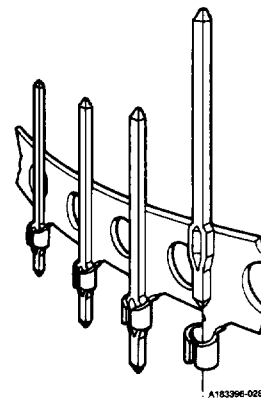


# Pins

2.54 mm (0.100 in.) Centerline

## Compliant Press-Fit Pin Terminal



### Features

- Compliant press-fit section has unique "bow tie" design.
- No soldering required.
- Large hole tolerance of 1.02 0.076 mm (0.040 0.003 in.).
- Lower PCB manufacturing cost than solder-to-board pins.
- Low insertion force.
- Minimum push-out force of 44 N (10 lbf) is maintained through 2 replacements.
- Gas-tight connection.
- No damage to plated-through hole.
- Fully automatic insertion.
- GXT™ (palladium-nickel alloy with gold flash), a Berg Electronics gold equivalent plating, ensures high cycle life and excellent solderability.
- Berg Electronics is an approved vendor listed on the Qualified Products List.


### Mating Data


Mates with all receptacles requiring a 0.64 mm (0.25 in.) square pin.

### Specifications

- MIL-C-28859/3
- MIL-C-28859/4
- MIL-G-45204
- MIL-P-55110
- MIL-P-81728
- MIL-STD-275
- QQ-B-750

### Approvals and Certifications

 File no. E66906

 File no. LR46923

### Application Equipment

Description	Page
▪ TP-159 Semi-automatic pantograph compliant pin insertion machine . . . . .	13-119
▪ TP-162C Semi-automatic pantograph compliant pin insertion machine . . . . .	13-119
▪ BP-191B Computer-controlled compliant pin insertion machine . . . . .	13-120

### Technical Data

#### Materials

- Contact pin . . . . . Drawn wire 0.64 mm (0.025 in.) square, 3/4-hard phosphor-bronze

#### Mechanical Performance

- Insertion force
  - Smallest hole diameter (0.94 mm/0.037 in.) . . . . . 176 N (40 lbf) max
- Retention force
  - Largest hole diameter (1.09 mm/0.043 in.) . . . . . 44 N (10 lbf) min
- Pin replaceability . . . . . 2 times (new pins, same hole) maintains 44 N (10 lbf) min retention force

#### PCB Requirements

- PCB thickness . . . . . 2.36 mm (0.093 in.) to 3.17 mm (0.125 in.) recommended (thicker PCBs acceptable)
- PCB hole size
  - Drilled . . . . . 1.15 ±0.025 mm (0.0453 ±0.001 in.)
  - Finished . . . . . 1.02 ±0.076 mm (0.040 ±0.003 in.)
- PCB hole finish . . . . . 0.025 mm (0.001 in.) min to 0.072 mm (0.003 in.) max copper or 0.0072 mm (0.0003 in.) min to 0.0178 mm (0.0007 in.) max tin-lead

#### Plating

- Finish . . . . . 0.38 µm (15 µin.) gold over 1.27 µm (50 µin.) nickel or 0.76 µm (30 µin.) gold over 1.27 µm (50 µin.) nickel or 1.27 µm (50 µin.) gold over 1.27 µm (50 µin.) nickel or 0.76 µm (30 µin.) GXT over 1.27 µm (50 µin.) nickel or 3.81 µm (150 µin.) tin-lead (93/7)

#### Electrical Performance

- Insulation resistance . . . . . 5000 MΩ min
- Contact resistance . . . . . 15 mΩ max
- Withstanding voltage . . . . . 1000 V ac rms
- Current rating
  - Mated with Mini PV™ . . . . . 3 amp dc continuous
  - Mated with Maxi PV . . . . . 5 amp dc continuous

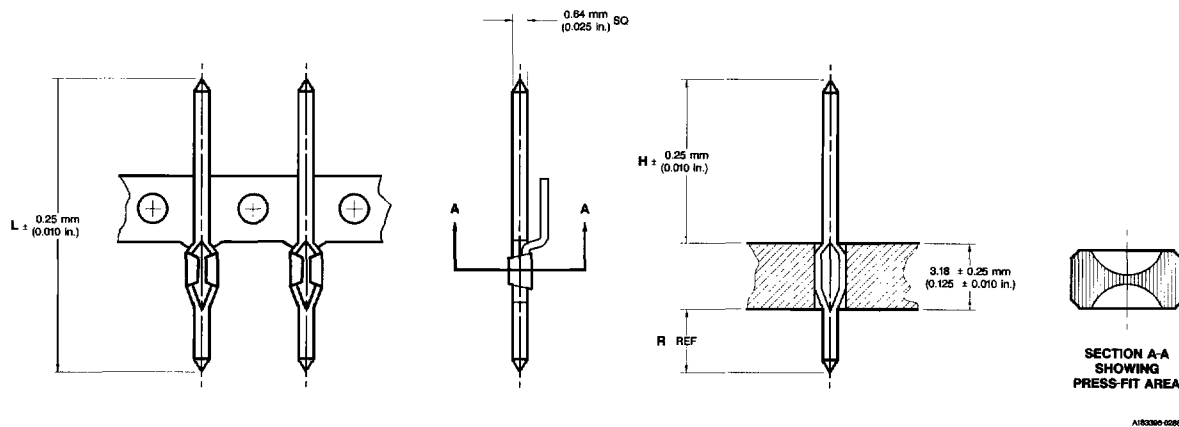
#### Operating Environment

- Temperature range . . . . . -40°C to +125° C

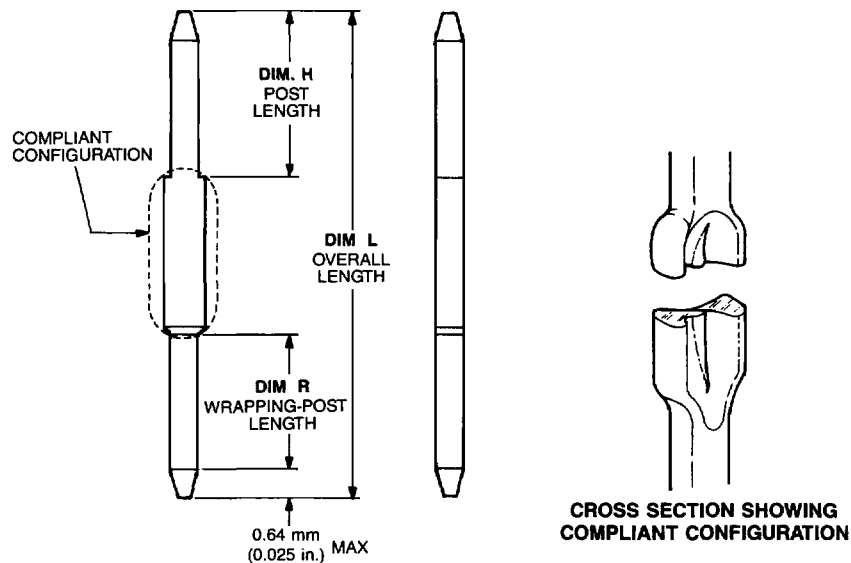
#### Packaging

- Reels
- Antistatic bags (loose piece)

### Description Standard Pin



### Military QPL Pin



A183396-0289

### Ordering Data

□ □ □ □ - X Y Y

Base number and first digit of dash number specify plating and packaging style.

YY specifies dimensions.

Base Number			
Package	Gold over Nickel		
	0.38 $\mu\text{m}$ (15 $\mu\text{in.}$ )	0.76 $\mu\text{m}$ (30 $\mu\text{in.}$ )	1.27 $\mu\text{m}$ (50 $\mu\text{in.}$ )
Reel	76230-9XX	76230-1XX	76230-3XX
Loose piece	76828-9XX	76828-1XX	76828-3XX
Package	GXT™ over Nickel		Tin-Lead
	0.38 $\mu\text{m}$ (15 $\mu\text{in.}$ )	0.76 $\mu\text{m}$ (30 $\mu\text{in.}$ )	3.81 $\mu\text{m}$ (150 $\mu\text{in.}$ )
Reel	76230-6XX	76230-5XX	76230-4XX
Loose piece	76828-6XX	76828-5XX	76828-4XX

Pins  
2.54 mm (0.100 in.)

<b>Ordering Data (Cont'd)</b>						
	<b>Dash Number</b>					
	<b>Dimensions</b>					
	<b>H*</b>		<b>R*</b>		<b>L</b>	
	mm	in.	mm	in.	mm	in.
X40	5.72	0.225	4.57	0.180	13.34	0.525
X02	5.84	0.230	1.14	0.045	10.03	0.395
X49	5.84	0.230	9.27	0.365	18.16	0.715
<b>X04</b>	<b>8.13</b>	<b>0.320</b>	<b>1.14</b>	<b>0.045</b>	<b>12.32</b>	<b>0.485</b>
<b>X05</b>	<b>8.13</b>	<b>0.320</b>	<b>5.46</b>	<b>0.215</b>	<b>16.64</b>	<b>0.655</b>
<b>X48</b>	<b>8.13</b>	<b>0.320</b>	<b>14.22</b>	<b>0.560</b>	<b>25.40</b>	<b>1.000</b>
X07	8.76	0.345	1.14	0.045	12.95	0.510
X08	8.76	0.345	5.84	0.230	17.65	0.695
X09	8.76	0.345	8.00	0.315	19.81	0.780
<b>X10</b>	<b>8.76</b>	<b>0.345</b>	<b>8.76</b>	<b>0.345</b>	<b>20.57</b>	<b>0.810</b>
<b>X13</b>	<b>10.67</b>	<b>0.420</b>	<b>1.14</b>	<b>0.045</b>	<b>14.86</b>	<b>0.585</b>
<b>X50</b>	<b>10.67</b>	<b>0.420</b>	<b>9.22</b>	<b>0.363</b>	<b>22.86</b>	<b>0.900</b>
X58	10.67	0.420	11.68	0.460	25.32	0.997
X42	11.30	0.445	9.91	0.390	24.26	0.955
X36	11.43	0.450	8.64	0.340	23.11	0.910
<b>X59</b>	<b>11.56</b>	<b>0.455</b>	<b>1.14</b>	<b>0.045</b>	<b>15.75</b>	<b>0.620</b>
<b>X16</b>	<b>12.70</b>	<b>0.500</b>	<b>1.40</b>	<b>0.055</b>	<b>17.15</b>	<b>0.675</b>
<b>X56</b>	<b>13.21</b>	<b>0.520</b>	<b>1.14</b>	<b>0.045</b>	<b>17.40</b>	<b>0.685</b>
X19	13.84	0.545	1.27	0.050	18.16	0.715
X37	14.61	0.575	1.14	0.045	18.80	0.740
X22	15.24	0.600	1.27	0.050	19.56	0.770
<b>X23</b>	<b>16.13</b>	<b>0.635</b>	<b>1.14</b>	<b>0.045</b>	<b>20.32</b>	<b>0.800</b>
<b>X24</b>	<b>16.13</b>	<b>0.635</b>	<b>5.84</b>	<b>0.230</b>	<b>25.02</b>	<b>0.985</b>
<b>X25</b>	<b>16.13</b>	<b>0.635</b>	<b>8.00</b>	<b>0.315</b>	<b>27.18</b>	<b>1.070</b>
X26	16.13	0.635	8.76	0.345	27.94	1.100
X27	16.13	0.635	9.91	0.390	29.08	1.145
X28	16.13	0.635	16.13	0.635	35.31	1.390
<b>301**</b>	<b>8.08</b>	<b>0.318</b>	<b>0.00</b>	<b>0.000</b>	<b>12.52</b>	<b>0.493</b>
<b>304**</b>	<b>8.08</b>	<b>0.318</b>	<b>0.89</b>	<b>0.350</b>	<b>21.41</b>	<b>0.843</b>
<b>306**</b>	<b>8.08</b>	<b>0.318</b>	<b>15.88</b>	<b>0.625</b>	<b>28.40</b>	<b>1.118</b>
307**	8.08	0.318	19.05	0.750	31.57	1.243
323**	1.02	0.040	6.35	0.250	11.68	0.460
325**	1.02	0.040	12.70	0.500	18.03	0.710
<b>328**</b>	<b>1.02</b>	<b>0.040</b>	<b>4.45</b>	<b>0.175</b>	<b>9.27</b>	<b>0.365</b>
<b>331**</b>	<b>1.02</b>	<b>0.040</b>	<b>12.70</b>	<b>0.500</b>	<b>17.32</b>	<b>0.682</b>

\*H and R dimensions are calculated with pins applied to 3.18 mm (0.125 in.) thick PCB.

\*\*Military dash numbers are available only for 77015 and 77017 base numbers.

Ordering data shown is for our standard product offering. For special sizes or high-volume orders, contact your authorized Berg Electronics representative.

<b>Customer Support Materials</b>			
Description	Order No.	Description	Order No.
Customer Product Drawings.....	By Part No.	Product Samples.....	Upon Request
Product Specifications.....	BUS-12-033		