

35mm VINKOR

ADJUSTABLE POT CORES FOR HIGH QUALITY INDUCTORS

(to B.S. 4061—Range I.—Ref. 9)

LA2100

Series

TYPE NUMBER TABLES FOR 35mm VINKORS AND ACCESSORIES

To avoid unnecessary delays in deliveries, it is important that cores, mountings and accessories are ordered against the correct type numbers. These are shown in the following data sheets and prefixed LA or DT.

CORES (For details see individual Vinkor data sheets)

| Material | Effective permeability | Type numbers | | | Material | Effective permeability | Type numbers | | |
|----------|------------------------|---|--------------------------------|------------------|----------|------------------------|---|--------------------------------|------------------|
| | | Pair of matched pot cores with adjuster | Pair of matched pot cores only | Adjuster only | | | Pair of matched pot cores with adjuster | Pair of matched pot cores only | Adjuster only |
| A10 | 63 | LA2106 | LA1173 | LA1275 (Natural) | A13 | 250 | LA2132 | LA1211 | LA1362 (Blue) |
| A10 | 40 | LA2107 | LA1174 | LA1340 (Red) | A13 | 160 | LA2134 | LA1212 | LA1362 (Blue) |
| A10 | 25 | LA2108 | LA1175 | LA1340 (Red) | A13 | 100 | LA2136 | LA1213 | LA1275 (Natural) |
| A13 | 400 | LA2130 | LA1210 | LA1362 (Blue) | A13 | 63 | LA2138 | LA1412 | LA1275 (Natural) |

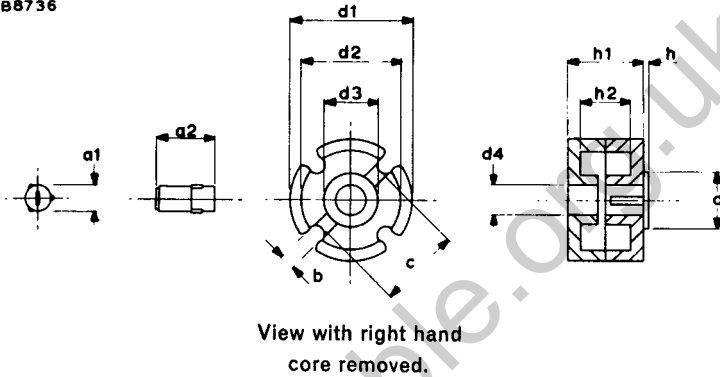
ACCESSORIES

| Item | | For details see: | Type No. |
|--|---------------------------|----------------------------------|----------|
| Cylindrical casing with leaf type tag board | Kit of parts incl. board | LA2100 Series page 3 | DT2151 |
| | Tag board only | | DT2046 |
| Cylindrical casing with printed circuit type tag board | Kit of parts incl. board | LA2100 Series page 4 | DT2187 |
| | Tag board only | | DT2115 |
| Clip and board assembly | 4 clips and 1 clamp. ring | LA2100 Series page 5 | DT2419 |
| | Tag board | | DT2379 |
| | Additional pins | | DT2207 |
| Coil formers | 1-section (Delrin) | LA2100 Series page 6 | DT2180 |
| | 2-section (Propathene) | | DT2285 |
| | 4-section (Propathene) | | DT2295 |
| Aligning plug | | Introductory notes pages 21 & 22 | DT2162 |
| Non-magnetic screwdriver | | | DT2047 |

CORE AND ADJUSTER DIMENSIONS

For electrical and magnetic design data see page 1 and 2 of the data sheets for the appropriate Vinkor. For type numbers see LA2100 Series, page 1, and the individual data sheets for the appropriate Vinkor.

B8736



| Tol. | Dimensions (millimetres) | | | | | | | | | | | |
|------|--------------------------|----------------|-----|-------|-----|----------------|----------------|----------------|----------------|-----|----------------|----------------|
| | a ₁ | a ₂ | b | c | d | d ₁ | d ₂ | d ₃ | d ₄ | h | h ₁ | h ₂ |
| Max. | 5.45 | 15.65 | 4.4 | 26.33 | 9.3 | 36.25 | 29.93 | 16.61 | 5.45 | 0.6 | 22.9 | 15.0 |
| Min. | — | — | 3.6 | 24.29 | — | 34.75 | 28.69 | 15.81 | 5.40 | — | 22.7 | 14.6 |

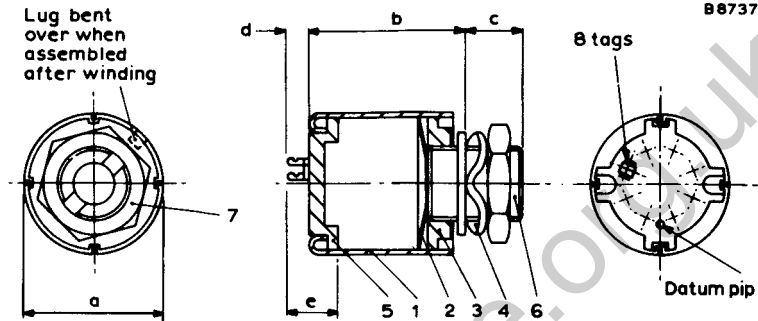
EFFECTIVE PARAMETERS

For calculating the magnetic properties of a pair of cores, the following parameters should be used:

| Parameter | Symbol | mm units | cm units |
|---------------------------------|--------|-----------------------|----------------------|
| Effective magnetic path length | l_e | 52.5 mm | 5.25cm |
| Effective area of magnetic path | A_e | 223 mm ² | 2.23cm ² |
| Effective volume | V_e | 11700 mm ³ | 11.7 cm ³ |
| $\sum \frac{l}{A}$ | C_1 | 0.236mm ⁻¹ | 2.36cm ⁻¹ |

CYLINDRICAL CASING WITH LEAF TYPE TAG BOARD

Complete kit of mounting parts: Type No. DT2151.
(Tag board obtainable separately as Type No. DT2046.)



| Tol. | Dimensions (millimetres) | | | | |
|------|--------------------------|----|-----|---|-----|
| | a | b | c | d | e |
| Max. | 39 | 32 | 6.6 | 4 | 6.2 |

THE CASING COMPRISES THE FOLLOWING PARTS

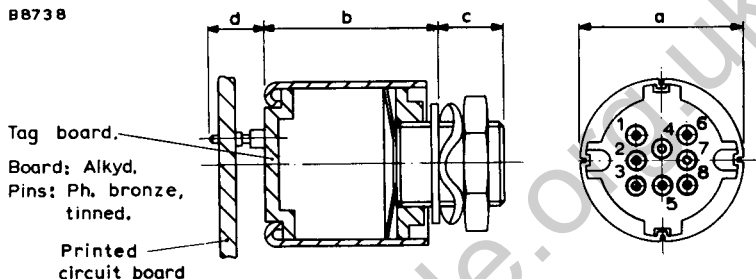
| Item No. | Part description | Material | Finish | Remarks |
|----------|--------------------|------------------|---------|--|
| 1 | Container | Brass | Nickel | |
| 2 | Spring | Spring steel | Cadmium | |
| 3 | Locking plate | Brass | Nickel | |
| 4 | Crinkle washer | Beryllium copper | Cadmium | |
| 5 | Tag board assembly | Board | Alkyd | Natural |
| | | Tags | Brass | Tinned |
| 6 | Fixing bush | Brass | Nickel | $\frac{1}{4}$ " \times 32 t.p.i. Whit. form thread to B.S. 84 (medium fit) to take panel 1.5mm max. thick. |
| 7 | Locknut | Brass | Nickel | 17.5mm max. a/f, 2.6mm max. thick. |

CYLINDRICAL CASING WITH TAG BOARD FOR PRINTED CIRCUIT APPLICATIONS

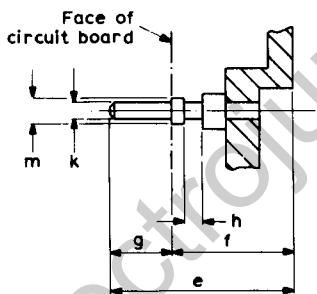
Complete kit of mounting parts: Type No. DT2187.
(Tag board obtainable separately as Type No. DT2115.)

This arrangement is identical with the one shown on the previous page with the exception of the tag board, which is detailed below.

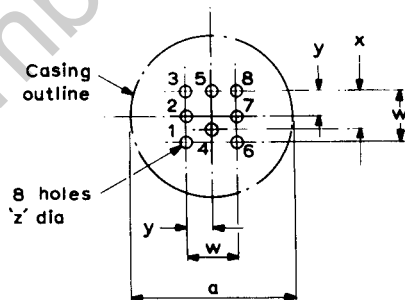
B8738



Pin dimensions



Pin position gauge



Dimensions (millimetres)

| Tol. | Dimensions (millimetres) | | | | | | |
|------|--------------------------|----|-----|-----|-----|---|-----|
| | a | b | c | d | e | f | g |
| Max. | 39 | 32 | 6.6 | 6.5 | 9.9 | 7 | 2.9 |
| Min. | — | — | — | — | — | — | 2.6 |

| Tol. | h | k | m | w | x | y | z |
|------|-----|------|------|-------|-------|------|------|
| Max. | 0.9 | 1.27 | — | 15.25 | 12.71 | 7.63 | 1.55 |
| Min. | 0.6 | — | 1.72 | 15.23 | 12.69 | 7.61 | 1.50 |

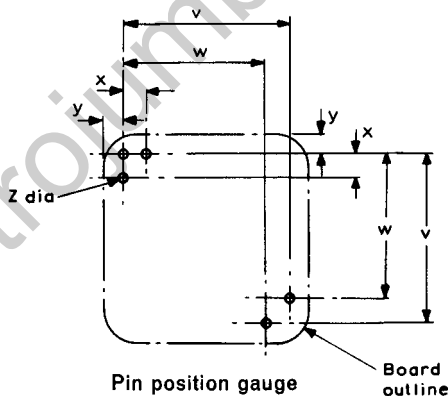
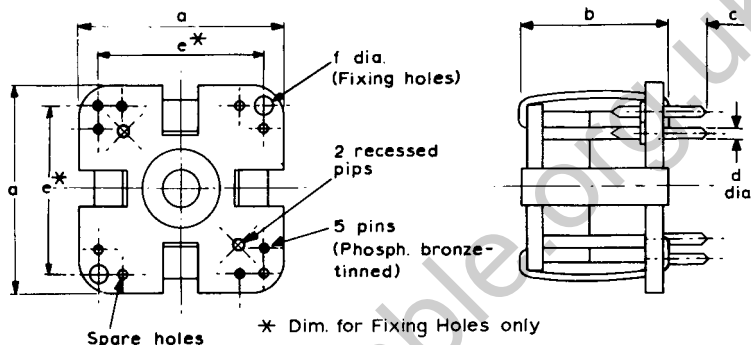
CLIP AND BOARD ASSEMBLY

This is an inexpensive assembly, obtainable in two parts as follows:

(1) 4 clips (one with earth. tag) and 1 clamping ring: Type No. DT2419.

(2) Tag board with 5 pins: Type No. DT2379.

Additional pins obtainable as Type No. DT2207 (see Introductory Notes for details).

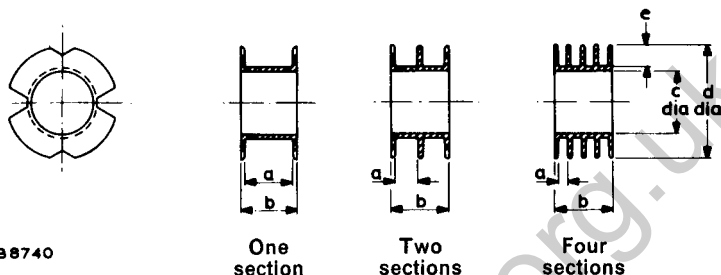


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| Tol. | Dimensions (millimetres) | | | | | | | | | | |
|------|--------------------------|------|---|-----|------|------|--------|--------|-------|-----|------|
| | a | b | c | d | e | f | v | w | x | y | z |
| Max. | 40.15 | 27.1 | — | 1.1 | 33.3 | — | 33.033 | 27.953 | 5.093 | 3.9 | 1.25 |
| Min. | — | — | 3 | — | 32.7 | 2.85 | 33.007 | 27.927 | 5.067 | — | 1.20 |

COIL FORMERS AND ACCESSORIES

Single and multi-section coil formers are available for 35mm Vinkors.



| Sections | Type No. | Tol. | Dimensions (millimetres) | | | | | Material |
|----------|----------|------|--------------------------|-------|-------|-------|------|--|
| | | | a | b | c | d | e | |
| One | DT2180 | Max. | — | 14.58 | — | 28.68 | — | Delrin (max. working temp. 140°C) |
| | | Min. | 13.02 | — | 16.62 | — | 5.07 | |
| Two | DT2285 | Max. | — | 14.58 | — | 28.68 | — | Propathene (max. working temp. 130°C) |
| | | Min. | 5.51 | — | 16.62 | — | 4.36 | |
| Four | DT2295 | Max. | — | 14.58 | — | 28.68 | — | |
| | | Min. | 2.14 | — | 16.62 | — | 4.36 | |

WINDING DATA

Winding data for single-section coil formers are shown on LA2100 Series pages 7 to 11.

Winding data for two-section coil formers may be obtained by multiplying the single-section figures by 0.73.

Winding data for four-section coil formers may be obtained by multiplying the single-section figures by 0.58.

Aligning plug: Type No. DT2162
should be used for the correct assembly of 35mm Vinkors.
(See Introductory Notes for details.)

Non-magnetic screwdriver: Type No. DT2047
should be used for precise setting of the adjuster.
(See Introductory Notes for details.)

WINDING DATA FOR FULLY WOUND 35mm DELRIN COIL FORMER TYPE DT2180

Enamelled copper wire to B.S.1844 (fine covering) and B.S.3188 (fine covering) for 16 to 47 S.W.G.; and to B.S.156 (normal covering) for 48 to 50 S.W.G.

| S.W.G. | Copper diameter (in) | Copper diameter (cm) | d' (cm ²) | Nom. O.D. (mm) | Typical No. of turns (N _t) | Resistance of N _t (Ω) | Max. O.D. (mm) | Minimum No. of turns (N _m) | Resistance of N _m (Ω) |
|--------|----------------------|----------------------|-------------------------|----------------|--|----------------------------------|----------------|--|----------------------------------|
| 16 | 0.0640 | 0.163 | 6.98 × 10 ⁻⁴ | 1.680 | 22 | 0.0132 | 1.710 | 13 | 0.00774 |
| 17 | 0.0560 | 0.142 | 4.09 × 10 ⁻⁴ | 1.476 | 29 | 0.0223 | 1.500 | 23 | 0.0179 |
| 18 | 0.0480 | 0.122 | 2.21 × 10 ⁻⁴ | 1.270 | 39 | 0.0411 | 1.290 | 32 | 0.0339 |
| 19 | 0.0400 | 0.102 | 1.07 × 10 ⁻⁴ | 1.064 | 55 | 0.0838 | 1.080 | 45 | 0.0687 |
| 20 | 0.0360 | 0.0914 | 6.99 × 10 ⁻⁵ | 0.9601 | 68 | 0.125 | 0.980 | 55 | 0.103 |
| 21 | 0.0320 | 0.0813 | 4.36 × 10 ⁻⁵ | 0.8572 | 85 | 0.201 | 0.874 | 70 | 0.167 |
| 22 | 0.0280 | 0.0711 | 2.56 × 10 ⁻⁵ | 0.7531 | 111 | 0.345 | 0.770 | 90 | 0.280 |
| 23 | 0.0240 | 0.0610 | 1.38 × 10 ⁻⁵ | 0.6490 | 150 | 0.634 | 0.663 | 122 | 0.515 |
| 24 | 0.0220 | 0.0559 | 9.75 × 10 ⁻⁶ | 0.5969 | 176 | 0.889 | 0.610 | 144 | 0.724 |
| 25 | 0.0200 | 0.0508 | 6.66 × 10 ⁻⁶ | 0.5461 | 211 | 1.28 | 0.559 | 171 | 1.04 |
| 26 | 0.0180 | 0.0457 | 4.37 × 10 ⁻⁶ | 0.4928 | 262 | 1.97 | 0.505 | 212 | 1.60 |
| 27 | 0.0164 | 0.0417 | 3.01 × 10 ⁻⁶ | 0.4508 | 316 | 2.87 | 0.462 | 256 | 2.32 |
| 28 | 0.0148 | 0.0376 | 2.00 × 10 ⁻⁶ | 0.4077 | 391 | 4.35 | 0.417 | 318 | 3.54 |
| 29 | 0.0136 | 0.0345 | 1.42 × 10 ⁻⁶ | 0.3772 | 461 | 6.08 | 0.386 | 375 | 4.94 |
| 30 | 0.0124 | 0.0315 | 9.84 × 10 ⁻⁷ | 0.3442 | 557 | 8.83 | 0.353 | 451 | 7.15 |

| S.W.G. | Copper diameter (in) | Copper diameter (d) (cm) | d' (cm ²) | Nom. O.D. (mm) | Typical No. of turns (N _t) | Resistance of N _t (Ω) | Max. O.D. (mm) | Minimum No. of turns (N _m) | Resistance of N _m (Ω) |
|--------|----------------------|--------------------------|--------------------------|----------------|--|----------------------------------|----------------|--|----------------------------------|
| 31 | 0.0116 | 0.0295 | 7.54 × 10 ⁻⁷ | 0.3213 | 639 | 11.6 | 0.330 | 516 | 9.35 |
| 32 | 0.0108 | 0.0274 | 5.66 × 10 ⁻⁷ | 0.3010 | 728 | 15.2 | 0.310 | 585 | 12.2 |
| 33 | 0.0100 | 0.0254 | 4.16 × 10 ⁻⁷ | 0.2794 | 845 | 20.7 | 0.287 | 682 | 16.6 |
| 34 | 0.00920 | 0.0234 | 2.98 × 10 ⁻⁷ | 0.2565 | 1 000 | 28.9 | 0.264 | 806 | 23.2 |
| 35 | 0.00840 | 0.0213 | 2.07 × 10 ⁻⁷ | 0.2362 | 1 180 | 40.9 | 0.244 | 944 | 32.6 |
| 36 | 0.00760 | 0.0193 | 1.39 × 10 ⁻⁷ | 0.2146 | 1 430 | 60.5 | 0.221 | 1 150 | 48.6 |
| 37 | 0.00680 | 0.0173 | 8.90 × 10 ⁻⁸ | 0.1943 | 1 750 | 92.2 | 0.201 | 1 390 | 73.3 |
| 38 | 0.00600 | 0.0152 | 5.39 × 10 ⁻⁸ | 0.1689 | 2 280 | 154 | 0.175 | 1 800 | 122 |
| 39 | 0.00520 | 0.0132 | 3.04 × 10 ⁻⁸ | 0.1486 | 2 910 | 262 | 0.155 | 2 280 | 205 |
| 40 | 0.00480 | 0.0122 | 2.21 × 10 ⁻⁸ | 0.1359 | 3 440 | 364 | 0.142 | 2 680 | 284 |
| 41 | 0.00440 | 0.0112 | 1.56 × 10 ⁻⁸ | 0.1257 | 3 980 | 501 | 0.132 | 3 070 | 387 |
| 42 | 0.00400 | 0.0102 | 1.07 × 10 ⁻⁸ | 0.1143 | 4 810 | 733 | 0.119 | 3 780 | 576 |
| 43 | 0.00360 | 0.00914 | 6.99 × 10 ⁻⁹ | 0.1016 | 6 020 | 1 130 | 0.107 | 4 620 | 869 |
| 44 | 0.00320 | 0.00813 | 4.36 × 10 ⁻⁹ | 0.09160 | 7 330 | 1 750 | 0.0965 | 5 610 | 1 340 |
| 45 | 0.00280 | 0.00711 | 2.56 × 10 ⁻⁹ | 0.08010 | 9 460 | 2 940 | 0.0840 | 7 330 | 2 280 |
| 46 | 0.00240 | 0.00610 | 1.38 × 10 ⁻⁹ | 0.06950 | 12 400 | 5 270 | 0.0737 | 9 410 | 3 980 |
| 47 | 0.00200 | 0.00508 | 6.66 × 10 ⁻¹⁰ | 0.05740 | 18 100 | 11 000 | 0.0610 | 13 700 | 8 330 |
| 48 | 0.00160 | 0.00406 | 2.73 × 10 ⁻¹⁰ | 0.04690 | 27 200 | 25 900 | 0.0508 | 19 700 | 18 800 |
| 49 | 0.00120 | 0.00304 | 8.63 × 10 ⁻¹¹ | 0.03630 | 45 300 | 76 700 | 0.0406 | 30 800 | 52 200 |
| 50 | 0.00100 | 0.00254 | 4.16 × 10 ⁻¹¹ | 0.03100 | 62 200 | 152 000 | 0.0356 | 40 100 | 97 800 |



SILK COVERED BUNCHED ENAMELLED COPPER CONDUCTORS WITH STRANDS TO B.S.156
(NORMAL COVERING)
48 S.W.G. RANGE

| No. of strands (n) | nd ⁴ (cm ⁴) | Nom. O.D. (mm) | Typical No. of turns (N _t) | Resistance of N _t (Ω) | Max. O.D. (mm) | Minimum No. of turns (N _m) | Resistance of N _m (Ω) |
|--------------------|------------------------------------|----------------|--|----------------------------------|----------------|--|----------------------------------|
| 350 | 9.56 × 10 ⁻⁸ | 1.15 | 47 | 0.128 | 1.29 | 32 | 0.0873 |
| 315 | 8.60 × 10 ⁻⁸ | 1.09 | 53 | 0.159 | 1.23 | 35 | 0.106 |
| 280 | 7.64 × 10 ⁻⁸ | 1.04 | 58 | 0.198 | 1.17 | 39 | 0.133 |
| 252 | 6.88 × 10 ⁻⁸ | 0.991 | 64 | 0.242 | 1.12 | 42 | 0.160 |
| 200 | 5.46 × 10 ⁻⁸ | 0.884 | 80 | 0.381 | 0.996 | 54 | 0.258 |
| 180 | 4.91 × 10 ⁻⁸ | 0.837 | 90 | 0.474 | 0.945 | 60 | 0.318 |
| 160 | 4.37 × 10 ⁻⁸ | 0.795 | 99 | 0.590 | 0.897 | 66 | 0.388 |
| 140 | 3.82 × 10 ⁻⁸ | 0.743 | 114 | 0.775 | 0.838 | 76 | 0.518 |
| 120 | 3.28 × 10 ⁻⁸ | 0.691 | 132 | 1.04 | 0.782 | 87 | 0.691 |
| 100 | 2.73 × 10 ⁻⁸ | 0.642 | 152 | 1.45 | 0.726 | 101 | 0.967 |
| 81 | 2.21 × 10 ⁻⁸ | 0.579 | 187 | 2.20 | 0.655 | 125 | 1.47 |
| 70 | 1.91 × 10 ⁻⁸ | 0.541 | 215 | 2.92 | 0.612 | 143 | 1.94 |
| 63 | 1.72 × 10 ⁻⁸ | 0.518 | 234 | 3.54 | 0.587 | 155 | 2.35 |
| 50 | 1.37 × 10 ⁻⁸ | 0.467 | 291 | 5.55 | 0.528 | 194 | 3.70 |
| 37 | 1.01 × 10 ⁻⁸ | 0.380 | 450 | 11.6 | 0.434 | 293 | 7.56 |
| 30 | 8.19 × 10 ⁻⁹ | 0.340 | 568 | 18.0 | 0.373 | 401 | 12.7 |
| 24 | 6.55 × 10 ⁻⁹ | 0.315 | 665 | 26.4 | 0.361 | 431 | 17.1 |
| 19 | 5.18 × 10 ⁻⁹ | 0.279 | 848 | 42.5 | 0.323 | 538 | 27.0 |
| 15 | 4.10 × 10 ⁻⁹ | 0.253 | 1 030 | 65.5 | 0.279 | 722 | 45.8 |
| 10 | 2.73 × 10 ⁻⁹ | 0.229 | 1 260 | 120 | 0.267 | 788 | 75.1 |
| 9 | 2.46 × 10 ⁻⁹ | 0.211 | 1 480 | 157 | 0.246 | 928 | 98.3 |
| 7 | 1.91 × 10 ⁻⁹ | 0.181 | 2 010 | 274 | 0.213 | 1 240 | 169 |
| 5 | 1.37 × 10 ⁻⁹ | 0.167 | 2 950 | 449 | 0.198 | 1 420 | 271 |
| 4 | 1.09 × 10 ⁻⁹ | 0.158 | 2 900 | 620 | 0.187 | 1 580 | 376 |
| 3 | 8.19 × 10 ⁻¹⁰ | 0.143 | 3 140 | 998 | 0.170 | 1 890 | 601 |

45 S.W.G. RANGE

| No. of strands (n) | nd' (cm ²) | Nom. O.D. (mm) | Typical No. of turns (N _t) | Resistance of N _t (Ω) | Max. O.D. (mm) | Minimum No. of turns (N _m) | Resistance of N _m (Ω) |
|--------------------|-------------------------|----------------|--|----------------------------------|----------------|--|----------------------------------|
| 350 | 8.95 × 10 ⁻⁷ | 1.91 | 14 | 0.0124 | 2.08 | 11 | 0.00978 |
| 315 | 8.05 × 10 ⁻⁷ | 1.83 | 14 | 0.0138 | 1.99 | 11 | 0.0109 |
| 280 | 7.16 × 10 ⁻⁷ | 1.73 | 21 | 0.0233 | 1.88 | 11 | 0.0122 |
| 252 | 6.45 × 10 ⁻⁷ | 1.65 | 23 | 0.0284 | 1.79 | 13 | 0.0160 |
| 200 | 5.12 × 10 ⁻⁷ | 1.47 | 29 | 0.0451 | 1.59 | 21 | 0.0328 |
| 180 | 4.60 × 10 ⁻⁷ | 1.39 | 32 | 0.0553 | 1.51 | 23 | 0.0395 |
| 160 | 4.09 × 10 ⁻⁷ | 1.31 | 36 | 0.0710 | 1.43 | 26 | 0.0506 |
| 140 | 3.58 × 10 ⁻⁷ | 1.23 | 41 | 0.0912 | 1.33 | 30 | 0.0668 |
| 120 | 3.07 × 10 ⁻⁷ | 1.14 | 48 | 0.124 | 1.24 | 35 | 0.0905 |
| 100 | 2.56 × 10 ⁻⁷ | 1.05 | 57 | 0.177 | 1.15 | 40 | 0.125 |
| 81 | 2.07 × 10 ⁻⁷ | 0.932 | 72 | 0.277 | 1.00 | 53 | 0.203 |
| 70 | 1.79 × 10 ⁻⁷ | 0.881 | 81 | 0.360 | 0.961 | 58 | 0.258 |
| 63 | 1.61 × 10 ⁻⁷ | 0.841 | 89 | 0.438 | 0.919 | 63 | 0.312 |
| 50 | 1.28 × 10 ⁻⁷ | 0.753 | 111 | 0.690 | 0.822 | 79 | 0.492 |
| 37 | 9.46 × 10 ⁻⁸ | 0.623 | 162 | 1.36 | 0.684 | 114 | 0.961 |
| 30 | 7.68 × 10 ⁻⁸ | 0.568 | 195 | 2.02 | 0.610 | 144 | 1.49 |
| 24 | 6.13 × 10 ⁻⁸ | 0.511 | 241 | 3.12 | 0.562 | 169 | 2.19 |
| 19 | 4.86 × 10 ⁻⁸ | 0.451 | 312 | 5.11 | 0.499 | 217 | 3.55 |
| 15 | 3.84 × 10 ⁻⁸ | 0.407 | 388 | 8.04 | 0.457 | 262 | 5.43 |
| 10 | 2.56 × 10 ⁻⁸ | 0.364 | 490 | 15.2 | 0.394 | 356 | 11.1 |
| 9 | 2.30 × 10 ⁻⁸ | 0.333 | 592 | 20.5 | 0.361 | 429 | 14.8 |
| 7 | 1.79 × 10 ⁻⁸ | 0.283 | 824 | 36.6 | 0.307 | 596 | 26.5 |
| 5 | 1.28 × 10 ⁻⁸ | 0.258 | 991 | 61.7 | 0.294 | 650 | 40.4 |
| 4 | 1.02 × 10 ⁻⁸ | 0.242 | 1 130 | 87.6 | 0.275 | 743 | 57.8 |
| 3 | 7.67 × 10 ⁻⁹ | 0.217 | 1 400 | 145 | 0.248 | 913 | 94.7 |

N.B. Bunched conductors with < 50 strands have single silk covering
 Bunched conductors with ≥ 50 strands have double silk covering



SILK COVERED BUNCHED ENAMELLED COPPER CONDUCTORS WITH STRANDS TO B.S.156
 (NORMAL COVERING)
 50 S.W.G. RANGE

| No. of strands (n) | nd' (cm ²) | Nom. O.D. (mm) | Typical No. of turns (N _t) | Resistance of N _t (Ω) | Max. O.D. (mm) | Minimum No. of turns (N _m) | Resistance of N _m (Ω) |
|--------------------|-------------------------|----------------|--|----------------------------------|----------------|--|----------------------------------|
| 460 | 1.91 × 10 ⁻⁸ | 0.8816 | 81 | 0.430 | 1.02 | 52 | 0.276 |
| 420 | 1.75 × 10 ⁻⁸ | 0.8444 | 88 | 0.511 | 0.972 | 56 | 0.324 |
| 380 | 1.58 × 10 ⁻⁸ | 0.8073 | 96 | 0.616 | 0.930 | 62 | 0.398 |
| 350 | 1.46 × 10 ⁻⁸ | 0.7763 | 104 | 0.727 | 0.894 | 67 | 0.467 |
| 315 | 1.31 × 10 ⁻⁸ | 0.7391 | 115 | 0.891 | 0.851 | 73 | 0.565 |
| 280 | 1.17 × 10 ⁻⁸ | 0.7050 | 126 | 1.10 | 0.812 | 81 | 0.706 |
| 252 | 1.05 × 10 ⁻⁸ | 0.6740 | 138 | 1.34 | 0.777 | 88 | 0.852 |
| 200 | 8.32 × 10 ⁻⁹ | 0.6058 | 171 | 2.09 | 0.699 | 110 | 1.34 |
| 180 | 7.49 × 10 ⁻⁹ | 0.5717 | 192 | 2.61 | 0.659 | 123 | 1.67 |
| 160 | 6.66 × 10 ⁻⁹ | 0.5438 | 213 | 3.24 | 0.627 | 136 | 2.07 |
| 140 | 5.82 × 10 ⁻⁹ | 0.5129 | 239 | 4.16 | 0.592 | 153 | 2.66 |
| 130 | 5.41 × 10 ⁻⁹ | 0.4974 | 254 | 4.77 | 0.574 | 162 | 3.05 |
| 120 | 4.99 × 10 ⁻⁹ | 0.4772 | 279 | 5.67 | 0.551 | 176 | 3.58 |
| 100 | 4.16 × 10 ⁻⁹ | 0.4416 | 326 | 7.95 | 0.500 | 216 | 5.27 |
| 81 | 3.37 × 10 ⁻⁹ | 0.4044 | 393 | 11.8 | 0.467 | 250 | 7.53 |
| 70 | 2.91 × 10 ⁻⁹ | 0.3796 | 451 | 15.7 | 0.439 | 287 | 9.99 |
| 63 | 2.62 × 10 ⁻⁹ | 0.3610 | 498 | 19.3 | 0.418 | 317 | 12.3 |
| 50 | 2.08 × 10 ⁻⁹ | 0.3285 | 608 | 29.7 | 0.380 | 386 | 18.8 |
| 40 | 1.66 × 10 ⁻⁹ | 0.3006 | 730 | 44.5 | 0.348 | 463 | 28.3 |

N.B. Bunched conductors with < 50 strands have single silk covering
 Bunched conductors with ≥ 50 strands have double silk covering



21mm VINKOR

ADJUSTABLE POT CORES FOR HIGH QUALITY INDUCTORS

(to B.S. 4061—Range I.—Ref. 6)

LA2400

Series

TYPE NUMBER TABLES FOR 21mm VINKORS AND ACCESSORIES

To avoid unnecessary delays in deliveries, it is important that cores, mountings and accessories are ordered against the correct type numbers. These are shown in the following data sheets and prefixed LA or DT.

CORES (For details see individual Vinkor data sheets)

| Material | Effective permeability | Type numbers | | | Material | Effective permeability | Type numbers | | |
|----------|------------------------|---|--------------------------------|------------------|----------|------------------------|---|--------------------------------|------------------|
| | | Pair of matched pot cores with adjuster | Pair of matched pot cores only | Adjuster only | | | Pair of matched pot cores with adjuster | Pair of matched pot cores only | Adjuster only |
| A10 | 63 | LA2406 | LA1164 | LA1339 (Red) | A13 | 160 | LA2434 | LA1223 | LA1274 (Natural) |
| A10 | 40 | LA2407 | LA1165 | LA1339 (Red) | A13 | 100 | LA2436 | LA1224 | LA1274 (Natural) |
| A10 | 25 | LA2408 | LA1166 | LA1339 (Red) | A13 | 63 | LA2438 | LA1415 | LA1339 (Red) |
| A13 | 250 | LA2432 | LA1222 | LA1274 (Natural) | | | | | |

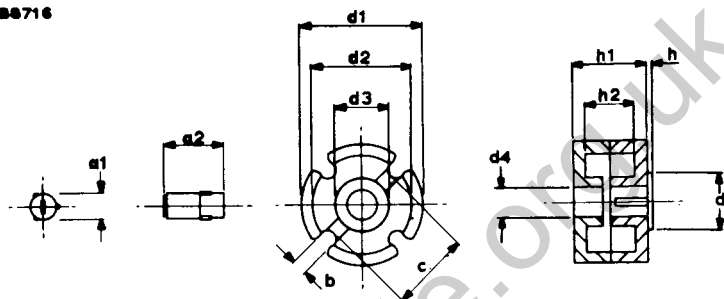
ACCESSORIES

| Item | | For details see: | Type No. |
|--|---------------------------|----------------------------------|----------|
| Cylindrical casing with leaf type tag board | Kit of parts incl. board | LA2400 Series page 3 | DT2148 |
| | Tag board only | | DT2043 |
| Cylindrical casing with printed circuit type tag board | Kit of parts incl. board | LA2400 Series page 4 | DT2184 |
| | Tag board only | | DT2112 |
| Clip and board assembly | 4 clips and 1 clamp. ring | LA2400 Series page 5 | DT2404 |
| | Tag board | | DT2364 |
| | Additional pins | | DT2207 |
| Coil formers | 1-section (Delrin) | LA2400 Series page 6 | DT2204 |
| | 2-section (Propathene) | | DT2282 |
| | 3-section (Propathene) | | DT2297 |
| Aligning plug | | Introductory notes pages 21 & 22 | DT2159 |
| Non-magnetic screwdriver | | | DT2047 |

CORE AND ADJUSTER DIMENSIONS

For electrical and magnetic design data see page 1 and 2 of the data sheets for the appropriate Vinkor. For type numbers see LA2400 Series, page 1 and the individual data sheets for the appropriate Vinkor.

86716



View with right hand
core removed.

| Tol. | Dimensions (millimetres) | | | | | | | | | | | |
|------|--------------------------|----------------|-----|-------|-----|----------------|----------------|----------------|----------------|-----|----------------|----------------|
| | a ₁ | a ₂ | b | c | d | d ₁ | d ₂ | d ₃ | d ₄ | h | h ₁ | h ₂ |
| Max. | 4.65 | 8.65 | 3.0 | 16.07 | 8.3 | 21.95 | 18.47 | 9.87 | 4.65 | 0.6 | 13.7 | 9.0 |
| Min. | — | — | 2.4 | 14.69 | — | 21.05 | 17.69 | 9.41 | 4.60 | — | 13.5 | 8.6 |

EFFECTIVE PARAMETERS

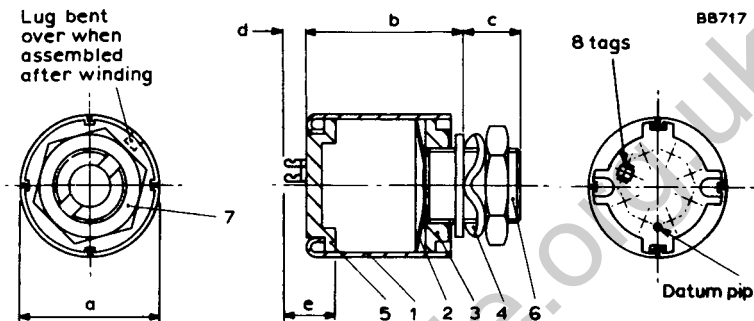
For calculating the magnetic properties of a pair of cores, the following parameters should be used:

| Parameter | Symbol | mm units | cm units |
|---------------------------------|--------|-----------------------|-----------------------|
| Effective magnetic path length | l_e | 30.7 mm | 3.07 cm |
| Effective area of magnetic path | A_e | 72.3 mm ² | 0.723cm ² |
| Effective volume | V_e | 2220 mm ³ | 2.22cm ³ |
| $\sum \frac{l}{A}$ | C_1 | 0.425mm ⁻¹ | 4.25 cm ⁻¹ |



CYLINDRICAL CASING WITH LEAF TYPE TAG BOARD

Complete kit of mounting parts: Type No. DT 2148.
(Tag board obtainable separately as Type No. DT2043.)



| Tol. | Dimensions (millimetres) | | | | |
|------|--------------------------|----|-----|---|-----|
| | a | b | c | d | e |
| Max. | 24 | 21 | 6.6 | 4 | 6.2 |

THE CASING COMPRISES THE FOLLOWING PARTS

| Item No. | Part description | Material | Finish | Remarks |
|----------|--------------------|------------------|---------|--|
| 1 | Container | Brass | Nickel | |
| 2 | Spring | Spring steel | Cadmium | |
| 3 | Locking plate | Brass | Nickel | |
| 4 | Crinkle washer | Beryllium copper | Cadmium | |
| 5 | Tag board assembly | Board | Alkyd | Natural |
| | | Tags | Brass | Tinned |
| 6 | Fixing bush | Brass | Nickel | $\frac{1}{4}$ " \times 32 t.p.i. Whit. form thread to B.S. 84 (medium fit) to take panel 1.5mm max. thick. |
| 7 | Locknut | Brass | Nickel | 12.7mm max. a/f, 2.6mm max. thick. |

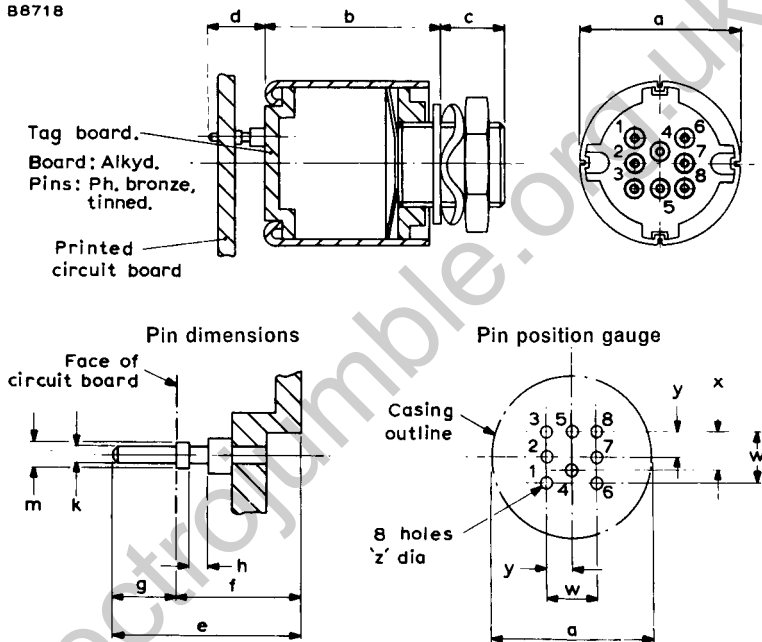
CYLINDRICAL CASING WITH TAG BOARD FOR PRINTED CIRCUIT APPLICATIONS

Complete kit of mounting parts: Type No. DT2184.

(Tag board obtainable separately as Type No. DT2112.)

This arrangement is identical with the one shown on the previous page with the exception of the tag board, which is detailed below.

B8718



| Tol. | Dimensions (millimetres) | | | | | | |
|------|--------------------------|----|-----|-----|-----|---|-----|
| | a | b | c | d | e | f | g |
| Max. | 24 | 21 | 6.6 | 6.5 | 9.9 | 7 | 2.9 |
| Min. | — | — | — | — | — | — | 2.6 |

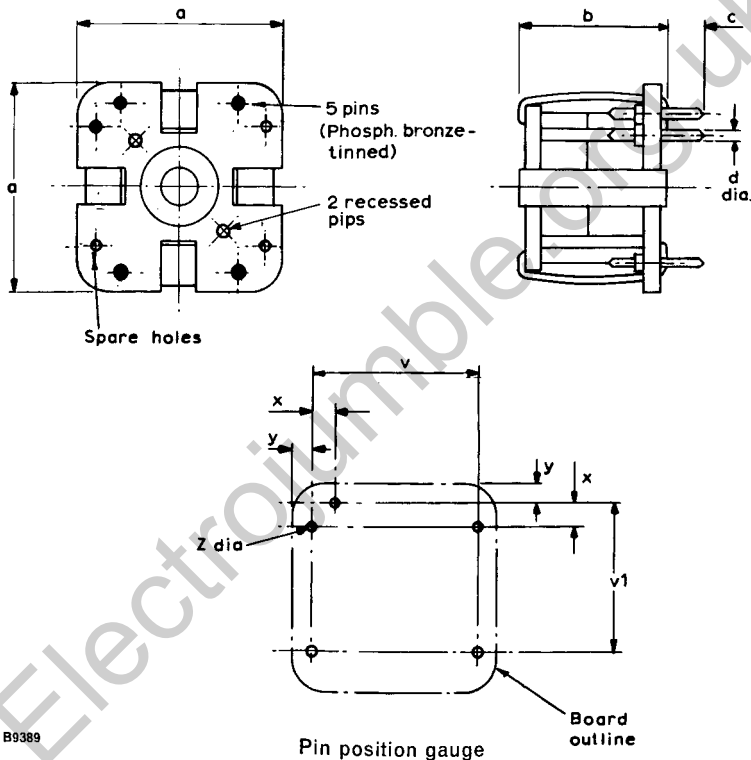
| Tol. | h | k | m | w | x | y | z |
|------|-----|------|------|-------|------|------|------|
| Max. | 0.9 | 1.27 | — | 10.17 | 7.63 | 5.09 | 1.55 |
| Min. | 0.6 | — | 1.72 | 10.15 | 7.61 | 5.07 | 1.50 |

CLIP AND BOARD ASSEMBLY

This is an inexpensive assembly, obtainable in two parts as follows:

- (1) 4 clips (one with earth. tag) and 1 clamping ring: Type No. DT2404.
- (2) Tag board with 5 pins: Type No. DT2364.

Additional pins obtainable as Type No. DT2207 (see Introductory Notes for details.)

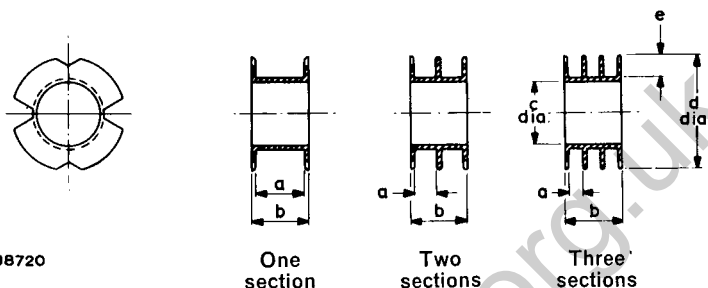


B9389

| Tol. | Dimensions (millimetres) | | | | | | | | |
|------|--------------------------|------|---|-----|--------|--------|-------|-----|------|
| | a | b | c | d | v | v_1 | x | y | z |
| Max. | 24.65 | 17.4 | — | 1.1 | 20.333 | 17.793 | 2.553 | 2.5 | 1.25 |
| Min. | — | — | 3 | — | 20.307 | 17.767 | 2.527 | — | 1.20 |

COIL FORMERS AND ACCESSORIES

Single and multi-section coil formers are available for 21mm Vinkors.



B8720

| Sections | Type No. | Tol. | Dimensions (millimetres) | | | | | Material |
|----------|----------|------|--------------------------|-----|------|-------|------|--|
| | | | a | b | c | d | e | |
| One | DT2204 | Max. | — | 8.6 | — | 17.68 | — | Delrin (max. working temp. 140°C) |
| | | Min. | 7.6 | — | 9.88 | — | 3.25 | |
| Two | DT2282 | Max. | — | 8.6 | — | 17.68 | — | Propathene (max. working temp. 130°C) |
| | | Min. | 3.07 | — | 9.88 | — | 2.7 | |
| Three | DT2297 | Max. | — | 8.6 | — | 17.68 | — | |
| | | Min. | 1.69 | — | 9.88 | — | 2.7 | |

WINDING DATA:

Winding data for single-section coil formers are shown on LA2400 Series pages 7 to 11.

Winding data for two-section coil formers may be obtained by multiplying the single section figures by 0.69.

Winding data for three-section coil formers may be obtained by multiplying the single-section figures by 0.6.

Aligning plug: Type No. DT2159
should be used for the correct assembly of 21mm Vinkor.
(See Introductory Notes for details.)

Non-magnetic screwdriver: Type No. DT2047
should be used for precise setting of the adjuster.
(See Introductory Notes for details.)

21mm VINKOR

ADJUSTABLE POT CORES

LA2400

Series

WINDING DATA FOR FULLY WOUND 21mm DELRIN COIL FORMER TYPE DT2204

Enamelled copper wire to B.S.1844 (fine covering) and B.S.3188 (fine covering) for 16 to 47 S.W.G.; and to B.S.156 (normal covering) for 48 to 50 S.W.G.

| S.W.G. | Copper diameter (in) | Copper diameter (d) (cm) | d' (cm ²) | Nom. O.D. (mm) | Typical No. of turns (N _t) | Resistance of N _t (Ω) | Max. O.D. (mm) | Minimum No. of turns (N _m) | Resistance of N _m (Ω) |
|--------|----------------------|--------------------------|-------------------------|----------------|--|----------------------------------|----------------|--|----------------------------------|
| 16 | 0.0640 | 0.163 | 6.98 × 10 ⁻⁴ | 1.680 | 8 | 0.00286 | 1.71 | 4 | 0.00145 |
| 17 | 0.0560 | 0.142 | 4.09 × 10 ⁻⁴ | 1.476 | 10 | 0.00472 | 1.50 | 9 | 0.00425 |
| 18 | 0.0480 | 0.122 | 2.21 × 10 ⁻⁴ | 1.270 | 12 | 0.00776 | 1.29 | 9 | 0.00579 |
| 19 | 0.0400 | 0.102 | 1.07 × 10 ⁻⁴ | 1.064 | 21 | 0.0194 | 1.08 | 17 | 0.0157 |
| 20 | 0.0360 | 0.0914 | 6.99 × 10 ⁻⁵ | 0.9601 | 26 | 0.0297 | 0.980 | 19 | 0.0217 |
| 21 | 0.0320 | 0.0813 | 4.36 × 10 ⁻⁵ | 0.8572 | 32 | 0.0463 | 0.874 | 26 | 0.0376 |
| 22 | 0.0280 | 0.0711 | 2.56 × 10 ⁻⁵ | 0.7531 | 42 | 0.0792 | 0.770 | 33 | 0.0626 |
| 23 | 0.0240 | 0.0610 | 1.38 × 10 ⁻⁵ | 0.6480 | 57 | 0.149 | 0.663 | 45 | 0.115 |
| 24 | 0.0220 | 0.0559 | 9.75 × 10 ⁻⁶ | 0.5969 | 67 | 0.205 | 0.610 | 54 | 0.166 |
| 25 | 0.0200 | 0.0508 | 6.66 × 10 ⁻⁶ | 0.5461 | 80 | 0.294 | 0.559 | 64 | 0.237 |
| 26 | 0.0180 | 0.0457 | 4.37 × 10 ⁻⁶ | 0.4928 | 99 | 0.453 | 0.505 | 79 | 0.362 |
| 27 | 0.0164 | 0.0417 | 3.01 × 10 ⁻⁶ | 0.4508 | 120 | 0.662 | 0.462 | 96 | 0.529 |
| 28 | 0.0148 | 0.0376 | 2.00 × 10 ⁻⁶ | 0.4077 | 148 | 1.00 | 0.417 | 119 | 0.805 |
| 29 | 0.0136 | 0.0345 | 1.42 × 10 ⁻⁶ | 0.3772 | 175 | 1.40 | 0.386 | 140 | 1.12 |
| 30 | 0.0124 | 0.0315 | 9.84 × 10 ⁻⁷ | 0.3442 | 212 | 2.04 | 0.353 | 169 | 1.63 |



| S. W. G. | Copper diameter (in) | Copper diameter (cm) | d^4 (cm ⁴) | Nom. O.D. (mm) | Typical No. of turns (N_t) | Resistance of N_t (Ω) | Max. O.D. (mm) | Minimum No. of turns (N_m) | Resistance of N_m (Ω) |
|----------|----------------------|----------------------|--------------------------|----------------|--------------------------------|----------------------------------|----------------|--------------------------------|----------------------------------|
| 31 | 0.0116 | 0.0295 | 7.54×10^{-7} | 0.3213 | 243 | 2.68 | 0.330 | 193 | 2.13 |
| 32 | 0.0108 | 0.0274 | 5.66×10^{-7} | 0.3010 | 277 | 3.52 | 0.310 | 219 | 3.78 |
| 33 | 0.0100 | 0.0254 | 4.16×10^{-7} | 0.2794 | 321 | 4.76 | 0.287 | 255 | 3.78 |
| 34 | 0.00920 | 0.0234 | 2.98×10^{-7} | 0.2565 | 381 | 6.67 | 0.264 | 302 | 5.28 |
| 35 | 0.00840 | 0.0213 | 2.07×10^{-7} | 0.2362 | 449 | 9.44 | 0.244 | 353 | 7.42 |
| 36 | 0.00760 | 0.0193 | 1.39×10^{-7} | 0.2146 | 544 | 14.0 | 0.221 | 430 | 11.0 |
| 37 | 0.00680 | 0.0173 | 8.90×10^{-8} | 0.1943 | 644 | 21.3 | 0.201 | 520 | 16.7 |
| 38 | 0.00600 | 0.0152 | 5.39×10^{-8} | 0.1689 | 865 | 35.6 | 0.175 | 675 | 27.8 |
| 39 | 0.00520 | 0.0132 | 3.04×10^{-8} | 0.1486 | 1 110 | 60.6 | 0.155 | 851 | 46.7 |
| 40 | 0.00480 | 0.0122 | 2.21×10^{-8} | 0.1359 | 1 310 | 84.1 | 0.142 | 1 000 | 64.6 |
| 41 | 0.00440 | 0.0112 | 1.56×10^{-8} | 0.1257 | 1 510 | 116 | 0.132 | 1 150 | 87.9 |
| 42 | 0.00400 | 0.0102 | 1.07×10^{-8} | 0.1143 | 1 830 | 169 | 0.119 | 1 410 | 131 |
| 43 | 0.00360 | 0.00914 | 6.99×10^{-9} | 0.1016 | 2 290 | 262 | 0.107 | 1 730 | 198 |
| 44 | 0.00320 | 0.00813 | 4.36×10^{-9} | 0.09160 | 2 780 | 403 | 0.0965 | 2 100 | 304 |
| 45 | 0.00280 | 0.00711 | 2.56×10^{-9} | 0.08010 | 3 590 | 680 | 0.0840 | 2 740 | 518 |
| 46 | 0.00240 | 0.00610 | 1.36×10^{-9} | 0.06950 | 4 730 | 1 220 | 0.0737 | 3 520 | 906 |
| 47 | 0.00200 | 0.00508 | 6.66×10^{-10} | 0.05740 | 6 880 | 2 550 | 0.0610 | 5 110 | 1 890 |
| 48 | 0.00160 | 0.00406 | 2.73×10^{-10} | 0.04690 | 10 300 | 5 980 | 0.0508 | 7 370 | 4 270 |
| 49 | 0.00120 | 0.00304 | 8.63×10^{-11} | 0.03630 | 17 200 | 17 700 | 0.0406 | 11 500 | 11 900 |
| 50 | 0.00100 | 0.00254 | 4.16×10^{-11} | 0.03100 | 23 600 | 35 000 | 0.0356 | 15 000 | 22 200 |



SILK COVERED BUNCHED ENAMELLED COPPER CONDUCTORS WITH STRANDS TO B.S.156
(NORMAL COVERING)
48 S.W.G. RANGE

| No. of strands (n) | nd ² (cm ²) | Nom. O.D. (mm) | Typical No. of turns (N _t) | Resistance of N _t (Ω) | Max. O.D. (mm) | Minimum No. of turns (N _m) | Resistance of N _m (Ω) |
|--------------------|------------------------------------|----------------|--|----------------------------------|----------------|--|----------------------------------|
| 350 | 9.56 × 10 ⁻⁸ | 1.15 | 18 | 0.0297 | 1.29 | 9 | 0.0149 |
| 315 | 8.60 × 10 ⁻⁸ | 1.09 | 20 | 0.0368 | 1.23 | 11 | 0.0202 |
| 280 | 7.64 × 10 ⁻⁸ | 1.04 | 22 | 0.0455 | 1.17 | 11 | 0.0228 |
| 252 | 6.88 × 10 ⁻⁸ | 0.991 | 24 | 0.0553 | 1.12 | 11 | 0.0253 |
| 200 | 5.46 × 10 ⁻⁸ | 0.884 | 30 | 0.0868 | 0.996 | 19 | 0.0550 |
| 180 | 4.91 × 10 ⁻⁸ | 0.837 | 34 | 0.110 | 0.945 | 22 | 0.0709 |
| 160 | 4.37 × 10 ⁻⁸ | 0.795 | 37 | 0.134 | 0.897 | 25 | 0.0904 |
| 140 | 3.82 × 10 ⁻⁸ | 0.743 | 43 | 0.178 | 0.838 | 28 | 0.116 |
| 120 | 3.28 × 10 ⁻⁸ | 0.691 | 50 | 0.241 | 0.782 | 32 | 0.155 |
| 100 | 2.73 × 10 ⁻⁸ | 0.642 | 58 | 0.335 | 0.726 | 38 | 0.220 |
| 81 | 2.21 × 10 ⁻⁸ | 0.579 | 71 | 0.508 | 0.655 | 46 | 0.329 |
| 70 | 1.91 × 10 ⁻⁸ | 0.541 | 81 | 0.670 | 0.612 | 53 | 0.439 |
| 63 | 1.72 × 10 ⁻⁸ | 0.518 | 89 | 0.818 | 0.587 | 58 | 0.534 |
| 50 | 1.37 × 10 ⁻⁸ | 0.467 | 111 | 1.28 | 0.528 | 72 | 0.832 |
| 37 | 1.01 × 10 ⁻⁸ | 0.380 | 171 | 2.67 | 0.434 | 110 | 1.72 |
| 30 | 8.19 × 10 ⁻⁹ | 0.340 | 216 | 4.16 | 0.373 | 150 | 2.90 |
| 24 | 6.55 × 10 ⁻⁹ | 0.315 | 253 | 6.10 | 0.361 | 161 | 3.89 |
| 19 | 5.18 × 10 ⁻⁹ | 0.279 | 322 | 9.82 | 0.323 | 201 | 6.14 |
| 15 | 4.10 × 10 ⁻⁹ | 0.253 | 392 | 15.1 | 0.279 | 270 | 10.4 |
| 10 | 2.73 × 10 ⁻⁹ | 0.229 | 478 | 27.7 | 0.267 | 295 | 17.1 |
| 9 | 2.46 × 10 ⁻⁹ | 0.211 | 563 | 36.2 | 0.246 | 347 | 22.3 |
| 7 | 1.91 × 10 ⁻⁹ | 0.181 | 765 | 63.3 | 0.213 | 463 | 38.3 |
| 5 | 1.37 × 10 ⁻⁹ | 0.167 | 894 | 104 | 0.198 | 533 | 61.7 |
| 4 | 1.09 × 10 ⁻⁹ | 0.158 | 988 | 143 | 0.187 | 591 | 85.6 |
| 3 | 8.19 × 10 ⁻¹⁰ | 0.143 | 1190 | 230 | 0.170 | 708 | 137 |



45 S.W.G. RANGE

| No. of strands (n) | nd ¹ (cm ²) | Nom. O.D. (mm) | Typical No. of turns (N _t) | Resistance of N _t (Ω) | Max. O.D. (mm) | Minimum No. of turns (N _m) | Resistance of N _m (Ω) |
|--------------------|------------------------------------|----------------|--|----------------------------------|----------------|--|----------------------------------|
| 350 | 8.85 × 10 ⁻⁷ | 1.91 | 4 | 0.00216 | 2.08 | 3 | 0.00162 |
| 315 | 8.05 × 10 ⁻⁷ | 1.83 | 4 | 0.00240 | 1.99 | 3 | 0.00180 |
| 280 | 7.16 × 10 ⁻⁷ | 1.73 | 8 | 0.00540 | 1.88 | 4 | 0.00270 |
| 252 | 6.45 × 10 ⁻⁷ | 1.65 | 9 | 0.00660 | 1.79 | 4 | 0.00300 |
| 200 | 5.12 × 10 ⁻⁷ | 1.47 | 10 | 0.00945 | 1.59 | 7 | 0.00662 |
| 180 | 4.60 × 10 ⁻⁷ | 1.39 | 10 | 0.0105 | 1.51 | 9 | 0.00945 |
| 160 | 4.09 × 10 ⁻⁷ | 1.31 | 12 | 0.0141 | 1.43 | 9 | 0.0106 |
| 140 | 3.58 × 10 ⁻⁷ | 1.23 | 12 | 0.0162 | 1.33 | 9 | 0.0122 |
| 120 | 3.07 × 10 ⁻⁷ | 1.14 | 18 | 0.0283 | 1.24 | 11 | 0.0173 |
| 100 | 2.56 × 10 ⁻⁷ | 1.05 | 22 | 0.0415 | 1.15 | 11 | 0.0208 |
| 81 | 2.07 × 10 ⁻⁷ | 0.932 | 28 | 0.0654 | 1.00 | 19 | 0.0444 |
| 70 | 1.79 × 10 ⁻⁷ | 0.881 | 31 | 0.0836 | 0.961 | 19 | 0.0513 |
| 63 | 1.61 × 10 ⁻⁷ | 0.841 | 34 | 0.102 | 0.919 | 23 | 0.0690 |
| 50 | 1.28 × 10 ⁻⁷ | 0.753 | 42 | 0.159 | 0.822 | 29 | 0.110 |
| 37 | 9.46 × 10 ⁻⁸ | 0.623 | 62 | 0.317 | 0.684 | 42 | 0.216 |
| 30 | 7.88 × 10 ⁻⁸ | 0.568 | 74 | 0.466 | 0.610 | 53 | 0.330 |
| 24 | 6.13 × 10 ⁻⁸ | 0.511 | 91 | 0.718 | 0.562 | 63 | 0.497 |
| 19 | 4.86 × 10 ⁻⁸ | 0.451 | 119 | 1.18 | 0.499 | 81 | 0.806 |
| 15 | 3.84 × 10 ⁻⁸ | 0.407 | 147 | 1.86 | 0.457 | 98 | 1.23 |
| 10 | 2.56 × 10 ⁻⁸ | 0.364 | 186 | 3.52 | 0.394 | 133 | 2.52 |
| 9 | 2.50 × 10 ⁻⁸ | 0.353 | 225 | 4.72 | 0.361 | 160 | 3.37 |
| 7 | 1.79 × 10 ⁻⁸ | 0.283 | 313 | 8.45 | 0.307 | 223 | 6.02 |
| 5 | 1.28 × 10 ⁻⁸ | 0.258 | 377 | 14.2 | 0.294 | 243 | 9.20 |
| 4 | 1.02 × 10 ⁻⁸ | 0.242 | 428 | 20.2 | 0.275 | 278 | 13.1 |
| 3 | 7.67 × 10 ⁻⁹ | 0.217 | 532 | 33.5 | 0.248 | 342 | 21.5 |

N.B. Bunched conductors with < 50 strands have single silk covering
Bunched conductors with ≥ 50 strands have double silk covering



SILK COVERED BUNCHED ENAMELLED COPPER CONDUCTORS WITH STRANDS TO B.S.156
(NORMAL COVERING)
50 S.W.G. RANGE

| No. of strands (n) | nd ¹ (cm ²) | Nom. O.D. (mm) | Typical No. of turns (N _t) | Resistance of N _t (Ω) | Max. O.D. (mm) | Minimum No. of turns (N _m) | Resistance of N _m (Ω) |
|--------------------|------------------------------------|----------------|--|----------------------------------|----------------|--|----------------------------------|
| 460 | 1.91 × 10 ⁻⁸ | 0.8816 | 30 | 0.0967 | 1.02 | 19 | 0.0614 |
| 420 | 1.75 × 10 ⁻⁸ | 0.8444 | 33 | 0.116 | 0.972 | 21 | 0.0740 |
| 380 | 1.58 × 10 ⁻⁸ | 0.8073 | 36 | 0.141 | 0.930 | 23 | 0.0895 |
| 350 | 1.46 × 10 ⁻⁸ | 0.7763 | 39 | 0.165 | 0.894 | 25 | 0.106 |
| 315 | 1.31 × 10 ⁻⁸ | 0.7391 | 43 | 0.203 | 0.851 | 27 | 0.127 |
| 280 | 1.17 × 10 ⁻⁸ | 0.7050 | 48 | 0.254 | 0.812 | 30 | 0.159 |
| 252 | 1.05 × 10 ⁻⁸ | 0.6740 | 52 | 0.306 | 0.777 | 33 | 0.194 |
| 200 | 8.32 × 10 ⁻⁹ | 0.6058 | 65 | 0.481 | 0.699 | 41 | 0.304 |
| 180 | 7.49 × 10 ⁻⁹ | 0.5717 | 73 | 0.601 | 0.659 | 46 | 0.379 |
| 160 | 6.66 × 10 ⁻⁹ | 0.5438 | 80 | 0.741 | 0.627 | 50 | 0.464 |
| 140 | 5.82 × 10 ⁻⁹ | 0.5129 | 90 | 0.953 | 0.592 | 57 | 0.604 |
| 130 | 5.41 × 10 ⁻⁹ | 0.4974 | 96 | 1.09 | 0.574 | 60 | 0.684 |
| 120 | 4.99 × 10 ⁻⁹ | 0.4772 | 106 | 1.31 | 0.551 | 66 | 0.815 |
| 100 | 4.16 × 10 ⁻⁹ | 0.4416 | 124 | 1.84 | 0.500 | 81 | 1.20 |
| 81 | 3.37 × 10 ⁻⁹ | 0.4044 | 149 | 2.73 | 0.467 | 93 | 1.70 |
| 70 | 2.91 × 10 ⁻⁹ | 0.3796 | 171 | 3.63 | 0.439 | 107 | 2.27 |
| 63 | 2.62 × 10 ⁻⁹ | 0.3610 | 189 | 4.45 | 0.418 | 119 | 2.79 |
| 50 | 2.08 × 10 ⁻⁹ | 0.3285 | 231 | 6.85 | 0.380 | 145 | 4.29 |
| 40 | 1.66 × 10 ⁻⁹ | 0.3006 | 277 | 10.3 | 0.348 | 173 | 6.43 |

N.B. Bunched conductors with < 50 strands have single silk covering
 Bunched conductors with ≥ 50 strands have double silk covering

