

# TECHNICAL DATA Press-Fit Insulated Terminals

Press-Fit Terminals have outstanding electrical, mechanical, thermal and chemical properties made possible through the use of uncontaminated pte resin - long known for its exceptional inherent physical properties - as well as close fabrication control. The highest production standards are assured because quality control at ITT Sealectro is based on United Kingdom Ministry specifications and methods and these inspection procedures are carried on from receipt of the pte right down to the assembled terminals.

## Characteristics of pte

### Electrical Properties

Volume Resistivity (50% RH, 23°C)	10 <sup>18</sup> ohm/cm
Dielectric Constant (60 Hz to 10 <sup>6</sup> Hz)	2.0-2.2
Dielectric Strength (volts/mil)	400-450
Dissipation (power) Factor (60 Hz to 10 <sup>6</sup> Hz)	0.0002
Corona Resistance (see ratings in tables)	No tracking or carbonizing
Capacitance (see ratings in tables)	Very low

### Mechanical Properties

Tensile Strength	1500-2500 psi (105 kgf/cm <sup>2</sup> - 175 kgf/cm <sup>2</sup> )
Elongation	75-150%
Modulus of Elasticity	50000-55000 psi (3500 kgf/cm <sup>2</sup> - 3850 kgf/cm <sup>2</sup> )

### Chemical Properties

Resistant to all acids and alkalis of all concentrations, as well as to all common solvents, fungus and rot.

Water absorption [24 hour immersion 1/8" (3.175) thickness]	0.01%
Burning Rate	None
Effect of Sunlight, Ultra-violet and Infra-red light	None
Temperature Range (not affected by soldering operations or cryogenic environs)	-100°C to +250°C (-148°F to +482°F)

### Testing Data

Capacitance and voltage measured with terminals installed in chassis permitting 0.040" (1.016) protrusion of the pte bushing but not more than 0.050" (1.27) thick.

Note: While the above values are typical of the materials used, they should not be quoted on users specifications or drawings of ITT Sealectro Insulated Terminals

### Plating

Standard plating code for the lug portion of each terminal is given in the 13th & 14th digits of the part number.

20	Gold flash 0.000005" (0.13 micron) min. over silver 0.0003" (7.62 micron) min.
51	Greville Tinned to ITT Sealectro specification A0143502
59	Bright acid tin 0.0003" (7.62 micron) min. over 0.0002" (5.08 micron) min. copper
60	Silver 0.0002" (5.08 micron) over copper flash.

### Bushing Colour

All terminals are manufactured with white pte

### Dimensions

All dimensions are in inches with metric equivalents given in brackets or green throughout.



143-375/376

# STAND OFFS Press-Fit Terminals

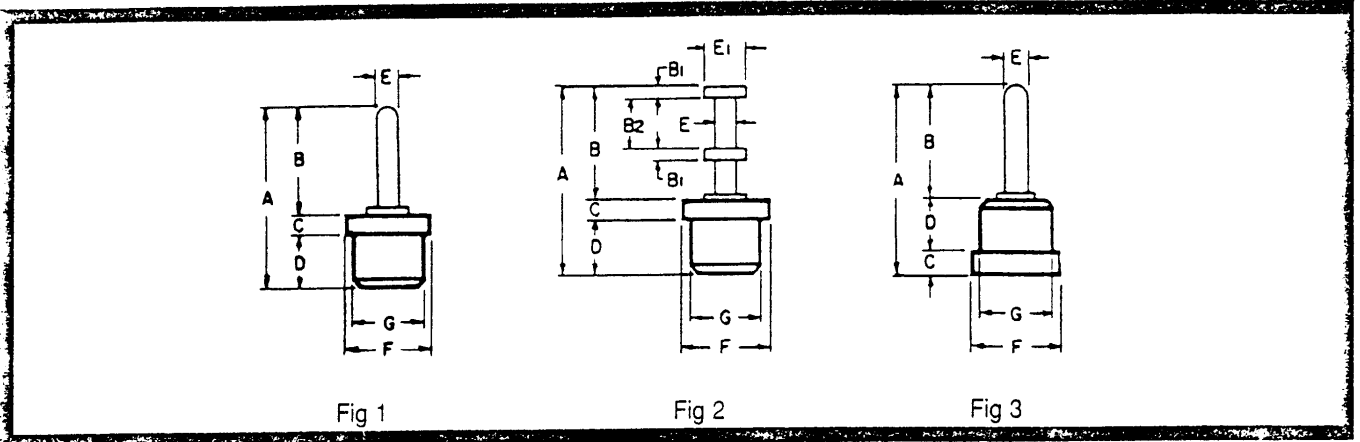


Fig	Part No.	Tool No.	Approx Capacitance mmf	V RMS 50Hz		A	B	B1	B2	C	D	E Dia	E1 Dia	F Dia	G * Dia
				Nominal Rating	Flashover Sea Level										
1	013-1000-040519	B-8	0.45	1000	3000	.350 8.9	.210 5.3			.040 1.0	.100 2.5	.040 1.0		.172 4.4	.148 3.76
2	013-2001-040519	B-8	0.40	1000	3000	.350 8.9	.210 5.3	.020 0.5	.100 2.5	.040 1.0	.100 2.5	.040 1.0	.080 2.0	.172 4.4	.148 3.76
2	013-2003-040519	B-8	0.50	1000	3000	.375 9.5	.210 5.3	.020 0.5	.100 2.5	.040 1.0	.125 3.2	.040 1.0	.080 2.0	.172 4.4	.148 3.76
1	013-1019-040519	B-15	0.45	1000	3000	.350 8.9	.210 5.3			.040 1.0	.100 2.5	.040 1.0		.195 5.0	.172 4.37
1	003-1009-040519	B3-1	0.60	1000	3000	.350 8.9	.210 5.3			.040 1.0	.100 2.5	.040 1.0		.125 3.2	.093 2.36
2	003-2003-040519	B3-2B	0.60	1000	3000	.350 8.9	.210 5.3	.020 0.5	.100 2.5	.040 1.0	.100 2.5	.040 1.0	.080 2.0	.125 3.2	.093 2.36
3	014-1001-040519	B8-G	0.40	1200	3500	.330 8.4	.210 5.3			.020 0.5	.100 2.5	.040 1.0		.125 3.2	.093 2.36
3	004-1007-040519	B3-2X	0.40	1000	3000	.350 8.9	.210 5.3			.040 1.0	.100 2.5	.040 1.0		.172 4.4	.148 3.76

\* +.002(0.05) -.000(0.00)

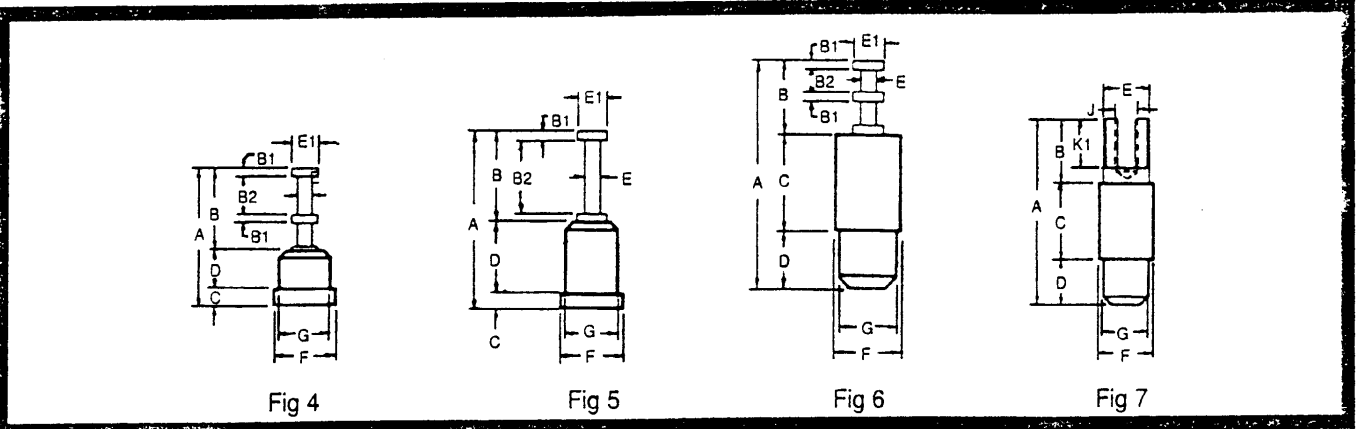
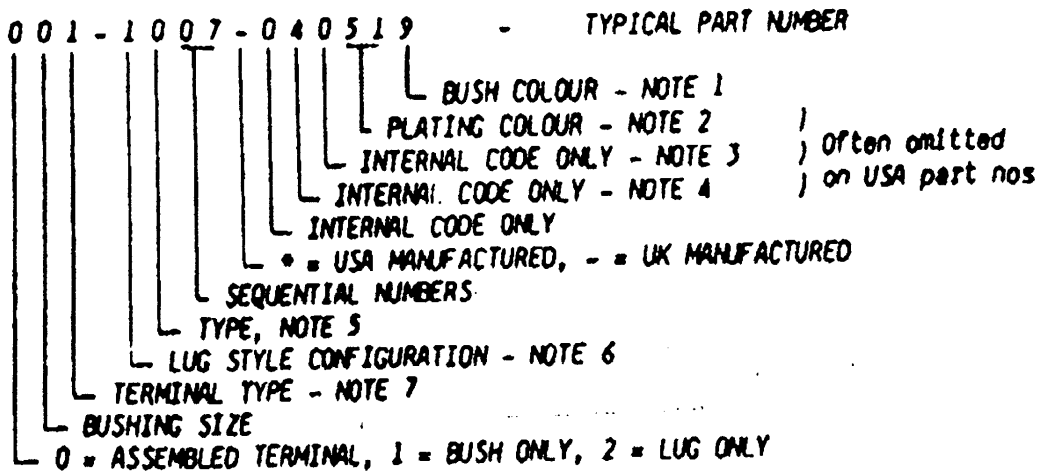


Fig	Part No	Tool No.	Approx Capacitance mmf	V RMS 50Hz		A	B	B1	B2	C	D	E Dia	E1 Dia	F Dia	G * Dia	J Dia	K1
				Nominal Rating	Flashover Sea Level												
4	014-2001-040519	B8-X-1	0.40	1200	3500	.350 8.9	.210 5.3	.020 0.5	.100 2.5	.040 1.0	.100 2.5	.040 1.0	.080 2.0	.172 4.4	.148 3.76		
5	014-2011-040519	B8-X-1	0.50	1700	4500	.455 11.5	.227 5.8	.020 0.5	.187 4.8	.040 1.0	.187 4.8	.040 1.0	.080 2.0	.172 4.4	.148 3.76		
6	013-2046-040609	B12	0.30	2500	6000	.431 10.9	.156 4.0	.020 0.5	.046 1.2	.125 3.2	.150 3.8	.046 1.2	.093 2.4	.187 4.8	.165 4.19		
7	013-3005-040609	B11	0.70	2000	5000	.478 12.1	.203 5.2			.125 3.2	.150 3.8	.148 3.8		.187 4.8	.171 4.34	.078	.156

CIRCUIT COMPONENT PART NUMBERING INFORMATION



NOTE 1

- 0 = BLACK BK
- 1 = BROWN BW
- 2 = RED R
- 3 = ORANGE O
- 4 = YELLOW Y
- 5 = GREEN G
- 6 = BLUE B
- 7 = VIOLET V
- 8 = GREY GY
- 9 = WHITE W

NOTE 2

- 51 = GREVILLE TIN - TIN/LEAD SOLDER DIPPED (UK ONLY)
- 09 = GREVILLE TIN WITH COPPER UNDERCOAT (UK ONLY)
- 47 = ELECTROSOLDER OVER COPPER (USA ONLY)
- 59 = BRIGHT ACID TIN OVER COPPER (USA ONLY)
- 60 = SILVER OVER COPPER (UK ONLY)
- 68 = SILVER OVER COPPER (USA ONLY)
- 20 = GOLD FLASH OVER SILVER
- 14 = GOLD OVER SILVER (UK ONLY)
- 99 = SPECIAL - CHECK ENGINEERING DRAWINGS
- 24 = GOLD OVER NICKEL
- 23 = GOLD OVER GOLD OVER COPPER

NOTE 3

- 0 = STANDARD PART
- 1 = BRITISH BRANCH DRAWING, MAY VARY FROM USA DRAWN PART. CHECK DRAWINGS IF UNSURE.

NOTE 4

4 IS USED IN UK ONLY TO IDENTIFY ASSEMBLED PARTS. THIS IS USED ON USA AND UK MANUFACTURED ITEMS ALTHOUGH USA WILL SHOW 0 IN THIS POSITION, (OFTEN CAUSES CONFUSION).

NOTE 5

- 0, 1, 2, 3 = STANDARD TERMINALS
- 4, 5 = RIVET-LOC AND SEMI ASSEMBLED TERMINALS
- 6 = FLOATING TERMINALS
- 7 = THREE PIECE TERMINALS
- 8 = B&C AND MISCELLANEOUS

NOTE 6

- 0 = SPECIALS
- 1 = STRAIGHT POST
- 2 = TURRET
- 3 = SLOTTED
- 4 = PROBES
- 5 = THREADED
- 6 = EYELET THROUGH HOLE
- 7 = TAPER PIN
- 8 = WIRE WRAP OR STAMPINGS

NOTE 7

- 0 = SPECIALS
- 1 = FEEDTHROUGHS
- 2 = REVERSE FEEDTHROUGH
- 3 = STANDOFF
- 4 = REVENUE STANDOFF
- 5 = DOUBLE STANDOFF
- 6 = SOCKETS
- 7 = TRANSISTOR SOCKET
- 8 = TRANSISTOR HOLDERS

# INSTALLATION PROCEDURE

# Press-Fit Insulated Terminals

The Press-Fit method is the simplest, fastest, most economical terminal installation, with practically no restriction as to chassis material and thickness. The procedure is further simplified by the use of Insertion Tools available from ITT Sealectro. These inexpensive tools are designed to fit any drill press or hand-arbor press.

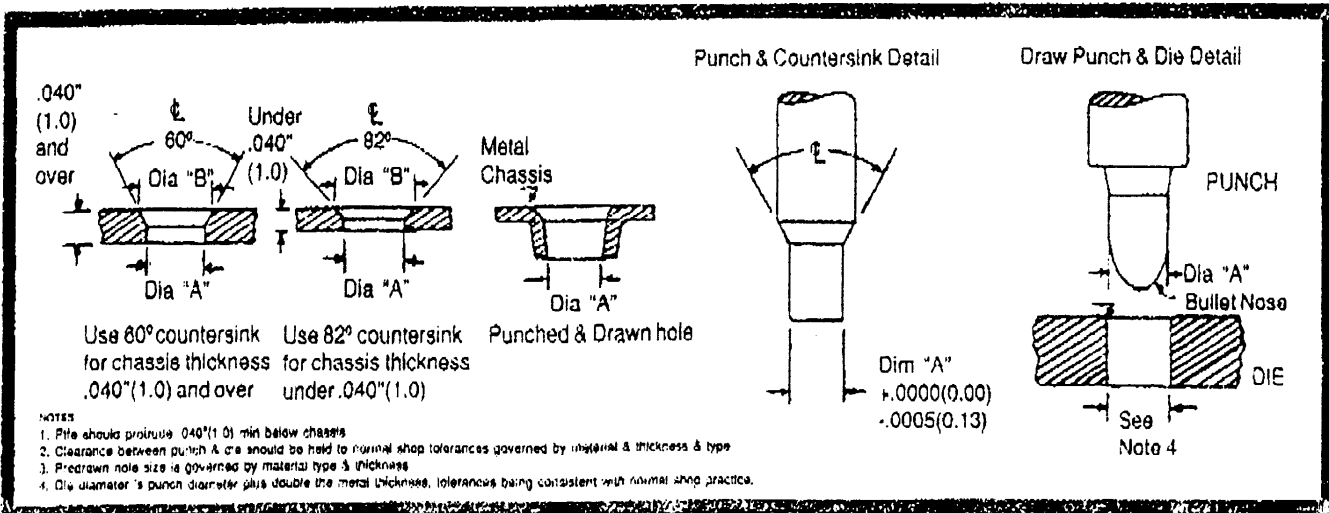
Recommended Insertion Tools for each terminal are listed in the first column following the terminal part number on each table in the catalogue.

(3) INSERTION TOOL.... Insertion tool is placed in chuck of drill press (power off) or hand arbor press. Terminal is held by tool, leaving assembler's hands free to index and centre chassis hole underneath tool. Proper pressure is applied and released just as soon as major diameter of terminal seats itself.

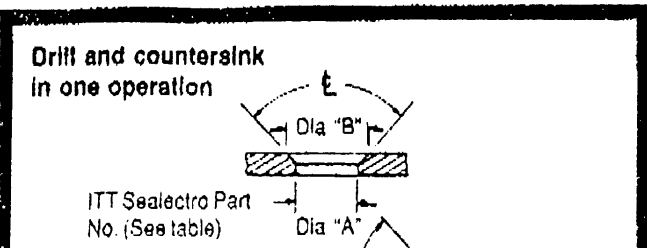
(1) PUNCH OR DRILL HOLE in chassis  $0.013" + 0.002$  (0.05) less than diameter of terminal section (dia G in tables) passing through chassis. Minimum protrusion of bushing passing through chassis  $0.040"$  (1.0). Maximum thickness of chassis  $0.125"$  (3.18); for greater thickness ask for our recommendations. Countersink from breakout or die side of chassis (not from punch side)

(2) COUNTERSINK ENTRANCE EDGE ....Use  $60^\circ$  countersink when chassis thickness is  $0.040"$  (1.0) and over; use  $82^\circ$  countersink when chassis thickness is less than  $0.040"$  (1.0). This enables centring of terminal in hole and prevents scoring the ptfе bushing. Depth and maximum diameter of countersink is determined by thickness of chassis stock and bushing's major diameter.

Bushing Minor Dia. (Dia "G" in tables)		Hole or punch Dia. "A" $\pm 0.002"$ ( $\pm 0.05$ )		Countersink Dia. "B" $+0.010" - 0.000"$ ( $+0.25 - 0.00$ )	
.075	1.90	.070	1.78	.083 <sup>-0.005</sup> -0.000	2.11 <sup>-0.13</sup> -0.00
.093	2.36	.086	2.18	.110	2.79
.104	2.64	.091	2.31	.115	2.92
.125	3.18	.113	3.87	.135	3.43
.148	3.76	.136	3.45	.160	4.06
.165	4.19	.152	3.86	.175	4.45
.171-.172	4.34-4.37	.158	4.01	.175	4.45
.185	4.70	.172	4.37	.195	4.95
.217-.218	5.51-5.54	.205	5.21	.235	5.97
.256	6.50	.243	6.17	.269	6.83
.290	7.37	.277	7.04	.305	7.75
.373	9.48	.360	9.15	.380	9.65
.513	13.03	.500	12.70	.537	13.64



## STEP DRILLS



Part No.	A	B'	C'	D
086-115-60	.086 2.18	.115 2.92	60	.187 4.75
136-160-60	.136 3.45	.160 4.06	60	.187 4.75
136-160-82	.136 3.45	.160 4.06	82	.187 4.75
152-175-60	.152 3.86	.175 4.45	60	.187 4.75