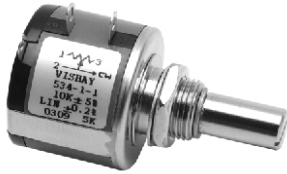


7/8" (22 mm) Multiturn Wirewound 533: 3 Turns/534: 10 Turns/535: 5 Turns



FEATURES

- Bushing and servo mount designs available
- Special resistance tolerances to 1 %
- Rear shaft extensions and support bearing
- Metric shaft available
- Dual gang configuration and concentric shafts
- High torque, center tap, slipping clutch on request
- Special markings and front shaft extensions



Note

- The color of this product may either be black (US market) or Blue (other regions)

| ELECTRICAL SPECIFICATIONS | | | |
|------------------------------------|---|-------------------|-------------------|
| PARAMETER | MODEL 533 | MODEL 534 | MODEL 535 |
| Resistance Range - Standard Values | 50 Ω to 20 kΩ | 100 Ω to 100 kΩ | 50 Ω to 50 kΩ |
| Capability Range | 5 Ω to 60 kΩ | 10 Ω to 200 kΩ | 5 Ω to 100 kΩ |
| Standard Tolerance | ± 5 % | ± 5 % | ± 5 % |
| Linearity (Independent) | ± 0.25 % | ± 0.20 % | ± 0.25 % |
| Noise | 100 Ω ENR | 100 Ω ENR | 100 Ω ENR |
| Rotation (Electrical & Mechanical) | 1080° +10° -0° | 3600° +10° -0° | 1800° +10° -0° |
| Power Rating (at 70 °C) | 1.0 W | 2.0 W | 1.5 W |
| Insulation Resistance | 1000 MΩ minimum 500 V _{DC} | | |
| Dielectric Strength | 1000 V _{RMS} minimum 60 Hz | | |
| Absolute Minimum Resistance | Not to exceed linearity x total resistance or 1 Ω, whichever is greater | | |
| Temperature Coefficient | 20 ppm/°C (standard values, wire only) | | |
| End Voltage | 0.25 % of total applied voltage, maximum | | |
| Phasing | CCW end points - section 2 phased to section 1 within ± 2° | | |
| Taps | Center tap only | | |

| MARKING | |
|---------------------|---|
| Unit Identification | Manufacturer's name and model number, resistance value and tolerance, linearity specification date code and terminal identification |

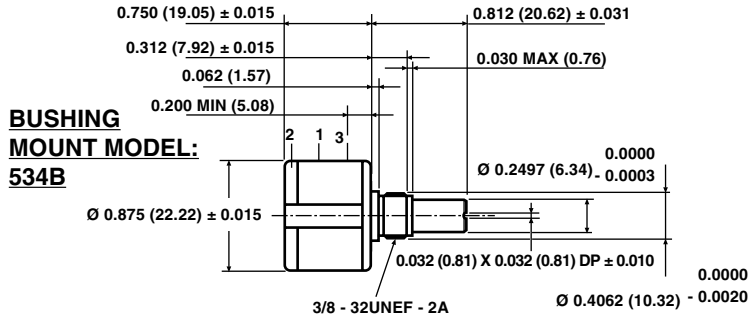
| RESISTANCE VALUES | |
|-------------------|---|
| Ohms 533: | 50R, 100R, 200R, 500R, 1K, 2K, 5K, 10K, 20K |
| 534: | 100R, 200R, 500R, 1K, 2K, 5K, 10K, 20K, 50K, 100K |
| 535: | 50R, 100R, 200R, 500R, 1K, 2K, 5K, 10K, 20K, 50K |

| ORDERING INFORMATION/DESCRIPTION | | | | | | | | |
|--|------------------------|--------------------|--------------------------|--------------------------|--------------------------|--------------------|----------------------------|-------------|
| The Models 533 (3 turns), 534 (10 turns) and 535 (5 turns) can be ordered by stating | | | | | | | | |
| 534 | B | 2 | 10K | 20K | 5 % | L | BO10 | e4 |
| MODEL | MOUNTING | NUMBER OF SECTIONS | OHMIC VALUE SECTION N° 1 | OHMIC VALUE SECTION N° 2 | TOLERANCE ON OHMIC VALUE | LINEARITY ± 0.20 % | PACKAGING Box of 10 pieces | LEAD FINISH |
| | B: Bushing S: Servo | | | | | | | |

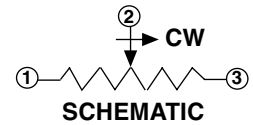
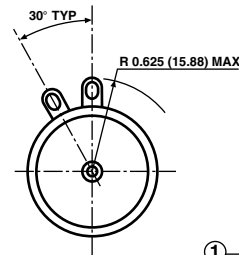
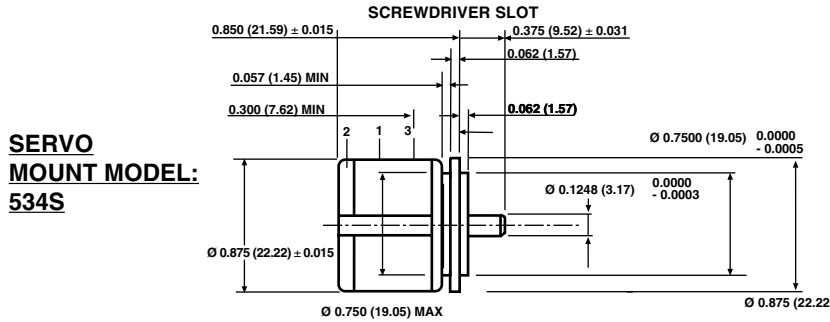
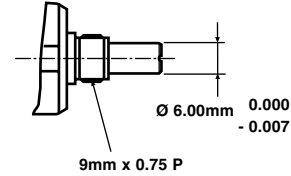
| SAP PART NUMBERING GUIDELINES | | | | | | | |
|-------------------------------|------------------------|--------------------|--------------------------|--------------------------|--------------------------|---|------------------|
| 534 | B | 2 | 103 | 203 | J | L | B10 |
| MODEL | STYLE | NUMBER OF SECTIONS | OHMIC VALUE SECTION N° 1 | OHMIC VALUE SECTION N° 2 | TOLERANCE ON OHMIC VALUE | LINEARITY | PACKAGING |
| | B: Bushing S: Servo | | 103 = 10K | 203 = 20K | J: ± 5 % F: ± 1 % | L: ± 0.20 % C: ± 0.25 % D: ± 0.10 % | Box of 10 pieces |



SINGLE SECTION DIMENSIONS in millimeters



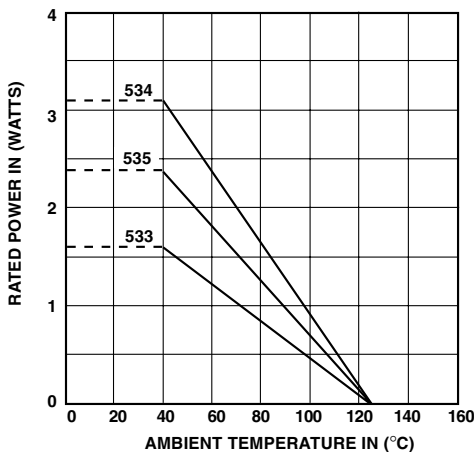
METRIC SHAFT: 534B...8872



Mounting hardware, washer and panel nut, nickel plated

| MECHANICAL SPECIFICATIONS | | |
|----------------------------------|--|--|
| PARAMETER | | |
| Bearing Type | Bushing: Sleeve bearing | Servo: Ball bearing |
| Torque (maximums): starting | | |
| Section 1 | 534 0.5 oz - in (36 g - cm) | 533/535 0.7 oz - in (50 g - cm) |
| Section 2 | 0.9 oz - in (65 g - cm) | 1.1 oz - in (79 g - cm) |
| Torque (maximums): running | | |
| Section 1 | 534 0.4 oz - in (28.80 g - cm) | 533/535 0.6 oz - in (43.20 g - cm) |
| Section 2 | 0.7 oz - in (50.40 g - cm) | 0.9 oz - in (64.8 g - cm) |
| Weight (maximums) | | |
| Section 1 | 0.75 oz (21.26 g) | |
| Section 2 | 1.25 oz (35.44 g) | |
| Stop Strength | 75 oz - in (static) (5.4 kg - cm) | |
| Ganging | 2 sections maximum | |

POWER RATING CHART



| ENVIRONMENTAL SPECIFICATIONS | |
|-------------------------------------|---------------------|
| Vibration | 15 g thru 2000 Hz |
| Shock | 50 g |
| Rotational Life (Shaft Revolution) | |
| 533 | 300 000 |
| 534 | 1 000 000 |
| 534 (Servo) | > 1 000 000 |
| 535 | 500 000 |
| Load Life | 900 hours |
| Temperature Range | - 55 °C to + 125 °C |

Model 533, 534, 535



Vishay Spectrol

7/8" (22 mm) Multiturn Wirewound
533: 3 Turns/534: 10 Turns/535: 5 Turns

| RESISTANCE ELEMENT DATA | | | | | | | | | | | | | | |
|-------------------------|------|-----|--------------|-------|-------|---------------|--------|--------|-----------------------------------|-------|-------|-----------------------------|-------|-------|
| RESISTANCE VALUE (Ω) | | | RESOLUTION % | | | OHMS PER TURN | | | MAX CURRENT AT 70 °C AMBIENT (mA) | | | MAX VOLTAGE ACROSS COIL (V) | | |
| 533 | 534 | 535 | 533 | 534 | 535 | 533 | 534 | 535 | 533 | 534 | 535 | 533 | 534 | 535 |
| 50 | - | 50 | 0.149 | - | 0.120 | 0.0746 | - | 0.0603 | 141.0 | - | 173.0 | 7.07 | - | 8.66 |
| 100 | 100 | 100 | 0.111 | 0.060 | 0.075 | 0.1114 | 0.0603 | 0.0746 | 100.0 | 141.0 | 122.0 | 10.0 | 14.1 | 12.2 |
| 200 | 200 | 200 | 0.097 | 0.037 | 0.061 | 0.1954 | 0.0746 | 0.1220 | 70.7 | 100.0 | 86.6 | 14.1 | 20.0 | 17.3 |
| 500 | 500 | 500 | 0.069 | 0.031 | 0.049 | 0.3424 | 0.1520 | 0.2459 | 44.7 | 63.2 | 54.7 | 22.4 | 31.6 | 27.4 |
| 1K | 1K | 1K | 0.063 | 0.025 | 0.041 | 0.6331 | 0.2459 | 0.4113 | 31.6 | 44.7 | 38.7 | 31.6 | 44.7 | 38.7 |
| 2K | 2K | 2K | 0.041 | 0.021 | 0.031 | 0.8206 | 0.4113 | 0.6331 | 22.4 | 31.6 | 27.4 | 44.7 | 63.2 | 54.8 |
| 5K | 5K | 5K | 0.044 | 0.016 | 0.034 | 2.2330 | 0.8206 | 1.7230 | 14.1 | 20.0 | 17.3 | 70.7 | 100.0 | 86.6 |
| 10K | 10K | 10K | 0.034 | 0.017 | 0.030 | 3.4510 | 1.7230 | 3.0160 | 10.0 | 14.1 | 12.2 | 100.0 | 141.0 | 122.0 |
| 20K | 20K | 20K | 0.031 | 0.015 | 0.020 | 6.1790 | 3.0160 | 3.9910 | 7.07 | 10.0 | 8.66 | 141.0 | 200.0 | 173.0 |
| - | 50K | 50K | - | 0.009 | 0.015 | - | 4.6690 | 7.4560 | - | 6.32 | 5.47 | - | 316.0 | 274.0 |
| - | 100K | - | - | 0.007 | - | - | 7.4560 | - | - | 4.47 | - | - | 447.0 | - |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |



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