIRED PC BOARD LAYOUT
COMPONENT SIDE
SEE PRINT 58351 FOR
ADDITIONAL PCB INFORMATION

KEY		
CODE	DIMENSIONS	
	DIM "A" MATE	DIM "B" TAIL
1	5.00	4.30
2	5.75	4.30
3	6.50	4.30
4	7.25	4.30
5	5.00	13.60
6	5.75	13.60
7	6.50	13.60
8	7.25	13.60
9	5.00	17.00
10	5.75	17.00
11	6.50	17.00
12	7.25	17.00
13	8.25	4.30
14	8.25	13.60
15	8.25	17.00
16	7.00	4.30
17	7.00	13.60
18	7.00	17.00
19	8.00	4.30
20	8.00	13.60
21	8.00	17.00
59	5.00	11.80

spec ref	*	dr	Terran Huang	2010/07/08	projection 	mm 	size	A4	scale	2:1
tolerance std	TOLERANCES UNLESS OTHERWISE SPECIFIED	eng	Andy Lu	2012/11/21			ecn no	ELX-DG-13476-1		
ISO 406 ISO 1101		chr	Sun Richard	2012/11/25			rel level	Released		
surface	3.200 linear	appr	Pei-Ming Zheng	2012/11/27	product family	METRAL				
ISO 1302	angular				title	METRAL SIGNAL HEADER				
	0.X					1 MOD, 5 ROW PRESS-FIT				
	0.XX				cat. no.	-				
	0.XXX				Product - Customer Drw	sheet 2 of 9				
	0°				www.fci.com	dwg no	89006	rev	AY	
	±0.3									
	±0.13									
	±0.050									
	±2°									

ProjE File - REV C - 2009-06-09

METRAL P/N	ROW	CONTACT CODE MOD. I					
		1	2	3	4	5	6
89006-X10 SEE NOTE 10 LEAD FREE OPTION	E	1	1	1	1	1	1
	D	1	1	1	1	1	1
	C	1	1	1	1	1	1
	B	1	1	1	1	1	1
	A	1	1	1	1	1	1

METRAL P/N	ROW	CONTACT CODE MOD. I					
		1	2	3	4	5	6
89006-X11 SEE NOTE 10 LEAD FREE OPTION	E	3	3	3	3	3	3
	D	3	3	3	3	3	3
	C	3	3	3	3	3	3
	B	3	3	3	3	3	3
	A	3	3	3	3	3	3

METRAL P/N	ROW	CONTACT CODE MOD. I					
		1	2	3	4	5	6
89006-X12 SEE NOTE 10 LEAD FREE OPTION	E	4	4	4	4	4	4
	D	3	3	3	3	3	3
	C	3	3	3	3	3	3
	B	1	1	1	1	1	1
	A	1	1	1	1	1	1

METRAL P/N	ROW	CONTACT CODE MOD. I					
		1	2	3	4	5	6
89006-X13 SEE NOTE 10 LEAD FREE OPTION	E	4	4	4	4	4	4
	D	19	19	19	19	19	19
	C	4	4	4	4	4	4
	B	4	4	4	4	4	4
	A	4	4	4	4	4	4

METRAL P/N	ROW	CONTACT CODE MOD. I					
		1	2	3	4	5	6
89006-X14 SEE NOTE 10 LEAD FREE OPTION	E	4	4	4	4	4	4
	D	3	3	3	3	3	3
	C	4	4	4	4	4	4
	B	4	4	4	4	4	4
	A	4	4	4	4	4	4

METRAL P/N	ROW	CONTACT CODE MOD. I					
		1	2	3	4	5	6
89006-X15 SEE NOTE 10 LEAD FREE OPTION	E	1	1	1	1	1	1
	D	1	1	1	1	1	1
	C	1	1	1	1	1	1
	B	1	1	1	1	1	1
	A	3	3	3	3	3	3

METRAL P/N	ROW	CONTACT CODE MOD. I					
		1	2	3	4	5	6
89006-X16 SEE NOTE 10 LEAD FREE OPTION	E	2	2	2	2	2	2
	D	2	2	2	2	2	2
	C	2	2	2	2	2	2
	B	2	2	2	2	2	2
	A	2	2	2	2	2	2

METRAL P/N	ROW	CONTACT CODE MOD. I					
		1	2	3	4	5	6
89006-X17 SEE NOTE 10 LEAD FREE OPTION	E	2	2	2	2	2	2
	D	2	2	2	2	2	2
	C	2	2	2	2	2	2
	B	2	2	2	2	2	2
	A	19	19	19	19	19	19

METRAL P/N	ROW	CONTACT CODE MOD. I					
		1	2	3	4	5	6
89006-X18 SEE NOTE 10 LEAD FREE OPTION	E	4	4	4	4	4	4
	D	7	7	7	7	7	7
	C	7	7	7	7	7	7
	B	7	7	7	7	7	7
	A	7	7	7	7	7	7

METRAL P/N	ROW	CONTACT CODE MOD. I					
		1	2	3	4	5	6
89006-X19 SEE NOTE 10 LEAD FREE OPTION	E	4	4	4	4	4	4
	D	4	4	4	4	4	4
	C	4	4	4	4	4	4
	B	4	4	4	4	4	4
	A	4	4	4	4	4	4

METRAL P/N	ROW	CONTACT CODE MOD. I					
		1	2	3	4	5	6
89006-X20 SEE NOTE 10 LEAD FREE OPTION	E	5	5	5	5	5	5
	D	5	5	5	5	5	5
	C	5	5	5	5	5	5
	B	5	5	5	5	5	5
	A	5	5	5	5	5	5

METRAL P/N	ROW	CONTACT CODE MOD. I					
		1	2	3	4	5	6
89006-X21 SEE NOTE 10 LEAD FREE OPTION	E	7	7	7	7	7	7
	D	7	7	7	7	7	7
	C	7	7	7	7	7	7
	B	7	7	7	7	7	7
	A	7	7	7	7	7	7

METRAL P/N	ROW	CONTACT CODE MOD. I					
		1	2	3	4	5	6
89006-X22 SEE NOTE 10 LEAD FREE OPTION	E	8	8	8	8	8	8
	D	7	7	7	7	7	7
	C	7	7	7	7	7	7
	B	5	5	5	5	5	5
	A	5	5	5	5	5	5

METRAL P/N	ROW	CONTACT CODE MOD. I					
		1	2	3	4	5	6
89006-X23 SEE NOTE 10 LEAD FREE OPTION	E	8	8	8	8	8	8
	D	20	20	20	20	20	20
	C	8	8	8	8	8	8
	B	8	8	8	8	8	8
	A	8	8	8	8	8	8

METRAL P/N	ROW	CONTACT CODE MOD. I					
		1	2	3	4	5	6
89006-X24 SEE NOTE 10 LEAD FREE OPTION	E	8	8	8	8	8	8
	D	7	7	7	7	7	7
	C	8	8	8	8	8	8
	B	8	8	8	8	8	8
	A	8	8	8	8	8	8

METRAL P/N	ROW	CONTACT CODE MOD. I					
		1	2	3	4	5	6
89006-X25 SEE NOTE 10 LEAD FREE OPTION	E	5	5	5	5	5	5
	D	5	5	5	5	5	5
	C	5	5	5	5	5	5
	B	5	5	5	5	5	5
	A	7	7	7	7	7	7

METRAL P/N	ROW	CONTACT CODE MOD. I					
		1	2	3	4	5	6
89006-X26 SEE NOTE 10 LEAD FREE OPTION	E	6	6	6	6	6	6
	D	6	6	6	6	6	6
	C	6	6	6	6	6	6
	B	6	6	6	6	6	6
	A	6	6	6	6	6	6



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spec ref	*	dr	Terran Huang	2010/07/08	projection	mm	size	A4	scale	1:1
tolerance std	ISO 406 ISO 1101	eng	Andy Lu	2012/11/21			ecn no	ELX-DG-13476-1		
	TOLERANCES UNLESS OTHERWISE SPECIFIED	chr	Sun Richard	2012/11/25				rel level	Released	
surface	3.2 linear	appr	Pei-Ming Zheng	2012/11/27	product family	METRAL		rev	AY	
	0.X ±0.3									
	0.XX ±0.13									
	0.XXX ±0.050									
	ISO 1302 angular 0° ±2°									
		www.fci.com	cat. no.	-	Product - Customer Drw	sheet 3 of 9				

Prod File - REV C - 2009-06-09

A

B

C

D

A

B

C

D

METRAL P/N	ROW	CONTACT CODE MOD. I					
		1	2	3	4	5	6
89006-X27 SEE NOTE 10 LEAD FREE OPTION	E	6	6	6	6	6	6
	D	6	6	6	6	6	6
	C	6	6	6	6	6	6
	B	6	6	6	6	6	6
	A	20	20	20	20	20	20

METRAL P/N	ROW	CONTACT CODE MOD. I					
		1	2	3	4	5	6
89006-X32 SEE NOTE 10 LEAD FREE OPTION	E	12	12	12	12	12	12
	D	11	11	11	11	11	11
	C	11	11	11	11	11	11
	B	9	9	9	9	9	9
	A	9	9	9	9	9	9

METRAL P/N	ROW	CONTACT CODE MOD. I					
		1	2	3	4	5	6
89006-X36 SEE NOTE 10 LEAD FREE OPTION	E	10	10	10	10	10	10
	D	10	10	10	10	10	10
	C	10	10	10	10	10	10
	B	10	10	10	10	10	10
	A	10	10	10	10	10	10

METRAL P/N	ROW	CONTACT CODE MOD. I					
		1	2	3	4	5	6
89006-X41 SEE NOTE 10 LEAD FREE OPTION	E	2	2	2	2	2	2
	D	1	1	1	1	1	1
	C	2	2	2	2	2	2
	B	2	2	2	2	2	2
	A	3	3	3	3	3	3

METRAL P/N	ROW	CONTACT CODE MOD. I					
		1	2	3	4	5	6
89006-X29 SEE NOTE 10 LEAD FREE OPTION	E	8	8	8	8	8	8
	D	8	8	8	8	8	8
	C	8	8	8	8	8	8
	B	8	8	8	8	8	8
	A	8	8	8	8	8	8

METRAL P/N	ROW	CONTACT CODE MOD. I					
		1	2	3	4	5	6
89006-X33 SEE NOTE 10 LEAD FREE OPTION	E	12	12	12	12	12	12
	D	21	21	21	21	21	21
	C	12	12	12	12	12	12
	B	12	12	12	12	12	12
	A	12	12	12	12	12	12

METRAL P/N	ROW	CONTACT CODE MOD. I					
		1	2	3	4	5	6
89006-X37 SEE NOTE 10 LEAD FREE OPTION	E	10	10	10	10	10	10
	D	10	10	10	10	10	10
	C	10	10	10	10	10	10
	B	10	10	10	10	10	10
	A	21	21	21	21	21	21

METRAL P/N	ROW	CONTACT CODE MOD. I					
		1	2	3	4	5	6
89006-X42 SEE NOTE 10 LEAD FREE OPTION	E	2	2	2	2	2	2
	D	4	4	4	4	4	4
	C	4	4	4	4	4	4
	B	3	3	3	3	3	3
	A	4	4	4	4	4	4

METRAL P/N	ROW	CONTACT CODE MOD. I					
		1	2	3	4	5	6
89006-X30 SEE NOTE 10 LEAD FREE OPTION	E	9	9	9	9	9	9
	D	9	9	9	9	9	9
	C	9	9	9	9	9	9
	B	9	9	9	9	9	9
	A	9	9	9	9	9	9

METRAL P/N	ROW	CONTACT CODE MOD. I					
		1	2	3	4	5	6
89006-X34 SEE NOTE 10 LEAD FREE OPTION	E	12	12	12	12	12	12
	D	11	11	11	11	11	11
	C	12	12	12	12	12	12
	B	12	12	12	12	12	12
	A	12	12	12	12	12	12

METRAL P/N	ROW	CONTACT CODE MOD. I					
		1	2	3	4	5	6
89006-X39 SEE NOTE 10 LEAD FREE OPTION	E	12	12	12	12	12	12
	D	12	12	12	12	12	12
	C	12	12	12	12	12	12
	B	12	12	12	12	12	12
	A	12	12	12	12	12	12

METRAL P/N	ROW	CONTACT CODE MOD. I					
		1	2	3	4	5	6
89006-X43 SEE NOTE 10 LEAD FREE OPTION	E	2	2	2	2	2	2
	D	2	2	2	2	2	2
	C	2	2	2	2	2	2
	B	2	2	2	2	2	2
	A	4	4	4	4	4	4

METRAL P/N	ROW	CONTACT CODE MOD. I					
		1	2	3	4	5	6
89006-X31 SEE NOTE 10 LEAD FREE OPTION	E	11	11	11	11	11	11
	D	11	11	11	11	11	11
	C	11	11	11	11	11	11
	B	11	11	11	11	11	11
	A	11	11	11	11	11	11

METRAL P/N	ROW	CONTACT CODE MOD. I					
		1	2	3	4	5	6
89006-X35 SEE NOTE 10 LEAD FREE OPTION	E	9	9	9	9	9	9
	D	9	9	9	9	9	9
	C	9	9	9	9	9	9
	B	9	9	9	9	9	9
	A	11	11	11	11	11	11

METRAL P/N	ROW	CONTACT CODE MOD. I					
		1	2	3	4	5	6
89006-X40 SEE NOTE 10 LEAD FREE OPTION	E	2	2	2	2	2	2
	D	2	2	2	2	2	2
	C	2	2	2	2	2	2
	B	4	4	4	4	4	4
	A	2	2	2	2	2	2

METRAL P/N	ROW	CONTACT CODE MOD. I					
		1	2	3	4	5	6
89006-X44 SEE NOTE 10 LEAD FREE OPTION	E	1	1	1	1	1	1
	D	3	3	3	3	3	3
	C	4	4	4	4	4	4
	B	3	3	3	3	3	3
	A	1	1	1	1	1	1



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spec ref	*	dr	Terran Huang	2010/07/08	projection	mm	size	A4	scale	1:1
tolerance std	ISO 406 ISO 1101	eng	Andy Lu	2012/11/21			ecn no	ELX-DG-13476-1		
TOLERANCES UNLESS OTHERWISE SPECIFIED		chr	Sun Richard	2012/11/25				product family	METRAL	rel level
surface	3.2 linear	appr	Pei-Ming Zheng	2012/11/27	METRAL		rel level	Released		
	0.X ±0.3		www.fci.com	cat. no.	-	Product - Customer Drw	sheet 4 of 9	rev	AY	
	0.XX ±0.13									
	0.XXX ±0.050									
	ISO 1302 angular 0° ±2°	title		METRAL SIGNAL HEADER		dwg no		89006		
				1 MOD, 5 ROW PRESS-FIT						

A

METRAL P/N	ROW	CONTACT CODE MOD. I					
		1	2	3	4	5	6
89006-X45 SEE NOTE 10 LEAD FREE OPTION	E	1	1	1	1	1	1
	D	19	19	19	19	19	19
	C	1	1	1	1	1	1
	B	19	19	19	19	19	19
	A	1	1	1	1	1	1

METRAL P/N	ROW	CONTACT CODE MOD. I					
		1	2	3	4	5	6
89006-X49 SEE NOTE 10 LEAD FREE OPTION	E	4	4	4	4	4	4
	D	3	3	3	3	3	3
	C	3	3	3	3	3	3
	B	3	3	3	3	3	3
	A	19	19	19	19	19	19

METRAL P/N	ROW	CONTACT CODE MOD. I					
		1	2	3	4	5	6
89006-X53 SEE NOTE 10 LEAD FREE OPTION	E	6	6	6	6	6	6
	D	6	6	6	6	6	6
	C	6	6	6	6	6	6
	B	6	6	6	6	6	6
	A	8	8	8	8	8	8

METRAL P/N	ROW	CONTACT CODE MOD. I					
		1	2	3	4	5	6
89006-X57 SEE NOTE 10 LEAD FREE OPTION	E	6	6	6	6	6	6
	D	7	7	7	7	7	7
	C	6	6	6	6	6	6
	B	6	6	6	6	6	6
	A	7	7	7	7	7	7

B

METRAL P/N	ROW	CONTACT CODE MOD. I					
		1	2	3	4	5	6
89006-X46 SEE NOTE 10 LEAD FREE OPTION	E	2	2	2	2	2	2
	D	2	2	2	2	2	2
	C	4	4	4	4	4	4
	B	2	2	2	2	2	2
	A	2	2	2	2	2	2

METRAL P/N	ROW	CONTACT CODE MOD. I					
		1	2	3	4	5	6
89006-X50 SEE NOTE 10 LEAD FREE OPTION	E	6	6	6	6	6	6
	D	6	6	6	6	6	6
	C	6	6	6	6	6	6
	B	8	8	8	8	8	8
	A	6	6	6	6	6	6

METRAL P/N	ROW	CONTACT CODE MOD. I					
		1	2	3	4	5	6
89006-X54 SEE NOTE 10 LEAD FREE OPTION	E	5	5	5	5	5	5
	D	7	7	7	7	7	7
	C	8	8	8	8	8	8
	B	7	7	7	7	7	7
	A	5	5	5	5	5	5

METRAL P/N	ROW	CONTACT CODE MOD. I					
		1	2	3	4	5	6
89006-X58 SEE NOTE 10 LEAD FREE OPTION	E	20	20	20	20	20	20
	D	20	20	20	20	20	20
	C	20	20	20	20	20	20
	B	20	20	20	20	20	20
	A	20	20	20	20	20	20

METRAL P/N	ROW	CONTACT CODE MOD. I					
		1	2	3	4	5	6
89006-X47 SEE NOTE 10 LEAD FREE OPTION	E	2	2	2	2	2	2
	D	3	3	3	3	3	3
	C	2	2	2	2	2	2
	B	2	2	2	2	2	2
	A	3	3	3	3	3	3

METRAL P/N	ROW	CONTACT CODE MOD. I					
		1	2	3	4	5	6
89006-X51 SEE NOTE 10 LEAD FREE OPTION	E	6	6	6	6	6	6
	D	5	5	5	5	5	5
	C	6	6	6	6	6	6
	B	6	6	6	6	6	6
	A	7	7	7	7	7	7

METRAL P/N	ROW	CONTACT CODE MOD. I					
		1	2	3	4	5	6
89006-X55 SEE NOTE 10 LEAD FREE OPTION	E	5	5	5	5	5	5
	D	20	20	20	20	20	20
	C	5	5	5	5	5	5
	B	20	20	20	20	20	20
	A	5	5	5	5	5	5

METRAL P/N	ROW	CONTACT CODE MOD. I					
		1	2	3	4	5	6
89006-X59 SEE NOTE 10 LEAD FREE OPTION	E	8	8	8	8	8	8
	D	7	7	7	7	7	7
	C	7	7	7	7	7	7
	B	7	7	7	7	7	7
	A	20	20	20	20	20	20

C

METRAL P/N	ROW	CONTACT CODE MOD. I					
		1	2	3	4	5	6
89006-X48 SEE NOTE 10 LEAD FREE OPTION	E	19	19	19	19	19	19
	D	19	19	19	19	19	19
	C	19	19	19	19	19	19
	B	19	19	19	19	19	19
	A	19	19	19	19	19	19

METRAL P/N	ROW	CONTACT CODE MOD. I					
		1	2	3	4	5	6
89006-X52 SEE NOTE 10 LEAD FREE OPTION	E	6	6	6	6	6	6
	D	8	8	8	8	8	8
	C	8	8	8	8	8	8
	B	7	7	7	7	7	7
	A	8	8	8	8	8	8

METRAL P/N	ROW	CONTACT CODE MOD. I					
		1	2	3	4	5	6
89006-X56 SEE NOTE 10 LEAD FREE OPTION	E	6	6	6	6	6	6
	D	6	6	6	6	6	6
	C	8	8	8	8	8	8
	B	6	6	6	6	6	6
	A	6	6	6	6	6	6

METRAL P/N	ROW	CONTACT CODE MOD. I					
		1	2	3	4	5	6
89006-X60 SEE NOTE 10 LEAD FREE OPTION	E	10	10	10	10	10	10
	D	10	10	10	10	10	10
	C	10	10	10	10	10	10
	B	12	12	12	12	12	12
	A	10	10	10	10	10	10



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D

spec ref	*	dr	Terran Huang	2010/07/08	projection	mm	size	A4	scale	1:1		
tolerance std	ISO 406 ISO 1101	eng	Andy Lu	2012/11/21			ecn no				ELX-DG-13476-1	
	TOLERANCES UNLESS OTHERWISE SPECIFIED	chr	Sun Richard	2012/11/25			rel level				Released	
surface	3.200 linear	appr	Pei-Ming Zheng	2012/11/27	product family			METRAL	rev		AY	
	ISO 1302				title			METRAL SIGNAL HEADER		dwg no		89006
					cat. no.			-		Product - Customer Drw		sheet 5 of 9

A

B

C

D

A

B

C

D

METRAL P/N	ROW	CONTACT CODE MOD. I					
		1	2	3	4	5	6
89006-X61 SEE NOTE 10 LEAD FREE OPTION	E	10	10	10	10	10	10
	D	9	9	9	9	9	9
	C	10	10	10	10	10	10
	B	10	10	10	10	10	10
	A	11	11	11	11	11	11

METRAL P/N	ROW	CONTACT CODE MOD. I					
		1	2	3	4	5	6
89006-X65 SEE NOTE 10 LEAD FREE OPTION	E	9	9	9	9	9	9
	D	21	21	21	21	21	21
	C	9	9	9	9	9	9
	B	21	21	21	21	21	21
	A	9	9	9	9	9	9

METRAL P/N	ROW	CONTACT CODE MOD. I					
		1	2	3	4	5	6
89006-X69 SEE NOTE 10 LEAD FREE OPTION	E	12	12	12	12	12	12
	D	11	11	11	11	11	11
	C	11	11	11	11	11	11
	B	11	11	11	11	11	11
	A	21	21	21	21	21	21

METRAL P/N	ROW	CONTACT CODE MOD. I					
		1	2	3	4	5	6
89006-X73 SEE NOTE 10 LEAD FREE OPTION	E	4	4	4	4	4	4
	D	4	4	4	4	4	4
	C	4	4	4	4	4	4
	B	4	4	4	4	4	4
	A	13	13	13	13	13	13

METRAL P/N	ROW	CONTACT CODE MOD. I					
		1	2	3	4	5	6
89006-X62 SEE NOTE 10 LEAD FREE OPTION	E	10	10	10	10	10	10
	D	12	12	12	12	12	12
	C	12	12	12	12	12	12
	B	11	11	11	11	11	11
	A	12	12	12	12	12	12

METRAL P/N	ROW	CONTACT CODE MOD. I					
		1	2	3	4	5	6
89006-X66 SEE NOTE 10 LEAD FREE OPTION	E	10	10	10	10	10	10
	D	10	10	10	10	10	10
	C	12	12	12	12	12	12
	B	10	10	10	10	10	10
	A	10	10	10	10	10	10

METRAL P/N	ROW	CONTACT CODE MOD. I					
		1	2	3	4	5	6
89006-X70 SEE NOTE 10 LEAD FREE OPTION	E	2	2	2	2	2	2
	D	2	2	2	2	2	2
	C	3	3	3	3	3	3
	B	2	2	2	2	2	2
	A	2	2	2	2	2	2

METRAL P/N	ROW	CONTACT CODE MOD. I					
		1	2	3	4	5	6
89006-X74 SEE NOTE 10 LEAD FREE OPTION	E	13	13	13	13	13	13
	D	4	4	4	4	4	4
	C	3	3	3	3	3	3
	B	4	4	4	4	4	4
	A	13	13	13	13	13	13

METRAL P/N	ROW	CONTACT CODE MOD. I					
		1	2	3	4	5	6
89006-X63 SEE NOTE 10 LEAD FREE OPTION	E	10	10	10	10	10	10
	D	10	10	10	10	10	10
	C	10	10	10	10	10	10
	B	10	10	10	10	10	10
	A	12	12	12	12	12	12

METRAL P/N	ROW	CONTACT CODE MOD. I					
		1	2	3	4	5	6
89006-X67 SEE NOTE 10 LEAD FREE OPTION	E	10	10	10	10	10	10
	D	11	11	11	11	11	11
	C	10	10	10	10	10	10
	B	10	10	10	10	10	10
	A	11	11	11	11	11	11

METRAL P/N	ROW	CONTACT CODE MOD. I					
		1	2	3	4	5	6
89006-X71 SEE NOTE 10 LEAD FREE OPTION	E	3	3	3	3	3	3
	D	19	19	19	19	19	19
	C	3	3	3	3	3	3
	B	19	19	19	19	19	19
	A	3	3	3	3	3	3

METRAL P/N	ROW	CONTACT CODE MOD. I					
		1	2	3	4	5	6
89006-X75 SEE NOTE 10 LEAD FREE OPTION	E	3	3	3	3	3	3
	D	3	3	3	3	3	3
	C	2	2	2	2	2	2
	B	3	3	3	3	3	3
	A	3	3	3	3	3	3

METRAL P/N	ROW	CONTACT CODE MOD. I					
		1	2	3	4	5	6
89006-X64 SEE NOTE 10 LEAD FREE OPTION	E	9	9	9	9	9	9
	D	11	11	11	11	11	11
	C	12	12	12	12	12	12
	B	11	11	11	11	11	11
	A	9	9	9	9	9	9

METRAL P/N	ROW	CONTACT CODE MOD. I					
		1	2	3	4	5	6
89006-X68 SEE NOTE 10 LEAD FREE OPTION	E	21	21	21	21	21	21
	D	21	21	21	21	21	21
	C	21	21	21	21	21	21
	B	21	21	21	21	21	21
	A	21	21	21	21	21	21

METRAL P/N	ROW	CONTACT CODE MOD. I					
		1	2	3	4	5	6
89006-X72 SEE NOTE 10 LEAD FREE OPTION	E	19	19	19	19	19	19
	D	1	1	1	1	1	1
	C	1	1	1	1	1	1
	B	1	1	1	1	1	1
	A	19	19	19	19	19	19

METRAL P/N	ROW	CONTACT CODE MOD. I					
		1	2	3	4	5	6
89006-X76 SEE NOTE 10 LEAD FREE OPTION	E	1	1	1	1	1	1
	D	1	1	1	1	1	1
	C	1	1	1	1	1	1
	B	1	1	1	1	1	1
	A	4	4	4	4	4	4



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spec ref	*	dr	Terran Huang	2010/07/08	projection	mm	size	A4	scale	1:1
tolerance std	TOLERANCES UNLESS OTHERWISE SPECIFIED	eng	Andy Lu	2012/11/21			ecn no	ELX-DG-13476-1		
ISO 406		chr	Sun Richard	2012/11/25				rel level	Released	
ISO 1101	surface $\sqrt{3.2}$	appr	Pei-Ming Zheng	2012/11/27	product family		METRAL		rev	
ISO 1302		angular	0°	±2°	title		METRAL SIGNAL HEADER		dwg no	89006
		linear	0.X	±0.3	cat. no.		-		Product - Customer Drw	sheet 6 of 9
		0.XX	±0.13	www.fci.com						
		0.XXX	±.050							



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METRAL P/N	ROW	CONTACT CODE MOD. I					
		1	2	3	4	5	6
89006-X77 SEE NOTE 10 LEAD FREE OPTION	E	3	3	3	3	3	3
	D	19	19	19	19	19	19
	C	4	4	4	4	4	4
	B	3	3	3	3	3	3
	A	3	3	3	3	3	3
89006-X81 SEE NOTE 10 LEAD FREE OPTION	E	7	7	7	7	7	7
	D	20	20	20	20	20	20
	C	7	7	7	7	7	7
	B	20	20	20	20	20	20
	A	7	7	7	7	7	7
89006-X85 SEE NOTE 10 LEAD FREE OPTION	E	7	7	7	7	7	7
	D	7	7	7	7	7	7
	C	6	6	6	6	6	6
	B	7	7	7	7	7	7
	A	7	7	7	7	7	7
89006-X89 SEE NOTE 10 LEAD FREE OPTION	E	7	7	7	7	7	7
	D	7	7	7	7	7	7
	C	8	8	8	8	8	8
	B	17	17	17	17	17	17
	A	20	20	20	20	20	20
89006-X93 SEE NOTE 10 LEAD FREE OPTION	E	12	12	12	12	12	12
	D	12	12	12	12	12	12
	C	12	12	12	12	12	12
	B	12	12	12	12	12	12
	A	15	15	15	15	15	15
89006-X97 SEE NOTE 10 LEAD FREE OPTION	E	11	11	11	11	11	11
	D	21	21	21	21	21	21
	C	12	12	12	12	12	12
	B	11	11	11	11	11	11
	A	11	11	11	11	11	11
89006-X78 SEE NOTE 10 LEAD FREE OPTION	E	13	13	13	13	13	13
	D	16	16	16	16	16	16
	C	2	2	2	2	2	2
	B	16	16	16	16	16	16
	A	13	13	13	13	13	13
89006-X82 SEE NOTE 10 LEAD FREE OPTION	E	20	20	20	20	20	20
	D	5	5	5	5	5	5
	C	5	5	5	5	5	5
	B	5	5	5	5	5	5
	A	20	20	20	20	20	20
89006-X86 SEE NOTE 10 LEAD FREE OPTION	E	5	5	5	5	5	5
	D	5	5	5	5	5	5
	C	5	5	5	5	5	5
	B	5	5	5	5	5	5
	A	8	8	8	8	8	8
89006-X90 SEE NOTE 10 LEAD FREE OPTION	E	10	10	10	10	10	10
	D	10	10	10	10	10	10
	C	11	11	11	11	11	11
	B	10	10	10	10	10	10
	A	10	10	10	10	10	10
89006-X94 SEE NOTE 10 LEAD FREE OPTION	E	15	15	15	15	15	15
	D	12	12	12	12	12	12
	C	11	11	11	11	11	11
	B	12	12	12	12	12	12
	A	15	15	15	15	15	15
89006-X98 SEE NOTE 10 LEAD FREE OPTION	E	15	15	15	15	15	15
	D	18	18	18	18	18	18
	C	10	10	10	10	10	10
	B	18	18	18	18	18	18
	A	15	15	15	15	15	15
89006-X79 SEE NOTE 10 LEAD FREE OPTION	E	3	3	3	3	3	3
	D	3	3	3	3	3	3
	C	4	4	4	4	4	4
	B	19	19	19	19	19	19
	A	4	4	4	4	4	4
89006-X83 SEE NOTE 10 LEAD FREE OPTION	E	8	8	8	8	8	8
	D	8	8	8	8	8	8
	C	8	8	8	8	8	8
	B	8	8	8	8	8	8
	A	14	14	14	14	14	14
89006-X87 SEE NOTE 10 LEAD FREE OPTION	E	7	7	7	7	7	7
	D	20	20	20	20	20	20
	C	8	8	8	8	8	8
	B	7	7	7	7	7	7
	A	7	7	7	7	7	7
89006-X91 SEE NOTE 10 LEAD FREE OPTION	E	11	11	11	11	11	11
	D	21	21	21	21	21	21
	C	11	11	11	11	11	11
	B	21	21	21	21	21	21
	A	11	11	11	11	11	11
89006-X95 SEE NOTE 10 LEAD FREE OPTION	E	11	11	11	11	11	11
	D	11	11	11	11	11	11
	C	10	10	10	10	10	10
	B	11	11	11	11	11	11
	A	11	11	11	11	11	11
89006-X99 SEE NOTE 10 LEAD FREE OPTION	E	11	11	11	11	11	11
	D	11	11	11	11	11	11
	C	12	12	12	12	12	12
	B	18	18	18	18	18	18
	A	21	21	21	21	21	21
89006-X80 SEE NOTE 10 LEAD FREE OPTION	E	6	6	6	6	6	6
	D	6	6	6	6	6	6
	C	7	7	7	7	7	7
	B	6	6	6	6	6	6
	A	6	6	6	6	6	6
89006-X84 SEE NOTE 10 LEAD FREE OPTION	E	14	14	14	14	14	14
	D	8	8	8	8	8	8
	C	7	7	7	7	7	7
	B	8	8	8	8	8	8
	A	14	14	14	14	14	14
89006-X88 SEE NOTE 10 LEAD FREE OPTION	E	14	14	14	14	14	14
	D	17	17	17	17	17	17
	C	6	6	6	6	6	6
	B	17	17	17	17	17	17
	A	14	14	14	14	14	14
89006-X92 SEE NOTE 10 LEAD FREE OPTION	E	21	21	21	21	21	21
	D	9	9	9	9	9	9
	C	9	9	9	9	9	9
	B	9	9	9	9	9	9
	A	21	21	21	21	21	21
89006-X96 SEE NOTE 10 LEAD FREE OPTION	E	9	9	9	9	9	9
	D	9	9	9	9	9	9
	C	9	9	9	9	9	9
	B	9	9	9	9	9	9
	A	12	12	12	12	12	12
89006-X100 SEE NOTE 10 LEAD FREE OPTION	E	1	3	2	3	1	3
	D	1	3	2	3	1	3
	C	1	3	2	3	1	3
	B	1	3	2	3	1	3
	A	1	3	2	3	1	3

spec ref	*	dr	Terran Huang	2010/07/08	projection	mm	size	A4	scale	1:1
tolerance std	TOLERANCES UNLESS OTHERWISE SPECIFIED	eng	Andy Lu	2012/11/21			ecn no	ELX-DG-13476-1		
ISO 406		chr	Sun Richard	2012/11/25				product family	METRAL	rel level
ISO 1101		appr	Pei-Ming Zheng	2012/11/27	METRAL			rev	AY	
surface	3.200	FCI		METRAL SIGNAL HEADER			dwg no	89006		
ISO 1302	angular	0°	±0.3	www.fci.com	cat. no.	-	Product - Customer Drw	sheet 7 of 9		
	0.X	±0.3								
	0.XX	±0.13								
	0.XXX	±0.050								
	0°	±2°								

ProjE File - REV C - 2009-06-09

A

B

C

D

METRAL P/N	ROW	CONTACT CODE MOD. I					
		1	2	3	4	5	6
89006-X101 SEE NOTE 10 LEAD FREE OPTION	E	1	1	4	4	4	4
	D	1	1	4	4	4	4
	C	1	1	4	4	4	4
	B	1	1	4	4	4	4
	A	1	1	4	4	4	4

METRAL P/N	ROW	CONTACT CODE MOD. I					
		1	2	3	4	5	6
89006-X105 SEE NOTE 10 LEAD FREE OPTION	E	19	2	19	2	2	2
	D	19	2	19	2	2	2
	C	19	2	19	2	2	2
	B	19	2	19	2	2	2
	A	19	2	19	2	2	2

METRAL P/N	ROW	CONTACT CODE MOD. I					
		1	2	3	4	5	6
89006-X109 SEE NOTE 10 LEAD FREE OPTION	E	59	59	59	59	59	59
	D	59	59	59	59	59	59
	C	59	59	59	59	59	59
	B	59	59	59	59	59	59
	A	7	7	7	7	7	7

METRAL P/N	ROW	CONTACT CODE MOD. I					
		1	2	3	4	5	6
89006-X113 SEE NOTE 10 LEAD FREE OPTION	E	6	6	6	6	6	5
	D	6	6	6	6	6	6
	C	6	6	6	6	6	6
	B	6	6	6	6	6	6
	A	6	6	6	6	6	6

METRAL P/N	ROW	CONTACT CODE MOD. I					
		1	2	3	4	5	6
89006-X117 SEE NOTE 10 LEAD FREE OPTION	E	6	6	6	6	6	6
	D	8	6	6	6	6	6
	C	6	6	6	6	6	6
	B	6	8	6	6	6	6
	A	6	8	6	6	6	6

METRAL P/N	ROW	CONTACT CODE MOD. I					
		1	2	3	4	5	6
89006-X102 SEE NOTE 10 LEAD FREE OPTION	E	19	2	19	2	2	2
	D	19	2	19	2	2	2
	C	19	1	19	2	2	2
	B	19	2	19	2	2	2
	A	19	2	19	2	2	2

METRAL P/N	ROW	CONTACT CODE MOD. I					
		1	2	3	4	5	6
89006-X106 SEE NOTE 10 LEAD FREE OPTION	E	19	2	19	2	2	2
	D	19	2	19	2	2	1
	C	19	2	19	2	2	2
	B	19	2	19	2	2	2
	A	19	2	19	2	2	2

METRAL P/N	ROW	CONTACT CODE MOD. I					
		1	2	3	4	5	6
89006-X110 SEE NOTE 10 LEAD FREE OPTION	E	3	2	2	2	2	2
	D	3	2	2	2	2	2
	C	3	2	2	2	2	2
	B	3	2	2	2	2	2
	A	3	2	2	2	2	2

METRAL P/N	ROW	CONTACT CODE MOD. I					
		1	2	3	4	5	6
89006-X114 SEE NOTE 10 LEAD FREE OPTION	E	4	2	3	3	2	4
	D	4	2	3	3	2	4
	C	4	2	3	3	2	4
	B	4	2	3	3	2	4
	A	4	2	3	3	2	4

METRAL P/N	ROW	CONTACT CODE MOD. I					
		1	2	3	4	5	6
89006-X118 SEE NOTE 10 LEAD FREE OPTION	E	8	6	6	6	6	6
	D	8	6	6	6	6	6
	C	8	6	6	6	6	6
	B	8	6	6	6	6	6
	A	8	6	6	6	6	6

METRAL P/N	ROW	CONTACT CODE MOD. I					
		1	2	3	4	5	6
89006-X103 SEE NOTE 10 LEAD FREE OPTION	E	2	2	2	19	2	2
	D	2	2	2	19	2	2
	C	2	1	2	19	2	2
	B	2	19	19	19	2	2
	A	2	19	19	2	2	2

METRAL P/N	ROW	CONTACT CODE MOD. I					
		1	2	3	4	5	6
89006-X107 SEE NOTE 10 LEAD FREE OPTION	E	2	2	2	2	2	2
	D	2	2	2	2	2	1
	C	2	2	2	2	2	2
	B	2	2	2	2	2	2
	A	2	2	2	2	2	2

METRAL P/N	ROW	CONTACT CODE MOD. I					
		1	2	3	4	5	6
89006-X111 SEE NOTE 10 LEAD FREE OPTION	E	2	2	2	2	2	3
	D	2	2	2	2	2	3
	C	2	2	2	2	2	3
	B	2	2	2	2	2	3
	A	2	2	2	2	2	3

METRAL P/N	ROW	CONTACT CODE MOD. I					
		1	2	3	4	5	6
89006-X115 SEE NOTE 10 LEAD FREE OPTION	E	2	2	2	1	2	2
	D	2	2	2	1	2	2
	C	2	2	2	1	2	2
	B	2	2	2	1	2	2
	A	1	2	2	1	2	2

METRAL P/N	ROW	CONTACT CODE MOD. I					
		1	2	3	4	5	6
89006-X104 SEE NOTE 10 LEAD FREE OPTION	E	19	2	2	2	2	2
	D	19	2	2	2	2	2
	C	19	2	2	2	2	1
	B	19	2	2	2	2	2
	A	19	2	2	2	2	2

METRAL P/N	ROW	CONTACT CODE MOD. I					
		1	2	3	4	5	6
89006-X108 SEE NOTE 10 LEAD FREE OPTION	E	19	19	2	2	2	2
	D	19	19	2	1	2	2
	C	19	19	2	2	2	2
	B	19	19	2	2	2	2
	A	19	2	2	2	2	2

METRAL P/N	ROW	CONTACT CODE MOD. I					
		1	2	3	4	5	6
89006-X112 SEE NOTE 10 LEAD FREE OPTION	E	7	6	6	6	6	6
	D	7	6	6	6	6	6
	C	7	6	6	6	6	6
	B	7	6	6	6	6	6
	A	7	6	6	6	6	6

METRAL P/N	ROW	CONTACT CODE MOD. I					
		1	2	3	4	5	6
89006-X116 SEE NOTE 10 LEAD FREE OPTION	E	5	6	6	6	6	6
	D	5	6	6	6	6	6
	C	5	6	6	6	6	6
	B	5	6	6	6	6	6
	A	5	6	6	6	6	6



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spec ref	*	dr	Terran Huang	2010/07/08	projection	mm	size	A4	scale	1:1		
tolerance std	ISO 406 ISO 1101	eng	Andy Lu	2012/11/21			ecn no				ELX-DG-13476-1	
	TOLERANCES UNLESS OTHERWISE SPECIFIED	chr	Sun Richard	2012/11/25			rel level				Released	
surface	3.200 linear	appr	Pei-Ming Zheng	2012/11/27	product family			METRAL	rev		AY	
	ISO 1302				title			METRAL SIGNAL HEADER		dwg no		89006
					cat. no.			-		Product - Customer Drw		sheet 8 of 9

PRODUCT NUMBER

89006-XYX

89006-XYXLF

NOTES:

1. FOR DIM A AND B SEE SHEET 2 AND UP.
2. BODY MATERIAL: LIQUID CRYSTAL
POLYMER 30 % GLASS.
FLAME RETARDANT ACC. UL 94-V0.
3. PIN MATERIAL:
PHOSPHOR BRONZE.
4. PLATING ON PRESS-FIT TAIL:
73931-XYX IS SnPb
73931-XYXLF IS SN (LEAD FREE)
PLATING ON CONTACT AREA CONFORMS TO PERFORMANCE
LEVEL SHOWN IN TABLE BELOW.
5. PRODUCT MARKING:
PART NUMBER DESIGNATION & BATCH I.D.
6. ALL PRODUCTS WITH PART NUMBERS SHOWN IN
SUBSEQUENT TABLES WILL BE PACKAGED IN TUBES.
IF TRAY PACKAGING IS REQUIRED, A SUFFIX "P"
WILL BE ADDED TO THE END OF THE PART NUMBER.
EXAMPLE: XXXXX-XXXP
7. PRODUCT SPECIFICATION GS-12-180
APPLICATION SPECIFICATION BUS-20-073
8. AFTER INSERTION INTO CIRCUIT BOARD WITH
QUALIFIED TOOL.
9. THE PRODUCTS WHERE THE PART NUMBER ENDS IN LF MEET THE
EUROPEAN UNION DIRECTIVES AND OTHER COUNTRY REGULATIONS
AS DESCRIBED IN GS-22-008.

ALL PRODUCTS EXCEPT THOSE WITH PART NUMBERS CONTAINING
(DRAWING NO.)-NI--- OR (DRAWING NO.)-N5---WILL WITHSTAND EXPOSURE
TO 260°C FOR 60 SECONDS IN A CONVECTION, INFRA-RED OR
VAPOR PHASE REFLOW OVEN. PART NUMBERS (DRAWING NO.)-NI---
AND (DRAWINGS NO.)-N5---WILL NOT WITHSTAND REFLOW AND Au CONTACT
SURFACE OF THE CONTACTS SHALL BE EXPOSED TO A MAXIMUM 140°C FOR
NO LONGER THAN 15 SECONDS IN A WAVE SOLDER APPLICATION.
10. FOR LEAD FREE PART NUMBERS, ADD "LF" SUFFIX.
EXAMPLE:89006-X01LF
11. -A PLATING HAS Au FLASH IN PRESS FIT AREA (LEAD FREE)

PLATING IN CONTACT AREA		
DASH NUMBER	PERFORMANCE LEVEL	NOTES
-AYY	TELCORDIA CO	SEE NOTE 11
-PYY	0.25 um GOLD MIN.	-
-NIYY	TELCORDIA CO (NXT)	-
-N5YY	TELCORDIA UE (NXT)	-
-IYY	TELCORDIA CO	-
-2YY	TELECOM CLASS	-
-3YY	IEC CLASS 1	-
-5YY	TELCORDIA UE	-
-NIYY	TELCORDIA CO (NXT) IEC CLASS 1	SEE NOTE 9
-N5YYLF	TELCORDIA UE (NXT)	SEE NOTE 9
-IYYLF	TELCORDIA CO IEC CLASS 1	SEE NOTE 9
-2YYLF	TELECOM CLASS	SEE NOTE 9
-5YYLF	TELCORDIA UE	SEE NOTE 9



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spec ref	*	dr	Terran Huang	2010/07/08	projection	mm	size	A4	scale	1:1
tolerance std	TOLERANCES UNLESS OTHERWISE SPECIFIED	eng	Andy Lu	2012/11/21			ecn no	ELX-DG-13476-1		
ISO 406		chr	Sun Richard	2012/11/25				product family	METRAL	rel level
ISO 1101		appr	Pei-Ming Zheng	2012/11/27	title	METRAL SIGNAL HEADER	dwg no			
surface	linear	0.X	±0.3	www.fci.com				I MOD, 5 ROW PRESS-FIT	cat. no.	-
ISO 1302	angular	0.XX	±0.13							
		0.XXX	±0.050							