

DUBOX™ SHUNTS



FEATURES & BENEFITS

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



TECHNICAL INFORMATION

MATERIALS

- Housing: High temperature, black thermoplastic
- Flammability rating: UL94V-0
- Pin: Phosphor-bronze
- Plating: Gold or tin over 1.27µm (50µin.) nickel

ELECTRICAL PERFORMANCE

- Current rating: 2.5A max. per contact
- Insulation resistance: 50,000MΩ min
- Contact resistance: 15MΩ max. initial, 20MΩ max. after environmental tests
- Dielectric withstanding voltage: 800V

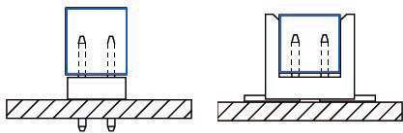
ENVIRONMENTAL

- Operating temperature range: -65°C to +125°C



MECHANICAL PERFORMANCE

- Mating cycles (durability): 50-Gold, 25-Tin
- Insertion force:
 - 450gf max. per gold contact
 - 500gf max. per tin-lead contact
- Withdrawal force:
 - 30gf min. per gold contact
 - 30gf min. per tin-lead contact
- Insertion depth:
 - 4.85 mm (.191in.) min.
 - [provides 3.81 mm (.015in.) wipe] – Low profile

TYPICAL APPLICATIONS



SPECIFICATIONS

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

APPROVALS AND CERTIFICATIONS

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

PACKAGING

- Plastic bags

PART NUMBERS

CORE RANGE

68786 — 202LF

LOW PROFILE

68786 — PLATING 02 LF

0.76µm (30µin.) gold	2
Tin	3

STANDARD

63429 — PLATING 02 LF

0.76µm (30µin.) gold	2
Tin	3

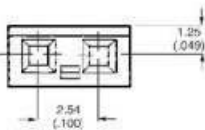
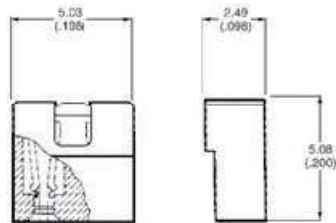
MULTI-POSITION

69145 — PLATING NUMBER OF POSITIONS LF

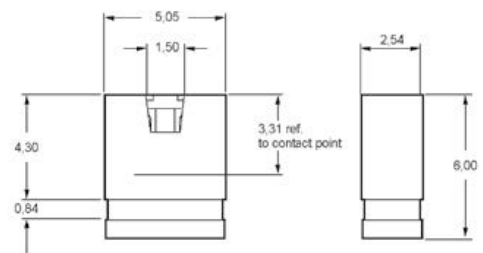
0.76µm (30µin.) gold	2
Tin	3

4 to 20 positions

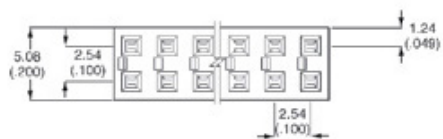
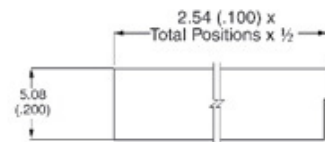
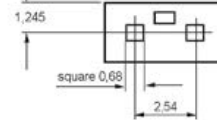
PRODUCT



68786



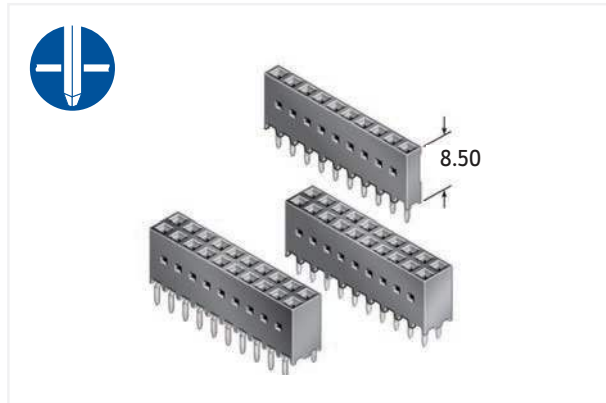
63429



69145

Dimension in mm

DUBOX™ VERTICAL RECEPTACLES



FEATURES & BENEFITS

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

TECHNICAL INFORMATION

MATERIALS

- Housing: Glass filled thermoplastic polyester, blue
- Flammability rating: UL94V-0
- Pin: Phosphor-bronze
- Plating: Gold or tin in accordance with IEC 603-81

ELECTRICAL PERFORMANCE

- Current rating: 3A max. per individual contact
2A DC max. per contact for fully energized connector
- Insulation resistance: $1 \times 10^5 \text{M}\Omega$ min.
- Contact resistance: $15 \text{M}\Omega$ max. initial,
 $20 \text{M}\Omega$ max. after environmental tests
- Dielectric withstanding voltage: 1000V RMS



ENVIRONMENTAL

- Operating temperature range: -65°C to $+125^\circ\text{C}$

MECHANICAL PERFORMANCE

- Mating cycles (durability): 200
- Insertion force per gold contact: 1.50 N (150gf) max.
- Withdrawal force per gold contact: 0.30 N (30gf) min.
- Insertion depth:
 - Top entry: 3.6mm min. to 6.81mm max.
[provides .381mm wipe]
 - Bottom entry: 7mm min.
[provides .381mm wipe] plus board thickness

SPECIFICATIONS

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

APPROVALS AND CERTIFICATIONS

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

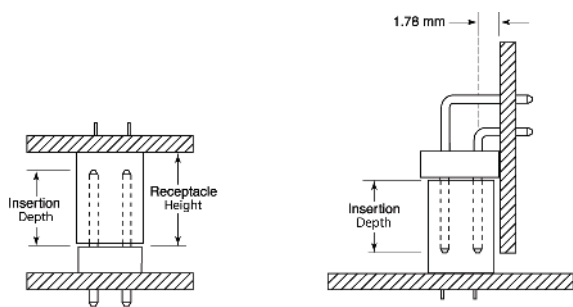
PACKAGING

- Plastic boxes or tubes

PROCESSING INFORMATION

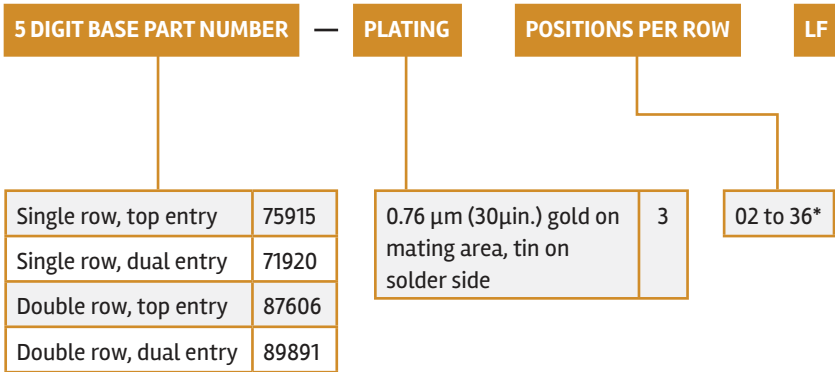
- Compatible with wave soldering processes

TYPICAL APPLICATIONS



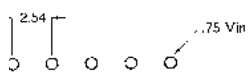


PART NUMBERS

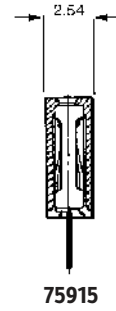
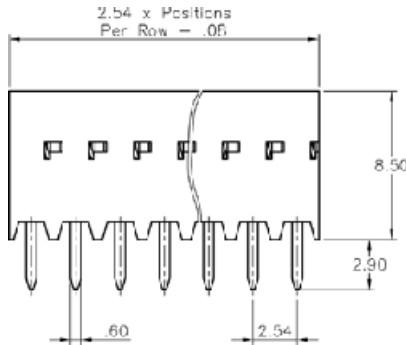


*Other sizes available on request

PRODUCT



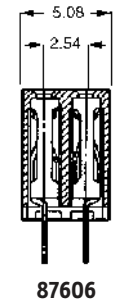
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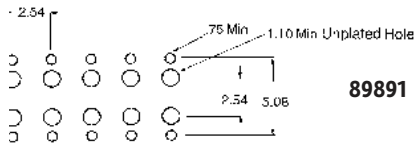
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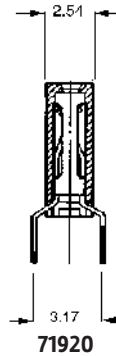
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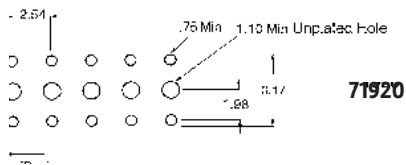
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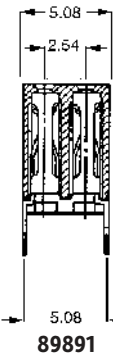
89891



71920



71920



89891

Recommended PCB layouts

Dimension in mm

DUBOX™ VERTICAL RECEPTACLES LOW PROFILE



FEATURES & BENEFITS

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

DUBOX™ VERTICAL RECEPTACLES LOW PROFILE

TECHNICAL INFORMATION

MATERIALS

- Housing: Glass filled thermoplastic polyester, blue
- Flammability rating: UL94V-0
- Pin: Phosphor-bronze
- Plating: Gold or tin over 1.27µm (50µin.) nickel

ELECTRICAL PERFORMANCE

- Current rating: 3A DC max. per individual contact
2A DC max. per contact for fully energized connector
- Insulation resistance: 1 x 10⁵MΩ min.
- Contact resistance: 15MΩ max. initial,
20MΩ max. after environmental tests
- Dielectric withstanding voltage: 1000V RMS



ENVIRONMENTAL

- Operating temperature range: -65°C to +125°C

MECHANICAL PERFORMANCE

- Mating cycles (durability): 200
- Insertion force per gold contact: 1.50 N (150gf) max.
- Withdrawal force per gold contact: 0.30 N (30gf) min.
- Insertion depth:
 - Top entry: 3.6mm min. to 6.7mm max.
[provides .381mm wipe]
 - Bottom entry: 6mm min.
[provides .381mm wipe] plus board thickness

SPECIFICATIONS

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

APPROVALS AND CERTIFICATIONS

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

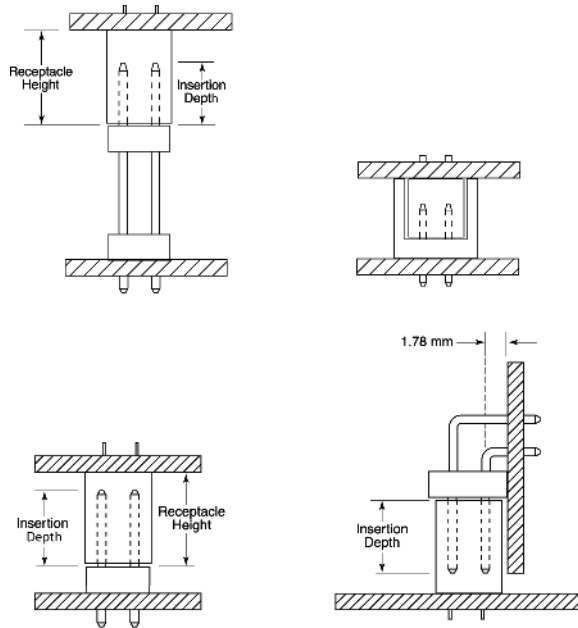
PACKAGING

- Plastic boxes or tubes

PROCESSING INFORMATION

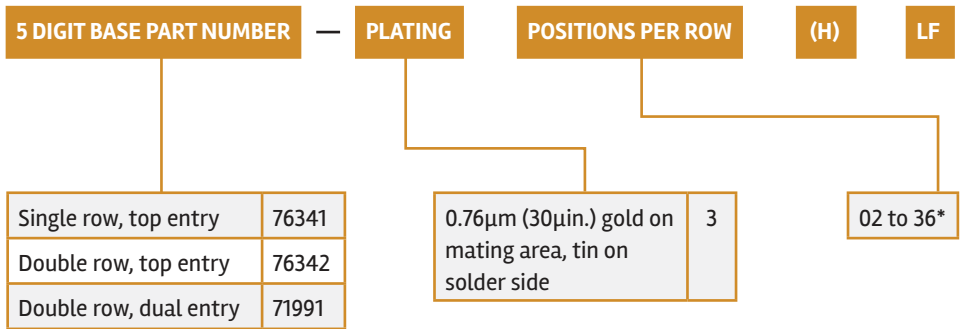
- Compatible with wave soldering processes

TYPICAL APPLICATIONS



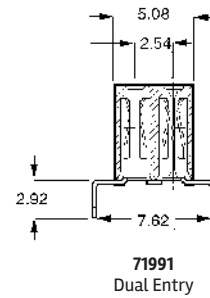
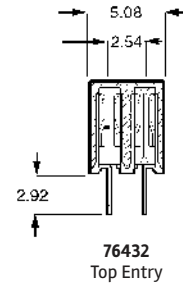
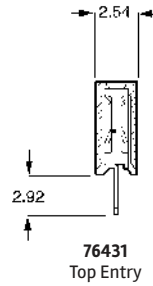
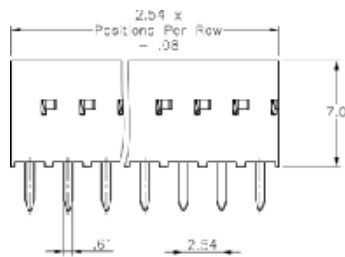
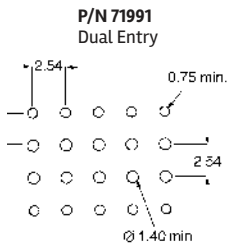
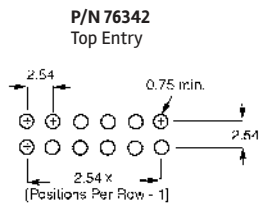
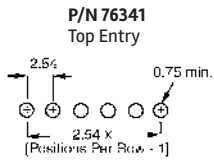
DUBOX™ VERTICAL RECEPTACLES LOW PROFILE

PART NUMBERS



*Other sizes available on request

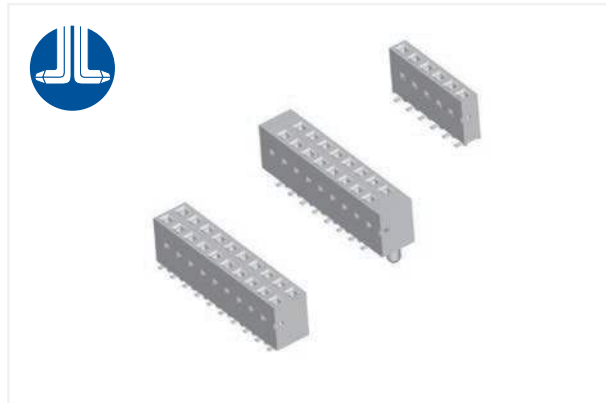
PRODUCT



Recommended PCB layouts

Dimension in mm

DUBOX™ VERTICAL RECEPTACLES LOW PROFILE



FEATURES & BENEFITS

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

DUBOX™ VERTICAL RECEPTACLES LOW PROFILE

TECHNICAL INFORMATION

MATERIALS

- Housing: High temperature body, grey
- Flammability rating: UL94V-0
- Pin: Phosphor-bronze
- Plating: Gold or tin over 1.27µm (50µin.) nickel

ELECTRICAL PERFORMANCE

- Current rating: 3A DC max. per individual contact
2A DC max. per contact for fully energized connector
- Insulation resistance: 1x 10⁵MΩ min.
- Contact resistance: 15MΩ max. initial,
20MΩ max. after environmental tests
- Dielectric withstanding voltage: 1000V RMS

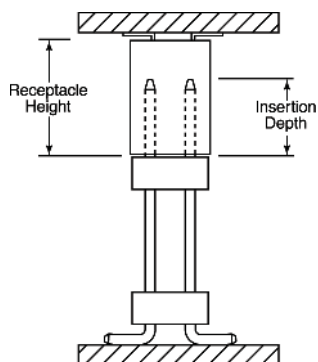
ENVIRONMENTAL

- Operating temperature range: -65°C to +125°C



MECHANICAL PERFORMANCE

- Mating cycles (durability): 200
- Insertion force per gold contact: 1.50 N (150gf) max
- Withdrawal force per gold contact: 0.30 N (30gf) min
- Insertion depth:
 - Top entry: 3.6mm min. to 6.7mm max.
[provides .381mm wipe]
 - Bottom entry: 6mm min.
[provides .381mm wipe] plus board thickness

TYPICAL APPLICATIONS



SPECIFICATIONS

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

APPROVALS AND CERTIFICATIONS

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

PACKAGING

- Plastic boxes or tubes
- Tape-and-reel as available

PROCESSING INFORMATION

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

DUBOX™ VERTICAL RECEPTACLES LOW PROFILE



PART NUMBERS

CORE RANGE

89898 — 3XXALF

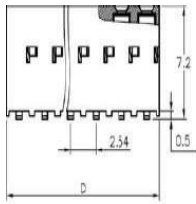
XX = 02, 03, 04, 05, 06, 08, 10

5 DIGIT BASE PART NUMBER	PLATING	POSITIONS PER ROW	OPTION	LF	
Single row, dual entry	91601	02 to 25	Single row	Standard-tubes	-
Single row, with external locating pegs, dual entry	91614	02 to 25	Double row	Tape-and-reel packaging with pick-up cap*	A
Double row, dual entry	89898	0.76µm (30µin.) gold on mating area, tin on solder side		3	
Double row with external locating pegs, dual entry	91615				
Double row with internal locating pegs, dual entry	91618				

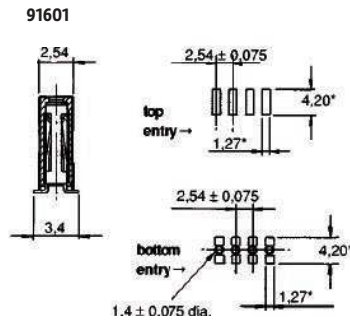
*as available

PRODUCT

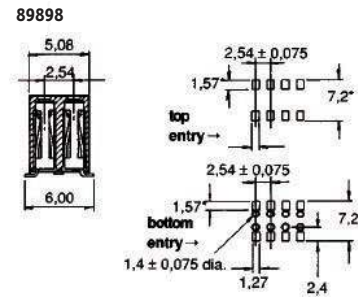
STANDARD



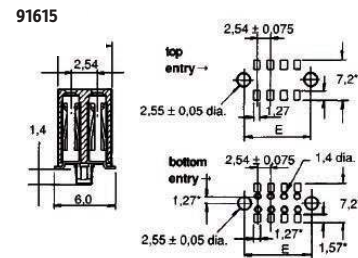
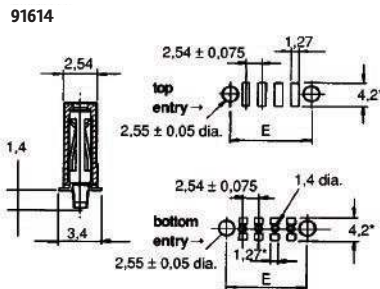
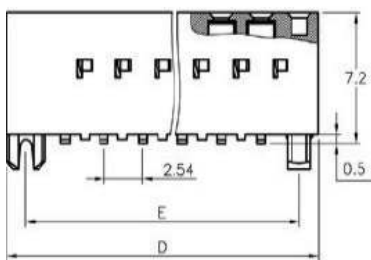
SINGLE ROW + PAD LAYOUTS



DOUBLE ROW + PAD LAYOUTS



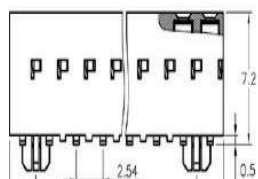
EXTERNAL LOCATING PEGS



*Note: Available as of 3 positions versions

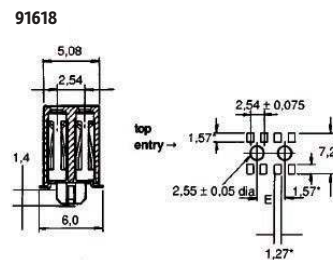
*Note: Available as of 3 positions versions

INTERNAL LOCATING PEGS



Dimension in mm

Not available in single row



Note: All dimensions marked with * are minimum dimensions

*Note: available as of 6 number of positions

For more information, please contact: Communications@fci.com or visit us at www.fci.com

Disclaimer

Please note that the above information is subject to change without notice.

DUBOX™ HORIZONTAL RECEPTACLES



FEATURES & BENEFITS

- 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 INFORMATION

MATERIALS

- Housing:
 - Blue thermoplastic –Through hole
 - High temp. grey thermoplastic – Surface mount
- Flammability rating: UL94V-0
- Pin: Phosphor-bronze
- Plating: Gold or tin over 1.27µm (50 µin.) nickel

ELECTRICAL PERFORMANCE

- Current rating: 3A DC max. per individual contact
2A DC max. per contact for fully energized connector
- Insulation resistance: 1 x 10⁹MΩ min.
- Contact resistance: 15MΩ max. initial,
20MΩ max. after environmental tests
- Dielectric withstanding voltage: 1000V RMS

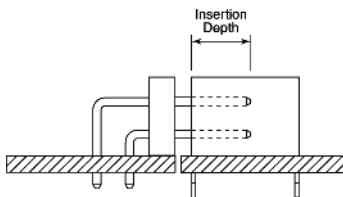
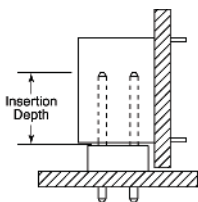
ENVIRONMENTAL

- Operating temperature range: -65°C to +125°C



MECHANICAL PERFORMANCE

- Mating cycles (durability): 200
- Insertion force per gold contact: 1.50 N (150gf) max.
- Withdrawal force per gold contact: 0.30 N (30gf) min.
- Insertion depth:
 - 3.6mm min. to 7.50mm max.
 - [provides .381mm wipe]

TYPICAL APPLICATIONS



SPECIFICATIONS

-  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

APPROVALS AND CERTIFICATIONS

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

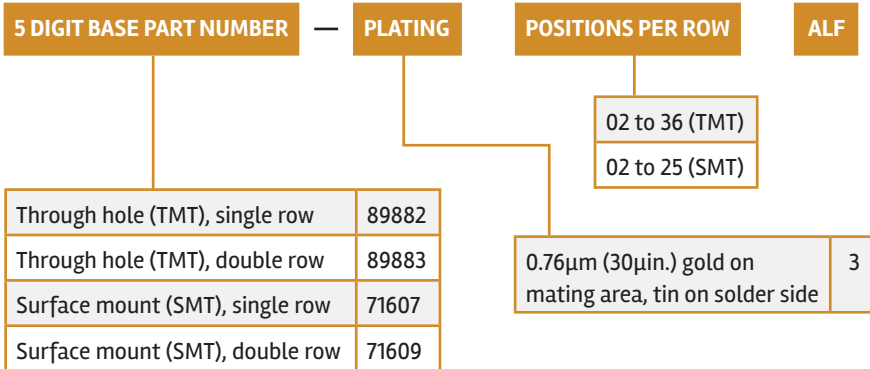
PACKAGING

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

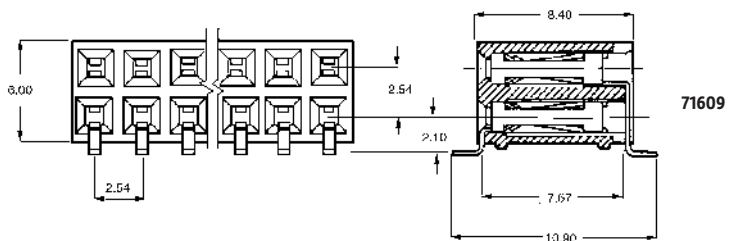
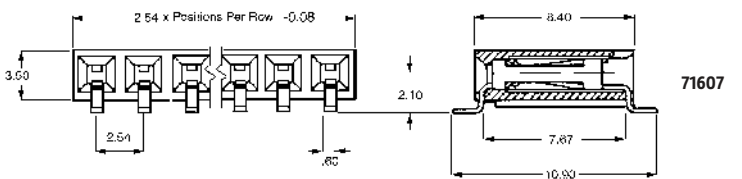
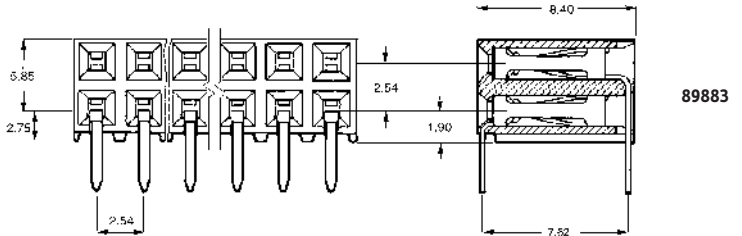
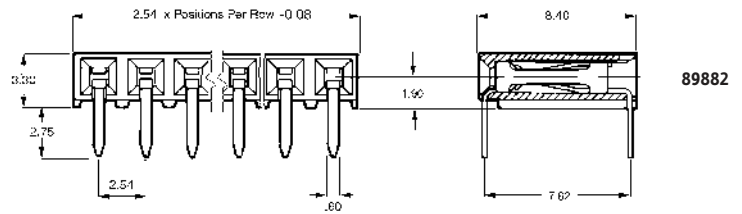
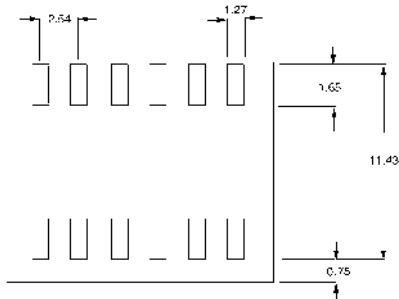
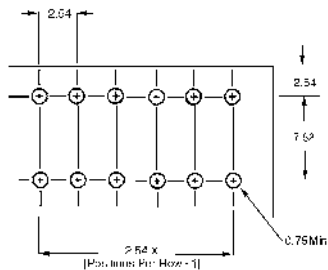
PROCESSING INFORMATION

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

PART NUMBERS



PRODUCT



Recommended PCB layouts

Dimension in mm

For more information,
please contact: Communications@fci.com
or visit us at www.fci.com

Disclaimer
Please note that the above information is subject to change without notice.

DUBOX™ SHROUDED HEADERS



FEATURES & BENEFITS

- 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 INFORMATION

MATERIALS

- Housing: Glass filled thermoplastic polyester
- Housing color for series 76382, 76383: blue
Housing color for series 76384, 76385: black
- Flammability rating: UL94V-0
- Contact: Copper alloy
- Plating: Gold or tin over 1.27µm (50µin.) nickel

ELECTRICAL PERFORMANCE

- Current rating: 3A continuous
- Insulation resistance: $1 \times 10^5 \text{M}\Omega$ min.
- Dielectric withstanding voltage: 1000V RMS

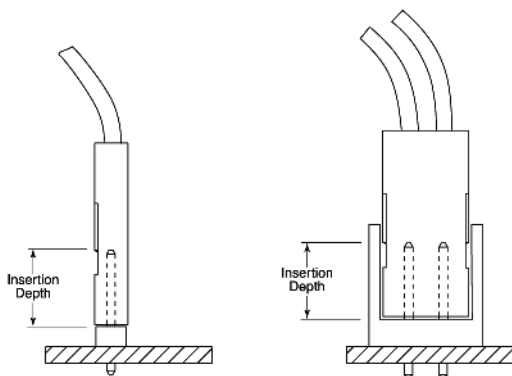
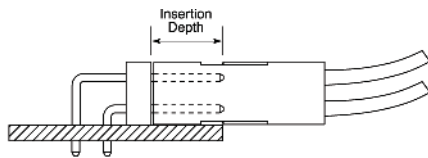
ENVIRONMENTAL

- Operating temperature range: -40°C to $+125^\circ\text{C}$



MECHANICAL PERFORMANCE

- Contact retention to housing: 20 N min.

TYPICAL APPLICATIONS



SPECIFICATIONS

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

APPROVALS AND CERTIFICATIONS

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

PACKAGING

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

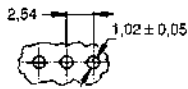
PROCESSING INFORMATION

- Compatible with wave soldering processes

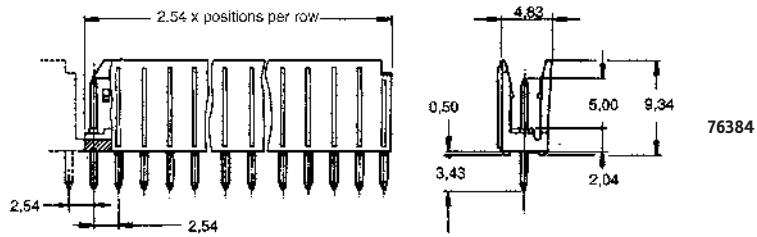
PART NUMBERS

5 DIGIT BASE PART NUMBER		PLATING	POSITIONS PER ROW	LF
Single row, straight	76384	0.76µm (30µin.) gold/GXT on mating area, tin on solder side	02 up to 18	3
Single row, right angle	76382			
Double row, straight	76385			
Double row, right angle	76383			
		Tin		4

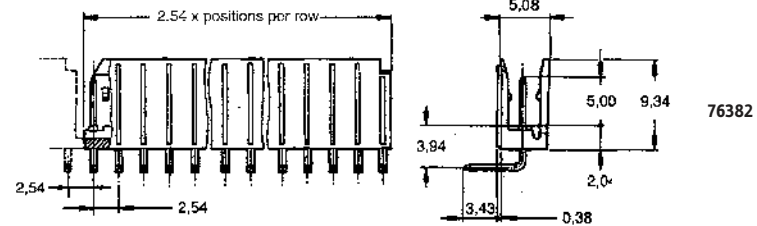
PRODUCT



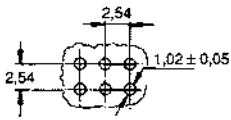
Recommended PCB Layouts



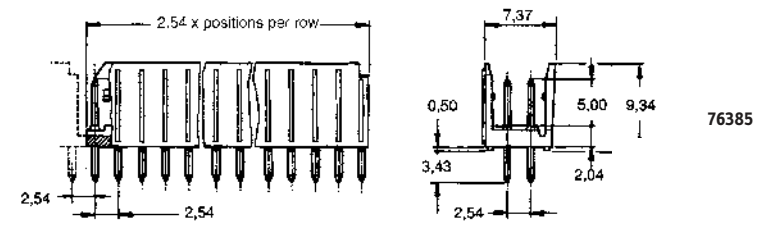
76384



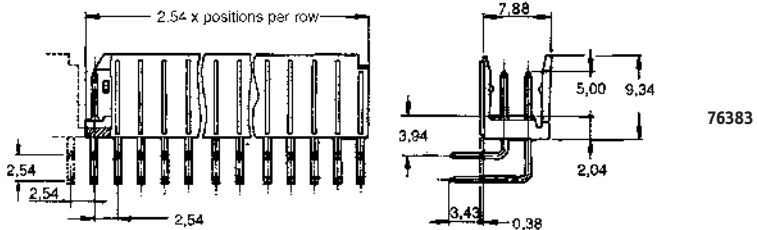
76382



Recommended PCB Layouts



76385



76383

Dimension in mm

DUBOX™ CRIMP-TO-WIRE-CONTACTS



FEATURES & BENEFITS

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



TECHNICAL INFORMATION

MATERIALS

- Contact: Phosphor-bronze
- Plating: 0.76µm (30µin.) Gold over 1.27µm (50µin.) nickel

ELECTRICAL PERFORMANCE

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



ENVIRONMENTAL

- Operating temperature range: -65°C to +125°C

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

SPECIFICATIONS

-  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

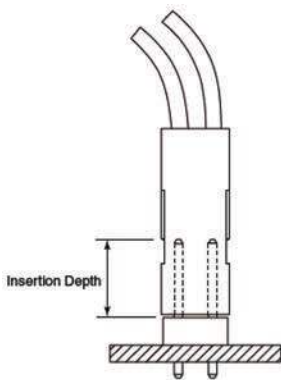
APPROVALS AND CERTIFICATIONS

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

PACKAGING

- 1 Reels
- Boxes – Loose piece

TYPICAL APPLICATIONS



PART NUMBERS

CORE RANGE

76347 — 301LF

PART NUMBERS / CONTACTS ON REEL

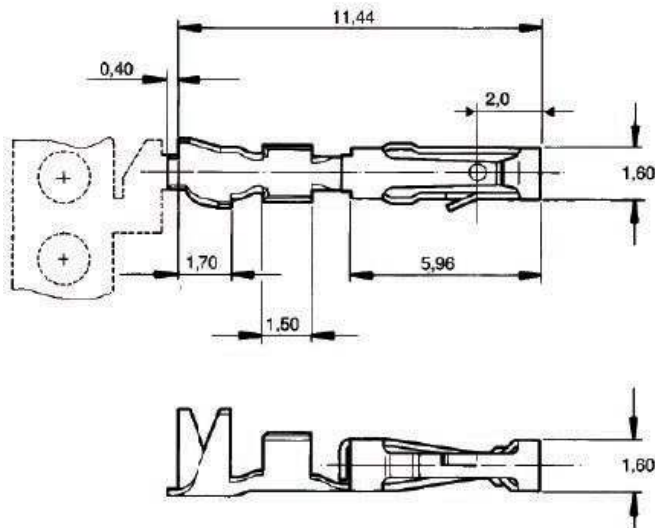
Wire Size	Insulation O.D.	Selective Gold Plated	Tin Plated	Packaging
22-30	0.90 - 1.50	76347-301LF	76347-401LF	15.000/reel
22-30	0.90 - 1.50	76347-302LF•	76347-402LF•	15.000/reel
22-30	0.90 - 1.50	76347-303LF	76347-403LF	500/reel
20-22	1.10 - 1.60	76347-311LF	76347-411LF	15.000/reel
20-22	1.10 - 1.60	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	76357-301LF	76357-401LF	1000/box

• : Reeled for application machine with left-to-right feeding

PRODUCT



Contacts to be used with housing = 65239-xxx / 65240-xxx
 Wire strip length = 3,00 ± 0,25 mm
 Mating pin size = 0,62 mm square
 Mating pin recommended length = 5,00 mm min.

DUBOX™ CRIMP-TO-WIRE-HOUSINGS



FEATURES & BENEFITS

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

TECHNICAL INFORMATION

MATERIALS

- Housing: Glass filled thermoplastic polyester
- Housing color: Blue
- Flammability rating: UL94V-0

ELECTRICAL PERFORMANCE

- Insulation resistance: $1 \times 10^5 \text{M}\Omega$ min.
- Dielectric withstanding voltage: 1000V RMS



ENVIRONMENTAL

- Operating temperature range: -65°C to $+125^\circ\text{C}$

MECHANICAL PERFORMANCE

- Insertion depth:
 - 3.6mm min. to 6.0mm max.

SPECIFICATIONS

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

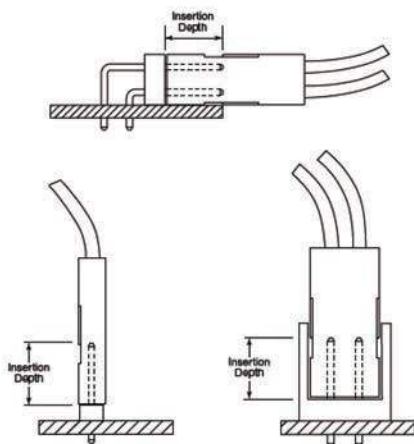
APPROVALS AND CERTIFICATIONS

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

PACKAGING

- Bulk

TYPICAL APPLICATIONS





PART NUMBERS

CORE RANGE

76347 — 301LF

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

76347 — 301LF

XX = 04, 06, 08, 10, 12, 16, 30

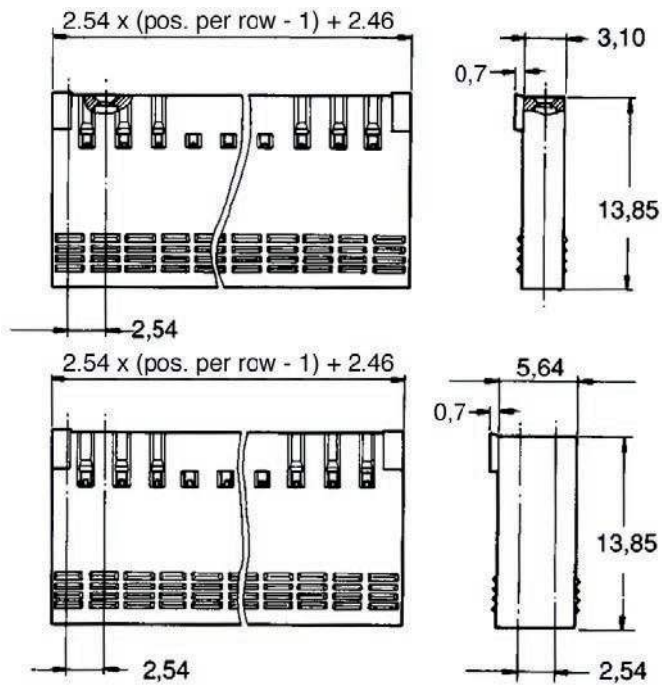
5 DIGIT BASE PART NUMBER — 0

POSITIONS PER ROW — LF

Single row	65240
Double row	65239

02 up to 36

PRODUCT



Pin size: 0.62mm square
Recommended pin length: 5.00mm min.

BWBDUBOX254081BEA4