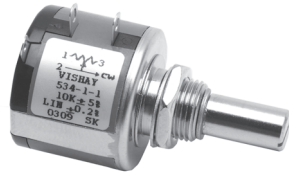




## 7/8" (22mm) Precision Wirewound Potentiometer

**ADDITIONAL FEATURES**

- Special Resistance Tolerances to 1%
- Rear Shaft Extensions and Support Bearing
- Non Turn Lug
- Dual Gang Configuration and Concentric Shafts
- High Torque and Center Tap
- Special Markings and Front Shaft Extensions
- Servo Unit available and Slipping Clutch

**Note:** The color of this product is changing to blue, during the internal period you may receive either black or blue.

| ELECTRICAL SPECIFICATIONS          |                                                                        |               |             |
|------------------------------------|------------------------------------------------------------------------|---------------|-------------|
| PARAMETER                          | MODEL 533                                                              | MODEL 534     | MODEL 535   |
| Resistance Range                   |                                                                        |               |             |
| Standard Values                    | 50Ω to 20KΩ                                                            | 100Ω to 100KΩ | 50Ω to 50KΩ |
| Capability Range                   | 5Ω to 60KΩ                                                             | 10Ω to 200KΩ  | 5Ω to 100KΩ |
| Standard Tol                       | ± 5%                                                                   | ± 5%          | ± 5%        |
| Linearity (Independent)            | ± 0.25%                                                                | 0.20%         | ± 0.25%     |
| Noise                              | 100Ω ENR                                                               | 100Ω ENR      | 100Ω ENR    |
| Rotation (Electrical & Mechanical) | 1080° + 10%                                                            | 3600° + 10%   | 1800° ± 10° |
| Power Rating (@ 70°C)              | 1.0 watts                                                              | 2.0 watts     | 1.5 watts   |
| Insulation Resistance              | 1000MΩ minimum 500VDC                                                  |               |             |
| Dielectric Strength                | 1000V <sub>RMS</sub> minimum 60Hz                                      |               |             |
| Absolute Minimum Resistance        | Not to exceed linearity x total resistance or 1Ω, whichever is greater |               |             |
| Tempco                             | 20ppm/°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                                                              |                        |                                      |                     |
|-----------------------------------------------------------------------------------|------------------------|--------------------------------------|---------------------|
| The Models 533 (3 turn), 534 (10 turn) and 535 (5 turn) can be ordered by stating |                        |                                      |                     |
| 534                                                                               | 1                      | 2                                    | XXX                 |
| MODEL                                                                             | MOUNTING               | NUMBER OF SECTIONS                   | RESISTANCE EIA CODE |
|                                                                                   | 1. Bushing<br>2. Servo | 1. Single section<br>2. Dual section |                     |

# Model 533, 534, 535

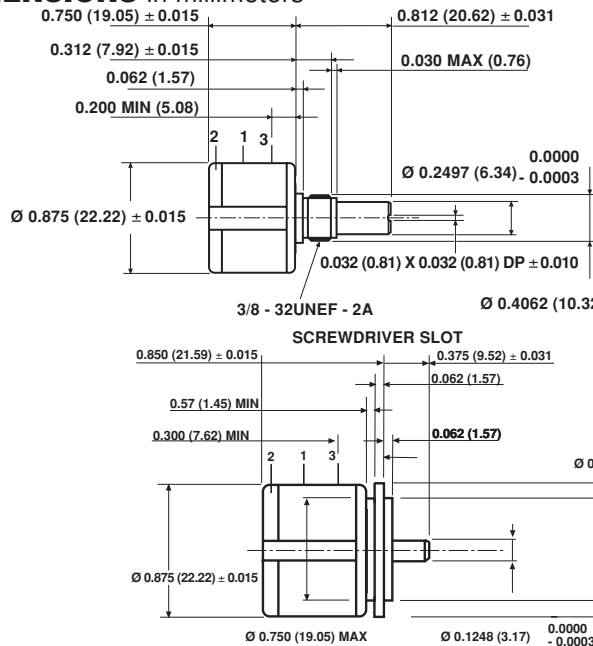
Vishay Spectrol

7/8" (22mm) Precision  
Wirewound Potentiometer

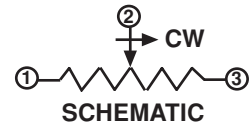
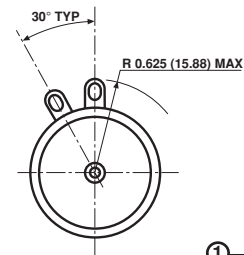
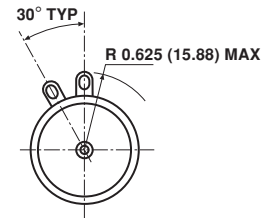
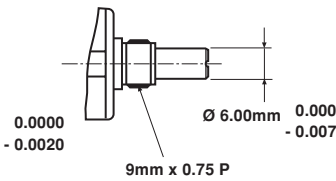


## SINGLE SECTION

### DIMENSIONS in millimeters



### METRIC

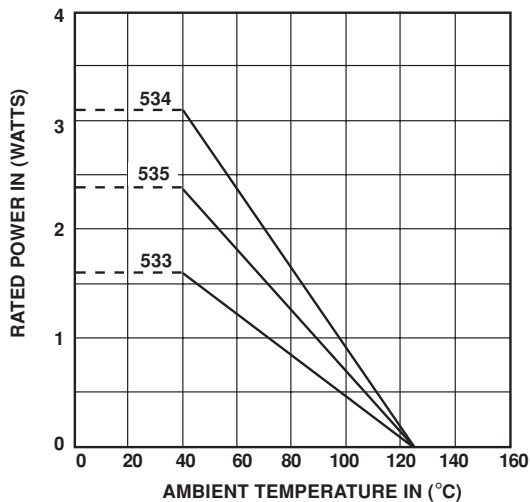


Mounting hardware, washer and panel nut, nickel plated

## MECHANICAL SPECIFICATIONS

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

## POWER RATING CHART



## ENVIRONMENTAL SPECIFICATIONS

|                                    |                   |
|------------------------------------|-------------------|
| Vibration                          | 15g thru 2000Hz   |
| Shock                              | 50g               |
| 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 |



| <b>RESISTANCE ELEMENT DATA</b>                |            |            |                     |            |            |                      |            |            |                                             |            |            |                                        |            |            |
|-----------------------------------------------|------------|------------|---------------------|------------|------------|----------------------|------------|------------|---------------------------------------------|------------|------------|----------------------------------------|------------|------------|
| <b>RESISTANCE VALUE (<math>\Omega</math>)</b> |            |            | <b>RESOLUTION %</b> |            |            | <b>OHMS PER TURN</b> |            |            | <b>MAX CURRENT AT 70°C<br/>AMBIENT (mA)</b> |            |            | <b>MAX VOLTAGE ACROSS COIL<br/>(V)</b> |            |            |
| <b>533</b>                                    | <b>534</b> | <b>535</b> | <b>533</b>          | <b>534</b> | <b>535</b> | <b>533</b>           | <b>534</b> | <b>535</b> | <b>533</b>                                  | <b>534</b> | <b>535</b> | <b>533</b>                             | <b>534</b> | <b>535</b> |
| 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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