

51415-001LF - PwrBlade® :
1P 24S 1P STB Right Angle
Header



www.fci.com

Mating Half

▷ 51416-001

▷ 51666-001

Specifications

General	
First Make Last Break (FMLB)	Yes
Gender	Header
Guided Mating	Guide Pin Pocket
Number of contacts (Total - Power)	2
Number of contacts (Total - Signal)	24
Orientation	Right Angle
Polarization	Yes
Tail Options	0.135 in. Solder
Mating half	PwrBlade® Vertical and Right Angle Receptacles
Number of rows (Power)	1
Number of rows (Signal)	4
Dimensional	
Spacing (Center line - Signal)	2.54 mm (0.1 in.)
Electrical	
Current rating	48A max. for One Powered Contact, 30A max. for Ten Contacts Powered
Resistance (Contact)	Maximum for mated pair is 2 milli ohms
Resistance (Insulation)	>= 10,000 M-ohms after Environmental Test Conditions
Voltage rating	1000V per Signal Contact, 2500V per Power Contact
Mechanical	
Durability (Mating cycles)	200
Insertion force	Maximum 25 oz. per Power Contact and 3.5 oz. per Signal Contact
Wipe (Power)	0.227 in. min., Post mate 0.177 in. min.
Wipe (Signal)	0.152 in. min., Post mate 0.102 in. min.
Mounting	
Retention feature (Board)	Through Hole
Solder process	High Temp Solder Process
Footprint note	Ordering data shown is for our standard product offering. For non-standard or custom products, contact your Authorized FCI Representative.

Physical	
Color (Housing)	Black
Material (Housing)	Glass - Filled High - Temp Thermoplastic (UL-94 V-0)
Plating (Contact area)	0.76 µm (30 µin.) Precious metal
Plating (Tail - Power)	1.98 µm (78 µin.) Tin
Plating (Tail - Signal)	1.98 µm (78 µin.) Tin
Temperature (Operating - range)	-20°C to +105°C
Approvals / Certifications	
Meets SSI Specification	Yes
Approvals / Certifications	UL and CSA Approved
Other Features	
Header Pin Pattern (Left to Right)	Power/Signal/Power
Packaging (Type)	Trays
System Application	SSI
Comments	In order to complete the Part Number selection process you will need the product drawing. To download the drawing click on the "View Drawing" button at the top of this page.

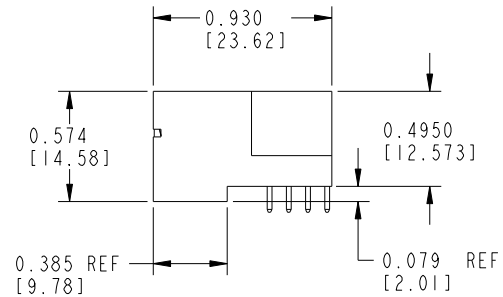
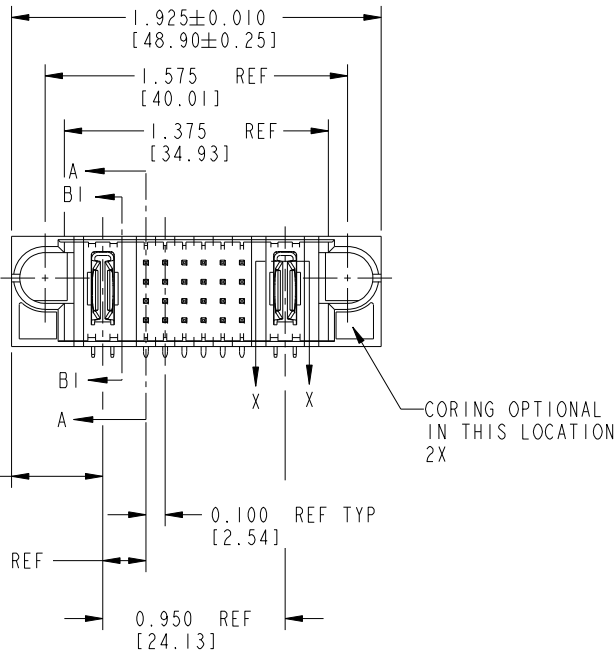
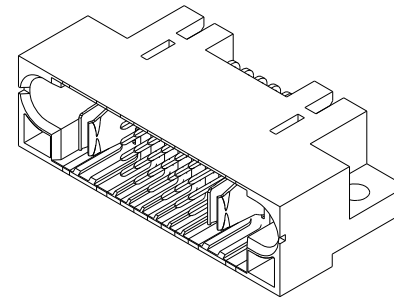
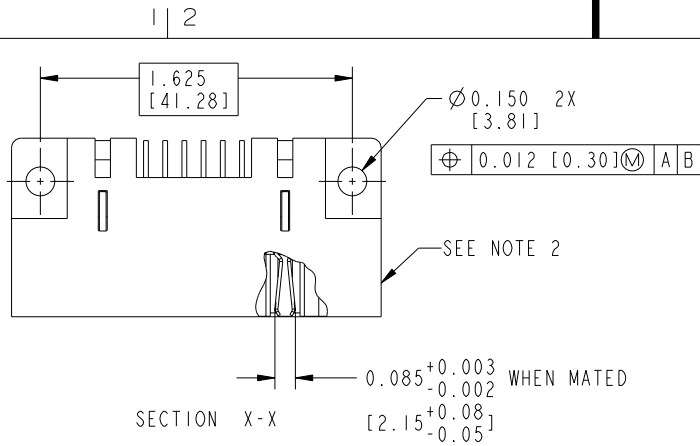
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PRODUCT NUMBER

51415-00X--
SEE NOTE: 3



mat'l code				SEE NOTES		tolerances unless otherwise specified		CUSTOMER		FCI	
ltr	ecn no.	dr	date	linear	.XX±.01/.X±.3	projection		COPY		www.fciconnect.com	
K	DG05-0064	SW	3/30/05		.XXX±.005/.X±.13	INCH/MM		title		IP + 24S + IP	
L	DG05-0435	SW	11/03/05	angles	.XXX±.0020/.XXX±.051	scale		product family		PWRBLADE	
M	DG08-0237	W D	09/01/08	dr	0°±2°	1:1		size		213	
N	DG08-0272	W D	09/25/08	enrg	C. BAROT 01-12-99			dwg no		51415	
				chr	J. BROWN 01-12-99			sheet		1 of 5	
				appd	J. BROWN 01-12-99			code			
sheet index	revision sheet	N 1	N 2	N 3	N 4	N 5					

Pro/E

PDM: Rev: N

STATUS: Released

Printed: Dec 20, 2010

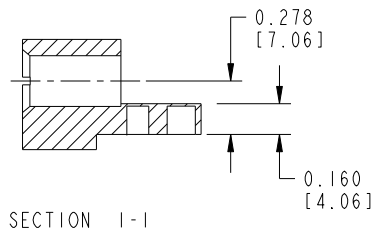
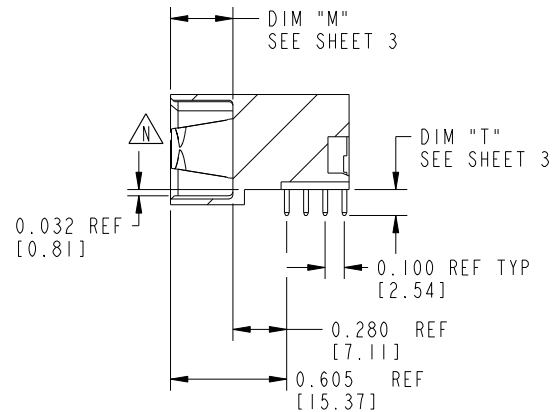
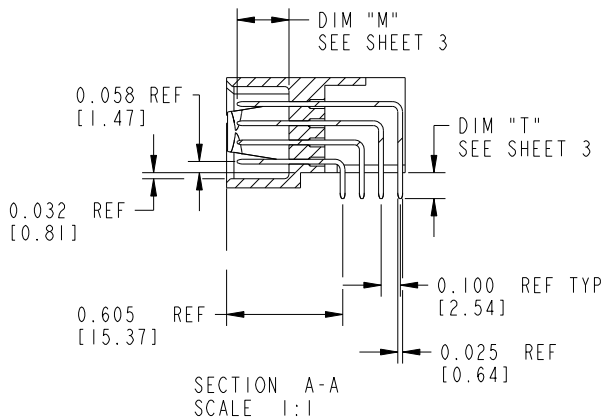
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lfr	ecn no.	dr	date	linear	.XX±.01/0.X±0.3	COPY		title	
N					.XXX±.005/0.XX±0.13	projection	IP + 24S + IP		
					.XXX±.0005/0.XXX±.051		Right Angle Solder Header		
				angles	0°±2°	INCH/MM		product family	
				dr	C. BAROT 01-12-99	scale		PWRBLADE	
				enrg	J. BROWN 01-12-99	1:1		code	
				chr	J. BROWN 01-12-99	A		213	
				appd	J. BROWN 01-12-99	51415		sheet	
sheet index		revision sheet						2 of 5	

Pro/E

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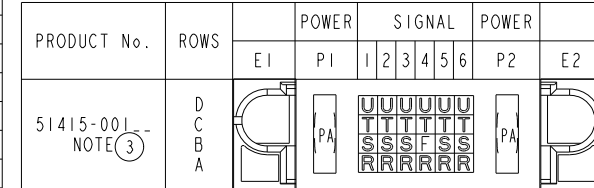
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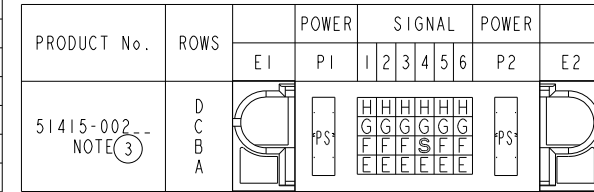
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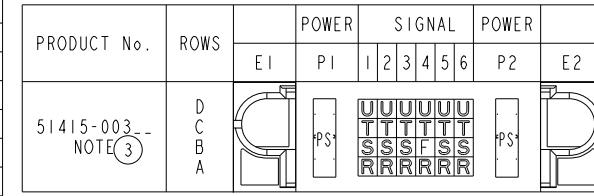
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PA	2	N/A	[N/A]	0.135	[3.43]	POWER
F	1	0.220	[5.59]	0.135	[3.43]	SIGNAL
R	6	0.270	[6.86]	0.135	[3.43]	SIGNAL
S	5	0.270	[6.86]	0.135	[3.43]	SIGNAL
T	6	0.270	[6.86]	0.135	[3.43]	SIGNAL
U	6	0.270	[6.86]	0.135	[3.43]	SIGNAL



ITEM NO.	QTY	DIM "M" MATING LENGTH ±.010		DIM "T" TAIL LENGTH ±.020		CONTACT TYPE
PS	2	N/A	[N/A]	0.135	[3.43]	POWER
E	6	0.220	[5.59]	0.135	[3.43]	SIGNAL
F	5	0.220	[5.59]	0.135	[3.43]	SIGNAL
G	6	0.220	[5.59]	0.135	[3.43]	SIGNAL
H	6	0.220	[5.59]	0.135	[3.43]	SIGNAL
S	1	0.270	[6.86]	0.135	[3.43]	SIGNAL



ITEM NO.	QTY	DIM "M" MATING LENGTH ±.010		DIM "T" TAIL LENGTH ±.020		CONTACT TYPE
PS	2	N/A	[N/A]	0.135	[3.43]	POWER
F	1	0.220	[5.59]	0.135	[3.43]	SIGNAL
R	6	0.270	[6.86]	0.135	[3.43]	SIGNAL
S	5	0.270	[6.86]	0.135	[3.43]	SIGNAL
T	6	0.270	[6.86]	0.135	[3.43]	SIGNAL
U	6	0.270	[6.86]	0.135	[3.43]	SIGNAL



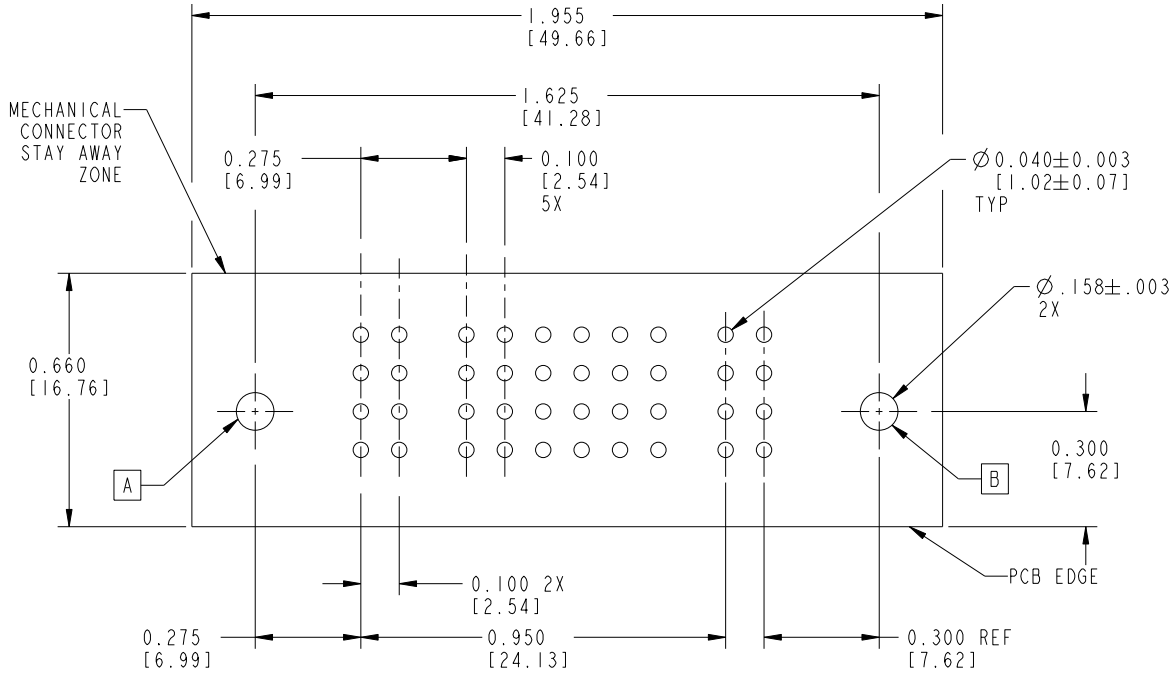
mat'l code		SEE NOTES		tolerances unless otherwise specified		CUSTOMER		FCI	
lir	ecn no.	dr	date	linear	.XX±.01/0.X±0.3	COPY	www.fciconnect.com		
N				angles	.XXX±.005/0.XX±0.13 .XXX±.0005/0.XXX±.051	projection	title IP + 24S + IP		
				dr	0°±2°		Right Angle Solder Header		
				enr	C. BAROT 01-12-99	INCH/MM	product family PWRBLADE		code 213
				chr	J. BROWN 01-12-99	scale	size A		sheet 3 of 5
				appd	J. BROWN 01-12-99	1:1	51415		
sheet index	revision sheet								

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SCALE 2:1

RECOMMENDED PCB LAYOUT

mat'l code		SEE NOTES		tolerances unless otherwise specified		CUSTOMER		 www.fciconnect.com	
ltr	ecn no.	dr	date	linear	.XX±.01/0.X±0.3	COPY		title	
N				angles	.XXX±.005/0.XX±0.13	projection		IP + 24S + IP	
				dr	.XXX±.0005/0.XXX±.051			Right Angle Solder Header	
				enr	0°±2°	INCH/MM		product family	
				chr		scale		PWRBLADE	
				appd		1:1		code	
sheet index		revision sheet				A		213	
						51415		sheet	
								4 of 5	

cage code 22526

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NOTES:

1. DIMENSIONS AND TOLERANCES ARE IN ACCORDANCE WITH ASME Y14.5M, 1994 UNLESS OTHERWISE SPECIFIED.

CONNECTOR NOTES:

2. HOUSING MATERIAL: UL 94 V-0 GLASS FILLED HIGH-TEMP THERMOPLASTIC
POWER CONTACT MATERIAL: COPPER ALLOY
SIGNAL PIN MATERIAL: COPPER ALLOY

 3. SEE ITEM 1 & 2 IN PRINT 10064183 FOR PLATING SPEC OF 51415-00X AND 51415-00XLF RESPECTIVELY.

4. MANUFACTURER'S NAME, P/N, AND DATE CODE TO APPEAR ON THIS SURFACE.

5. PRODUCT SPECIFICATION GS-12-149.
APPLICATION SPECIFICATION BUS-20-067.

PCB NOTES:

6. ALL HOLE DIAMETERS ARE FINISHED HOLE SIZE.


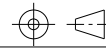
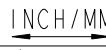
7. MOUNTING HOLES, WHERE APPLICABLE, ARE UNPLATED.

8. $\varnothing .0453 \pm 0.0010$ [1.151 ± 0.025] DRILLED HOLES PLATED WITH
.0003 [0.008] MIN SnPb OVER .001 [0.03]
TO .003 [0.08] Cu PLATING TO ACHIEVE
 $\varnothing .040 \pm .003$ [$1.02 \pm .07$] HOLE.

9. "DIM XXX" TO BE DETERMINED BY THE CUSTOMER.

10. CONNECTOR KEEP-OUT ZONE.

11. A  SYMBOL WILL BE NEXT TO ANY DIMENSION, VIEW, OR NOTE WHICH HAS BEEN MODIFIED WITH THE CURRENT DRAWING REVISION.

mat'l code		SEE NOTES		tolerances unless otherwise specified		CUSTOMER			
ltr	ecn no.	dr	date	linear	.XX±.01/0.X±0.3		projection	www.fciconnect.com	
N					.XXX±.005/0.XX±0.13				title IP + 24S + 1P Right Angle Solder Header
				angles	.XXX±.0005/0.XXX±.051				product family PWRBLADE
					0°±2°			scale	code 213
				dr	C. BAROT	01-12-99	1:1		size
				enrg	J. BROWN	01-12-99		dwg no	
				chr	J. BROWN	01-12-99		A 51415	
				appd	J. BROWN	01-12-99		sheet 5 of 5	
sheet index		revision sheet							

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