Technical data

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Press-Fit Terminals have outstanding electrical, mechanical, thermal and chemical properties made possible through the use of uncontaminated p.t.f.e. 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 Sealectro is based on United Kingdom Ministry specifications and methods and these inspection procedures are carried on from receipt of the p.t.f.e. right down to the assembled terminals.

Characteristics of p.t.f.e.

Electrical Properties

Volume Resistivity (50% RH, 23°C)	10^{18} ohm/cm
Dielectric Constant (60 Hz to 10^6 Hz)	2.0-2.2
Dielectric Strength (volts/mil)	400-450
Dissipation (power) factor (60 Hz to 10^6 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/cm² - 175 kgf/cm²)
Elongation	75-150%
Modulus of Elasticity	50,000-55,000 psi (3,500 kgf/cm² - 3,850 kgf/cm²)

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 .040" (1.016) protrusion of the p.t.f.e. bushing but not more than .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 Sealectro Insulated Terminals.

Plating

Standard plating code for the lug portion of each terminal is stated at the bottom of each page.

P.20 Gold flash 0.000005" (0.13μ) min. over silver 0.0003" (7.62μ) min.

P.51 Greville Tinned to Sealectro specification A0143502.

P.59 Bright acid tin 0.0003" (7.62μ) min. over 0.0002" (5.08μ) min. copper.

P.99 Gold 0.000005" (0.13μ)/0.00001" (0.25μ) over nickel 0.0001" (2.54μ)/0.00015" (3.81μ).

Bushing Colours

All terminals and bushes are manufactured with white p.t.f.e. as standard. Up to nine alternative colours may be specified on special order but these colours will be subject to minimum quantity requirements and a price surcharge. Please contact the Sales Department who will be pleased to quote for your requirements.

Dimensions

All dimensions are in imperial measure with metric equivalents given in brackets or in orange throughout.

Installation procedure

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 Sealectro Limited. These inexpensive tools are designed to fit any drill press or hand-arbor press.

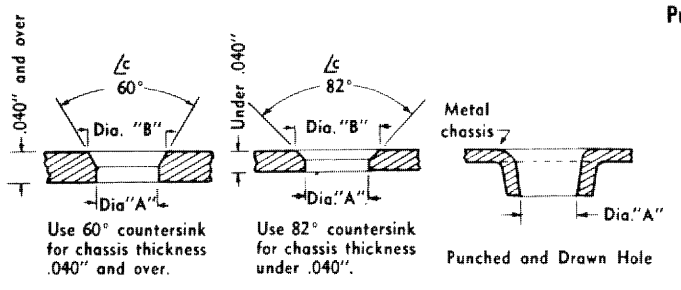
Recommended Insertion Tools for each terminal are listed in the first column following the terminal part number on each table in the catalogue.

(1) PUNCH OR DRILL HOLE in chassis .013"± .002 (0.05 mm) less than diameter of terminal section (dia "G" in tables) passing through chassis. Minimum protrusion of bushing passing through chassis .040" (1 mm). Maximum thickness of chassis .125" (3.18 mm); 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° countersink when chassis thickness is .040" (1mm) and over; use 82° countersink when chassis thickness is less than .040" (1 mm). This enables centring of terminal in hole and prevents scoring the p.t.f.e. bushing. Depth and maximum diameter of countersink is determined by thickness of chassis stock and bushing's major diameter.

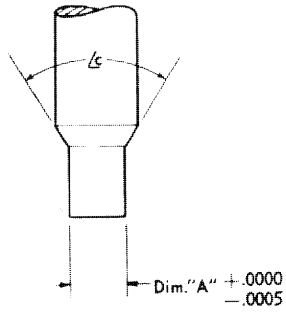
(3) INSERTION TOOL . . . Insertion tool is placed in chuck of drillpress (power off) or hand arbor press. Terminal is held by tool, leaving assembler's hands free to index and centre chassis hole underneath tool. Proper pressure is applied and released just as soon as major diameter of terminal seats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

Bushing Minor Diameter (Diameter 'G' in tables)		Hole or punch Dia. A ±0.002" (±0.05)		Countersink Dia. B +0.010" −0.000" (+0.25−0.00)	
.075	1.90	.070	1.78	.083 +.005 −.000	2.11 +.13 −.00
.093	2.36	.086	2.18	.110	2.79
.104	2.64	.091	2.31	.115	2.92
.125	3.18	.113	2.87	.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

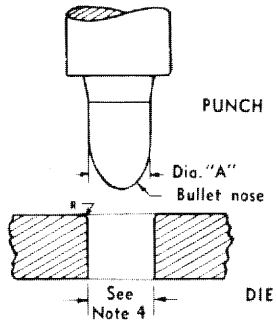


NOTES
1. Teflon should protrude .040" (1 mm) min. below chassis.
2. Clearance between punch and die should be held to normal shop tolerances governed by material and thickness and type.
3. Predrawn hole size is governed by material type and thickness.
4. Die diameter is punch diameter plus double the metal thickness, tolerances being consistent with normal shop practice.

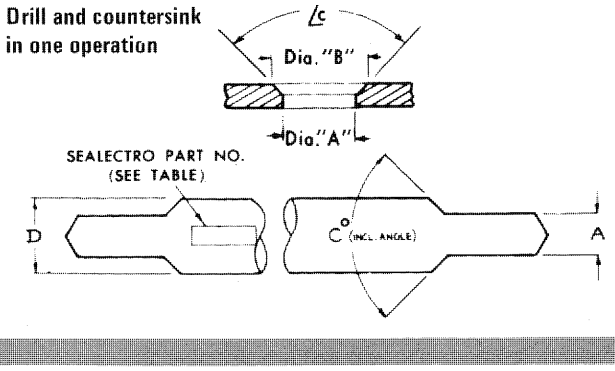
Punch and Countersink Detail



Draw Punch and Die Detail



Step drills



Sealectro 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
158-175-60	.158	4.01	.175	4.45	60	.187	4.75
172-195-60	.172	4.37	.195	4.95	60	.250	6.35
205-235-60	.205	5.21	.235	5.97	60	.250	6.35

Note: B* is recommended diameter of countersink +.010 (+0.25) -.000 (-0.00)

Test Point Jacks & Probes

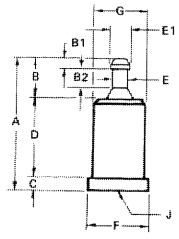


Fig. 20

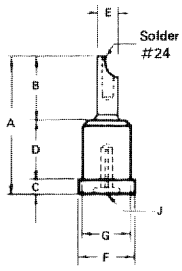


Fig. 21

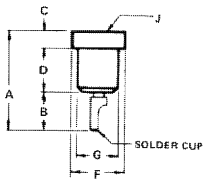


Fig. 22

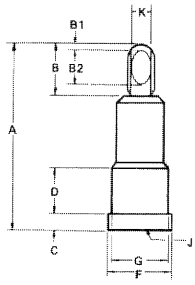


Fig. 23

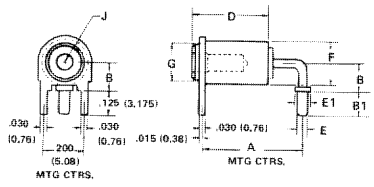


Fig. 24

Fig.	Part No.	Tool No.	Approx. Capacitance m.m.f.	V. RMS 50 Hz Nominal Rating	V. RMS 50 Hz Flashover Sea Level	A	B	B_1	B_2	C	D	E Dia	E_1 Dia.	F Dia.	+.002 −.000 G Dia. (+0.05 −0.00)	J Probe Dia.	J_1 Probe Lgth.	K
20	016-2000	S2	0.60	1000	3000	.437	.120	.037	.053	.046	.271	.054	.074	.218	.185	.080	.195	
						11.1	3.0	0.9	1.3	1.2	6.9	1.4	1.9	5.5	4.70	2.03	5.0	
20	016-2008	S5	0.35	1000	3000	.345	.120	.023	.077	.046	.179	.040	.060	.172	.148	.040	.140	
						8.8	3.0	0.6	2.0	1.2	4.5	1.0	1.5	4.4	3.76	1.02	3.6	
21	016-6001	S17	0.45	1000	3000	.408	.187			.046	.175	.060		.172	.148	.040	.135	
						10.4	4.7			1.2	4.4	1.5		4.4	3.76	1.02	3.4	
24	026-4003		0.45	1200	3500	.500	.140	.125			.378	.050	.080	.218	†.187	.080	.250	
						12.7	3.6	3.2			9.6	1.3	2.0	5.5	4.8	2.03	6.4	
24	026-4005		0.50	1200	3500	.400	.140	.125			.378	.050	.080	.218	†.187	.080	.250	
						10.2	3.6	3.2			9.6	1.3	2.0	5.5	4.8	2.03	6.4	
22	††016-6600	S17	0.50	1000	3000	.359	.140			.065	.154			.187	.148	.040	.125	
						9.1	3.6			1.7	3.9			4.7	3.76	1.02	3.2	
23	016-8010	S38	0.75	1000	3000	.637	.171	.028	.116	.050	.175			.218	.185	.080	.312	.055
						16.2	4.3	0.7	2.9	1.3	4.4			5.5	4.70	2.03	7.9	1.4

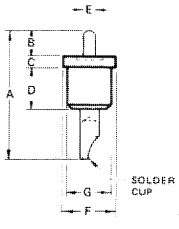


Fig. 25

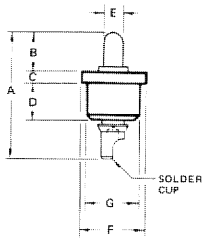


Fig. 26

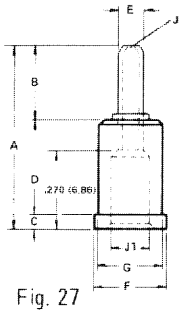


Fig. 27

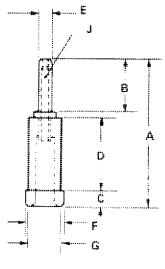


Fig. 28

Fig.	Part No.	Tool No.	Approx. Capacitance m.m.f.	V. RMS 50 Hz Nominal Rating	V. RMS 50 Hz Flashover Sea Level	A	B	C	D	E Dia	F Dia	+.002 −.000 G Dia (+0.05 −0.00)	J Dia	J_1 Dia
25	011-4000	B8-14	0.70	1000	3000	.538	.130	.046	.175	.040	.172	.148		
						13.7	3.3	1.2	4.4	1.02	4.4	3.76		
27	021-4006	B-22X1	0.20	3400	7800	.645	.270	.050	.325	.080	.250	.218	.062	.128
						16.4	6.9	1.3	8.3	2.03	6.4	5.54	1.6	3.3
26	††011-4600	B-13-3	0.55	1000	3000	.407	.125	.065	.090	.040	.187	.148		
						10.3	3.2	1.7	2.3	1.02	4.7	3.76		
28	*021-4000					.785	.300	.094	.360	.080	.218	.187	.062	
						19.9	7.6	2.4	9.14	2.03	5.54	4.8	1.6	

Standard Plating P.20 (for plating specification see page 2) †Tolerance ± .005" (±.13mm) †† Floating contact *Polypropolene insulator. Not suitable for Press-Fit installation into chassis.