Product Catalog

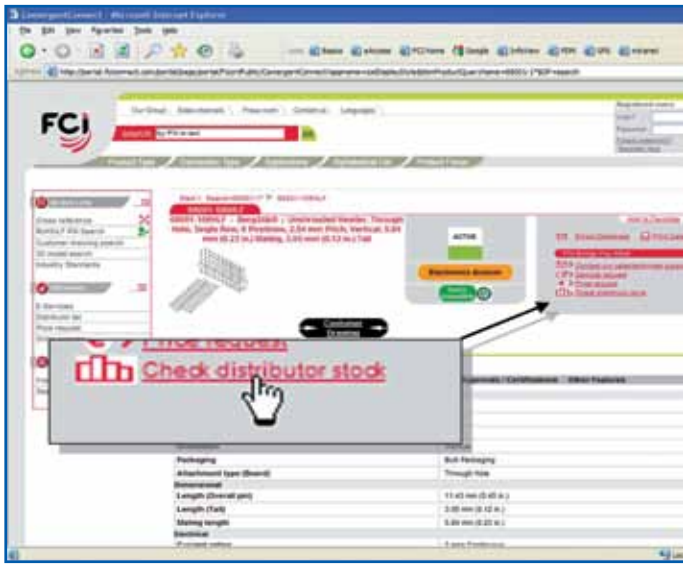
basics+

FCI: SETTING THE STANDARD FOR CONNECTORS

With 13,000 employees in 30 countries and sales of 1.25 billion euros in 2008, FCI is a leading manufacturer of connectors for various markets such as automotive, telecommunication infrastructures and consumer and industrial electronics.

basics+

MORE SERVICE.



More Service

Easy product selection, samples, prototypes, documentation, drawings and more at www.fciconnect.com/basics

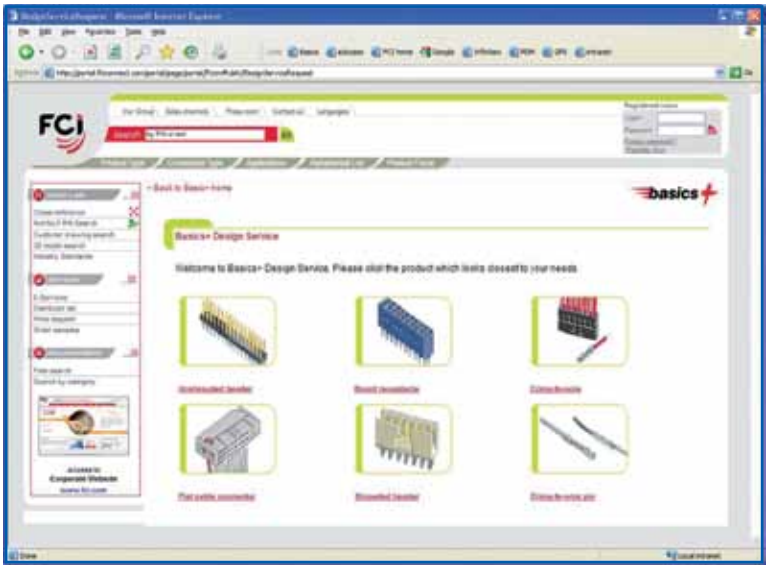
LESS WAITING.

Easy Availability

Catalog range direct from FCI's extensive local distribution network.
Global too: design here, build there.

Easy Customization

Just go here
www.fciconnect.com/basicsdesign
and tell us what you want



CONTENTS

UNSHROUDED HEADERS

BergStik® Unshrouded Headers 2.54mm (.100")

Vertical - standard sizes	8
Vertical - surface mount	10
Vertical - continuous	12
Right angle - standard sizes	14
Stacking headers	16

Minitek™ Unshrouded Headers 2.00mm (.079")

Vertical	50
Right angle	52
Pin-in-Paste	54
Stacking	56

SHROUDED HEADERS

Dubox™ Shrouded Headers 2.54mm (.100) 28

PV™ Superior Performance Shrouded Headers 2.54mm (.100") 34

Minitek™ Shrouded Headers 2.00mm (.079")

Vertical	62
Right angle	64
Pin-in-Paste	66
Eject latch	68

Quickie® Shrouded Headers 2.54mm (.100")

Low Profile	40
Surface Mount and Pin-in-Paste	42
Eject latch	44

BOARD-TO-BOARD RECEPTACLES

Dubox™ Board-to-Board Receptacles 2.54mm (.100")

Vertical	20
Low profile vertical - through mount	22
Low profile vertical - surface mount	24
Horizontal	26

Minitek™ Vertical receptacles 58

CRIMP-TO-WIRE TERMINALS AND HOUSINGS

Dubox™ Crimp-To-Wire 2.54mm (.100")

Contacts	30
Housings	32

PV™ Superior Performance Crimp-To-Wire 2.54mm (.100")

Contacts	36
Housings	38

Minitek™ Crimp-To-Wire 2.00mm (.079")

Contacts	70
Housings	70
Active latch	72

IDC RECEPTACLES

Quickie® IDC Receptacles 2.54mm (.100") 46

Quickie® IDC PCB connector 2.54mm (.100") 48

Minitek™ IDC strain relief 74

SHUNTS

Dubox™ Shunts 2.54mm (.100") 18

Minitek™ Shunts 2.00mm (.079") 60

MORE OPTIONS 76

APPLICATION EQUIPMENT 78

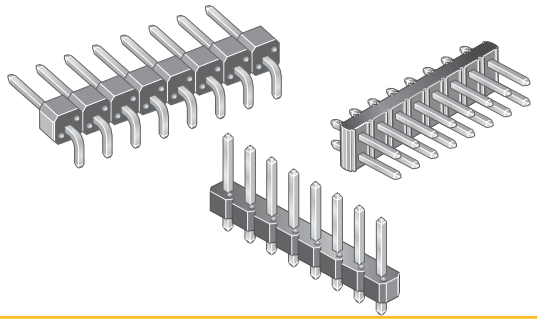
PART NUMBER INDEX 80

SHORT LEAD TIMES

Standard parts available for immediate shipment from participating distributors

Pin-in-Paste

Our new PiP range has been specifically designed to meet the requirements of this process, complete with paste stencil design
Pages 54, 66



Minitek Active Latch

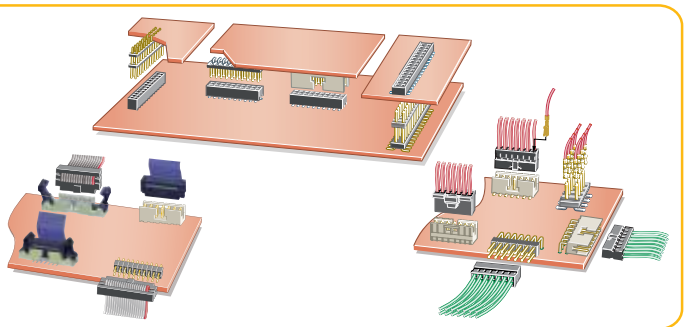
A latching crimp-to-wire system for demanding environments
Pages 64, 72

Minitek Eject Latch Header

This ribbon cable connector mates securely, but can be unmated with no difficulty.
Pages 68, 74

The Minitek 2mm Modular System

Now the most complete and versatile system available: intermateable, high temperature compatible, low coplanarity and space saving
Pages 50 – 74

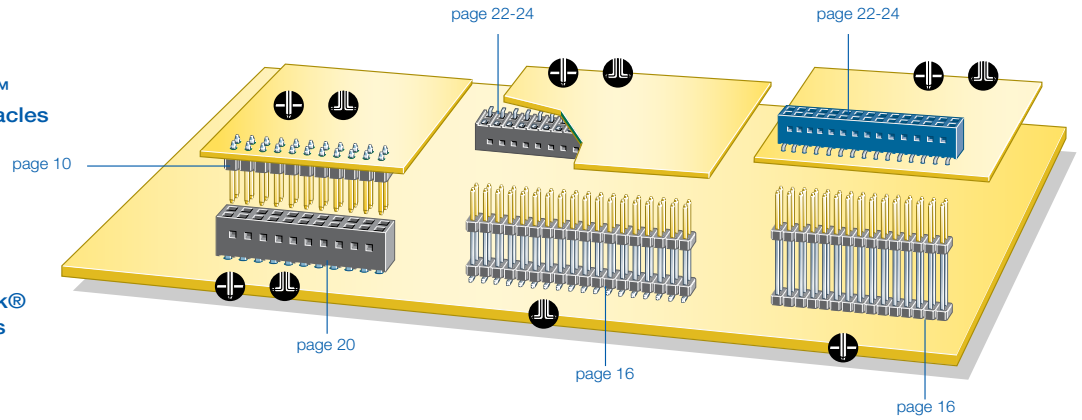


BOARD-TO-BOARD SOLUTIONS

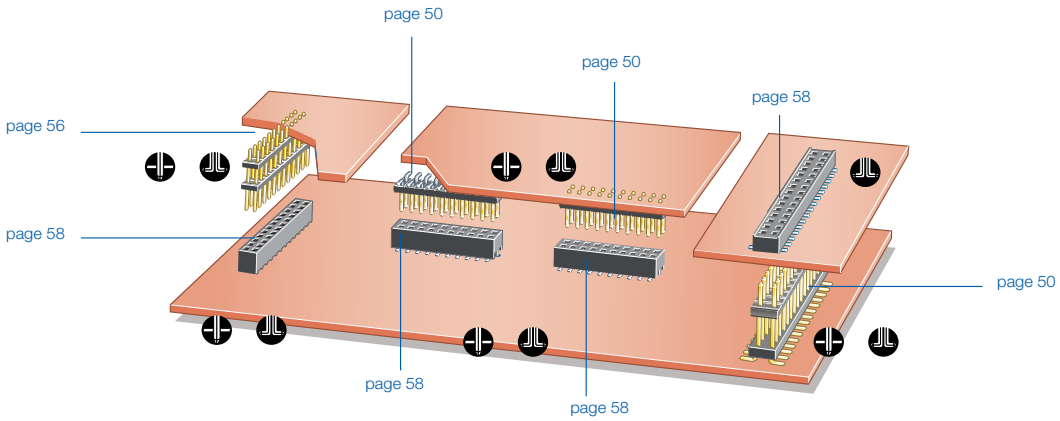
PARALLEL

Dubox™ Receptacles

BergStik® Headers



Minitek™ Modular System

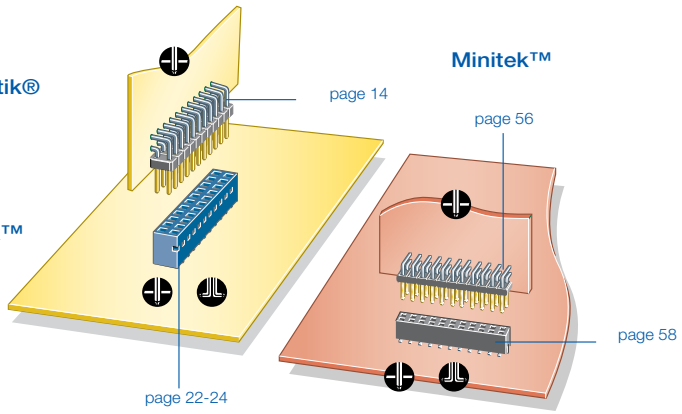


PERPENDICULAR

BergStik®

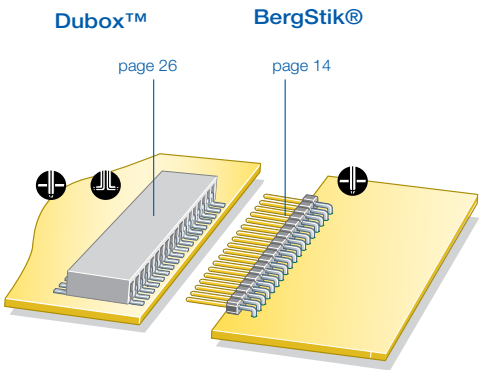
Dubox™

Minitek™



PLANAR

Dubox™ BergStik®



= 2.54 mm

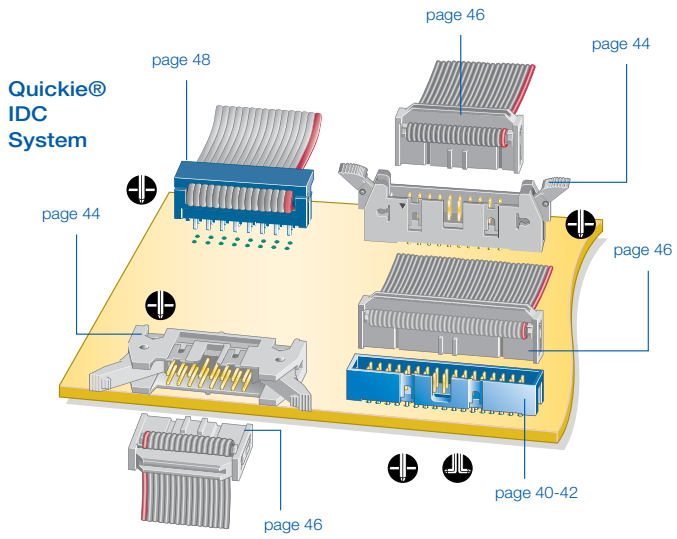
= 2.00 mm

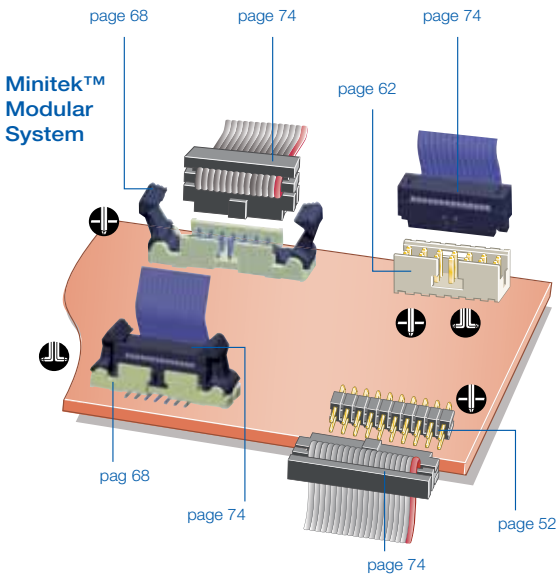
= Through Mount

= Surface Mount

CABLE-TO-BOARD SOLUTIONS

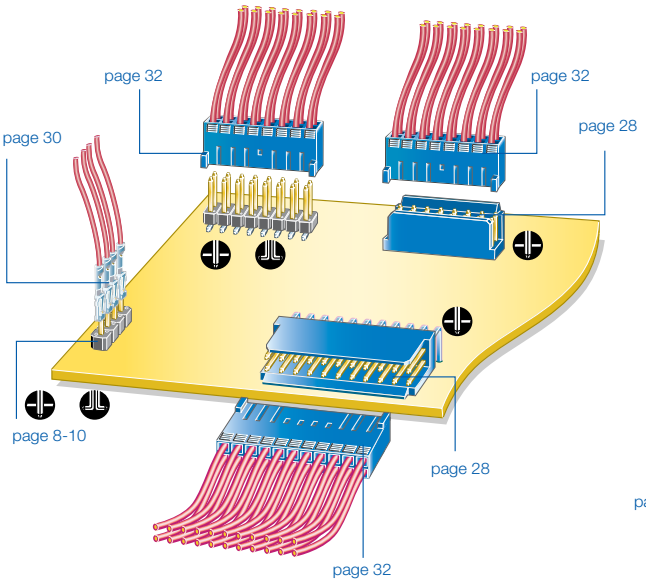
FLAT CABLE IDC

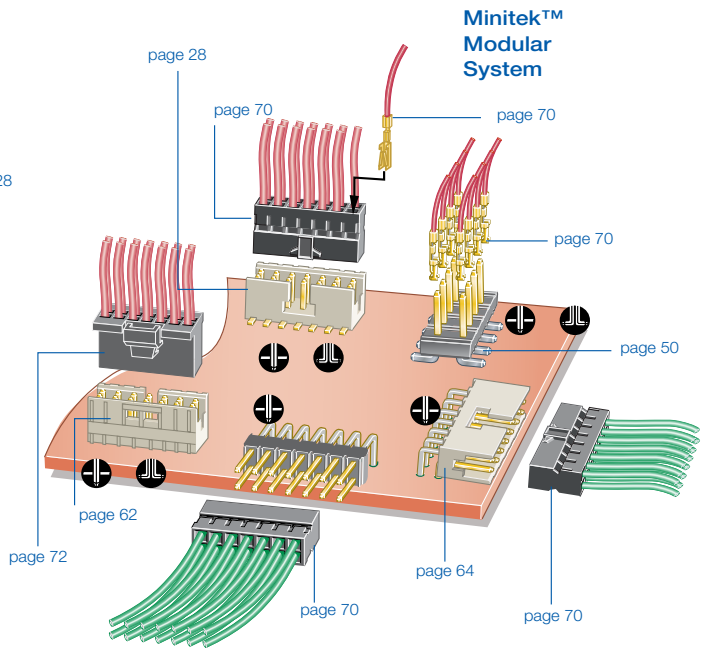




WIRE-TO-BOARD SOLUTIONS

DISCRETE WIRE





= 2.54 mm

= 2.00 mm

= Through Mount

= Surface Mount

TECHNICAL DATA

PHYSICAL

- Housing: High temperature, black thermoplastic
- Flammability rating: UL 94 V-0
- Pin: Phosphor-bronze
- Plating: Gold/GXT or tin over 1.27 µm (50 µ") nickel

ELECTRICAL PERFORMANCE

- Current rating: 3 A continuous
- Insulation resistance: 5000 MΩ min.
- Dielectric withstanding voltage: 1500 V

MECHANICAL PERFORMANCE

- Pin retention to housing: 8.8 N min.
- Retentive leg insertion force: >44.48 N max.
- Retentive leg board retention: 2.22 N

OPERATING TEMPERATURE RANGE

- -65°C to +125°C

PACKAGING

- Standard: Bags
- Optional: Tubes or
  Tape-and-reel with pick-up cap

REFERENCE INFORMATION

- File no. E66906
- File no. LR46923
- Product drawing: By 5-digit base part number
- Product specification: BUS-12-114

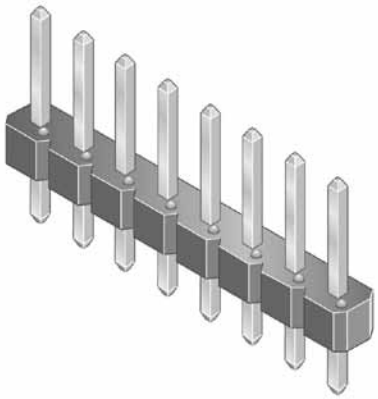
specifications subject to change without notice

PROCESSING INFORMATION

- Compatible with wave, vapor-phase, and IR reflow soldering processes

RoHs INFORMATION

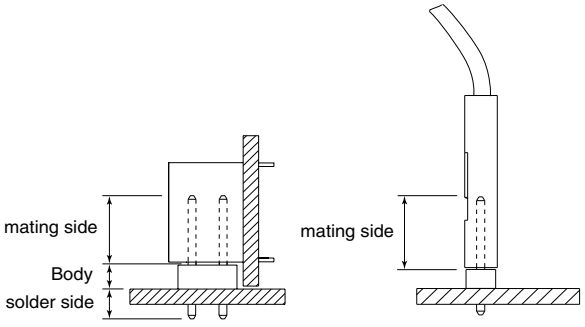
- This product is RoHs compatible according to the European Union Directive 2002/95/IEC



MATING DATA

Dubox™ Crimp-to-wire contacts	30
Dubox™ Crimp-to-wire housings	32
Dubox™ Vertical receptacles	20
Dubox™ Low profile vertical receptacles	22, 24
Dubox™ Horizontal receptacles	26
Quickie™ IDC receptacles	46
PV™ Crimp-to-Wire Contacts	36
PV™ Crimp-to-Wire Housings	38

TYPICAL APPLICATIONS



BergStik® Unshrouded Header, Vertical, Standard Sizes

PART NUMBERS

5-Digit Base Part Number	–	Plating	Number of positions	HLF

1 = 0.76 µm (30µ") gold / GXT
2 = 0.38 µm (15µ") gold / GXT
4 = tin

01 to **36** = Single row
02 to **72** = Double row

Single Row

Base PN	Post		Tail		OAL	
	mm	(inch)	mm	(inch)	mm	(inch)
68000	5.84	0.230	2.41	0.095	10.80	0.425
68001	5.84	0.230	3.05	0.120	11.43	0.450
68002	5.84	0.230	3.81	0.150	12.19	0.480
78511	8.08	0.318	3.05	0.120	13.67	0.538
68024	8.08	0.318	3.81	0.150	14.43	0.568

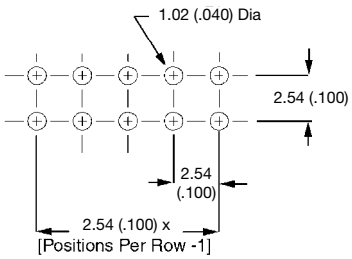
Double Row

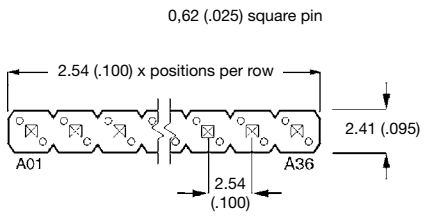
Base PN	Post		Tail		OAL	
	mm	(inch)	mm	(inch)	mm	(inch)
67996	5.84	0.230	2.41	0.095	10.80	0.425
67997	5.84	0.230	3.05	0.120	11.43	0.450
68602	5.84	0.230	3.81	0.150	12.19	0.480
68691	8.08	0.318	3.05	0.120	13.67	0.538
78233	8.08	0.318	3.81	0.150	14.43	0.568

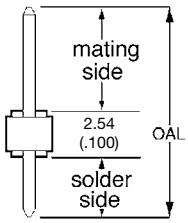
68000 – 1XXHLF
68001 – 1XXHLF
68002 – 1XXHLF
XX = 04, 06, 08, 10, 12, 16, 20
67996 – 1XXHLF
67997 – 1XXHLF
68602 – 1XXHLF
XX = 04, 06, 08, 10, 12, 16, 20

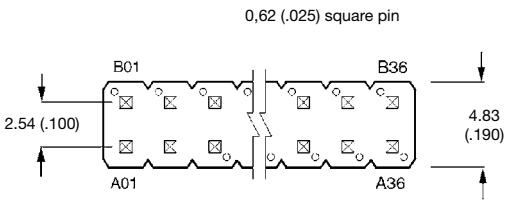
CORE RANGE

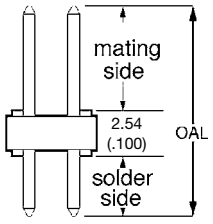
PRODUCT











Dimension : mm (inch)

TECHNICAL DATA

PHYSICAL

- Housing: High temperature, black thermoplastic
- Flammability rating: UL 94 V-0
- Pin: Phosphor-bronze
- Plating: Gold/GXT or tin over 1.27 µm (50 µ") nickel

ELECTRICAL PERFORMANCE

- Current rating: 3 A continuous
- Insulation resistance: 5000 MΩ min.
- Dielectric withstanding voltage: 1500 V

MECHANICAL PERFORMANCE

- Pin retention to housing: 9 N min.

OPERATING TEMPERATURE RANGE

- -65°C to +125°C

PACKAGING

- Standard: Bags
- Optional: Tubes or
  Tape-and-reel with pick-up cap
  (SMT pin style 01 only)

REFERENCE INFORMATION

- File no. E66906
- File no. LR46923
- Product drawing: By 5-digit base part number
- Product specification: BUS-12-114
- Tape and Reel packaging data: TA-840

PROCESSING INFORMATION

- Compatible with wave, vapor-phase, and (for SMT) IR reflow soldering processes
- Recommended IR profile TA 842 for SMT

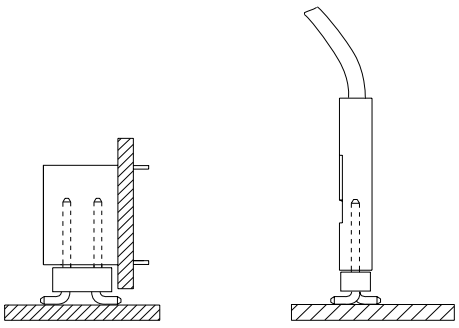
RoHs INFORMATION

- This product is RoHs compatible according to the European Union Directive 2002/95/IEC

MATING DATA

Dubox™ Crimp-to-wire contacts	30
Dubox™ Crimp-to-wire housings	32
Dubox™ Vertical receptacles	20
Dubox™ Low profile vertical receptacles	22, 24
Dubox™ Horizontal receptacles	26
Quickie™ IDC receptacles	46
PV™ Crimp-to-Wire Contacts	36
PV™ Crimp-to-Wire Housings	38

TYPICAL APPLICATIONS



BergStik® Unshrouded Header, Vertical, Surface Mount

PART NUMBERS

5-Digit Base Part Number	–	Plating	Pin Style	Option	Total Positions	LF

Surface mount
95293 = Single Row
95278 = Double Row
98401 = Double Row SMT with pegs

Surface mount	
Pin style	Mating
01	5.84
02	8.08

03 to **17** = Single Row SMT

04 to **50** = Double Row SMT
08 to **50** = Double Row SMT with pegs

Option	Packaging
A	Tape-and-reel with pick-up cap *
B	Tube with pick-up cap

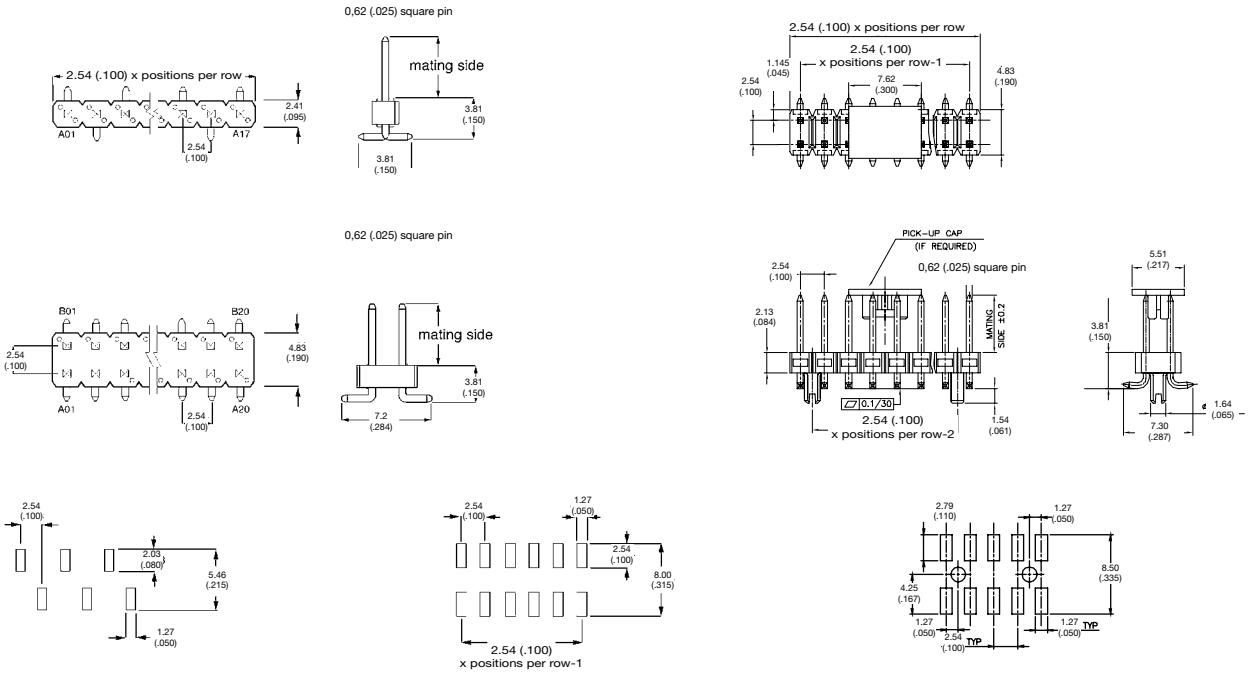
1 = 0.76 µm (30µ") gold/GXT on mating area, tin on solder side
4 = tin
8 = 0.38 µm (15µ") gold/GXT on mating area, tin on solder side

95278 – **101** **A** **XXLF**
XX = 04, 06, 08, 10, 12, 16, 20

CORE RANGE

*as available

PRODUCT



Dimension : mm (inch)

Recommended PCB layouts

FEATURES

- Continuously molded and reeled
- High temperature plastic
- Various lengths cut from 1 part number
- Benchtop machine cuts, polarizes, and applies retentive leg

TECHNICAL DATA

PHYSICAL

- Housing: High temperature, black thermoplastic
- Flammability rating: UL 94 V-0
- Pin: Phosphor-bronze
- Plating: Gold/GXT or tin over 1.27 µm (50 µ") nickel

ELECTRICAL PERFORMANCE

- Current rating: 3 A continuous
- Insulation resistance: 5000 MΩ min.
- Dielectric withstanding voltage: 1500 V

MECHANICAL PERFORMANCE

- Pin retention to housing: 9 N min.

OPERATING TEMPERATURE RANGE

- -65°C to +125°C

PACKAGING

- Reel

REFERENCE INFORMATION

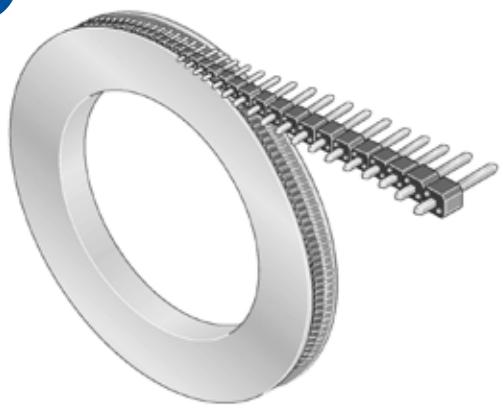
- File no. E66906
- File no. LR46923
- Product drawing: 54101 or 54102
- Product specification: BUS-12-059

PROCESSING INFORMATION

- Compatible with wave, vapor-phase, and IR reflow soldering processes

RoHs INFORMATION

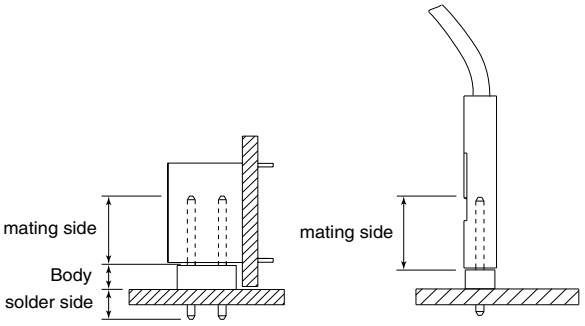
- This product is RoHs compatible according to the European Union Directive 2002/95/IEC



MATING DATA

Dubox™ Crimp-to-wire contacts	30
Dubox™ Crimp-to-wire housings	32
Dubox™ Vertical receptacles	20
Dubox™ Low profile vertical receptacles	22, 24
Dubox™ Horizontal receptacles	26
Quickie™ IDC receptacles	46
PV™ Crimp-to-Wire Contacts	36
PV™ Crimp-to-Wire Housings	38

TYPICAL APPLICATIONS



BergStrip® Unshrouded Header, Continuous

PART NUMBERS

5-Digit Base Part Number	–	Plating	00	HLF

1 = 0.76µm (30µ") gold /GXT
2 = 0.38µm (15µ") gold / GXT
4 = tin

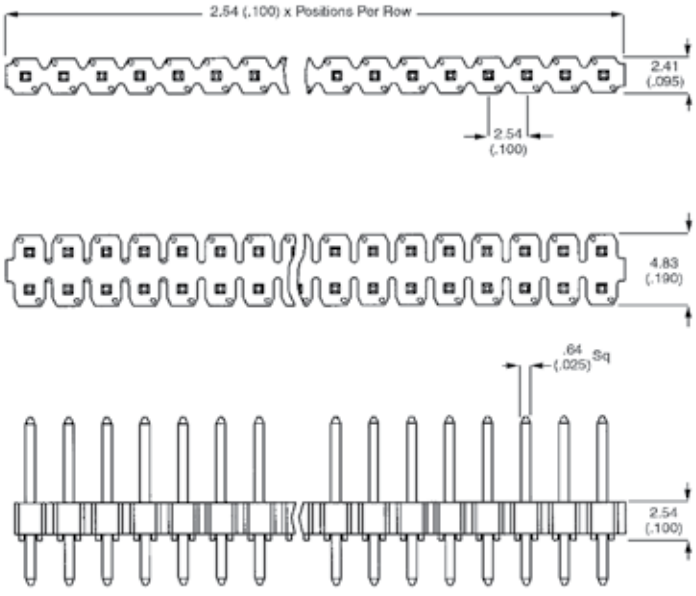
Single Row

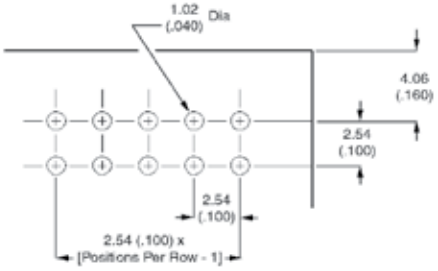
	mating side		solder side		OAL	
Base PN	mm	(in.)	mm	(in.)	mm	(in.)
68000	5.84	0.230	2.41	0.095	10.80	0.425
68001	5.84	0.230	3.05	0.120	11.43	0.450
68002	5.84	0.230	3.81	0.150	12.19	0.480

Double Row

	mating side		solder side		OAL	
Base PN	mm	(in.)	mm	(in.)	mm	(in.)
67996	5.84	0.230	2.41	0.095	10.80	0.425
67997	5.84	0.230	3.05	0.120	11.43	0.450
68602	5.84	0.230	3.81	0.150	12.19	0.480

PRODUCT





Recommended PCB layouts

Dimension : mm (inch)

FEATURES

- High temperature plastic
- Selective plating

TECHNICAL DATA

PHYSICAL

- Housing: High temperature, black thermoplastic
- Flammability rating: UL 94 V-0
- Pin: Phosphor-bronze
- Plating: Gold/GXT or tin over 1.27 µm (50 µ") nickel

ELECTRICAL PERFORMANCE

- Current rating: 3 A continuous
- Insulation resistance: 5000 MΩ min.
- Dielectric withstanding voltage: 1500 V

MECHANICAL PERFORMANCE

- Pin retention to housing: 8.8 N min.
- Retentive leg insertion force: >44.48 N max.
- Retentive leg board retention: 2.22 N

OPERATING TEMPERATURE RANGE

- -65°C to +125°C

PACKAGING

- Bags

REFERENCE INFORMATION

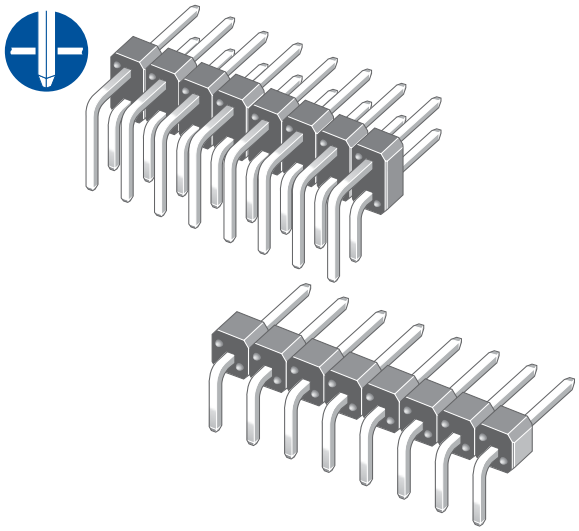
- File no. E66906
- File no. LR46923
- Product drawing: 55101 or 55102
- Product specification: BUS-12-114

PROCESSING INFORMATION

- Compatible with wave, vapor-phase, and IR reflow soldering processes

RoHs INFORMATION

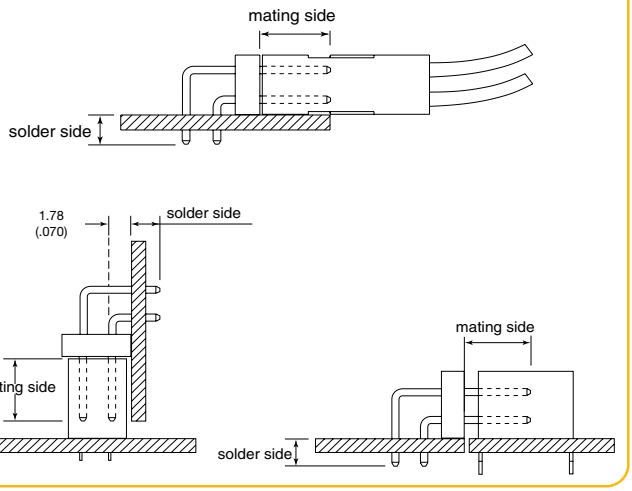
- This product is RoHs compatible according to the European Union Directive 2002/95/IEC



MATING DATA

Dubox™ Crimp-to-wire contacts	30
Dubox™ Crimp-to-wire housings	32
Dubox™ Vertical receptacles	20
Dubox™ Low profile vertical receptacles	22, 24
Dubox™ Horizontal receptacles	26
Quickie™ IDC receptacles	46
PV™ Crimp-to-Wire Contacts	36
PV™ Crimp-to-Wire Housings	38

TYPICAL APPLICATIONS



BergStik® Unshrouded Header, Right Angle, Standard Sizes

PART NUMBERS

5-Digit Base Part Number	–	Plating	Positions Per row	HLF

1 = 0.76 µm (30µ") gold / GXT
2 = 0.38 µm (15µ") gold / GXT
4 = tin

01 to **36** = Single row
02 to **72** = Double row

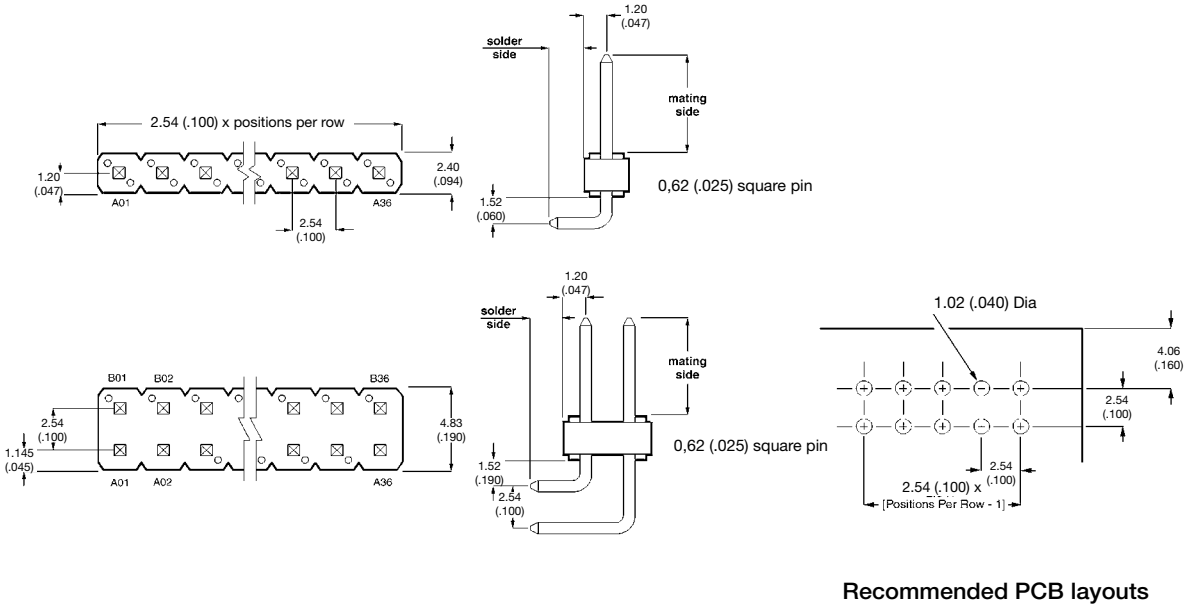
Single Row

	mating side		solder side	
Base PN	**mm**	**(in.)**	**mm**	**(in.)**
68015	5.84	0.230	2.41	0.095
68016	5.84	0.230	3.05	0.120

Double Row

	mating side		solder side	
Base PN	**mm**	**(in.)**	**mm**	**(in.)**
68020	5.84	0.230	2.41	0.095
68021	5.84	0.230	3.05	0.120

PRODUCT



Recommended PCB layouts

Dimension : mm (inch)

FEATURES

- Wide variety of stack heights in 0.5 mm increments
- High temperature plastic
- Selective plating

TECHNICAL DATA

PHYSICAL

- Housing: High temperature, black thermoplastic
- Flammability rating: UL 94 V-0
- Pin: Phosphor-bronze
- Plating: Gold/GXT or tin over 1.27 µm (50 µ") nickel

ELECTRICAL PERFORMANCE

- Current rating: 3 A continuous
- Insulation resistance: 5000 MΩ min.
- Dielectric withstanding voltage: 1500 V

MECHANICAL PERFORMANCE

- Pin retention to housing: 9 N min.

OPERATING TEMPERATURE RANGE

- -65°C to +125°C

PACKAGING

- Bags

REFERENCE INFORMATION

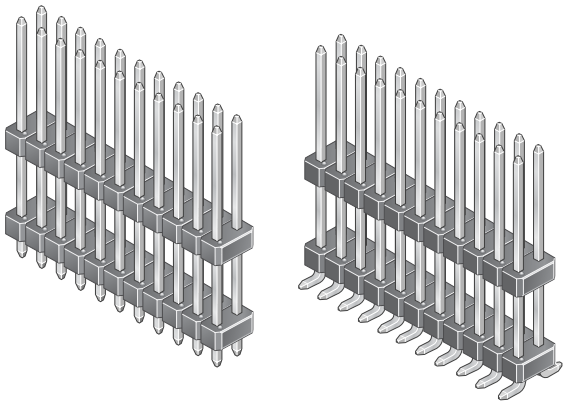
- File no. E66906
- File no. LR46923
- Product drawing: By 5-digit base part number
- Product specification: BUS-12-114

PROCESSING INFORMATION

- Compatible with wave, vapor-phase, and IR reflow soldering processes

RoHs INFORMATION

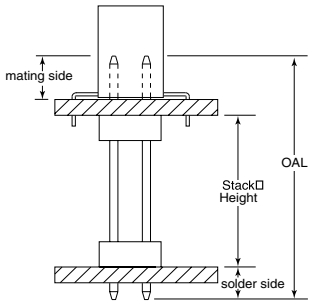
- This product is RoHs compatible according to the European Union Directive 2002/95/IEC

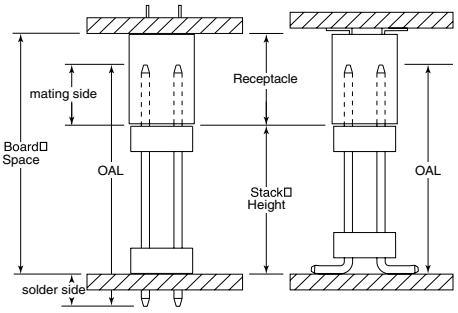


MATING DATA

Dubox™ Vertical receptacles	20
Dubox™ Low profile vertical receptacles	22, 24

TYPICAL APPLICATIONS





BergStik® Unshrouded Header, Stacking

PART NUMBERS

Compile your own part number using custom dimensions (Please allow for initial setup on our system)

5	4	Lead	Solder Side Option	Row Option	–	Plating	Pin Style	Total Positions	Stack Height	LF

1 = Through Hole (TMT)
2 = Surface Mount (SMT)

1 = Single Row (TMT only)
2 = Double Row

02 to **36** single row (TMT)
04 to **72** double row (TMT)
04 to **50** double row (SMT

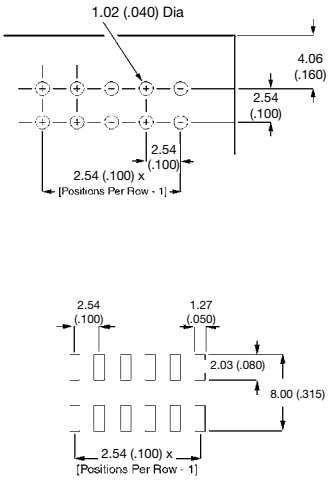
1 = 2.41 mm
2 = 3.05 mm
4 = SMT (double row only)

1 = 0.76 µm (30µ") gold/GXT on mating area, tin on solder side
8 = 0.38 µm (15µ") gold/GXT on mating area, tin on solder side

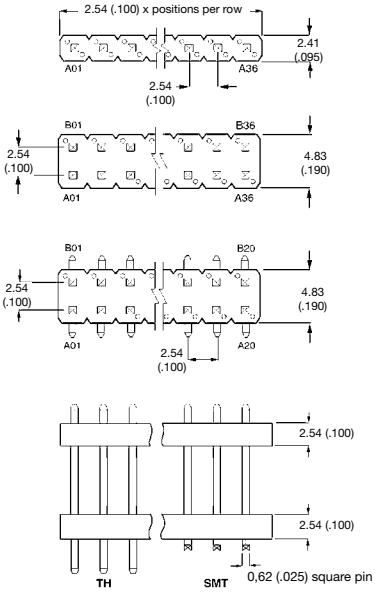
Pin Styl	Overall length (TMT)		Overall length (SMT)	
01	12.20	(.480)	10.42	(.410)
02	13.50	(.531)	11.72	(.461)
03	15.90	(.626)	14.12	(.556)
04	16.76	(.660)	14.98	(.590)
05	17.65	(.695)	15.87	(.525)
06	18.91	(.744)	17.13	(.674)
07	20.96	(.825)	19.18	(.755)
08	23.50	(.925)	21.72	(.855
09	26.04	(1.025)	24.26	(.955)
10	28.58	(1.125)	26.80	(1.055)
11	31.12	(1.225)	29.34	(1.155)
12	33.66	(1.325)	31.88	(1.255)

XX.XX = mm
Specify mm
i.e. 08.50 = 8.50 mm
in 0.50 mm increments
TMT = 08.00 min. - 25.00 max.
SMT = 09.50 min. - 26.00 max.

PRODUCT



Recommended PCB layouts



The board spacing
is the stack height of this header,
plus the height of the receptacle
(see application drawings on opposite page)

Dimension : mm (inch)

FEATURES

- Dual-beam contacts for added reliability
- Slotted cutout in low profile housing simplifies electrical testing
- Side-by-side and end-to-end stackable

TECHNICAL DATA

low profile only

PHYSICAL

- Housing: thermoplastic
  69145 color black
  68786 and 63429 color white
- Flammability rating: UL 94 V-0
- Contact: Phosphor-bronze
- Plating: Gold/GXT or tin over 1.27 µm (50 µ") nickel

ELECTRICAL PERFORMANCE

- Current rating: 2.5 A max. per contact
- Insulation resistance: 50,000 MΩ min.
- Contact resistance: 15 MΩ max. initial, 20 MΩ max. after environmental tests

Dielectric withstanding voltage: 800 V

MECHANICAL PERFORMANCE

- Mating cycles (durability): 50-Gold, 25-Tin.
- Insertion force: 450 gf max. per gold contact
  500 gf max. per tin-lead contact
- Withdrawal force: 30 gf min. per gold contact
  30 gf min. per tin-lead contact.

OPERATING TEMPERATURE RANGE

- -65°C to +125°C

PACKAGING

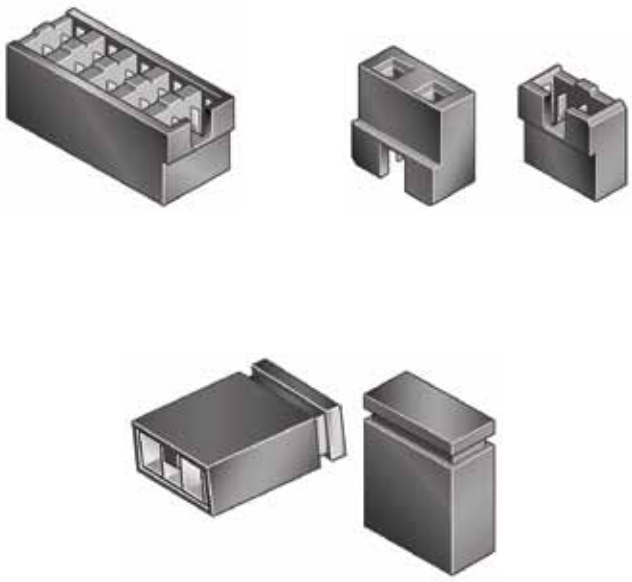
- Plastic bags

REFERENCE INFORMATION

- File no. E66906
- File no. LR46923
- Product drawing: By 5-digit base part number
- Product specification: BUS-12-071-gold
  BUS-12-070-tin

RoHs INFORMATION

- This product is RoHs compatible according to the European Union Directive 2002/95/IEC



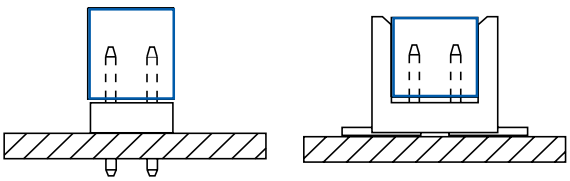
MATING DATA

Continuous unshrouded headers	12
Unshrouded vertical headers	8, 10
Unshrouded right angle headers	14, 16

INSERTION DEPTH

- 4.85 mm (.191") min.
  [provides 3.81 mm (.015") wipe] - Low profile

TYPICAL APPLICATIONS



SHUNTS

PART NUMBERS

Low profile

68786	–	Plating	02	LF

2 = 0.76 µm (30µ") gold / GXT
3 = tin

Standard

63429	–	Plating	02	LF

2 = 0.76 µm (30µ") gold/GXT
3 = tin

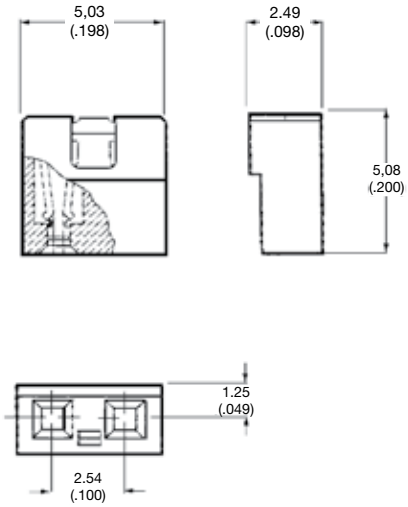
Multi-position

69145	–	Plating	Number of positions	LF

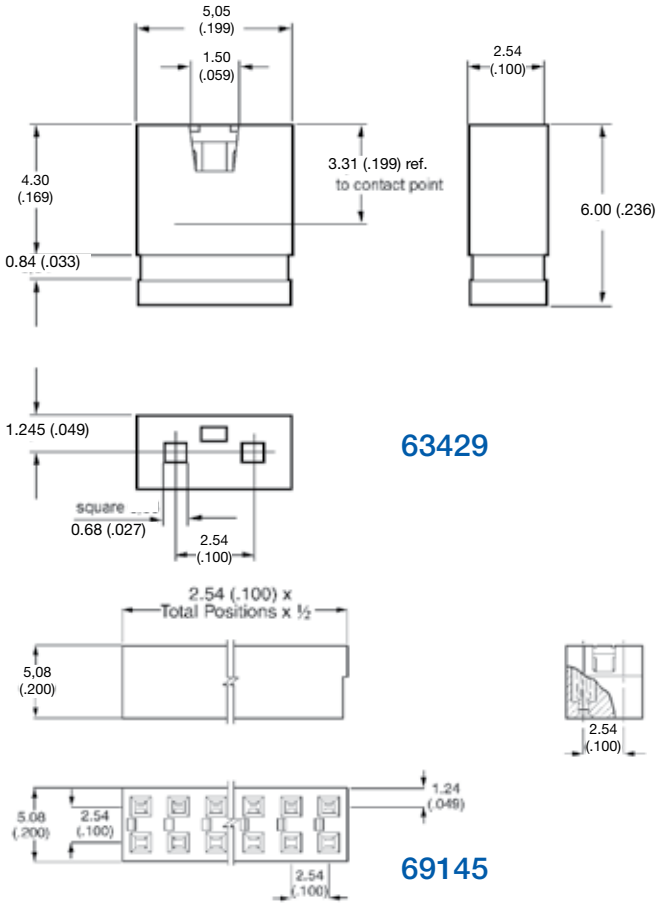
2 = 0.76 µm (30µ") gold / GXT
3 = tin
4 to **20** positions

68786 – 202LF CORE RANGE

PRODUCT



68786



63429

69145

Dimension : mm (inch)

FEATURES

- The Dubox™ contact has a pre-stressed, dual beam design to enable low insertion force
- 4-wall contact design for signal protection

TECHNICAL DATA

PHYSICAL

- Housing: Glass filled thermoplastic polyester, blue
- Flammability rating: UL 94 V-0
- Contact: Phosphor-bronze
- Plating: Gold/GXT or tin in accordance with IEC 603-8l

ELECTRICAL PERFORMANCE

- Current rating: 3 A dc max. per individual contact
  2 A dc max. per contact for fully energized connector
- Insulation resistance: 1x 10^5 MΩ min.
- Contact resistance: 15 MΩ max. initial,
  20 MΩ max. after environmental tests
- Dielectric withstanding voltage: 1000 V rms

MECHANICAL PERFORMANCE

- Mating cycles (durability): 200
- Insertion force per gold contact: 1.50 N (150 gf) max.
- Withdrawal force per gold contact: 0.30 N (30 gf) min.

OPERATING TEMPERATURE RANGE

- -65°C to +125°C

PACKAGING

- Plastic boxes or tubes

PROCESSING INFORMATION

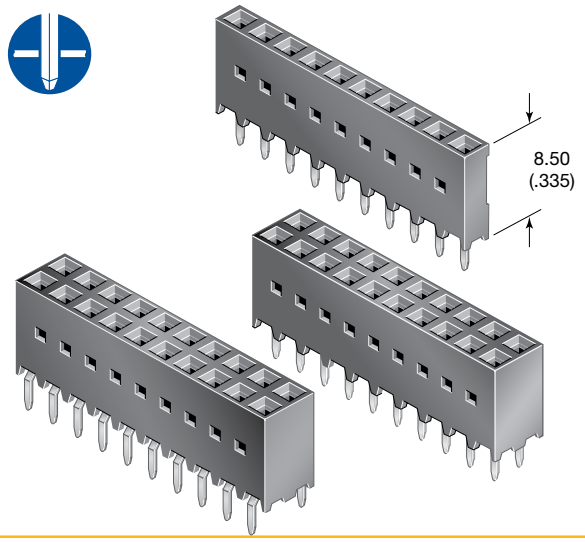
- Compatible with wave soldering processes

REFERENCE INFORMATION

- File no. E66906
- File no. LR46923
- Product drawing: By 5-digit base part number
- Product specification: HE 13/14 and IEC 603-8

RoHs INFORMATION

- This product is RoHs compatible according to the European Union Directive 2002/95/IEC



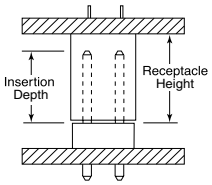
MATING DATA

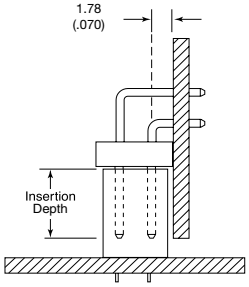
- BergStik® Unshrouded vertical headers 8, 10
- BergStik® Unshrouded right angle headers 14
- BergStik® Unshrouded stacking headers 16
- BergStik® continuous Unshrouded headers 12

INSERTION DEPTH

- Top Entry: 3.6 mm min. to 6.81 mm max.
  [provides .381 mm wipe]
- Bottom Entry: 7 mm min.
  [provides .381 mm wipe] plus board thickness

TYPICAL APPLICATIONS





Dubox™ Vertical Receptacles

PART NUMBERS

5-Digit Base Part Number		Plating	Positions Per Row	LF

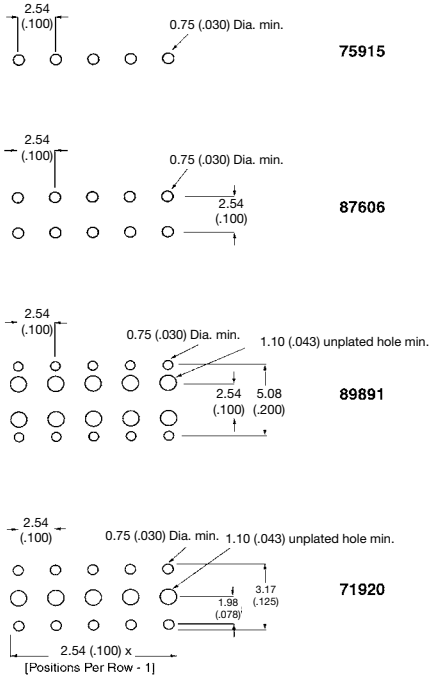
75915 = Single Row, Top Entry
71920 = Single Row, Dual Entry
87606 = Double Row, Top Entry
89891 = Double Row, Dual Entry

02 to **36** *

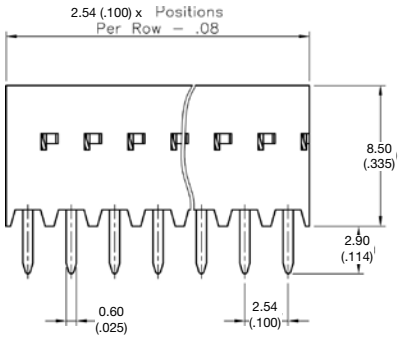
3 = 0,76 µm (30µ") gold / GXT on mating area, tin on solder side

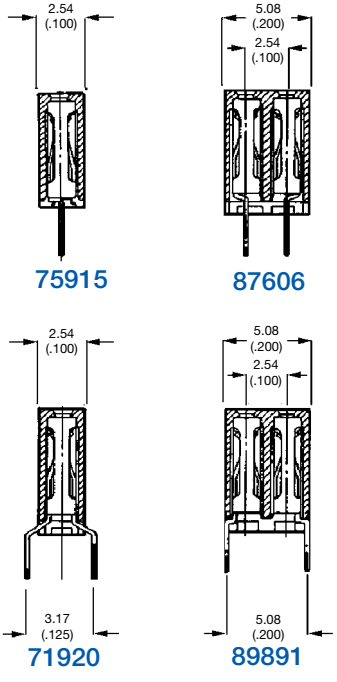
*Other sizes available on request

PRODUCT



Recommended PCB layouts





Dimension : mm (inch)

FEATURES

- The Dubox™ contact has a pre-stressed, dual beam design to enable low insertion force
- 4-wall contact design for signal protection

TECHNICAL DATA

PHYSICAL

- Housing: Glass filled thermoplastic polyester, blue
- Flammability rating: UL 94 V-0
- Contact: Phosphor-bronze
- Plating: Gold/GXT or tin over 1.27 µm (50 µ") nickel

ELECTRICAL PERFORMANCE

- Current rating: 3 A dc max. per individual contact
  2 A dc max. per contact for fully energized connector
- Insulation resistance: 1x 10^5 MΩ min.
- Contact resistance: 15 MΩ max. initial,
  20 MΩ max. after environmental tests
- Dielectric withstanding voltage: 1000 V rms

MECHANICAL PERFORMANCE

- Mating cycles (durability): 200
- Insertion force per gold contact: 1.50 N (150 gf) max.
- Withdrawal force per gold contact: 0.30 N (30 gf) min.

OPERATING TEMPERATURE RANGE

- -65°C to +125°C

PACKAGING

- Plastic boxes or tubes

PROCESSING INFORMATION

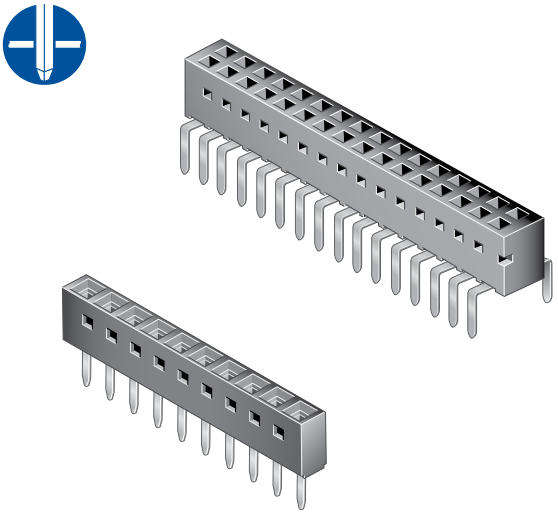
- Compatible with wave soldering processes

REFERENCE INFORMATION

- File no. E66906
- File no. LR46923
- Product drawing: By 5-digit base part number
- Product specification: BUS-12-055

RoHs INFORMATION

- This product is RoHs compatible according to the European Union Directive 2002/95/IEC



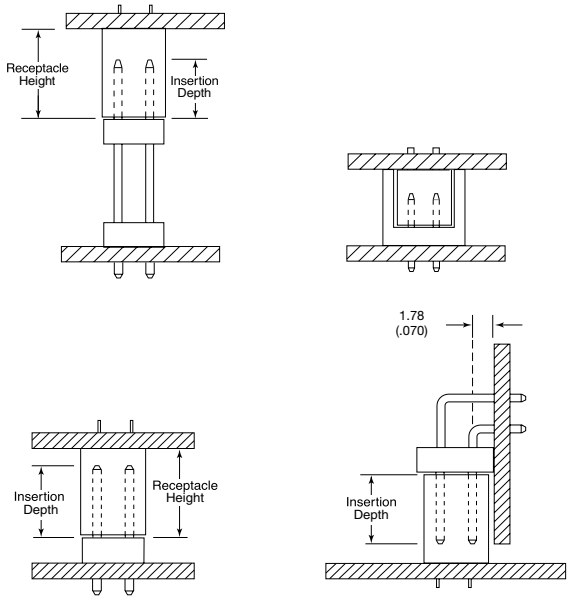
MATING DATA

- BergStik® Unshrouded vertical headers 8, 10
- BergStik® Unshrouded right angle headers 14,
- BergStik® Unshrouded stacking headers 16
- BergStik® continuous Unshrouded headers 12

INSERTION DEPTH

- Top Entry: 3.6 mm min. to 6.7 mm max.
  [provides .381 mm wipe]
- Bottom Entry: 6 mm min.
  [provides .381 mm wipe] plus board thickness

TYPICAL APPLICATIONS



Dubox™ Vertical Receptacles, Low Profile

PART NUMBERS

5-Digit Base Part Number	-	Plating	Positions Per Row	(H)	LF

76341 = Single Row, Top Entry
76342 = Double Row, Top Entry
71991 = Double Row, Dual Entry

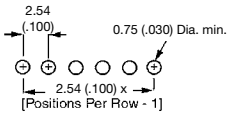
02 to **36** *

3 = 0,76 µm (30µ") gold / GXT on mating area, tin on solder side

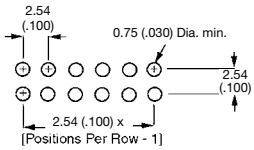
*Other sizes available on request

PRODUCT

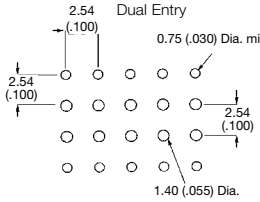
P/N 76341
Top Entry



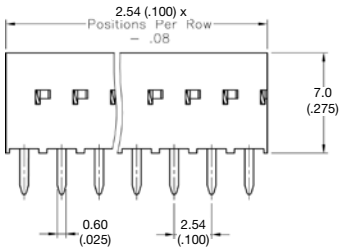
P/N 76342
Top Entry

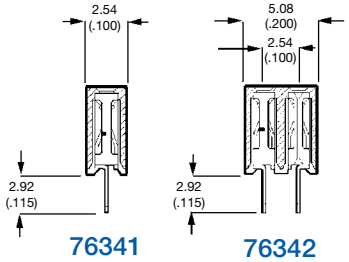


P/N 71991
Dual Entry



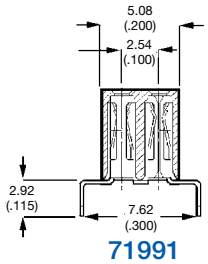
Recommended PCB layouts





76341
Top entry

76342
Top entry



71991
Dual entry

Dimension : mm (inch)

FEATURES

- The Dubox™ contact has a pre-stressed, dual beam design to enable low insertion force
- 4-wall contact design for signal protection

TECHNICAL DATA

PHYSICAL

- Housing: High temperature body, grey
- Flammability rating: UL 94 V-0
- Contact: Phosphor-bronze
- Plating: Gold/GXT or tin over 1.27 µm (50 µ") nickel

ELECTRICAL PERFORMANCE

- Current rating: 3 A dc max. per individual contact
  2 A dc max. per contact for fully energized connector
- Insulation resistance: 1x 10^5 MΩ min.
- Contact resistance: 15 MΩ max. initial,
  20 MΩ max. after environmental tests
- Dielectric withstanding voltage: 1000 V rms

MECHANICAL PERFORMANCE

- Mating cycles (durability): 200
- Insertion force per gold contact: 1.50 N (150 gf) max.
- Withdrawal force per gold contact: 0.30 N (30 gf) min.

OPERATING TEMPERATURE RANGE

- -65°C to +125°C

PACKAGING

- Plastic boxes or tubes
- Tape and reel as available

PROCESSING INFORMATION

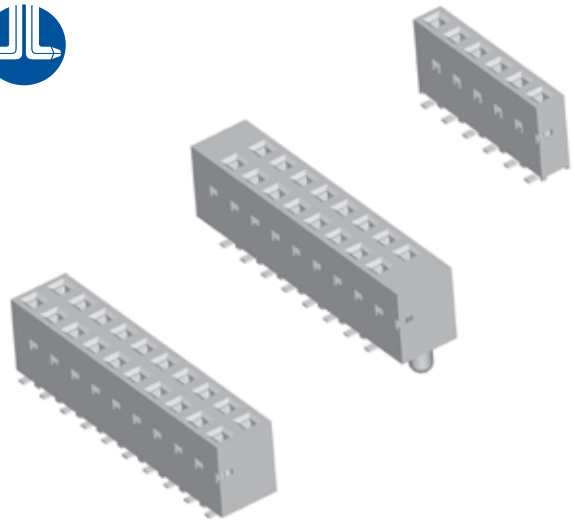
- Compatible with vapor-phase, and
  IR reflow soldering processes

REFERENCE INFORMATION

- File no. E66906
- File no. LR46923
- Product drawing: By 5-digit base part number
- Product specification: BUS-12-055

RoHs INFORMATION

- This product is RoHs compatible according
  to the European Union Directive 2002/95/IEC



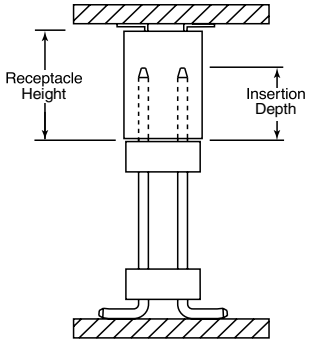
MATING DATA

- BergStik® Unshrouded vertical headers 8, 10
- BergStik® Unshrouded right angle headers 14
- BergStik® Unshrouded stacking headers 16
- BergStik® continuous Unshrouded headers 12

INSERTION DEPTH

- Top Entry: 3.6 mm min. to 6.7 mm max.
  [provides .381 mm wipe]
- Bottom Entry: 6 mm min.
  [provides .381 mm wipe] plus board thickness

TYPICAL APPLICATIONS



Dubox™ Vertical Receptacles, Low Profile

PART NUMBERS

5-Digit Base Part Number	–	Plating	Positions Per Row	Option	LF

91601 = Single Row, Dual Entry
91614 = Single Row with external Locating Pegs, Dual Entry
89898 = Double Row, Dual Entry
91615 = Double Row with External Locating Pegs, Dual Entry
91618 = Double Row with Internal Locating Pegs, Dual Entry

– = standard-tubes
A = Tape-and-Reel packaging with pick-up cap *

02 to **25** Single Row
02 to **25** Double Row

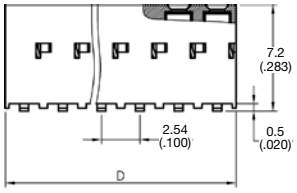
3 = 0,76 µm (30µ") gold/GXT on mating area, tin on solder side

89898 – **3XXALF** CORE RANGE
XX = 02, 03, 04, 05, 06, 08, 10

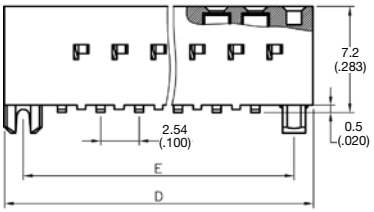
*as available

PRODUCT

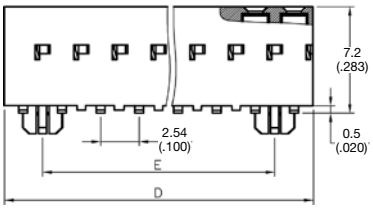
Standard



External Locating Pegs



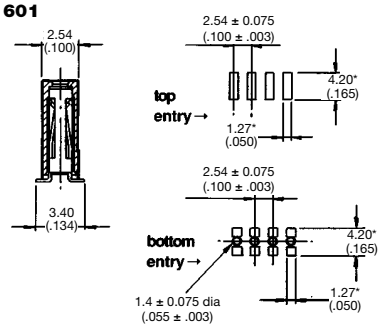
Internal Locating Pegs



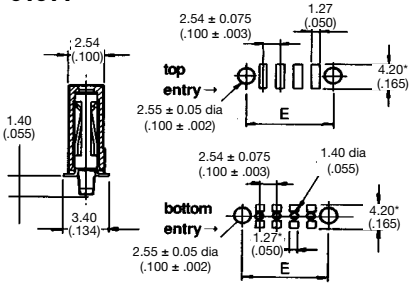
Dimension : mm (inch)

Single Row + Pad lay-outs

91601



91614

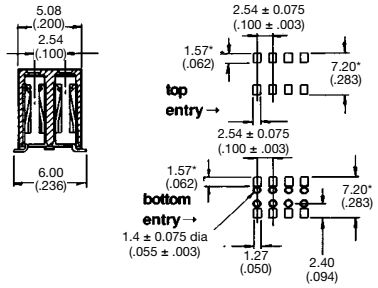


*Note: available as of 3 position versions

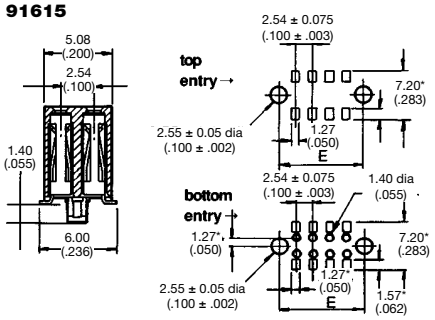
not available in single row

Double Row + Pad lay-outs

89898

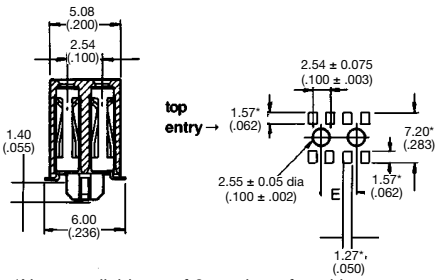


91615



*Note: available as of 3 position versions

91618



*Note: available as of 6 number of positions

Note:
All dimensions marked with * are minimum dimensions

FEATURES

- The Dubox™ contact has a pre-stressed, dual beam design to enable low insertion force
- Floating solder tails self-center on circuit pads and assure coplanarity
- 4-wall contact design for signal protection

TECHNICAL DATA

PHYSICAL

- Housing: Blue thermoplastic -Through hole
  High temp. grey thermoplastic - Surface mount
- Flammability rating: UL 94 V-0
- Contact: Phosphor-bronze
- Plating: Gold/GXT or tin over 1.27 µm (50 µ") nickel

ELECTRICAL PERFORMANCE

- Current rating: 3 A dc max. per individual contact
  2 A dc max. per contact for fully energized connector
- Insulation resistance: 1x 10^5 MΩ min.
- Contact resistance: 15 MΩ max. initial,
  20 MΩ max. after environmental tests
- Dielectric withstanding voltage: 1000 V rms

MECHANICAL PERFORMANCE

- Mating cycles (durability): 200
- Insertion force per gold contact: 1.50 N (150 gf) max.
- Withdrawal force per gold contact: 0.30 N (30 gf) min.

OPERATING TEMPERATURE RANGE

- -65°C to +125°C

PACKAGING

- Standard: Tubes
- Optional: Tape-and-reel

PROCESSING INFORMATION

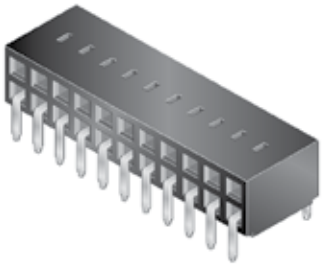
- Series 89882, 89883: compatible with wave soldering processes
- Series 71607, 71609: compatible with vapor-phase and IR reflow soldering processes

REFERENCE INFORMATION

- File no. E66906
- File no. LR46923
- Product drawing: 71607, 71609, 89882, 89883
- Product specification: HE 13/14 and IEC 603-8
- Application specification: TA-842 for SMT
- Tape and Reel packaging data : TA-856

RoHs INFORMATION

- This product is RoHs compatible according to the European Union Directive 2002/95/IEC



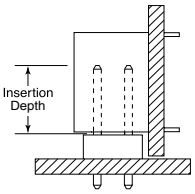
MATING DATA

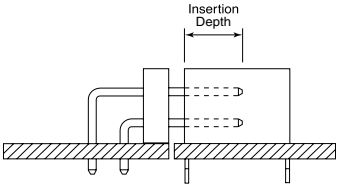
- BergStik® Unshrouded vertical headers 8, 10
- BergStik® Unshrouded right angle headers 14
- BergStik® continuous Unshrouded headers 12

INSERTION DEPTH

- 3,6 mm min. to 7.50 mm max.
  [provides .381 mm wipe]

TYPICAL APPLICATIONS





Dubox™ Horizontal Receptacles

PART NUMBERS

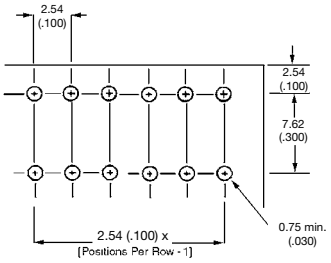
5-Digit Base Part Number	-	Plating	Positions Per Row	ALF

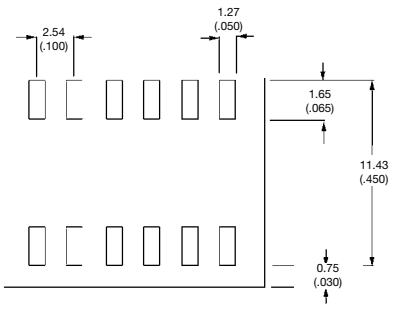
89882 = Through Hole (TMT), Single Row
89883 = Through Hole (TMT), Double Row
71607 = Surface Mount (SMT), Single Row
71609 = Surface Mount (SMT), Double Row

02 to **36** (TMT)
02 to **25** (SMT)

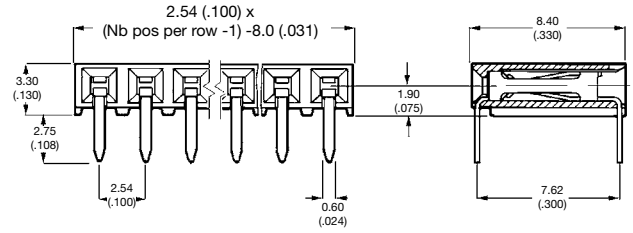
3 = 0,76 µm (30µ") gold/GXT on mating area, tin on solder side

PRODUCT

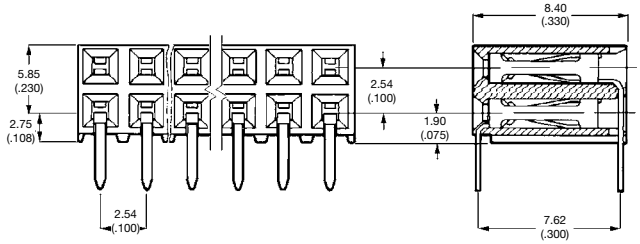




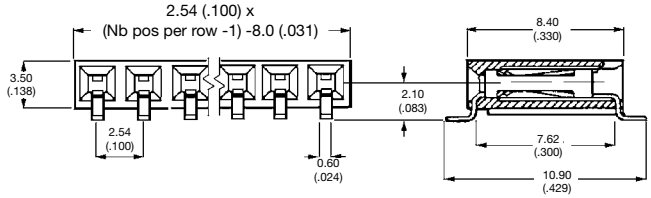
Recommended PCB layouts



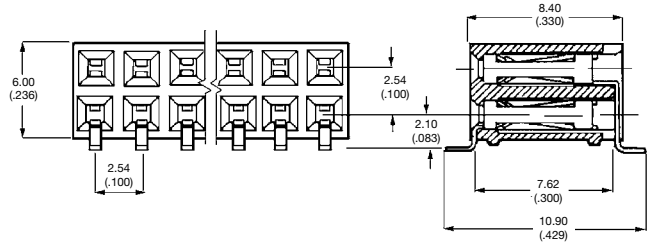
89882



89883



71607



71609

Dimension : mm (inch)

FEATURES

- For use with Dubox™ crimp-to-wire housings
- Stackable end-to-end
- Passive latching, anti-reverse and anti-miss-match when used with Dubox™ crimp-to-wire housings
- Selective plating

TECHNICAL DATA

PHYSICAL

- Housing: Glass filled thermoplastic polyester
- Housing color for series 76382, 76383: blue
  Housing color for series 76384, 76385: black
- Flammability rating: UL 94 V-0
- Contact: copper Alloy
- Plating: Gold/GXT or tin over 1.27 µm (50µ") nickel

ELECTRICAL PERFORMANCE

- Current rating: 3 A continuous
- Insulation resistance: 1x 10^5 MΩ min.
- Dielectric withstanding voltage: 1000 V rms

MECHANICAL PERFORMANCE

- Contact retention to housing: 20 N min.

OPERATING TEMPERATURE RANGE

- -40°C to +125°C

PACKAGING

- 1x2 to 1x6 and 2x2 to 2x6: plastic bags
- Other in tube

PROCESSING INFORMATION

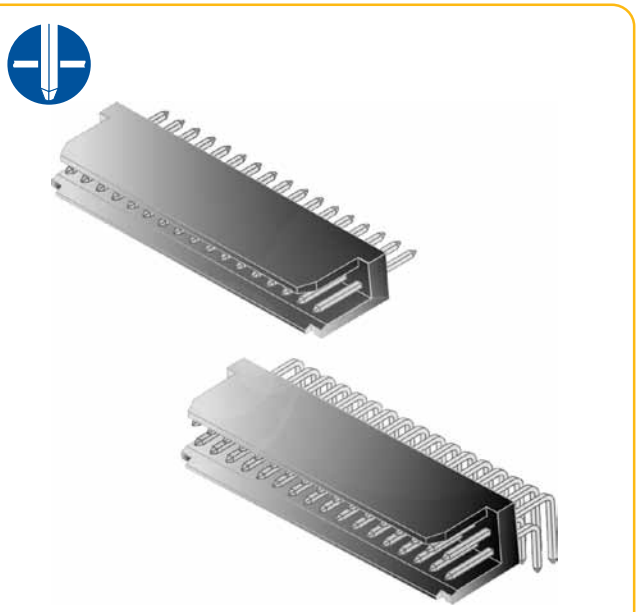
- Compatible with wave soldering processes

REFERENCE INFORMATION

- File no. E66906
- File no. LR46923
- Product drawing: By 5-digit base part number
- Application specification: TA-531

RoHs INFORMATION

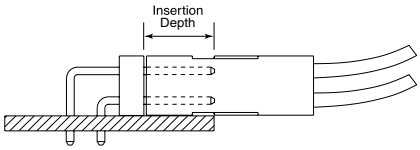
- This product is RoHs compatible according to the European Union Directive 2002/95/IEC

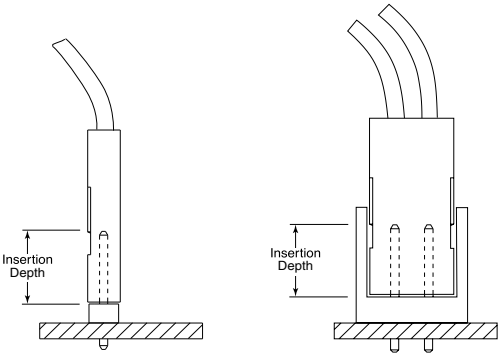


MATING DATA

- Dubox™ Crimp-to-wire contacts 30
- Dubox™ Crimp-to-wire housings 32

TYPICAL APPLICATIONS





Dubox™ Shrouded Headers

PART NUMBERS

5-Digit Base Part Number	–	Plating	Positions Per Row	LF

76384 = Single row, straight
76382 = Single row, right angle
76385 = Double row, straight
76383 = Double row, right angle

02 up to **18**

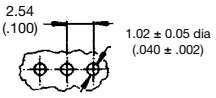
3 = 0.76 µm (30µ") gold/GXT on mating area, tin on solder side
4 = tin

76384	–	3XXLF
76385	–	3XXLF

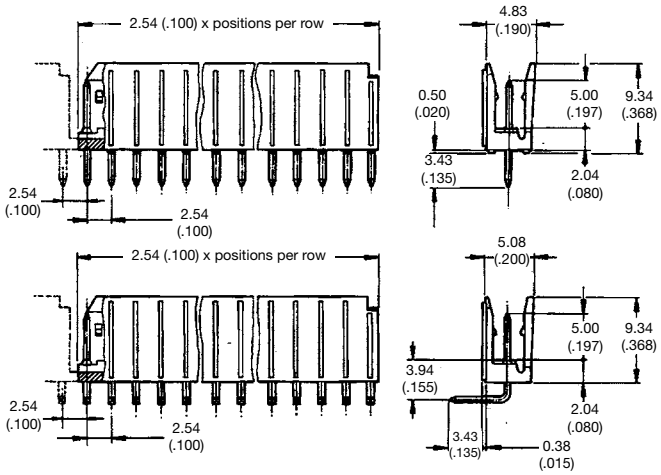
CORE RANGE

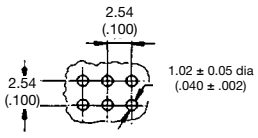
XX = 02, 03, 04, 05, 06, 08, 10

PRODUCT

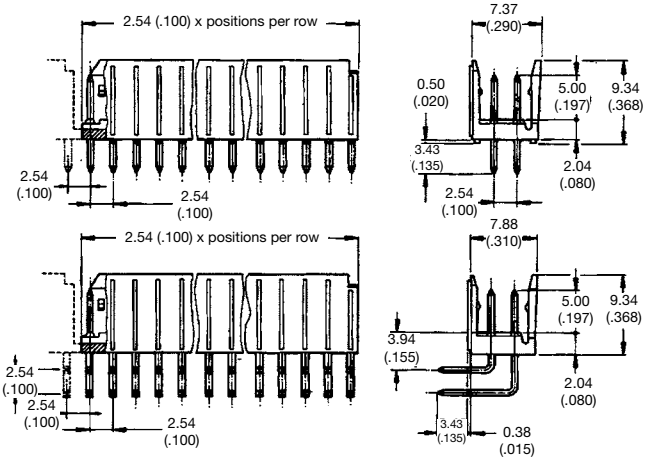


Recommended PCB layouts





Recommended PCB layouts



Dimension : mm (inch)

FEATURES

- The Dubox™ contact has a pre-stressed, dual beam design to enable low insertion force.
- Mates with very short pins (5 mm)
- Universal crimp barrel accomodates wires from AWG 22-30
- Selective plating

TECHNICAL DATA

PHYSICAL

- Contact: phosphor bronze
- Plating: 0.76 µm (30µ") Gold/GXT over 1.27 µm (50 µ") nickel

ELECTRICAL PERFORMANCE

- Current rating: 3 A continuous
- Contact resistance after environmental test: 15Ω m max. – Contact
- Dielectric withstanding voltage: 1000 V rms

MECHANICAL PERFORMANCE

- Mating cycles (durability): 200 – Gold
- Insertion force gold finish contact: 1.3 N
- Withdrawal force (min) gold finish contact: 0.3 N.
- contact retention force to housing: 15 N per contact.

OPERATING TEMPERATURE RANGE

- -65°C to +125°C

PACKAGING

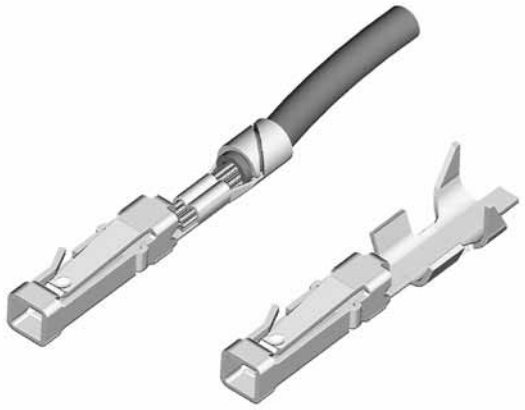
- 1Reels
- Boxes - Loose piece

REFERENCE INFORMATION

- File no. E66906
- File no. LR46923
- Product drawing: By 5-digit base part number
- Product specification: BUS-12-055
- Application specification: TA-317, TA-340

RoHs INFORMATION

- This product is RoHs compatible according to the European Union Directive 2002/95/IEC



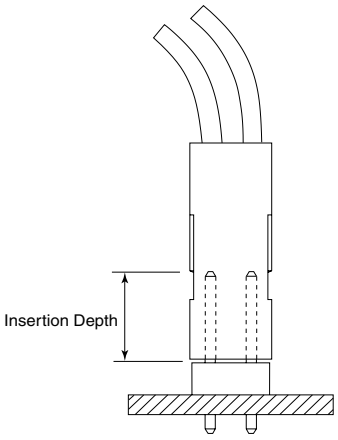
MATING DATA

- BergStik® unshrouded straight headers 8, 10
- BergStik® unshrouded right angle headers 14
- Dubox™ shrouded vert./ra. headers 28
- BergStik® continuous unshrouded headers 12

INSERTION DEPTH

- Discrete Wire: 3.6 mm min. to 5.6 mm max. [provides .381 mm wipe]
- Crimp-to-Wire Housing: 5.1 mm min. to 6.2 mm max. [provides .381 mm wipe in housing]

TYPICAL APPLICATIONS



Dubox™ Crimp-to-Wire Contacts

PART NUMBERS

Part numbers / Contacts on Reel

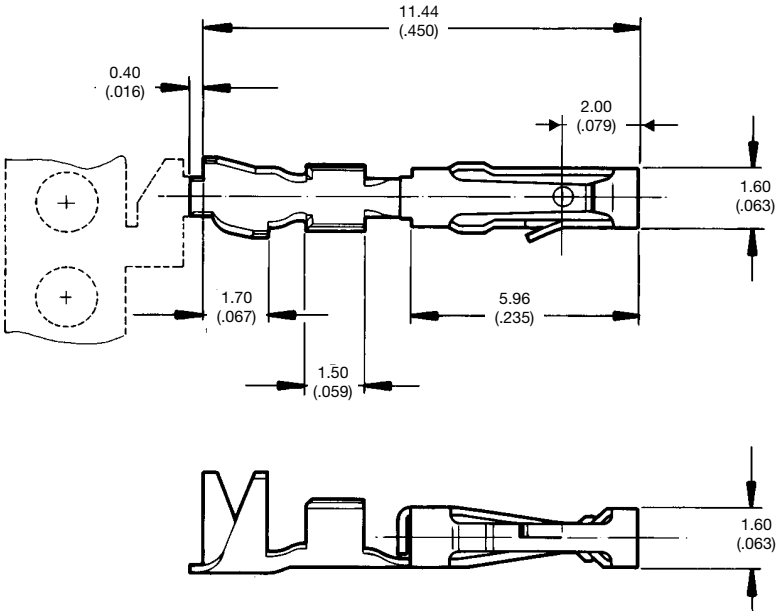
Wire size	insulation O.D.	Selective Gold Plated	Tin plated	Packaging
22-30	0.90 - 1.50 (.035 - .059)	76347-301LF	76347-401LF	15.000/reel
22-30	0.90 - 1.50 (.035 - .059)	76347-302 LF•	76347-402LF•	15.000/reel
22-30	0.90 - 1.50 (.035 - .059)	76347-303 LF	76347-403LF	500/reel
20-22	1.10 - 1.60 (.043 - .062)	76347-311LF	76347-411LF	15.000/reel
20-22	1.10 - 1.60 (.043 - .062)	76347-312 LF•	76347-412LF•	15.000/reel

Part numbers / Contacts loose Piece

Wire size	insulation O.D.	Selective Gold Plated	Tin plated	Packaging
22-30	0.90 - 1.50 (.035 - .059)	76357-301LF	76357-401LF	1000/box
Notes: • = reeled for application machine with left-to-right feeding				

76347 – 301LF CORE RANGE

PRODUCT



Contacts to be used with housing = 65239-xxx / 65240-xxx

Wire strip length = 3.00 ± 0.25 (.118 ±.010)

Mating pin size = 0.62 (.024) square

Mating pin recommended length = 5.00 (.197) min.

Dimension : mm (inch)

FEATURES

- For use with Dubox™ crimp-to-wire contacts
- Stackable end-to-end
- Passive latching, anti-reverse and anti-miss-match when used with Dubox™ shrouded headers
- Contacts removable for easy repairability

TECHNICAL DATA

PHYSICAL

- Housing: Glass filled thermoplastic polyester
- Housing color blue
- Flammability rating: UL 94 V-0

ELECTRICAL PERFORMANCE

- Insulation resistance: 1x 10^5 MΩ min.
- Dielectric withstanding voltage: 1000 V rms

OPERATING TEMPERATURE RANGE

- -65°C to +125°C

PACKAGING

- Bulk

PROCESSING INFORMATION

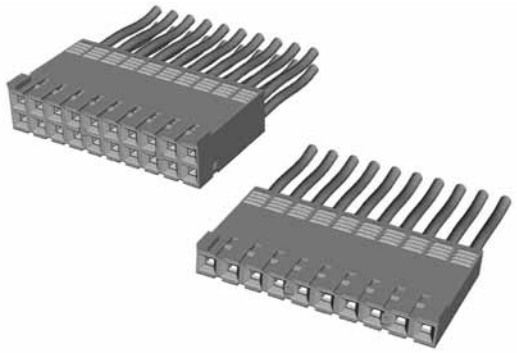
- Compatible with wave soldering processes

REFERENCE INFORMATION

- File no. E66906
- File no. LR46923
- Product drawing: By 5-digit base part number
- Application specification: TA-317, TA-340

RoHs INFORMATION

- This product is RoHs compatible according to the European Union Directive 2002/95/IEC



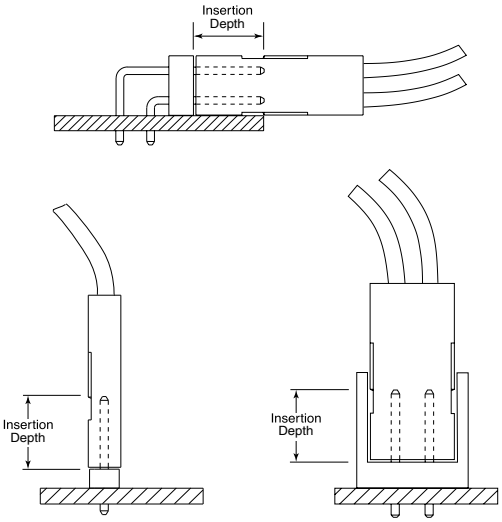
MATING DATA

BergStik® unshrouded straight headers	8, 10
BergStik® unshrouded right angle headers	14
Dubox™ shrouded vert./ra. headers	28

INSERTION DEPTH

- 3.6 mm min. to 6.0 mm max.

TYPICAL APPLICATIONS



Dubox™ Crimp-to-Wire Housings

PART NUMBERS

5-Digit Base Part Number	–	0	Positions Per Row	LF

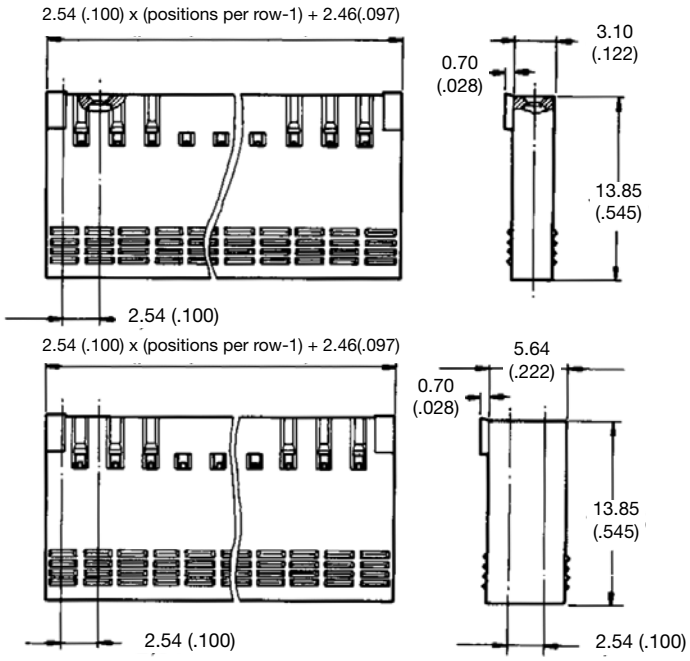
65240 = Single row
65239 = Double row

02 up to **36**

65239 – 0XXLF CORE RANGE
XX = 02, 03, 04, 05, 06, 08, 10

65240 – 0XXLF
XX = 04, 06, 08, 10, 12, 16, 20

PRODUCT



Pin size: 0.62 (.024) square
Recommended pin length: 5.00 (.197) min.

Dimension : mm (inch)

2.54 mm (.100")

FEATURES

- Housing uses our high reliability contact
- High temperature headers
- Passive latching system

TECHNICAL DATA

PHYSICAL

- Housing: Black thermoplastic
- Flammability rating: UL 94 V-0
- Contact: Phosphor-bronze
- Plating: Gold/GXT or tin-lead over 1.27 µm (50 µ") nickel

ELECTRICAL PERFORMANCE

- Current rating: 3 A continuous
- Insulation resistance: 1x 10^5 MΩ min.
- Dielectric withstanding voltage: 1000 V rms

MECHANICAL PERFORMANCE

- Contact retention to housing: 17.76 N min.

OPERATING TEMPERATURE RANGE

- -40°C to +125°C

PACKAGING

- Bags

PROCESSING INFORMATION

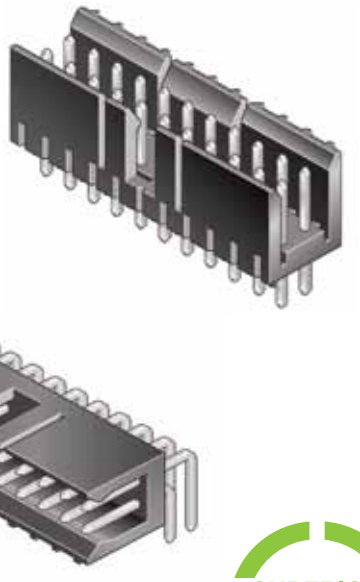
- Compatible with wave soldering processes

REFERENCE INFORMATION

- File no. E66906
- File no. LR46923
- Product drawing: By 5-digit base part number
- Product specification: BUS-12-067, BUS-12-075
- Application specification: TA-531

RoHs INFORMATION

- This product is RoHs compatible according to the European Union Directive 2002/95/IEC

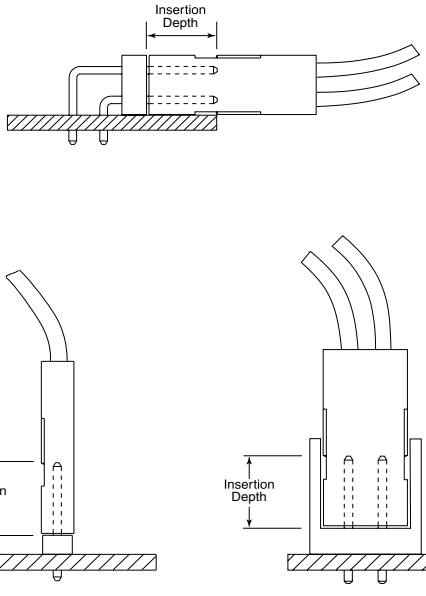


SUPERIOR PERFORMANCE

MATING DATA

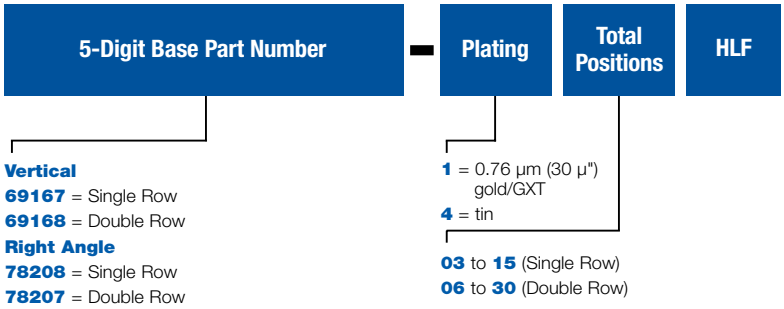
- PV™ Crimp-to-wire contacts 36
- PV™ Crimp-to-wire housings 38

TYPICAL APPLICATIONS

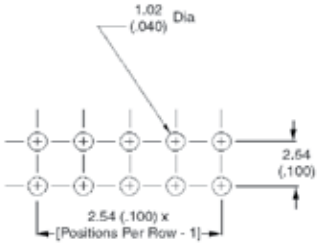


PV™ Shrouded Headers

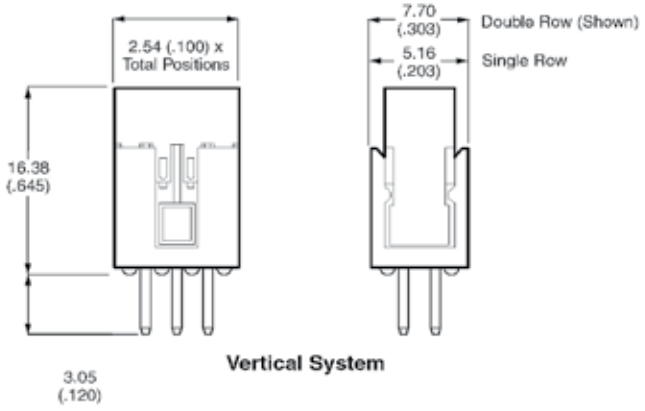
PART NUMBERS



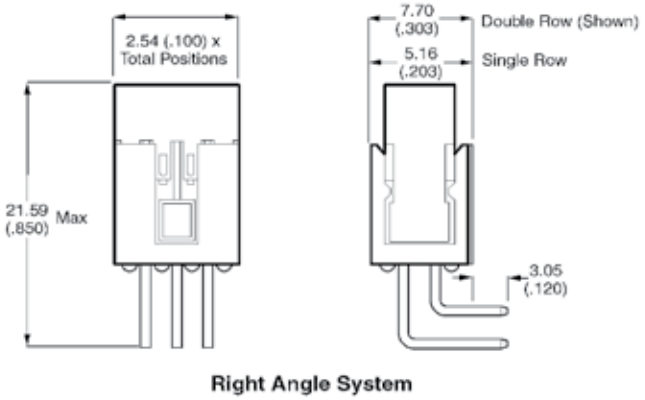
PRODUCT



Recommended PCB layouts



Vertical System



Right Angle System

Dimension : mm (inch)

2.54 mm (.100")

FEATURES

- High reliability contacts for shock and vibration applications
- Three spring thickness options meet application specific insertion, withdrawal, and normal force requirements
- Leaf spring design provides constant retention force after repeated cycles

TECHNICAL DATA

PHYSICAL

- Contact: Brass body with beryllium-copper spring
- Pin: Brass
- Plating: Gold/GXT or tin over 1.27 µm (50 µ") nickel

ELECTRICAL PERFORMANCE

- Current rating: 3 A continuous depending on wire size
- Insulation resistance: 5000 mΩ min.
- Contact resistance after environmental test: 15Ω m max. – Contact
- Dielectric withstanding voltage: 1000 V rms

MECHANICAL PERFORMANCE

- Mating cycles (durability): 1000 - Gold
- Insertion force per gold contact:
  - 2.35 N (240 gf) - Standard spring
  - 4.41 N (450 gf) - High spring
  - 10.79 N (1100 gf) - Ultra high spring

OPERATING TEMPERATURE RANGE

- -65°C to +125°C

PACKAGING

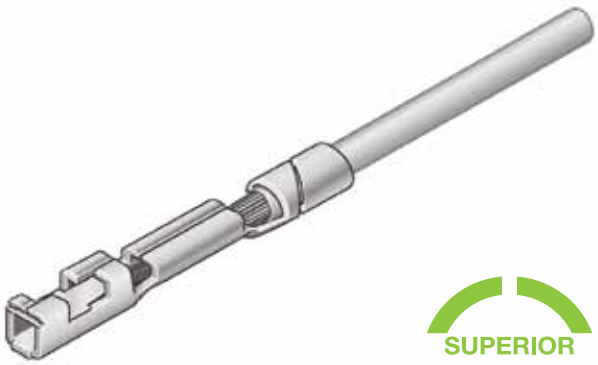
- 1Reels
- Boxes - Loose piece

REFERENCE INFORMATION

- File no. E66906
- File no. LR46923
- Product drawing: By 5-digit base part number
- Product specification: BUS-12-067 Contact
- Application specification: TA-75, TA-146 - Contact, TA-295, TA-228 and TA-302

RoHs INFORMATION

- This product is RoHs compatible according to the European Union Directive 2002/95/IEC



SUPERIOR PERFORMANCE

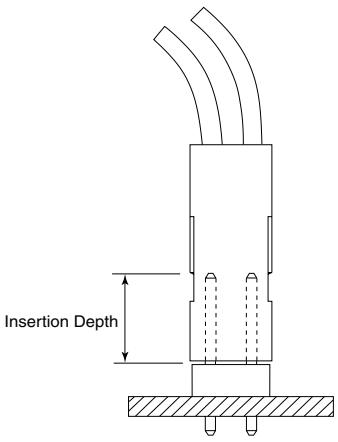
MATING DATA

Continuous unshrouded headers	12
Unshrouded vertical headers	8, 10
Unshrouded right angle headers	14

INSERTION DEPTH

- Discrete Wire: 3.5 mm min. to 5.3 mm max. [provides .381 mm wipe]
- Crimp-to-Wire Housing: 4.2 mm min. to 5.3 mm max. [provides . 381 mm (.015") wipe in housing]

TYPICAL APPLICATIONS



PV™ Crimp-to-Wire Contacts

PART NUMBERS

HOW TO SELECT THE RIGHT CONTACT

Step 1	Select Application
Step 2	Select Spring Force
Step 3	Select Wire Size

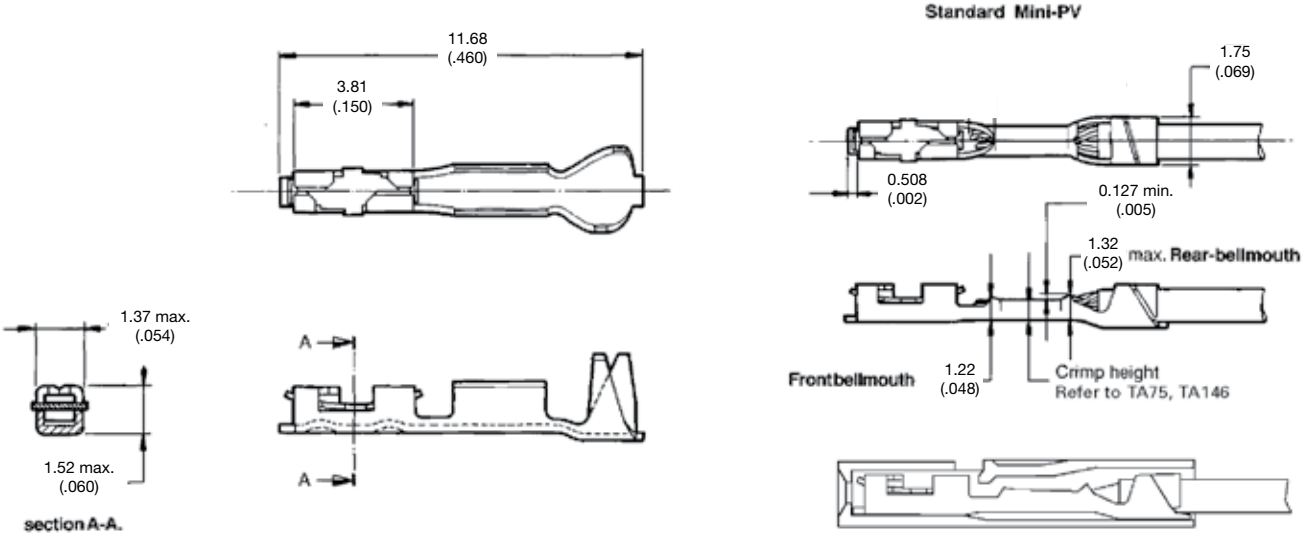
5-Digit Base Part Number	–	3-Digit Dash Number	LF

1 2

Application	Spring Force
Housing	
40-72 Contacts Per Housing	Standard
10-50 Contacts Per Housing	High
2-20 Contacts Per Housing	Ultra High
Discrete Contact	Ultra High

Wire Size (AWG)	Application Spring Force	Part Number
18, 20	Standard	48276-002LF
or two 22	High	48047-002LF
or two 24	Ultra High	47566-002LF
22, 24, 26	Standard	47457-002LF
or two 26	High	47439-002LF
or two 28	Ultra High	47565-002LF
28, 30, 32	Standard	48048-002LF
or two 30	High	47437-002LF
or two 32	Ultra High	47564-002LF

PRODUCT



Dimension : mm (inch)

FEATURES

- Lowest profile housing in the industry
- Designed for use with our high reliability PV™ Contact

TECHNICAL DATA

PHYSICAL

- Housing: Black thermoplastic
- Flammability rating: UL 94 V-0

ELECTRICAL PERFORMANCE

- Insulation resistance: 1x 10^5 MΩ min.
- Dielectric withstanding voltage: 1000 V rms

MECHANICAL PERFORMANCE

- Contact retention to housing: 17.76 N min.

OPERATING TEMPERATURE RANGE

- -40°C to +125°C

PACKAGING

- Bags

PROCESSING INFORMATION

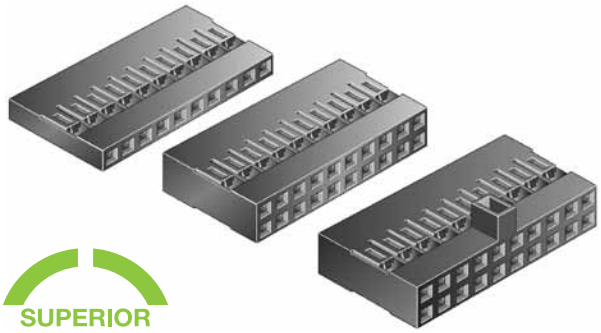
- Compatible with wave soldering processes

REFERENCE INFORMATION

- File no. E66906
- File no. LR46923
- Product drawing: By 5-digit base part number
- Aroduct specification: BUS-12-067
- Application specification: TA-531

RoHs INFORMATION

- This product is RoHs compatible according to the European Union Directive 2002/95/IEC



SUPERIOR PERFORMANCE

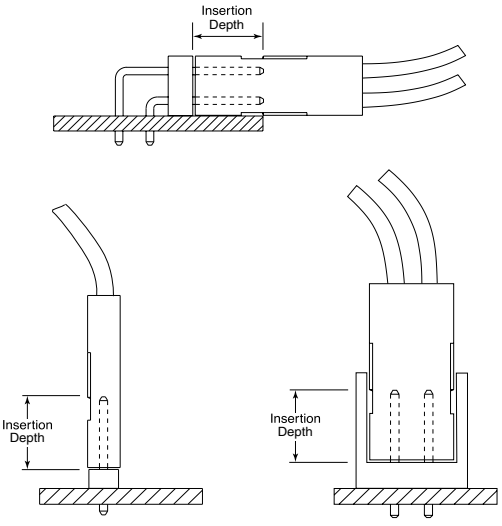
MATING DATA

Continuous unshrouded headers	12
Unshrouded vertical headers	8, 10
Unshrouded right angle headers	14
see previous page for terminals	36

INSERTION DEPTH

- 4.2 mm (.165") min. to 5.3 mm (.210") max. [provides .381 mm (.015") wipe in housing].

TYPICAL APPLICATIONS



PV™ Crimp-to-Wire Housings

PART NUMBERS

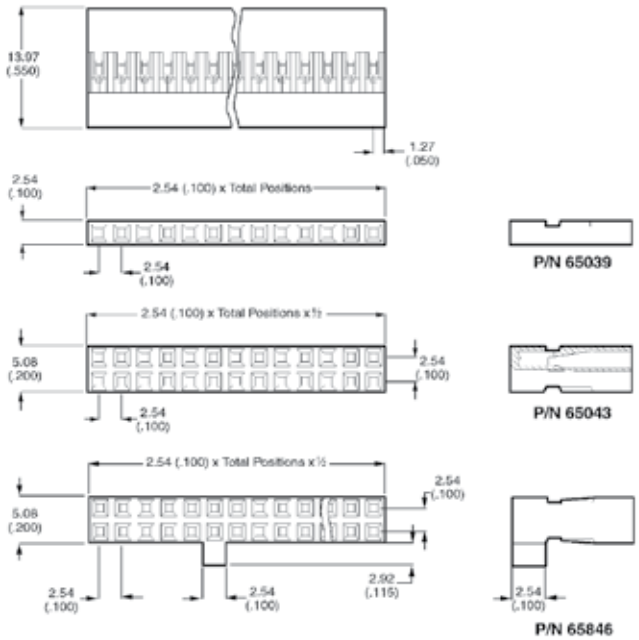
5-Digit Base Part Number – **3-Digit Dash Number** **ELF**

65039 = Single Row
65043 = Double Row
65846 = Double Row with Center Key

	Single Row			Double Row	
Total Positions	65039	78211	Total Positions	65043	65846
			4	-035	
2	-035		6	-034	
3	-034	-003	8	-033	
4	-033	-004	10	-032	
5	-032	-005	12	-031	-017
6	-031	-006	14	-030	
7	-030	-007	16	-029	
8	-029	-008	18	-028	
9	-028	-009	20	-027	
10	-027	-010	22	-026	-018
11	-026	-011	24	-025	
12	-025	-012	26	-024	-019
13	-024	-013	28	-023	-020
14	-023	-014	30	-022	
15	-022	-015	32	-021	-021
16	-021		34	-020	-022
17	-020		36	-019	-023
18	-019		38	-018	

	Single Row			Double Row	
Total Positions	65039	78211	Total Positions	65043	65846
19	-018		40	-017	-024
20	-017		42	-016	-025
21	-016		44	-015	-004
22	-015		46	-014	-026
23	-014		48	-013	-027
24	-013		50	-012	
25	-012		52	-011	-028
26	-011		54	-010	
27	-010		56	-009	-029
28	-009		58	-008	-030
29	-008		60	-007	-013
30	-007		62	-006	-031
31	-006		64	-005	-009
32	-005		66	-004	-032
33	-004		68	-003	-033
34	-003		70	-002	-034
35	-002		72	-001	-035
36	-001				

PRODUCT



Dimension : mm (inch)

FEATURES

- Recessed pins assure proper alignment and eliminate damage during mating
- End windows for latching with IDC receptacle

TECHNICAL DATA

PHYSICAL

- Housing: Glass filled, thermoplastic polyester, blue
- Flammability rating: UL 94 V-0
- Pin: Phosphor-bronze
- Plating: Gold/GXT over 1.27 µm (50µ") nickel

ELECTRICAL PERFORMANCE

- Current rating: 3 A continuous
- Insulation resistance: 1x 10^5 MΩ min.
- Dielectric withstanding voltage: 500 V rms min.

MECHANICAL PERFORMANCE

- Pin retention to housing: 20 N min.

OPERATING TEMPERATURE RANGE

- -65°C to +105°C

PACKAGING

- Tubes

PROCESSING INFORMATION

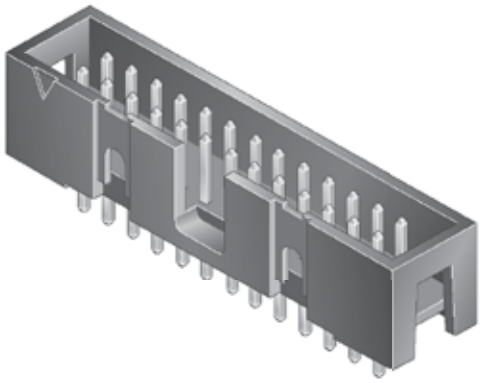
- Compatible with wave soldering processes

REFERENCE INFORMATION

- File no. E66906
- File no. LR46923
- Product drawing: By 5-digit base part number
- Product specification: BUS-12-082

RoHs INFORMATION

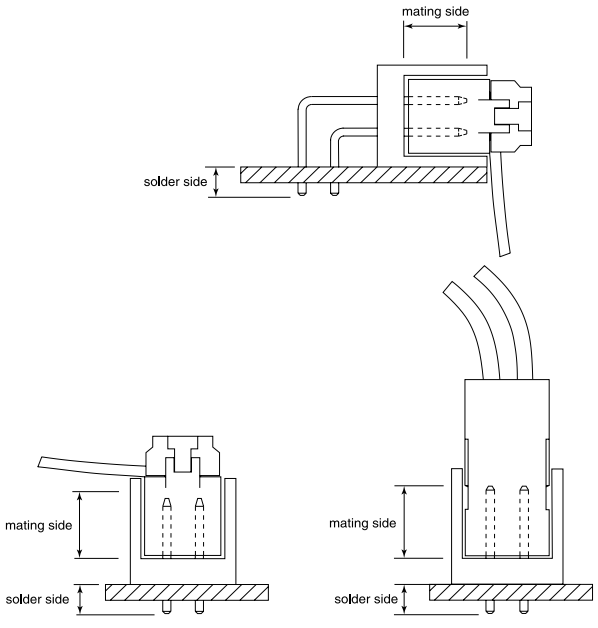
- This product is RoHs compatible according to the European Union Directive 2002/95/IEC



MATING DATA

Quickie™ IDC receptacles	46

TYPICAL APPLICATIONS



Standard Latch (Style 1) **Low profile Latch (Style 2)**

Quickie™ Shrouded Headers, Low Profile

PART NUMBERS

5-Digit Base Part Number	-	Plating	Total Positions	LF

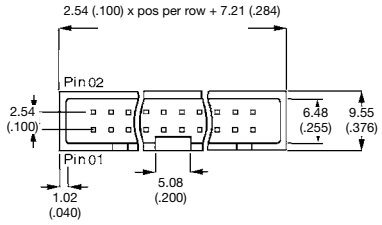
Through mount
75869 = Vertical
75867 = Right angle

1 = 0.76 µm (30µ") gold/GXT on mating area, tin on solder side

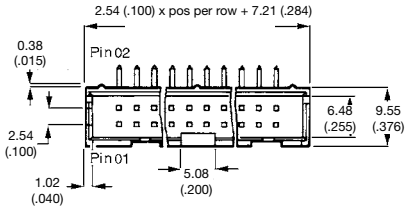
30 = 4 pos.
31 = 6 pos.
32 = 8 pos.
01 = 10 pos.
02 = 14 pos.
03 = 16 pos.
04 = 20 pos.
05 = 26 pos.
06 = 34 pos.
07 = 40 pos.
08 = 50 pos.
09 = 60 pos.
10 = 64 pos.

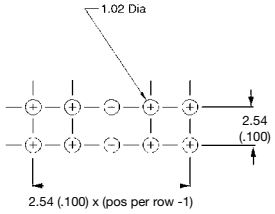
PRODUCT

Vertical

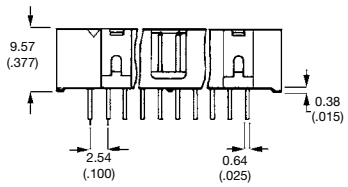


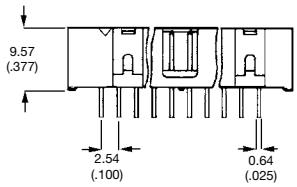
Right Angle

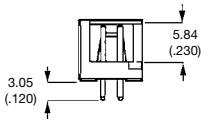


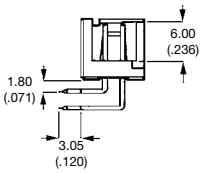


Recommended PCB layouts









Dimension : mm (inch)

FEATURES

- High temperature housing
- Compatible with IR reflow soldering processes
- Tape-and-Reel packaging for automatic pick-and-place

TECHNICAL DATA

PHYSICAL

- Housing: Glass filled, high temperature thermoplastic polyester, black
- Flammability rating: UL 94 V-0
- Pin: Phosphor-bronze
- Plating: Gold/GXT over 1.27 µm (50µ") nickel

ELECTRICAL PERFORMANCE

- Current rating: 3 A continuous
- Insulation resistance: 1x 10^5 MΩ min.
- Dielectric withstanding voltage: 500 V rms min.

MECHANICAL PERFORMANCE

- Pin retention to housing: 20 N min.

OPERATING TEMPERATURE RANGE

- -65°C to +125°C

PACKAGING

- SMT: Tape-and-reel with pick-up cap
- PiP, right angle: Tube without pick-up cap
- PiP, straight: Tape and reel

PROCESSING INFORMATION

- Compatible with wave, vapor-phase, and IR reflow soldering processes

REFERENCE INFORMATION

- File no. E66906
- File no. LR46923
- Product drawing: By 5-digit base part number
- Product specification: BUS-12-055

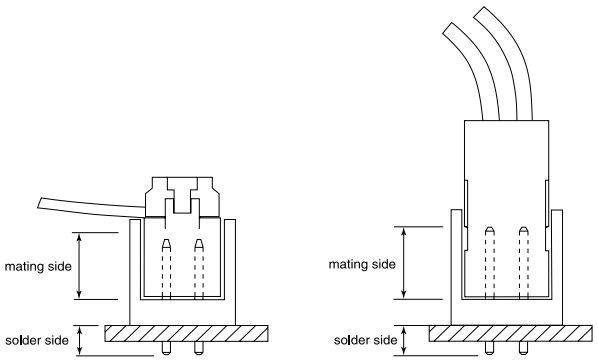
RoHs INFORMATION

- This product is RoHs compatible according to the European Union Directive 2002/95/IEC

MATING DATA

Quickie™ IDC receptacles	46

TYPICAL APPLICATIONS



Quickie™ Shrouded Headers, Low Profile, SMT, Pin-in-Paste

PART NUMBERS

SMT (Surface Mount)

52601	–	G	Total Positions	–	8TLF

10, 14, 16, 20, 26, 30, 34, 40, 44, 50, 60

PiP (Pin-in-Paste)

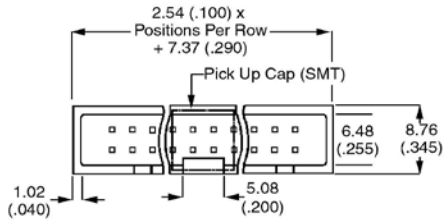
Base Part Number	–	1	Total Positions	option	LF

10056844 = Vertical
10056845 = Right angle

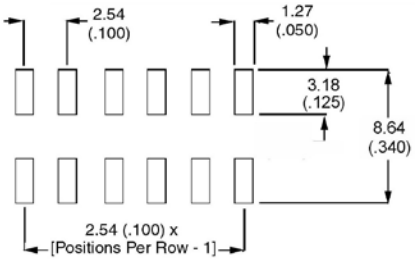
A = Tape & reel (for vertical)
Blank = Tube (for right angle)

08, 10, 14, 16, 20, 26, 30, 34, 40

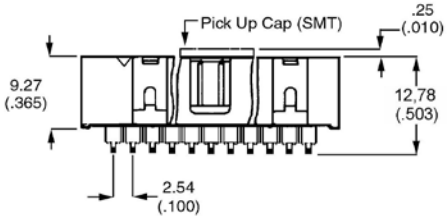
PRODUCT

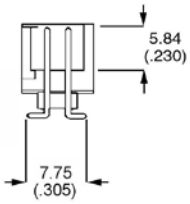


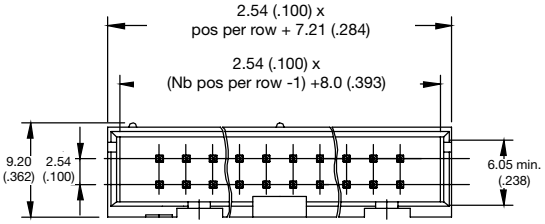
52601



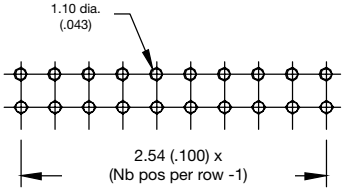
Recommended PCB layouts



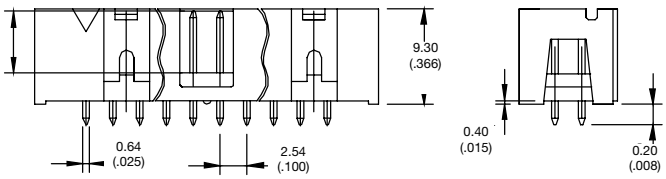




10056844



Recommended PCB layouts



Dimension : mm (inch)

FEATURES

- Selective plating
- Recessed pins assure proper alignment and eliminate damage during mating

TECHNICAL DATA

PHYSICAL

- Housing: Glass filled, high temperature thermoplastic polyester, grey
- Flammability rating: UL 94 V-0
- Pin: Phosphor-bronze
- Plating: Gold/GXT over 1.27 µm (50µ") nickel

ELECTRICAL PERFORMANCE

- Current rating: 3 A continuous
- Insulation resistance: 1x 10^5 MΩ min.
- Dielectric withstanding voltage: 500 V rms min.

MECHANICAL PERFORMANCE

- Pin retention to housing: 20 N min.

OPERATING TEMPERATURE RANGE

- -65°C to +105°C

PACKAGING

- Tubes

PROCESSING INFORMATION

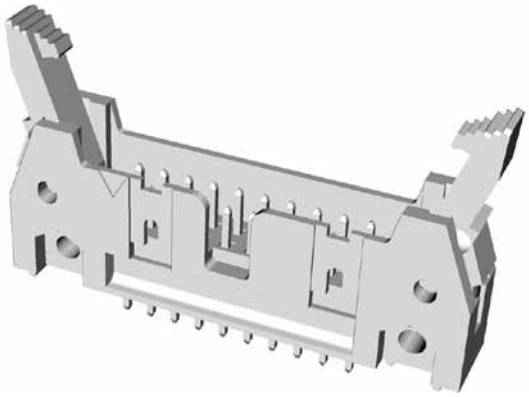
- Compatible with wave soldering processes

REFERENCE INFORMATION

- File no. E66906
- File no. LR46923
- Product drawing: By 5-digit base part number
- Product specification: BUS-12-082

RoHs INFORMATION

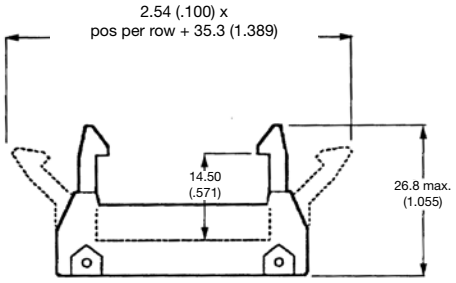
- This product is RoHs compatible according to the European Union Directive 2002/95/IEC



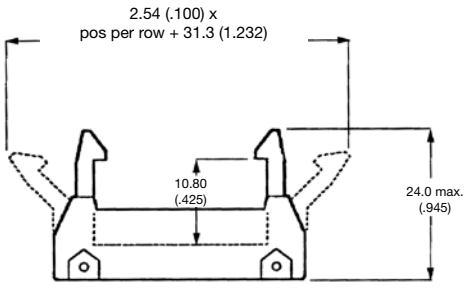
MATING DATA

Quickie™ IDC receptacles	46

TYPICAL APPLICATIONS



Standard Latch (Style 1)



Low profile Latch (Style 2)

Quickie™ Shrouded Headers, Eject Latch

PART NUMBERS

5-Digit Base Part Number	–	Latch Style	Total Positions	LF

Through mount
71918 = Vertical
71922 = Right angle

1 = Standard (mates with IDC Receptacle with Strain Relief)
2 = Low Profile (mates with IDC Receptacle without Strain Relief)

06, 08, 10, 14, 16, 18, 20, 26, 30, 34, 40, 44, 50, 60, 64

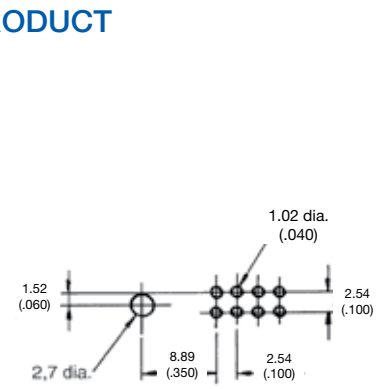
Plating = 0.76 µm (30µ") gold/GXT on mating area, tin on solder side

71918	–	1XXLF
71922	–	1XXLF

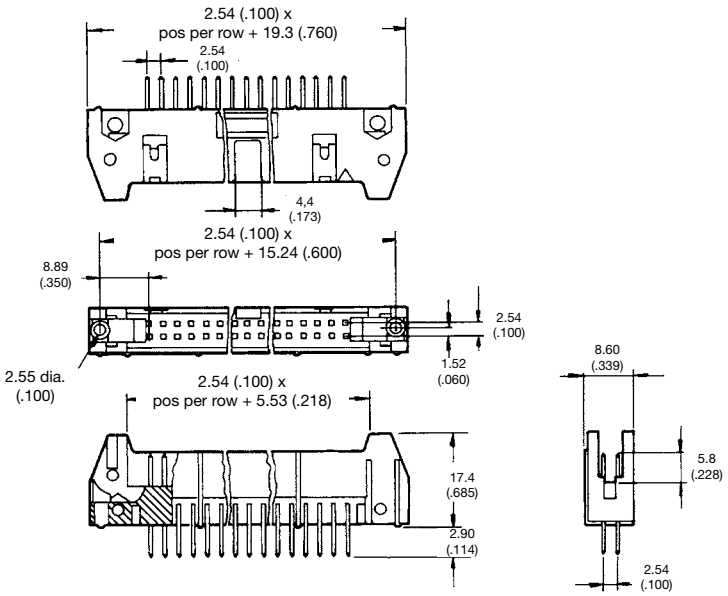
CORE RANGE

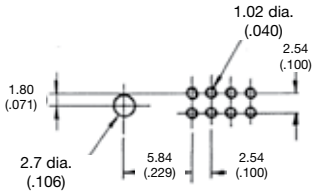
XX = 06, 08, 10, 16, 20

PRODUCT

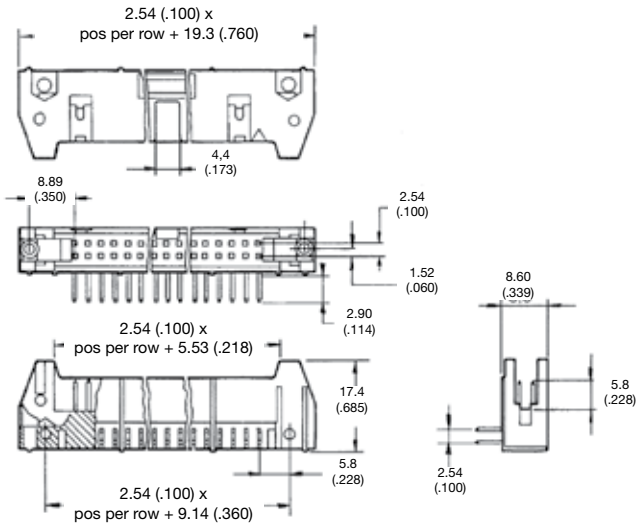


Vertical





Right Angle



Recommended PCB layouts

Dimension : mm (inch)

TECHNICAL DATA

PHYSICAL

- Housing: Grey thermoplastic
  Flammability rating: UL 94 V-0
- Contact: Phosphor-bronze
- Plating: 0.76 µm (30µ") Gold/GXT over
  1.27 µm (50 µ") nickel

ELECTRICAL PERFORMANCE

- Current rating: 1 A continuous
- Insulation resistance: 1x 10^5 MΩ min.
- Contact resistance: 15 mΩ max.
- Dielectric withstanding voltage: 1000 V min. rms (sea level)

MECHANICAL PERFORMANCE

- Mating cycles (durability): 100

OPERATING TEMPERATURE RANGE

- -65°C to +105°C

PACKAGING

- Tubes

PROCESSING INFORMATION

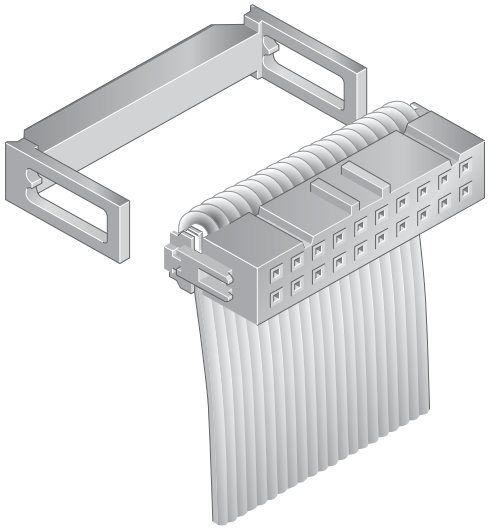
- Compatible with wave soldering processes

REFERENCE INFORMATION

- File no. E66906
- File no. LR46923
- Product drawing: By 5-digit base part number
- Product specification: BUS-12-095

RoHs INFORMATION

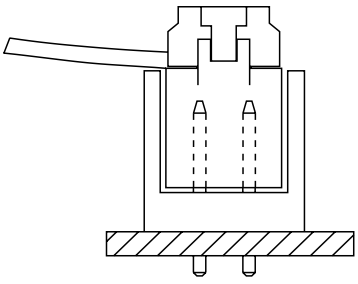
- This product is RoHs compatible according
  to the European Union Directive 2002/95/IEC



MATING DATA

BergStik® unshrouded vertical headers	8, 12
Quickie® shrouded low profile headers	40, 42
Quickie® shrouded eject latch headers	44

TYPICAL APPLICATIONS



Low profile Latch (Style 2)

Quickie™ IDC Receptacle

PART NUMBERS

7	1	6	0	0	–	Strain Relief	Total Positions	LF

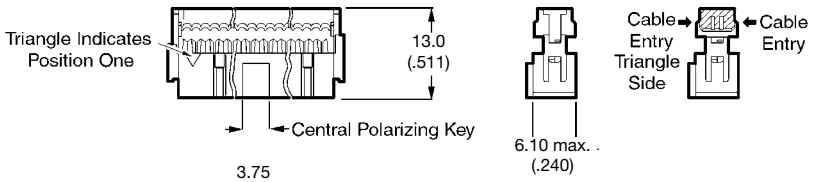
Note: 4 position available without strain relief only

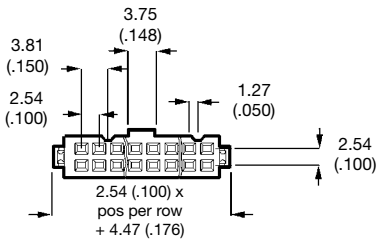
04, 06, 08, 10, 14, 16, 20, 26, 34, 40, 50, 60, 64

0 = Standard (Mates with Shrouded Eject Latch Header Latch 1)
1 = None (Mates with Shrouded Eject Latch Header Latch 2)
6 = Latching (Mates with Low Profile Headers)

71600 – 0XXLF CORE RANGE
XX = 04, 06, 08, 10, 16, 20

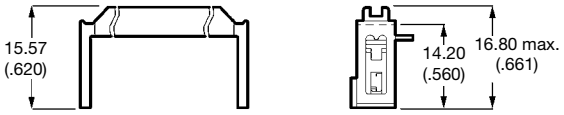
PRODUCT



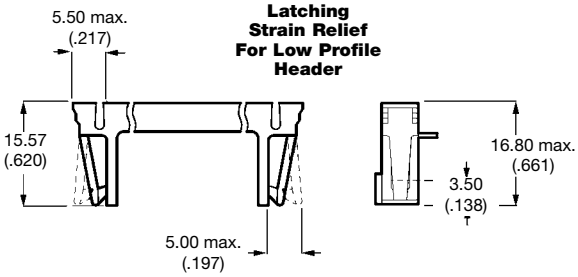


Cable specification:
Wire size: AWG 28 stranded
AWG 30 solid
Pitch: 1.27 mm (.050")

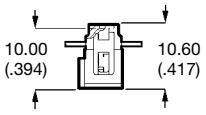
0
Standard Strain Relief



6
Latching Strain Relief For Low Profile Header



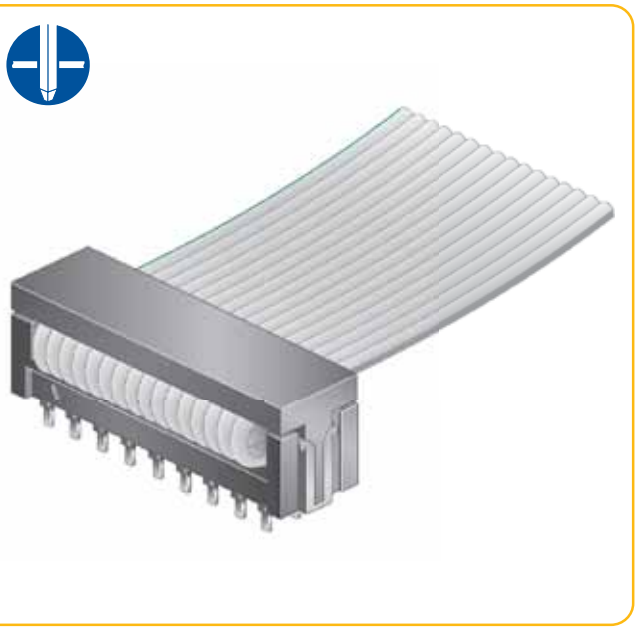
1
Without Strain Relief



Dimension : mm (inch)

FEATURES

- Ideal for daisy chain applications
- Single piece design provides one of the lowest applied costs in the industry



TECHNICAL DATA

PHYSICAL

- Housing: Blue thermoplastic
- Flammability rating: UL 94 V-0
- Pin: Phosphor-bronze
- Plating: Tin over 1.27 µm (50µ") nickel

ELECTRICAL PERFORMANCE

- Current rating: 1 A continuous
- Insulation resistance: 1x 10^5 MΩ min.
- Contact resistance: 15 mΩ max.
- Dielectric withstanding voltage: 1000 V min. rms (sea level)

OPERATING TEMPERATURE RANGE

- -65°C to +125°C

PACKAGING

- Tubes

PROCESSING INFORMATION

- Compatible with wave and vapor phase soldering processes — Low temperature

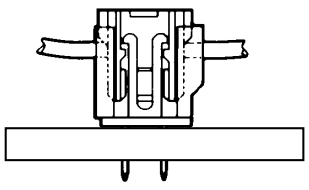
REFERENCE INFORMATION

- File no. E66906
- File no. LR46923
- Product drawing: By 5-digit base part number
- Product specification: BUS-12-095

RoHs INFORMATION

- This product is RoHs compatible according to the European Union Directive 2002/95/IEC

TYPICAL APPLICATIONS



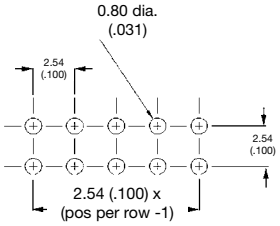
Quickie™ IDC PCB Connector

PART NUMBERS

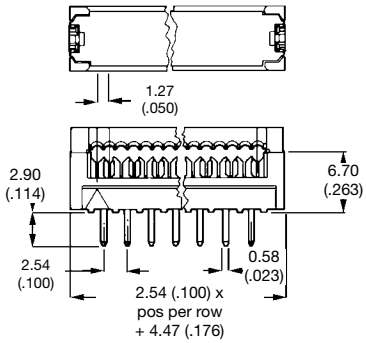
6	9	8	3	0	-	0	Total Positions	LF

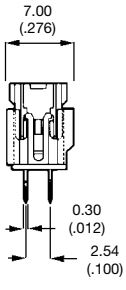
06 = 6 pos.
08 = 8 pos.
10 = 10 pos.
14 = 14 pos.
16 = 16 pos.
18 = 18 pos.
20 = 20 pos.
24 = 24 pos.
26 = 26 pos.
30 = 30 pos.
34 = 34 pos.
40 = 40 pos.
50 = 50 pos.
60 = 60 pos.
64 = 64 pos.

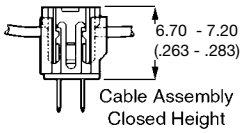
PRODUCT



Recommended PCB layouts







Dimension : mm (inch)

TECHNICAL DATA

PHYSICAL

- Housing: High-temperature, black thermoplastic
- Flammability rating: UL 94 V-0
- Pin: Phosphor-bronze
- Plating: Gold/GXT over 1.27 µm (50µ") nickel

ELECTRICAL PERFORMANCE

- Current rating: 3 A continuous
- Insulation resistance: 1x 10^5 MΩ min.
- Contact resistance: 25 mΩ max.
- Dielectric withstanding voltage: 650 V
- Voltage rating: 200 V.

MECHANICAL PERFORMANCE

- Mating cycles (durability): 100.

OPERATING TEMPERATURE RANGE

- -55°C to +125°C

PACKAGING

- Standard: TMT in tubes (04 to 06 pos. packed in box)
- SMT in Tape-and-reel
- Optional: SMT in Tubes

PROCESSING INFORMATION

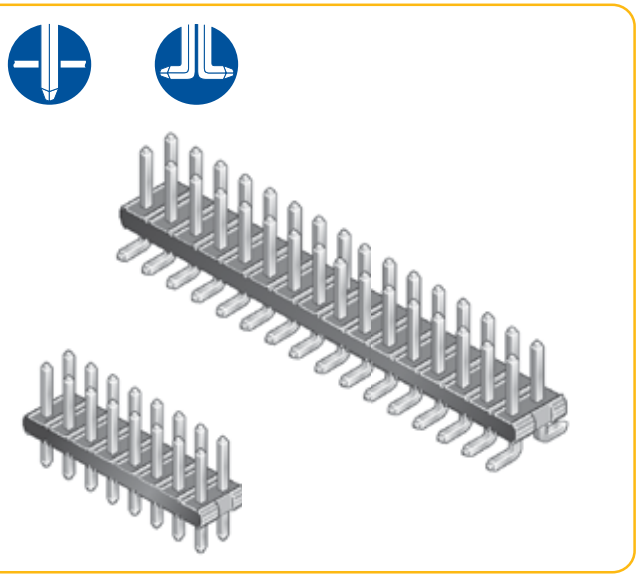
- Compatible with wave, vapor-phase, and IR reflow soldering processes

REFERENCE INFORMATION

- File no. E66906
- File no. LR46923
- Product drawing: 57102 or 57202
- Product specification: DPS-12-011 and GS-12-163
- Tape and Reel packaging data: TA-884

RoHs INFORMATION

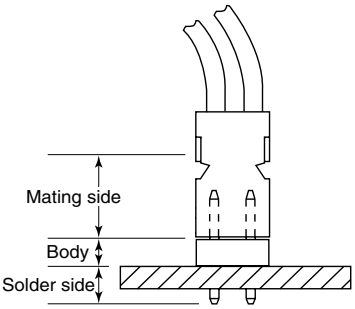
- This product is RoHs compatible according to the European Union Directive 2002/95/IEC

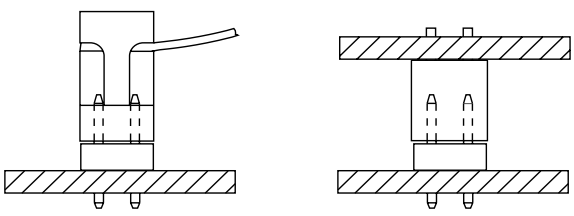


MATING DATA

Minitek™ ctw contacts and housings	70
Minitek™ Vertical receptacles	58
Minitek™ Shunts	60
Minitek™ IDC receptacles	74

TYPICAL APPLICATIONS





Minitek™ Unshrouded Vertical Headers

PART NUMBERS

5	7	Lead	0	2	–	Plating	Pin Style	–	Positions Per Row	Packaging	LF

1 = Through Mount (TMT)
2 = Surface Mount (SMT)

G = 0,76 µm (30µ") gold/GXT on mating area, 2-6 µm (79-237µ") Tin on solder side
F = Gold flash on mating area, 2-6 µm (79-237µ") Tin on solder side

02 to **25** (TMT)
02 to **25** (SMT)

U = Tube without cap (TMT)
A = Tape-and-reel with cap (SMT)

57202 – **G** **52** – **XXALF**

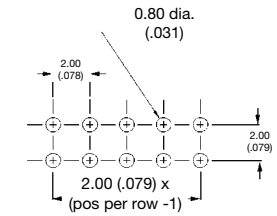
CORE RANGE

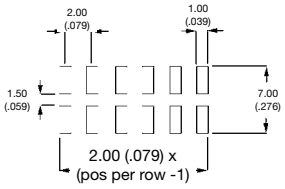
XX = 02, 03, 04, 05, 06, 08, 10

Pin Style	Surface Mount Mating side		
51	2.00	(.079)	
52	4.00	(.157)	

Pin Style	Through Mount Mating Side		Solder Side		OAL	
06	4.00	(.157)	2.50	(.098)	8.00	(.315)
08	4.00	(.157)	3.00	(.118)	8.50	(.335)

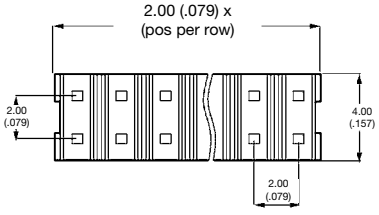
PRODUCT

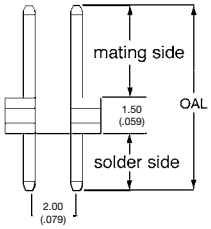




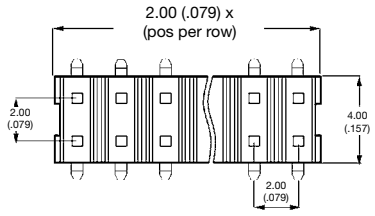
Recommended PCB layouts

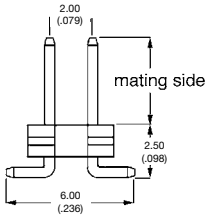
TMT

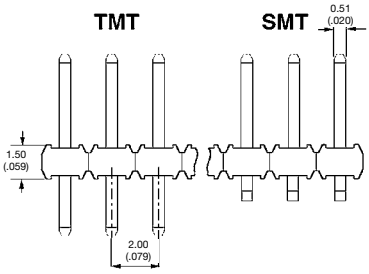




SMT







Dimension : mm (inch)

FEATURES

- High temperature plastic
- Selective plating

TECHNICAL DATA

PHYSICAL

- Housing: High-temperature, black thermoplastic
- Flammability rating: UL 94 V-0
- Pin: Phosphor-bronze
- Plating: Gold/GXT over 1.27 µm (50µ") nickel

ELECTRICAL PERFORMANCE

- Current rating: 3 A continuous
- Insulation resistance: 1x 10^5 MΩ min.
- Contact resistance: 25 mΩ max.
- Dielectric withstanding voltage: 650 V
- Voltage rating: 200 V.

MECHANICAL PERFORMANCE

- Mating cycles (durability): 100.

OPERATING TEMPERATURE RANGE

- -55°C to +125°C

PACKAGING

- Tubes (04 to 06 pos. packed in box)

PROCESSING INFORMATION

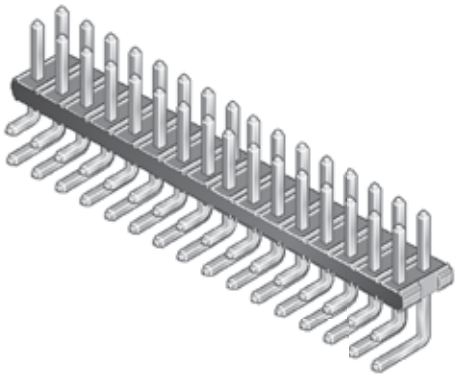
- Compatible with wave, vapor-phase, and IR reflow soldering processes

REFERENCE INFORMATION

- File no. E66906
- File no. LR46923
- Product drawing: 98423
- Product specification: DPS-12-011 and GS-12-163

RoHs INFORMATION

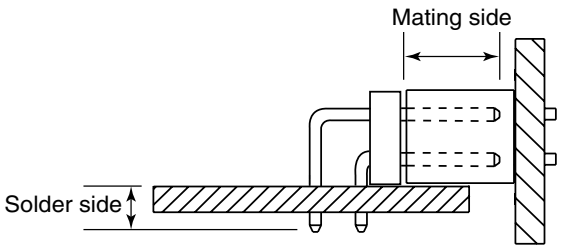
- This product is RoHs compatible according to the European Union Directive 2002/95/IEC

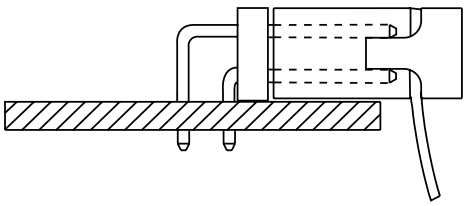


MATING DATA

Minitek™ ctw contacts and housings	70
Minitek™ Vertical receptacles	58
Minitek™ Shunts	60
Minitek™ IDC receptacles	74

TYPICAL APPLICATIONS





Minitek™ Unshrouded Right Angle Headers

PART NUMBERS

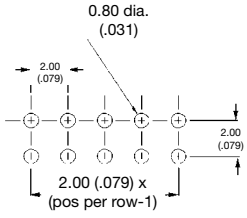
9	8	4	2	3	–	Plating	61	–	Positions Per Row	U	LF

G = 0,76 µm (30µ")gold/GXT on mating area,
2-6 µm (79-237µ") Tin on solder side

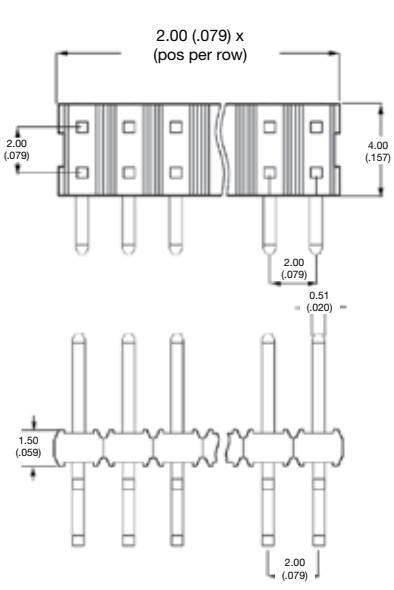
F = Gold flash on mating area,
2-6 µm (79-237µ") Tin on solder side

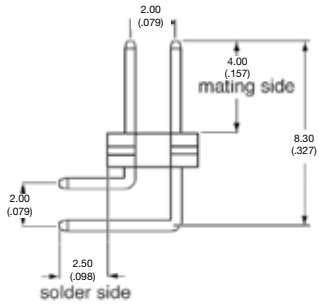
02 to **25**

PRODUCT



Recommended PCB layouts





Dimension : mm (inch)

TECHNICAL DATA

PHYSICAL

- Housing: High-temperature, black thermoplastic
- Flammability rating: UL 94 V-0
- Pin: Phosphor-bronze
- Plating: Gold/GXT over 1.27 µm (50µ") nickel

ELECTRICAL PERFORMANCE

- Current rating: 3 A continuous
- Insulation resistance: 1x 10^5 MΩ min.
- Contact resistance: 25 mΩ max.
- Dielectric withstanding voltage: 650 V
- Voltage rating: 200 V.

MECHANICAL PERFORMANCE

- Mating cycles (durability): 100.

OPERATING TEMPERATURE RANGE

- -55°C to +125°C

PACKAGING

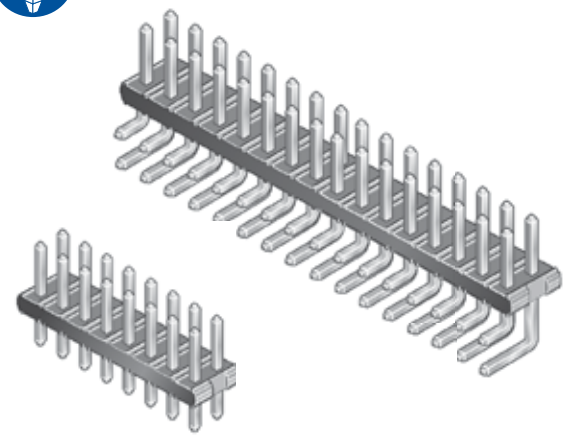
- Tubes (04 to 06 pos. packed in box)
- Tape on reel with pick up cap

PROCESSING INFORMATION

- Compatible with wave, vapor-phase, and IR reflow soldering processes

REFERENCE INFORMATION

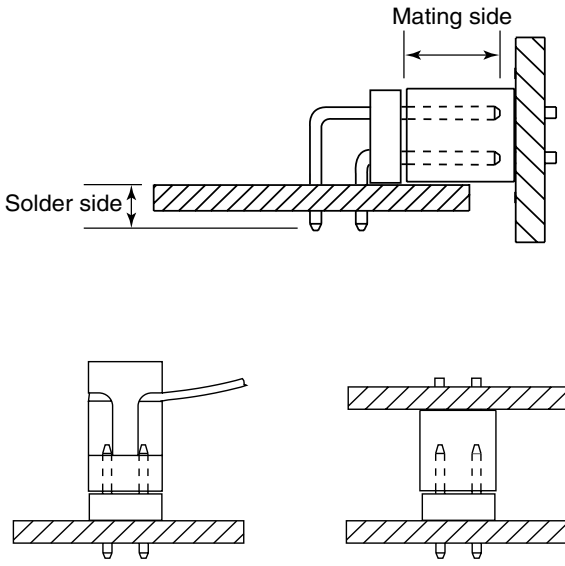
- File no. E66906
- File no. LR46923
- Product drawing: by 8-digit base part number
- Product specification: DPS-12-011 and GS-12-163
- Application specification: TA-895
- Reflow prpfile: TA-842



MATING DATA

Minitek™ ctw contacts and housings	70
Minitek™ Vertical receptacles	58
Minitek™ Shunts	60
Minitek™ IDC receptacles	74

TYPICAL APPLICATIONS



Minitek™ Unshrouded Headers, Pin-in-Paste

PART NUMBERS

8-Digit Base Part Number	–	Plating	Pin style	–	no. of pos. per row	Packaging	LF

10075024 = Vertical
10072353 = Right angle

02 to 25

G = 0.76µm (30µ") gold/GXT on mating area
2-6µm (50-150µ") tin on solder side

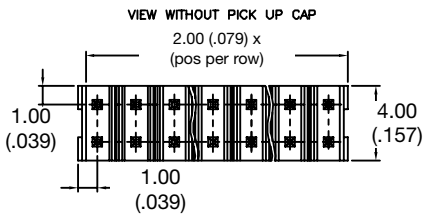
F = gold flash on mating area
2-6µm (50-150µ") tin on solder side

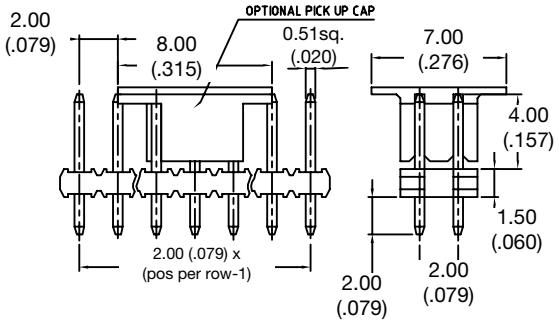
Pin Style	mating side length	solder side length
01	4.00 (.157)	2.00 (.079)

U = Tube without cap from 04 to 25 pos.
A = Tape, availability on request

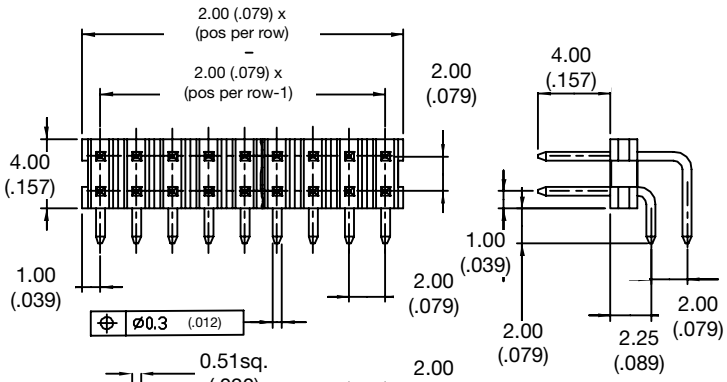
PRODUCT

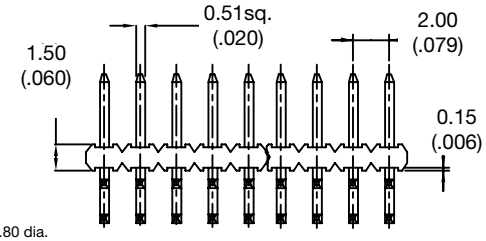
10075024 Vertical

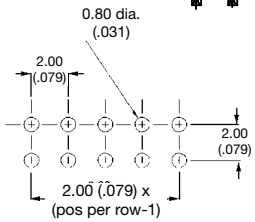




10072353 Right angle







Dimension : mm (inch)

Recommended PCB layouts

FEATURES

- Wide variety of stack heights in 0.13 mm increments
- Custom sizes to meet your specific design requirements

TECHNICAL DATA

PHYSICAL

- Housing: High-temperature, black thermoplastic
- Flammability rating: UL 94 V-0
- Pin: Phosphor-bronze
- Plating: Gold/GXT over over 1.27 µm (50µ") nickel

ELECTRICAL PERFORMANCE

- Current rating: 2 A continuous
- Insulation resistance: 1x 10^5 MΩ min.
- Contact resistance: 25 mΩ max.
- Dielectric withstanding voltage: 650 V
- Voltage rating: 200 V.

MECHANICAL PERFORMANCE

- Mating cycles (durability): 100.

OPERATING TEMPERATURE RANGE

- -55°C to +125°C

PACKAGING

- Standard: in bags

PROCESSING INFORMATION

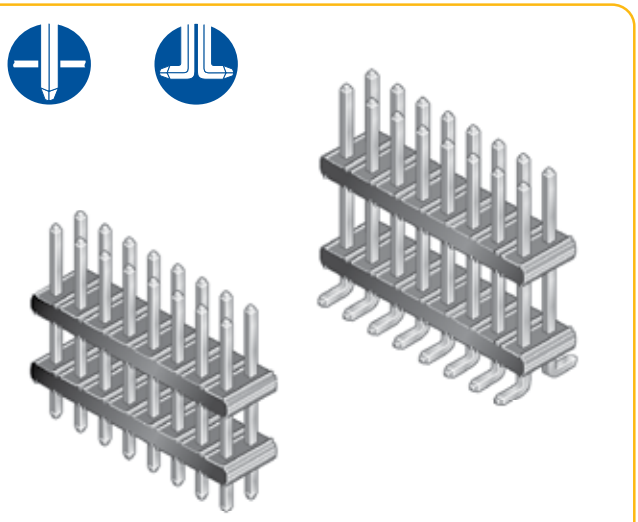
- Compatible with wave, vapor-phase, and IR reflow soldering processes

REFERENCE INFORMATION

- File no. E66906
- File no. LR46923
- Product drawing: 59112, 59132, or 59202
- Product specification: DPS-12-011

RoHs INFORMATION

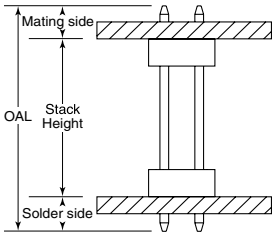
- This product is RoHs compatible according to the European Union Directive 2002/95/IEC

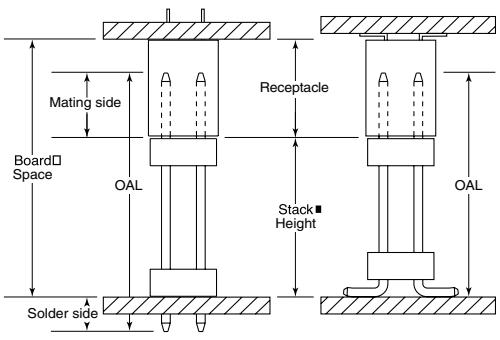


MATING DATA

Minitek™ ctw contacts and housings	70
Minitek™ Vertical receptacles	58
Minitek™ Shunts	60
Minitek™ IDC receptacles	74

TYPICAL APPLICATIONS





Minitek™ Unshrouded Stacking Headers

PART NUMBERS

Compile your own part number using custom dimensions (Please allow for initial setup on our system)

5	9	Lead	Solder Side Option	2	–	Plating	Pin Style	Positions Per Row	–	Stack Height	LF

1 = Through Mount (TMT)
2 = Surface Mount (SMT)

1 = 2.50
3 = 3.00
0 = SMT

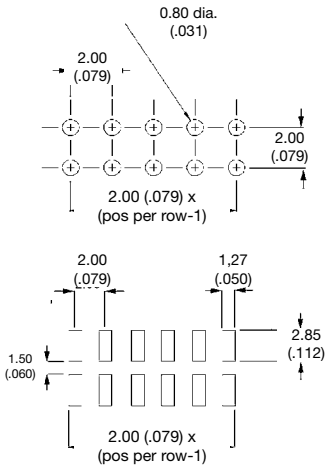
T = 0,76 µm (30µ") gold/GXT on mating side, tin on solder side

02 to **25** (TMT)
02 to **25** (SMT)

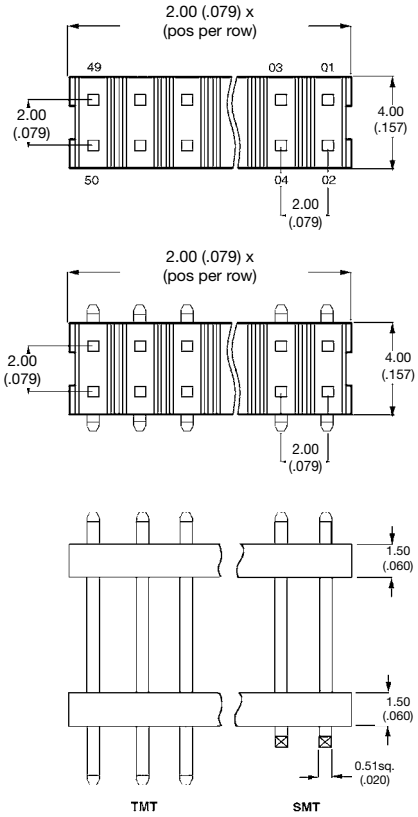
XXX = mm
Specify mm
[e.g., 037 = 03.7 mm]
in 0.1 mm increments

Pin Style	Overall length (OAL) (TMT)		(SMT)	
22	8.20	(.323)	6.53	(.257)
24	9.55	(.376)	7.87	(.310)
26	10.19	(.401)	8.51	(.335)
28	11.79	(.464)	10.11	(.398)
30	13.54	(.533)	11.86	(.467)
32	14.10	(.555)	12.42	(.489)
34	15.60	(.614)	13.92	(.548)
36	17.09	(.473)	15.42	(.607)
38	19.08	(.751)	17.40	(.685)
40	21.08	(.830)	19.41	(.764)

PRODUCT



Recommended PCB layouts



The board spacing
is the stack height of this header, plus the height of the receptacle
(see application drawings on opposite page)

Dimension : mm (inch)

2.00 mm (.079")

FEATURES

- Two housing heights: 2.30 mm, 4.50 mm
- Dual-beam contact design for highly reliable electrical performancets

TECHNICAL DATA

PHYSICAL

- Housing: High-temperature, black thermoplastic
- Flammability rating: UL 94 V-0
- Contact: Phosphor-bronze
  Beryllium-copper – 63453
- Plating: Gold/GXT over 1.27 µm (50 µ") nickel

ELECTRICAL PERFORMANCE

- Current rating: 2 A continuous
- Insulation resistance: 1x 10^5 MΩ min.
- Contact resistance: 20 mΩ
  25 mΩ - 63453
- Dielectric withstanding voltage: 650 V
- Voltage rating: 200 V.

MECHANICAL PERFORMANCE

- Mating cycles (durability): 25
  100 - 63453
- Contact retention to housing: 2.20 N (227 gf) min.
  4.90 N (500 gf) min. – 63453
- Insertion force per contact: 1.80 N (184 gf) max.
  1.95 N (200 gf) – 63453
- Withdrawal force per contact: 0.20 N (20 gf) min.

OPERATING TEMPERATURE RANGE

- -55°C to +125°C

PACKAGING

- Standard: TMT in Tubes
  SMT in Tape-and-reel
- Optional: Tubes (SMT)

PROCESSING INFORMATION

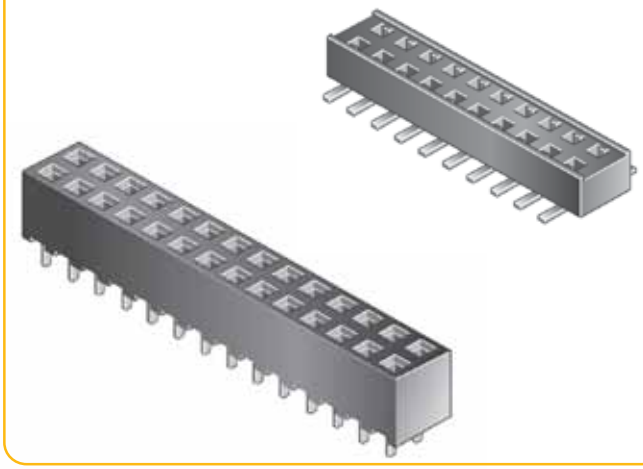
- Compatible with wave, vapor-phase, and IR reflow soldering processes

REFERENCE INFORMATION

- File no. E66906
- File no. LR46923
- Product drawing: by 5-digit base part number
- Product specification: GS-12-008
  DPS-12-011 - for 63453

RoHs INFORMATION

- This product is RoHs compatible according to the European Union Directive 2002/95/IEC



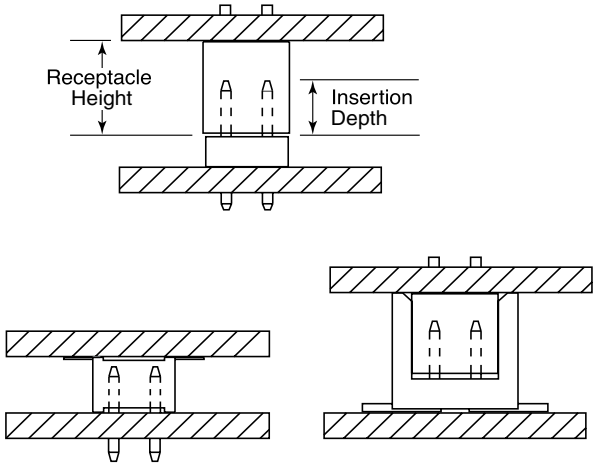
MATING DATA

Minitek™ Unshrouded headers	50, 52, 56
Minitek™ Shrouded headers	62, 64

INSERTION DEPTH

- 4.50 mm height: 3.00 mm min. to 4.30 mm max. [provides .381 mm wipe]
- 2.30 mm height – Top Entry: 1.30 mm min. to 2.20 mm max. [provides .381 mm wipe]
- 2.30 mm height – Bottom Entry:1.40 mm min. to 2.20 mm max. [provides .381 mm wipe] plus board thickness

TYPICAL APPLICATIONS



Minitek™ Vertical Receptacles

PART NUMBERS

5-Digit Base Part Number	–	1	Total Positions	Packaging	LF

	Through Mount (TMT) Height		Entry
63453	4.50	(.177)	Top
	Surface Mount (SMT)		
55510	4.50	(.177)	Top
55508	2.30	(.090)	Top
91596	2.30	(.090)	Bottom

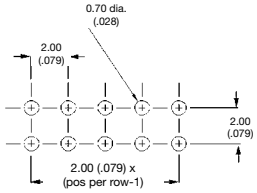
1 = 0,76 µm (30µ") gold/GXT on mating area, 2-6 µm (79-237µ") Tin on solder side

04 to **50** Top Entry
04 to **30** Bottom Entry

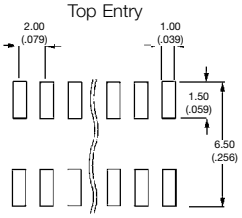
- (dash) = Tubes (TMT)
TR = Tape-and-reel (SMT)

55510 – 1XXTRLF CORE RANGE
XX = 04, 06, 08, 10, 12, 16, 20

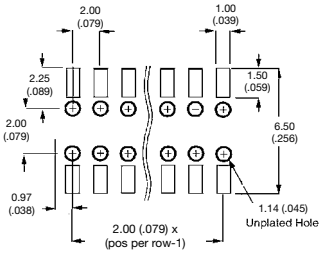
PRODUCT



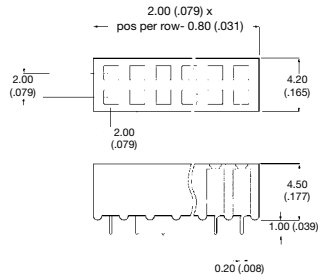
Top Entry



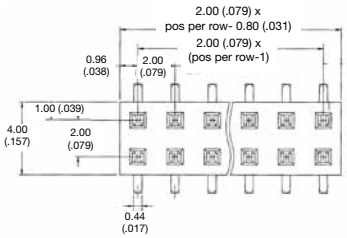
Bottom Entry



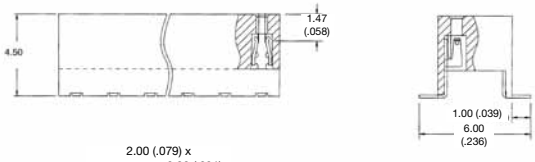
Recommended PCB layouts

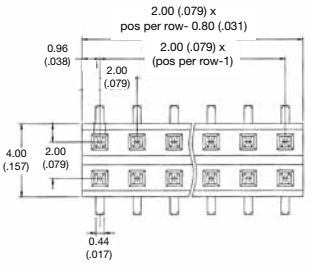


P/N 63453

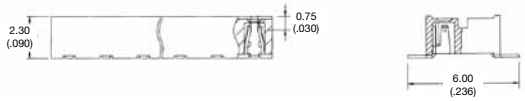


P/N 55510





P/N 55508



Dimension : mm (inch)

FEATURES

- Early entry, dual-beam contacts provide long wiping action for reliable electrical contact

TECHNICAL DATA

PHYSICAL

- Housing: Black thermoplastic
- Flammability rating: UL 94 V-0
- Contact: Phosphor-bronze
- Plating: Gold/GXT or tin-lead over 1.27 µm (50 µ") nickel

ELECTRICAL PERFORMANCE

- Current rating: 1 A continuous
- Insulation resistance: 1x 10^5 MΩ min.
- Contact resistance: 25 mΩ
- Dielectric withstanding voltage: 650 V
- Voltage rating: 200 V.

MECHANICAL PERFORMANCE

- Mating cycles (durability): 50
- Insertion force per contact: 6.41 N (650 gf) max.
- Withdrawal force per contact: 0.49 N (50 gf) min.

OPERATING TEMPERATURE RANGE

- -55°C to +125°C

PACKAGING

- Bags

PROCESSING INFORMATION

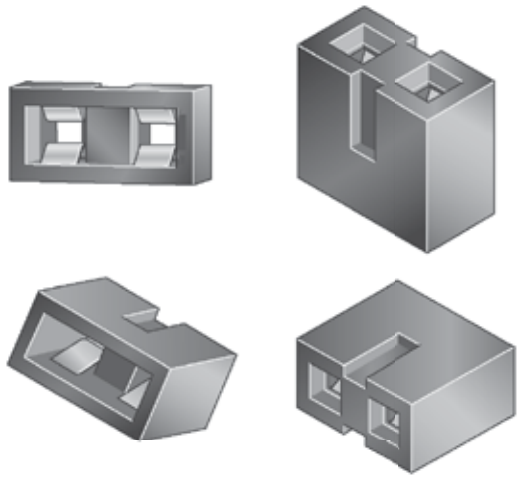
- Compatible with wave, vapor-phase, and IR reflow soldering processes

REFERENCE INFORMATION

- File no. E66906
- File no. LR46923
- Product drawing: by 5-digit base part number
- Product specification: DPS-12-012

RoHs INFORMATION

- This product is RoHs compatible according to the European Union Directive 2002/95/IEC



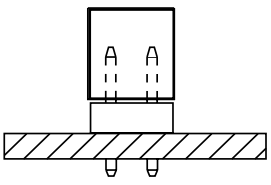
MATING DATA

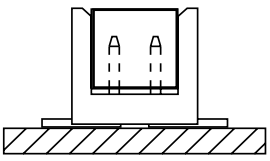
Minitek™ Unshrouded headers	50, 52, 56
Minitek™ Shrouded headers	62, 64

INSERTION DEPTH

- 2.24 mm min. [provides .381 mm wipe]

TYPICAL APPLICATIONS





Minitek™ Shunts

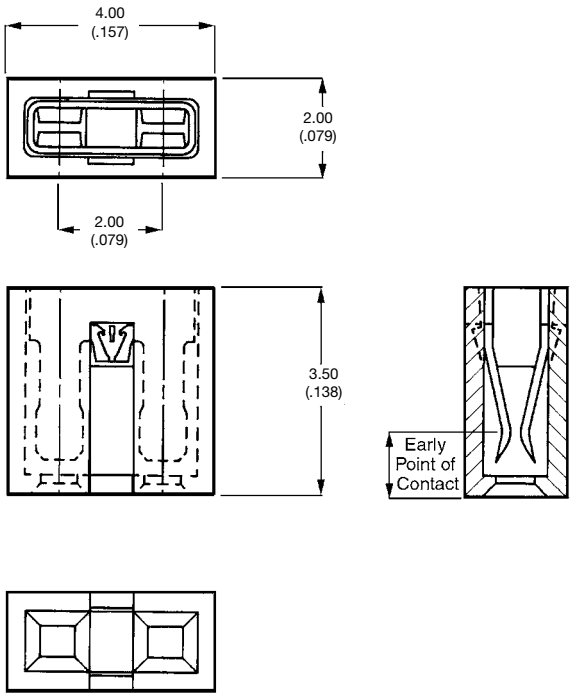
PART NUMBERS

8	6	7	3	0	-	Plating	0	1	LF

1 = 0,76 µm (30µ") gold/GXT on mating area, 2-6 µm (79-237µ") Tin on solder side
0 = Gold flash

86730 - 101LF CORE RANGE

PRODUCT



Dimension : mm (inch)

FEATURES

- 4-wall design prevents mis-mating
- Selective plating
- Co-planarity 0.1 (SMT)

TECHNICAL DATA

PHYSICAL

- Housing: High temperature, cream-colored thermoplastic
- Flammability rating: UL 94 V-0
- Pin: Phosphor-bronze
- Plating: Gold/GXT over 1.27 µm (50 µ") nickel

ELECTRICAL PERFORMANCE

- Current rating: 2 A continuous
- Insulation resistance: 1x 10^5 MΩ min.
- Contact resistance: 25 mΩ max.
- Dielectric withstanding voltage: 650 V
- Voltage rating: 200 V.

MECHANICAL PERFORMANCE

- Mating cycles (durability): 100

OPERATING TEMPERATURE RANGE

- -40°C to +125°C

PACKAGING

- Standard: TMT in Tubes (04 to 06 pos. packed in box)
  SMT in Tape-and-reel
- Optional: SMT in Tubes (04 and 06 in box)

PROCESSING INFORMATION

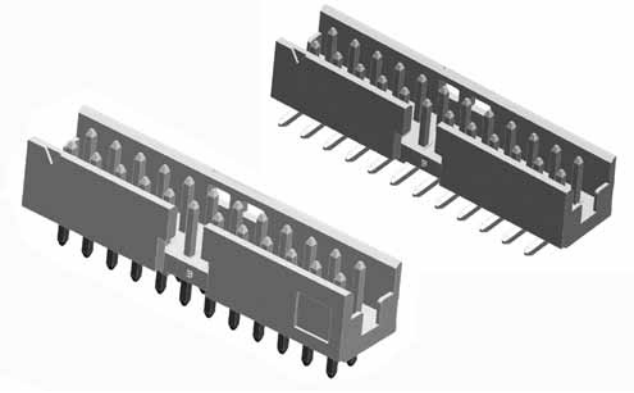
- Compatible with wave, vapor-phase, and IR reflow soldering processes

REFERENCE INFORMATION

- File no. E66906
- File no. LR46923
- Product drawing: 98414 or 98424
- Product specification: DPS-12-011 and GS-12-163
- Tape and Reel packaging data TA-884

RoHs INFORMATION

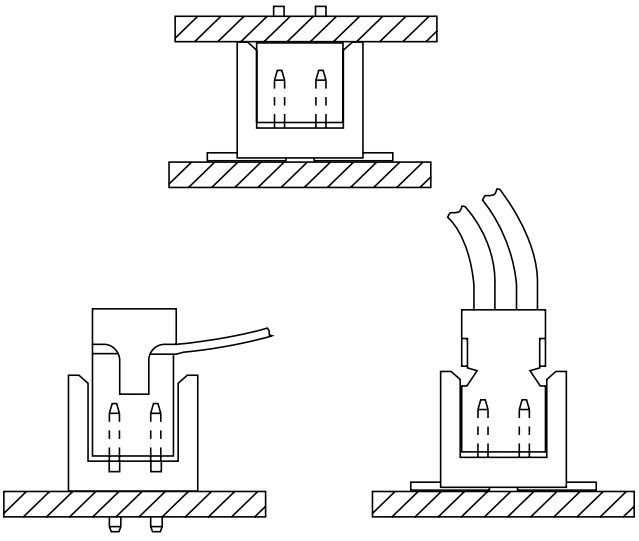
- This product is RoHs compatible according to the European Union Directive 2002/95/IEC



MATING DATA

Minitek™ ctw contacts and housings	70
Minitek™ Vertical receptacles	58
Minitek™ Shunts	60
Minitek™ IDC receptacles	74
Minitek™ Active latch	72

TYPICAL APPLICATIONS



Minitek™ Shrouded Vertical Headers

PART NUMBERS

5-Digit Base Part Number	–	Plating	Pin style	–	Total Positions	Packaging	LF

98414 = Through Mount, Double Row
98424 = Surface Mount, Double Row

04 to **50**

U = Tube (TMT)
A = Tape-and-reel (SMT)

G = 0,76 µm (30µ") gold/GXT on mating area, 2-6 µm (79-237µ") Tin on solder side
F = Gold flash on mating area, 2-6 µm (79-237µ") Tin on solder side

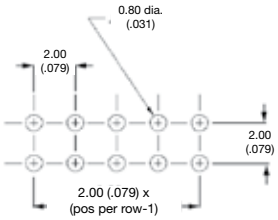
Surface Mount		
Pin Style	Mating side	
52	4.00	(.157)

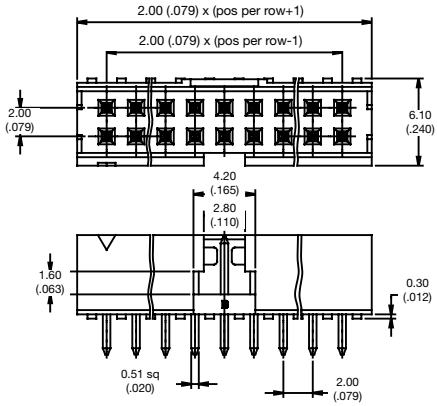
Through Mount			
Pin Style	Mating side		Solder side	
06	4.00	(.157)	2.50	(.098)

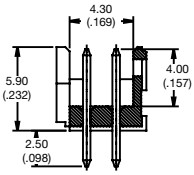
98424 – **G** **52** – **XX** **ALF**
XX = 04, 06, 08, 10, 12, 16, 20

CORE RANGE

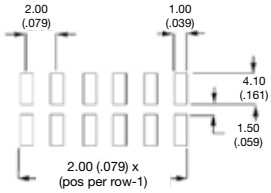
PRODUCT

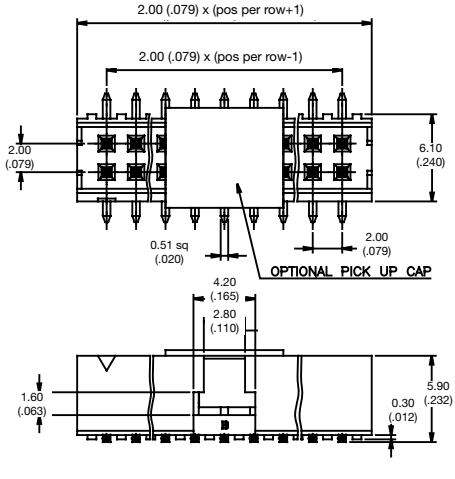


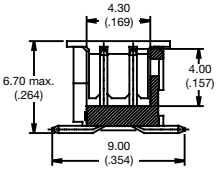




98414 Through mount







98424 Surface mount

Recommended PCB layouts

Dimension : mm (inch)

FEATURES

- 4-wall design prevents mis-mating
- Selective plating

TECHNICAL DATA

PHYSICAL

- Housing: High temperature, cream-colored thermoplastic
- Flammability rating: UL 94 V-0
- Pin: Phosphor-bronze
- Plating: Gold/GXT over 1.27 µm (50 µ") nickel

ELECTRICAL PERFORMANCE

- Current rating: 2 A continuous
- Insulation resistance: 1x 10^5 MΩ min.
- Contact resistance: 25 mΩ max.
- Dielectric withstanding voltage: 650 V
- Voltage rating: 200 V.

MECHANICAL PERFORMANCE

- Mating cycles (durability): 100

OPERATING TEMPERATURE RANGE

- -40°C to +125°C

PACKAGING

- Standard: Tubes (04 pos. packed in box)

PROCESSING INFORMATION

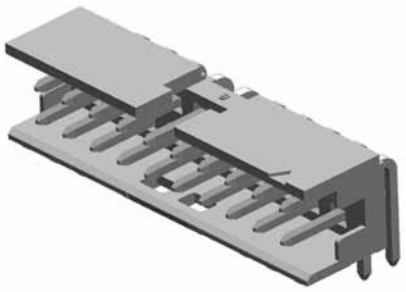
- Compatible with wave, vapor-phase, and IR reflow soldering processes

REFERENCE INFORMATION

- File no. E66906
- File no. LR46923
- Product drawing: 98464
- Product specification: DPS-12-011 and GS-12-163

RoHs INFORMATION

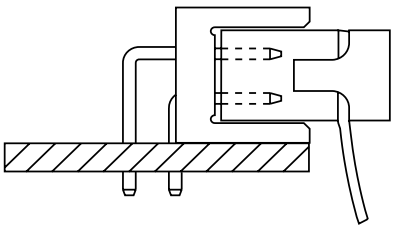
- This product is RoHs compatible according to the European Union Directive 2002/95/IEC

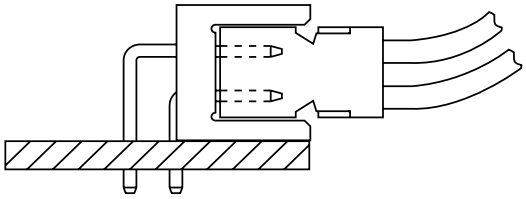


MATING DATA

Minitek™ ctw contacts and housings	70
Minitek™ Vertical receptacles	58
Minitek™ Shunts	60
Minitek™ IDC receptacles	74
Minitek™ Active latch	72

TYPICAL APPLICATIONS





Minitek™ Shrouded Right Angle Headers

PART NUMBERS

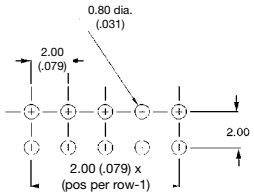
9	8	4	6	4	–	Plating	61	–	Total Positions	U	LF

04 to **50** (Double Row)

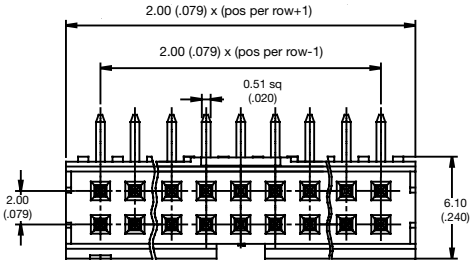
G = 0,76 µm (30µ")gold/GXT on mating area,
2-6 µm (79-237µ") Tin on solder side

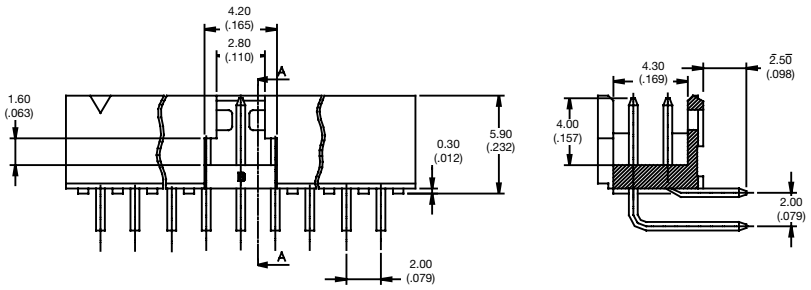
F = Gold flash on mating area,
2-6 µm (79-237µ") Tin on solder side

PRODUCT



Recommended PCB layouts





Dimension : mm (inch)

TECHNICAL DATA

PHYSICAL

- Housing: High-temperature, black thermoplastic
- Flammability rating: UL 94 V-0
- Pin: Phosphor-bronze
- Plating: Gold/GXT over 1.27 µm (50µ") nickel

ELECTRICAL PERFORMANCE

- Current rating: 3 A continuous
- Insulation resistance: 1x 10^5 MΩ min.
- Contact resistance: 25 mΩ max.
- Dielectric withstanding voltage: 650 V
- Voltage rating: 200 V.

MECHANICAL PERFORMANCE

- Mating cycles (durability): 100.

OPERATING TEMPERATURE RANGE

- -55°C to +125°C

PACKAGING

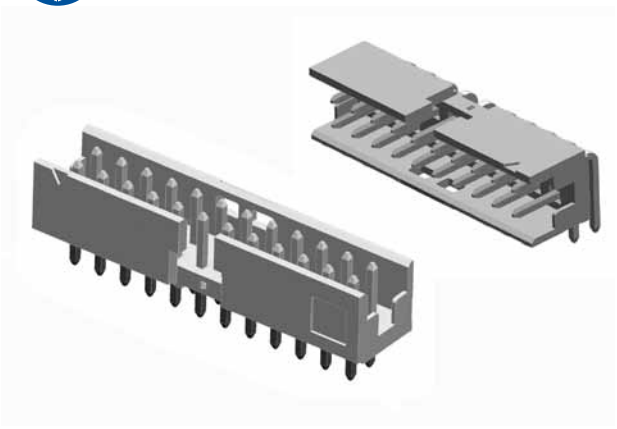
- Tubes (04 pos. packed in box)
- Tape on reel with pick up cap

PROCESSING INFORMATION

- Compatible with wave, vapor-phase, and IR reflow soldering processes

REFERENCE INFORMATION

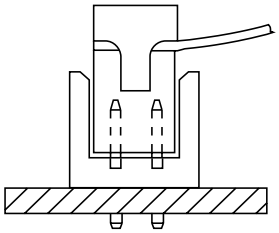
- File no. E66906
- File no. LR46923
- Product drawing: by 8-digit base part number
- Product specification: DPS-12-011 and GS-12-163
- Application specification: TA-895
- Reflow prpfile: TA-842

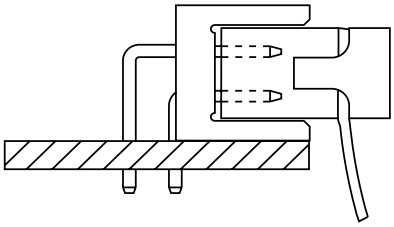


MATING DATA

Minitek™ ctw contacts and housings	70
Minitek™ Vertical receptacles	58
Minitek™ Shunts	60
Minitek™ IDC receptacles	74
Minitek™ Active latch	72

TYPICAL APPLICATIONS





Minitek™ Shrouded Headers, Pin-in-Paste

PART NUMBERS

8-Digit Base Part Number	–	Plating	Pin style	–	Total positions	Packaging	LF

10075025 = Vertical
10072354 = Right angle

04 to 50

G = 0.76µm (30µ") gold/GXT on mating area
2-6µm (50-150µ") tin on solder side

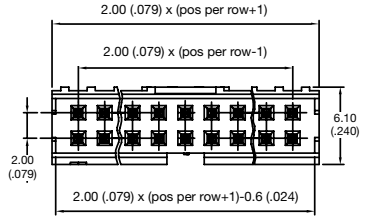
F = gold flash on mating area
2-6µm (50-150µ") tin on solder side

Pin Style	mating side length	solder side length
01	4.00 (.157)	2.00 (.079)

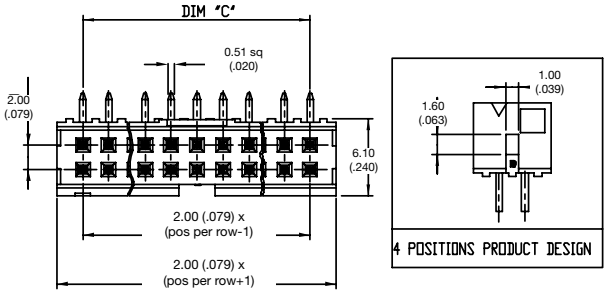
U = Tube without cap from 04 to 25 pos.
A = Tape, availability on request

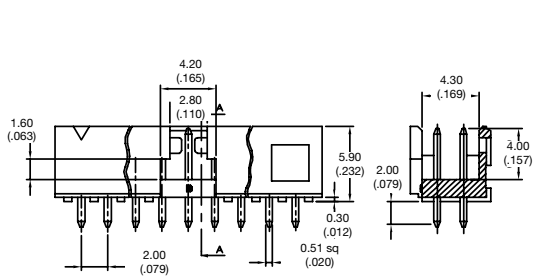
PRODUCT

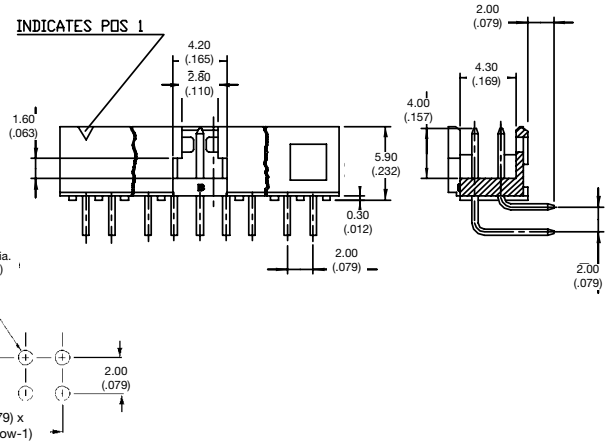
10075025 Vertical



10072354 Right angle





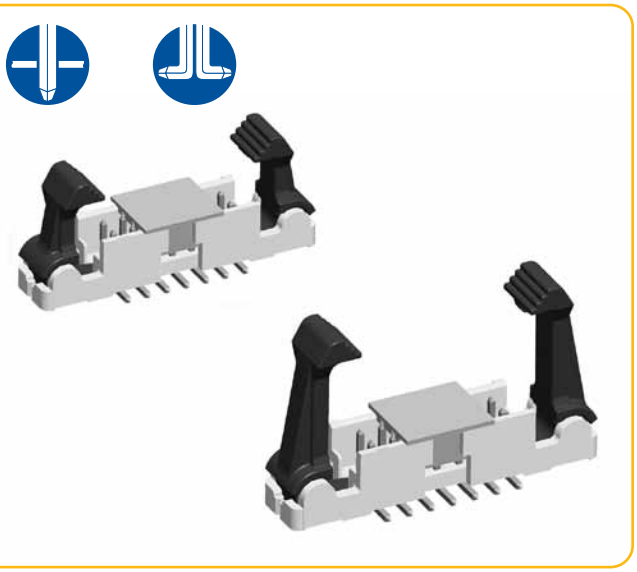


Dimension : mm (inch)

Recommended PCB layouts

FEATURES

- Secure latching of cable connector
- Easy ejection when required
- Works with IDC connectors with or without strain relief
- Low profile



TECHNICAL DATA

PHYSICAL

- Housing: Body, cream-colored LCP, Latch black PA
- Flammability rating: UL 94 V-0
- Pin: Phosphor-bronze
- Plating: Gold/GXT over 1.27 µm (50 µ") nickel

ELECTRICAL PERFORMANCE

- Current rating: 2 A continuous
- Insulation resistance: 1x 10^5 MΩ min.
- Contact resistance: 25 mΩ max.
- Dielectric withstanding voltage: 650 V
- Voltage rating: 200 V.

MECHANICAL PERFORMANCE

- Latching retention force: 30 N min.

OPERATING TEMPERATURE RANGE

- -40°C to +125°C

PACKAGING

- Standard: Tubes

PROCESSING INFORMATION

- Compatible with wave, vapor-phase, and IR reflow soldering processes

REFERENCE INFORMATION

- File no. E66906
- File no. LR46923
- Product drawing: 8-digit part number
- Product specification: GS-12-469

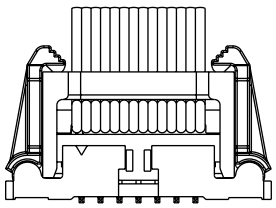
RoHs INFORMATION

- This product is RoHs compatible according to the European Union Directive 2002/95/IEC

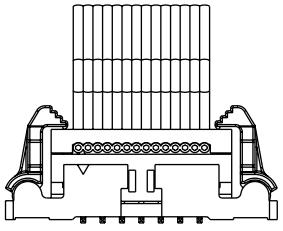
MATING DATA

Minitek™ IDC receptacles	74

TYPICAL APPLICATIONS



with strain relief
standard latch



without strain relief
low profile latch

Minitek™ Shrouded Eject Latch Headers

PART NUMBERS

8-Digit Base Part Number	–	G	Pin Style	Latch Type	–	total positions	packaging	LF

10078991 = Vertical TMT
10078995 = Vertical SMT

G = 0.76µm (30µ") gold /GXT on mating area

Style Solder side
0 = SMT
2 = 2.50 mm TMT
3 = 3.10 mm TMT

1 = Standard latch
2 = Low profile latch

6, 8, 10, 12, 14, 24, 30, 40, 44, 50

U = tube, for through mount*
A = tape & reel, SMT only
B = tube with cap, SMT only

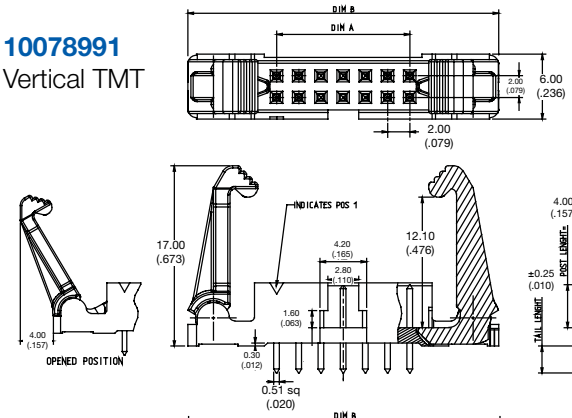
10078991 – G 22 – XX U LF
10078995 – G 02 – XX U LF
XX = 06, 08, 10, 12,

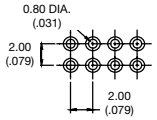
CORE RANGE

*as available

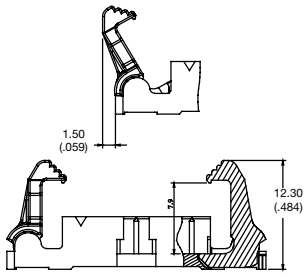
PRODUCT

10078991
Vertical TMT



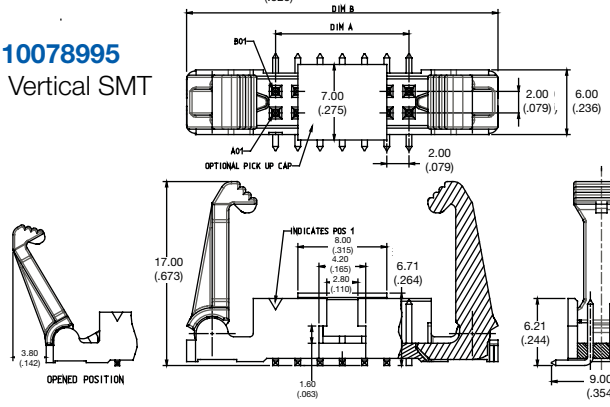


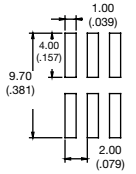
Recommended PCB layout



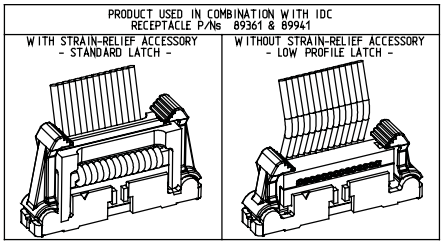
Low Profile Latch

10078995
Vertical SMT





Recommended PCB layout



Dimension : mm (inch)

FEATURES

- Dual-beam contact design for highly reliable electrical performance
- Latching key assures proper alignment and friction retention

TECHNICAL DATA

PHYSICAL

- Housing: Black thermoplastic
- Flammability rating: UL 94 V-0
- Contact: Phosphor-bronze
- Plating: Gold/GXT over 1.27 µm (50 µ") nickel

ELECTRICAL PERFORMANCE

- Current rating: 2 A continuous
- Insulation resistance: 1x 10^5 MΩ min.
- Contact resistance: 20 mΩ
- Dielectric withstanding voltage: 650 V
- Voltage rating: 200 V.

MECHANICAL PERFORMANCE

- Mating cycles (durability): 100
- Contact retention to housing: 7.83 N (800 gf) min.
- Mating force per contact: 1.77 N (180 gf) max.
- Unmating force per contact: 0.20 N (20gf) min.

OPERATING TEMPERATURE RANGE

- -40°C to +125°C

PACKAGING

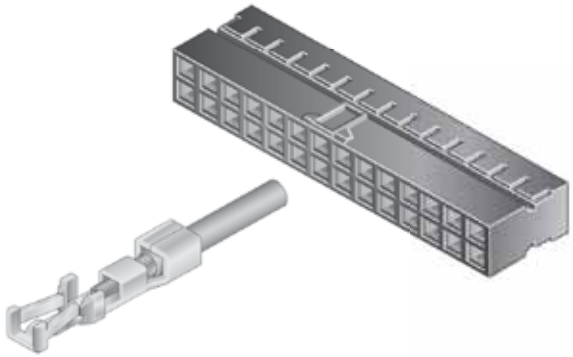
- Reels – Contacts
- Bags – Housings

REFERENCE INFORMATION

- File no. E66906
- File no. LR46923
- Product drawing: 77138 or 77139 – Contact
  69307, 90311– Housing
- Product specification: 110-036
- Application specification: 100-006, TA-959

RoHs INFORMATION

- This product is RoHs compatible according to the European Union Directive 2002/95/IEC



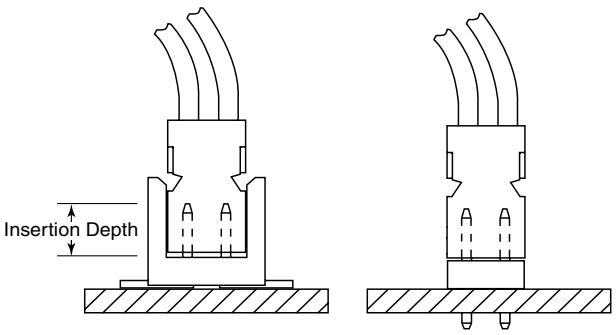
MATING DATA

Minitek™ Unshrouded headers	50, 52, 56
Minitek™ Shrouded headers	62, 64

INSERTION DEPTH

- 2.40 mm min. to 3.30 mm max.
  [provides .381 mm wipe]
- 3.63 mm min. to 4.00 mm max.
  [provides .381 mm wipe in housing]

TYPICAL APPLICATIONS



Minitek™ Crimp-to-wire Housings and Contacts

PART NUMBERS

Contacts

77138	-	Plating	0	1	LF

26 AWG to 30 AWG

1 = 0,76 µm (30µ") gold/GXT on mating area,
0 = Gold flash

Housings

10087010	-	0	Total Positions	LF

04 to **50** (Double Row)

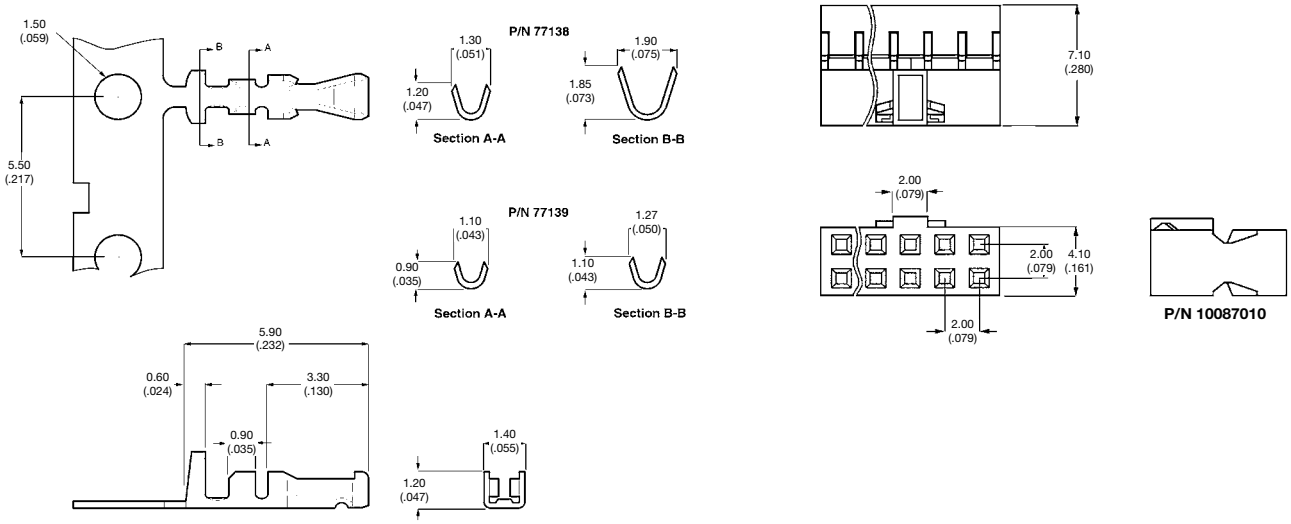
77138	-	101LF
10087010	-	0XXLF

CORE RANGE

XX = 04, 06, 08, 10, 12, 16, 20

PRODUCT

Contacts



Housings

Dimension : mm (inch)

FEATURES

- Latching retention 15/25 N (depending on size) due to latch alone
- Latches with audible click
- Mates with standard Minitek headers
- Latch can be released and parts unmated

TECHNICAL DATA

PHYSICAL

- Housing: Polyamide, black
- Flammability rating: UL 94 V-0

ELECTRICAL PERFORMANCE

- Insulation resistance: 1x 10^5 MΩ min.
- Dielectric withstanding voltage: 500 V

MECHANICAL PERFORMANCE

- Latching retention force: 15 N min. (for 2x3 and 2x4 pos)
- Latching retention force: 25 N min. (for 2x5 and 2x25 pos)

OPERATING TEMPERATURE RANGE

- -55°C to +125°C

PACKAGING

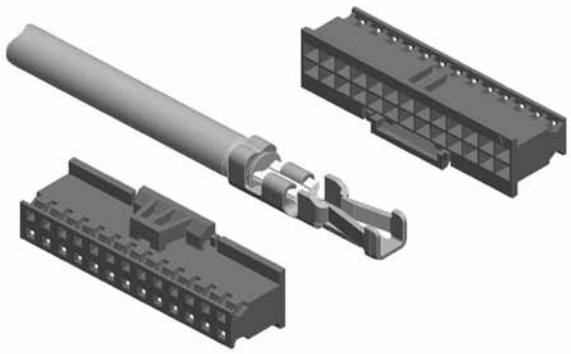
- Standard: Plastic bags

REFERENCE INFORMATION

- File no. E66906
- File no. LR46923
- Product drawing: 8-digit part number
- Product specification: GS-12-415

RoHs INFORMATION

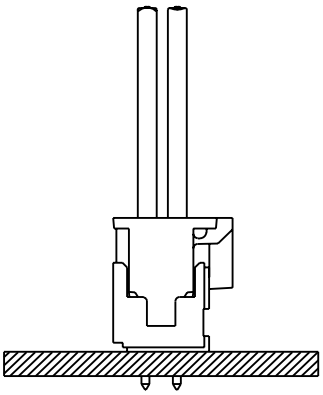
- This product is RoHs compatible according to the European Union Directive 2002/95/IEC



MATING DATA

Minitek™ Shrouded headers	62, 64, 66
Minitek™ CTW contacts	70, 72

TYPICAL APPLICATIONS



Minitek™ Crimp-to-wire Housings, Active latch

PART NUMBERS

Contacts

77138	–	Plating	0	1	LF

26 AWG to 30 AWG

1 = 0,76 µm (30µ") gold/GXT on mating area,
0 = Gold flash

Housings

10073599	–	0	total positions	LF

6 to 50

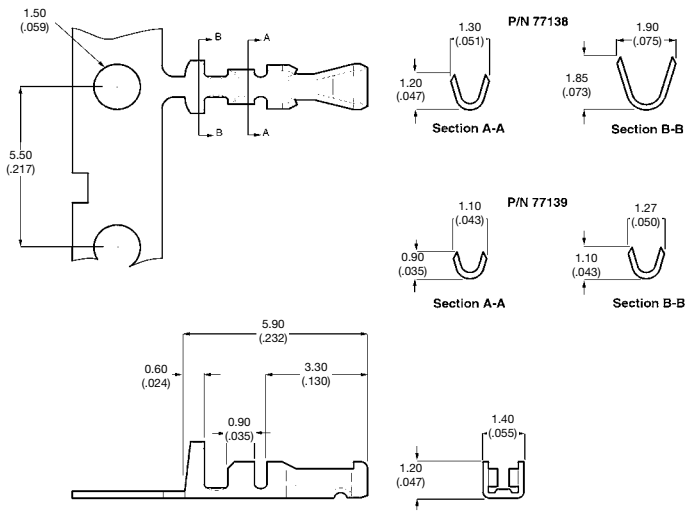
77138	–	101LF
10073599	–	0XXLF

CORE RANGE

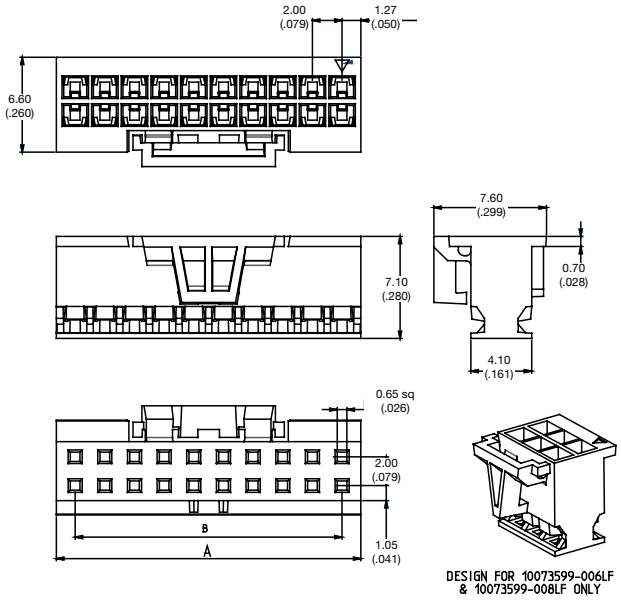
XX = 06, 08, 10, 12, 16, 20

PRODUCT

Contacts



Housings



Dimension : mm (inch)

FEATURES

- Early entry, single-beam contacts provide long wiping action for reliable electrical contact
- Center key polarization and friction latch options

TECHNICAL DATA

PHYSICAL

- Housing: Black thermoplastic
- Flammability rating: UL 94 V-0
- Contact: Phosphor-bronze
- Plating: Gold/GXT over 1.27 µm (50 µ") nickel

ELECTRICAL PERFORMANCE

- Current rating: 1 A continuous
- Insulation resistance: 1x 10^5 MΩ min.
- Contact resistance: 30 mΩ
- Dielectric withstanding voltage: 650 V

MECHANICAL PERFORMANCE

- Mating cycles (durability): 100

OPERATING TEMPERATURE RANGE

- -40°C to +105°C

PACKAGING

- Tubes

REFERENCE INFORMATION

- File no. E66906
- File no. LR46923
- Product drawing: 89947 or 89361
- Product specification: BUS-12-115

RoHs INFORMATION

- This product is RoHs compatible according to the European Union Directive 2002/95/IEC

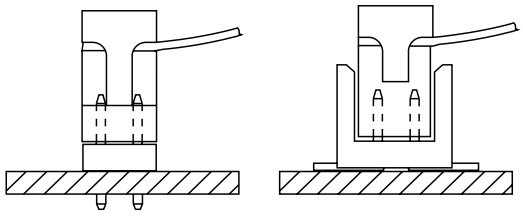
MATING DATA

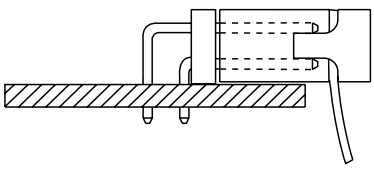
Minitek™ Unshrouded headers	50, 52, 56
Minitek™ Shrouded headers	62, 64

INSERTION DEPTH

- 2.55 mm min. to 4.57 mm max. [provides .381 mm wipe]

TYPICAL APPLICATIONS





Minitek™ IDC Receptacle

PART NUMBERS

5-Digit Base Part Number	–	Center Key	Total Positions	S	LF

06 to **50**

optional S = Add Optional **S** for Strain relief

89947 = 0,76 µm (30µ") gold/GXT
89361 = 0,20 µm (8µ") gold/GXT

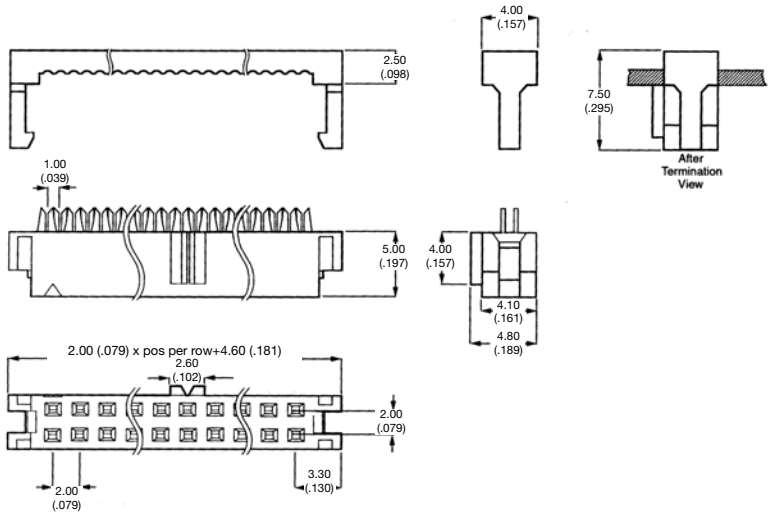
1 = Standard
7 = With Center Key and friction Latching (available from 06 to 30 positions)

89361 – **7XXLF**

XX = 04, 06, 08, 10, 12, 16, 20

CORE RANGE

PRODUCT



Dimension : mm (inch)

MORE OPTIONS

If you need someting more than the standard parts in this catalog, Basics+ has many more options to help you in your design process. Here are just some examples.

Polarized (missing) positions

These are highly specific, so please contact us with your requirement

Kinked legs

See drawing 69190 and 69192 at www.fciconnect.com

Press-fit pins

See drawing 94674 at www.fciconnect.com

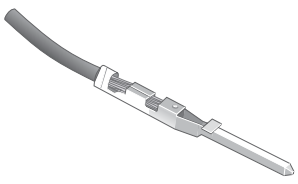
Add-on latches for headers

Please contact us with your requirement

Wide body headers

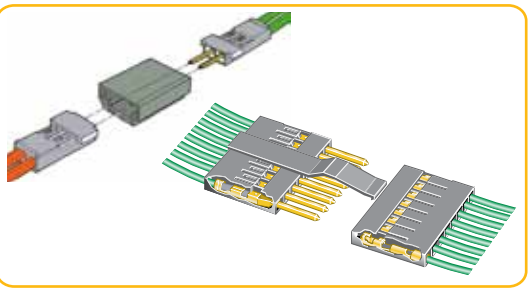
Crimp-to-wire pin

See drawing 47791 and 75653 at www.fciconnect.com



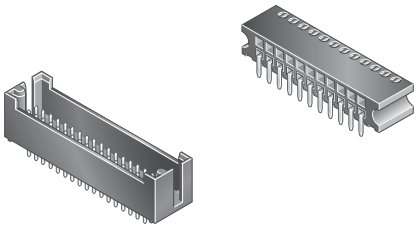
Flying latch

See drawing 67009, 68105 and 68106 at www.fciconnect.com



Guide pin header / receptacles

See drawing 64991 and 66527 at www.fciconnect.com

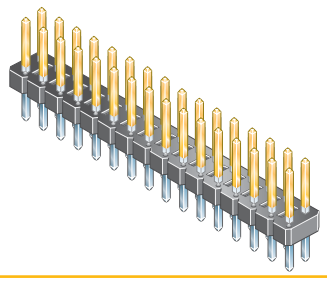


Printed housings

Please contact us with your requirement

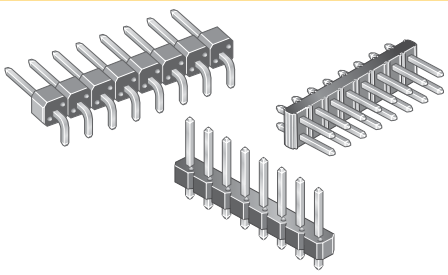
Additional plating options

Please contact us with your requirement



Pin-in-paste headers

See drawing 10076801, 10082201 and 10082202 at www.fciconnect.com



Visit: www.fciconnect.com/basicsdesign to specify your design need

Application Equipment

DUBOX™ CRIMP-TO-WIRE CONTACTS

Contact Description	Wire size	Hand Tool	Mini-Applicator (right to left feeding)	Mini-Applicator (left to right feeding)	Repair Tool
Dubox	AWG 20-22	RCY21235	RCY20027	RCY20017	HT 272
Dubox	AWG 22-24	RCY21234	RCY20008	RCY20029	HT 272
Dubox	AWG 26-30	RCY21234	RCY20008	RCY20029	HT 272
Small insulation Dubox	AWG 28-32	-	RCY20028		HT 272

PV™ CRIMP-TO-WIRE CONTACTS

Contact Description	Wire size	Hand Tool	Mini-Applicator	Repair Tool
Standard Mini-PV	AWG 18-20	HT-0073	133867-104	HT-0080
Standard Mini-PV	AWG 22-26	HT-0095	133867-105	HT-0080
Standard Mini-PV	AWG 28-32	HT-0095	133867-106	HT-0080
Standard Mini-PV	AWG 34-36	HT-0112	133867-108	HT-0080
Small Insulation PV	AWG 22-26	HT-207	-	HT-0080
Small Insulation PV	AWG 28-32	HT-217	-	HT-0080

MINITEK™ CRIMP-TO-WIRE CONTACTS

Contact Description	Wire size	Hand Tool	Mini-Applicator	Repair Tool
Minitek	AWG 26-30	HT 151	155250-101	HT-0080
Minitek	AWG 32-36	HT 152	155250-102	HT-0080

BergStik® AND Bergstrip®

- Manual cutting tool: HT 320

Quickie® IDC

- Manual flat cable cutter: HT 209
- Quickie assembly hand tool: HT 210
- Hand Press: QP-104
- Many other variations of manual, semi- automatic and automatic tools available upon request.

Minitek® IDC

- Manual flat cable cutter: HT 209
- Hand Press: QP-104

Where to get your tooling

These toolings and more detailed advice, pricing, availability etc. are available through your distributor or from the following suppliers:

- **Americas**
  Phone: 1-800-843-6911
  E-mail: doug.sheaffer@fciconnect.com

- **Europe**
  Föhrenbach Application Tooling N.V.
  Phone: +32 3 216 19 98
  Email : application.tooling@foehrenbach.be

- **Asia**
  Phone: +65 549 6666
  E-mail: fcising_sales@fciconnect.com

BASE PART NUMBER	PAGE
47437	37
47439	37
47457	37
47564	37
47565	37
47566	37
48047	37
48048	37
48276	37
52601	43
54XXX	17
55508	59
55510	59
57102	51
57202	51
59112	57
59132	57
59202	57
63453	58
65039	39
65043	39
65239	33
65240	33
65846	39
67996	9, 13
67997	9, 13
68000	9, 13
68001	9, 13
68002	9, 13
68015	15
68016	15
68020	15
68021	15
68602	9, 13
68786	19
69145	19
69167	35
69168	35
69830	49
71600	47
71607	27
71609	27
71918	45
71920	21
71922	45
71991	23
75867	41
75869	41
75915	21
76341	23
76342	23
76347	31
76357	31
76382	29
76383	29
76384	29
76385	29
77138	71, 73
78207	35
78208	35
86730	61
87606	21
89361	75
89882	27
89883	27
89891	21
89898	25
89947	75
91596	59
91601	25
91614	25
91615	25
91618	25
95293	11
95278	11
98401	11
98414	63
98423	53
98424	63
98464	65
10056844	43
10056845	43
10072353	55
10073599	73
10075024	55
10075025	67
10075324	67
10078991	69
10078995	69
10087010	71

ELXBASICSUS0610ELT

For more information about e-catalog or FCI sales offices, headquarters, agents and local distributors, visit www.fciconnect.com

Americas - Phone: 1 (800) 237 2374 Europe- - Phone: 33 1 39 49 21 83 Asia/Pacific - Phone: 65 6549 6666