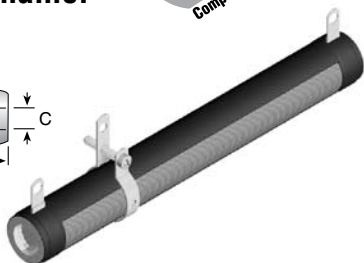
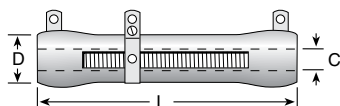


# 210 Series

## Dividohm® Vitreous Enamel Adjustable Power



### FEATURES

- Terminals suitable for soldering or bolt connection.
- Adjustable lug supplied.
- High wattage applications.
- All-welded construction.
- Rugged lead free vitreous enamel coating.
- Flame resistant coating.
- Thumb-screw-adjustable lug available (Part No. 2160) for 1.125" core resistors.
- RoHS compliant product available. Add "E" suffix to part number to specify.

**Terminals:** Solder coated radial lug. RoHS solder composition is 96% Sn, 3.5% Ag, 0.5% Cu

**Adjustable terminal:** Nickel plated steel. (Screwdriver type adjustable lug supplied standard. Other types, including silver contact units, available.)

**Derating:** Linearly from 100% @ +25°C to 0% @ +350°C.

### Electrical

**Tolerance:** ±10% (K)

**Power rating:** Based on 25°C free air rating. The stated wattage rating applies only when the entire resistance is in the circuit. Setting the lug at an intermediate point reduces the wattage rating by approximately the same proportion. Example: If the lug is set at half resistance, the wattage is reduced by approximately one-half.

**Overload:** 10 times rated wattage for 5 seconds.

**Temperature coefficient:** ±260 ppm/°C

**Dielectric withstanding voltage:** 1000 VAC: 12 to 100 watt rating. 3000 VAC: 175 and 225 watt rating (measured from terminal to mounting bracket)

**To calculate max. amps:** use the formula  $\sqrt{P/R}$ .

| Series                                                                                                         | Wattage | Ohms      | Dimensions (in. / mm) |              |              | Core Code | Voltage | Standard Terminal |
|----------------------------------------------------------------------------------------------------------------|---------|-----------|-----------------------|--------------|--------------|-----------|---------|-------------------|
|                                                                                                                |         |           | L                     | D            | C            |           |         |                   |
| D12                                                                                                            | 12      | 1.0-10K   | 1.75 / 44.4           | 0.313 / 7.94 | 0.188 / 4.76 | D         | 565     | 57                |
| D25                                                                                                            | 25      | 1.0-25K   | 2.0 / 50.8            | 0.562 / 14.3 | 0.313 / 7.94 | K         | 625     | 40                |
| D50                                                                                                            | 50      | 1.0-100K  | 4.0 / 101.6           | 0.562 / 14.3 | 0.313 / 7.94 | K         | 1625    | 40                |
| D75                                                                                                            | 75      | 1.0-100K  | 6.0 / 152.4           | 0.562 / 14.3 | 0.313 / 7.94 | K         | 2625    | 40                |
| D100                                                                                                           | 100     | 1.0-100K  | 6.5 / 165.1           | 0.750 / 19.1 | 0.50 / 12.7  | M         | 2845    | 40                |
| D175                                                                                                           | 175     | 1.0-100K  | 8.5 / 215.9           | 1.125 / 28.6 | 0.75 / 19.1  | P         | 3595    | 46                |
| D225                                                                                                           | 225     | 1.0-100K  | 10.5 / 266.7          | 1.125 / 28.6 | 0.75 / 19.1  | P         | 4595    | 46                |
| D500                                                                                                           | 500     | 1.5-15K   | 12.0 / 304.8          | 2.50 / 63.5  | 1.75 / 44.5  | S         | 4970    | 45                |
| D1000                                                                                                          | 1000    | 3.0-27.7K | 20.0 / 508.0          | 2.50 / 63.5  | 1.75 / 44.5  | S         | 8900    | 45                |
| Other sizes available; contact Ohmite. Also available in low cost Centohm or Silicone coating; contact Ohmite. |         |           |                       |              |              |           |         |                   |

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Choose Ohmite's 210 Type adjustable resistors for applications requiring settings at different resistance values. These wire-wound resistors are equipped with an adjustable lug, making them ideal for adjusting circuits, obtaining odd resistance values and setting equipment to meet various line voltages. 210 Type resistors feature a hollow core to permit secure fastening with spring-type clips or thru bolts with washers. They also offer the durability of lead free vitreous enamel coating and all-welded construction. Mounting brackets not included with resistors.

### SPECIFICATIONS

**Adjustability** is 10% to 90% of full value. Wattage is proportional to this adjusted resistance value.

#### Material

**Coating:** Lead free vitreous enamel.

**Core:** Tubular ceramic.

See page 36 for mounting hardware

### ORDERING INFO

| Coating               | Blank = Vitreous | C = Centohm     | S = Silicone |
|-----------------------|------------------|-----------------|--------------|
| RoHS Compliant        |                  |                 |              |
| <b>D 25 K 1 0 0 E</b> |                  |                 |              |
| Series                | Wattage          | Tolerance       | Ohms         |
| J = 5%                |                  | 1R0 = 1 Ω       |              |
| K = 10%               |                  | 250 = 250 Ω     |              |
|                       |                  | 1K0 = 1,000 Ω   |              |
|                       |                  | 25K = 25,000 Ω  |              |
|                       |                  | 25K5 = 25,500 Ω |              |

### MADE-TO-ORDER

| Core Diameter                      | Terminal Type                              | RoHS Compliant  |
|------------------------------------|--------------------------------------------|-----------------|
| See "Core and Terminal Selection"  | See "Resistor Terminals for Tubular Cores" |                 |
| <b>2 1 0 5 0 K 4 0 5 R 0 0 J E</b> |                                            |                 |
| Coating                            | Wattage                                    | Ohms            |
| 210 = Vitreous                     |                                            | R500 = 0.500 Ω  |
| 410 = Silicone Ceramic             |                                            | 1R00 = 1 Ω      |
| 610 = Centohm                      |                                            | 250R = 250 Ω    |
|                                    |                                            | 1K00 = 1,000 Ω  |
|                                    |                                            | 25K0 = 25,000 Ω |
|                                    |                                            | 25K5 = 25,500 Ω |

See website for custom core and terminal info

**Power limitations for high resistance values:** When resistance exceeds the resistance values listed below, derate the Power Rating by 25% to improve reliability:

| Power rating | Resistance value | No power derating necessary for ratings higher than 100W. |
|--------------|------------------|-----------------------------------------------------------|
| 12W          | 4,500Ω           |                                                           |
| 25W          | 9,000Ω           |                                                           |
| 50W          | 20,000Ω          |                                                           |
| 75W          | 35,000Ω          |                                                           |
| 100W         | 50,000Ω          |                                                           |

### STANDARD PART NUMBERS FOR 210 SERIES

| Ohmic value | Wattage                          |      |      |      |      |       |       |       |       |        | Ohmic value   | Wattage                          |      |      |      |      |       |       |       |       |        | Ohmic value     | Wattage                          |      |      |      |      |       |       |       |
|-------------|----------------------------------|------|------|------|------|-------|-------|-------|-------|--------|---------------|----------------------------------|------|------|------|------|-------|-------|-------|-------|--------|-----------------|----------------------------------|------|------|------|------|-------|-------|-------|
|             | Part No.<br>Prefix ▶<br>Suffix ▼ | 12   | 25   | 50   | 75   | 100   | 175   | 225   | 500   | 1000   |               | Part No.<br>Prefix ▶<br>Suffix ▼ | 12   | 25   | 50   | 75   | 100   | 175   | 225   | 500   | 1000   |                 | Part No.<br>Prefix ▶<br>Suffix ▼ | 12   | 25   | 50   | 75   | 100   | 175   | 225   |
|             |                                  | D12K | D25K | D50K | D75K | D100K | D175K | D225K | D500K | D1000K |               |                                  | D12K | D25K | D50K | D75K | D100K | D175K | D225K | D500K | D1000K |                 |                                  | D12K | D25K | D50K | D75K | D100K | D175K | D225K |
| 1.0 — 1R0E  | ✓                                | ✓    | ✓    | ✓    | ✓    | ✓     | ✓     | ✓     |       |        | 150 — 150E    | ✓                                | ✓    | ✓    | ✓    |      |       |       |       |       |        | 3,000 — 3K0E    | ✓                                | ✓    | ✓    |      |      |       |       |       |
| 2 — 2R0E    | ✓                                | ✓    | ✓    | ✓    | ✓    | ✓     | ✓     | ✓     |       |        | 200 — 200E    | ✓                                | ✓    | ✓    | ✓    |      |       |       |       |       |        | 4,000 — 4K0E    | ✓                                | ✓    | ✓    |      |      |       |       |       |
| 3 — 3R0E    |                                  | ✓    | ✓    | ✓    | ✓    | ✓     | ✓     | ✓     |       |        | 250 — 250E    | ✓                                | ✓    | ✓    | ✓    | ✓    | ✓     |       |       |       |        | 5,000 — 5K0E    | ✓                                | ✓    | ✓    |      | ✓    | ✓     | ✓     |       |
| 4 — 4R0E    |                                  |      | ✓    | ✓    | ✓    | ✓     | ✓     | ✓     |       |        | 300 — 300E    | ✓                                | ✓    | ✓    | ✓    | ✓    | ✓     | ✓     |       |       |        | 6,000 — 6K0E    | ✓                                | ✓    |      |      |      |       |       |       |
| 5 — 5R0E    | ✓                                |      |      | ✓    | ✓    | ✓     | ✓     | ✓     | ✓     | ✓      | 400 — 400E    | ✓                                | ✓    | ✓    | ✓    | ✓    |       |       |       |       |        | 7,000 — 7K0E    | ✓                                | ✓    |      |      |      |       |       |       |
| 7.5 — 7R5E  | ✓                                | ✓    |      |      |      |       |       |       |       |        | 500 — 500E    | ✓                                | ✓    | ✓    | ✓    | ✓    | ✓     | ✓     | ✓     | ✓     |        | 7,500 — 7K5E    | ✓                                | ✓    | ✓    |      |      |       |       |       |
| 10 — 10RE   | ✓                                | ✓    | ✓    | ✓    | ✓    | ✓     | ✓     | ✓     |       |        | 750 — 750E    | ✓                                | ✓    | ✓    | ✓    | ✓    | ✓     | ✓     |       |       |        | 10,000 — 10KE   | ✓                                | ✓    | ✓    | ✓    | ✓    | ✓     |       |       |
| 15 — 15RE   | ✓                                | ✓    |      | ✓    |      | ✓     |       |       |       |        | 800 — 800E    |                                  | ✓    | ✓    | ✓    |      |       |       |       |       |        | 12,000 — 12KE   |                                  |      |      |      |      |       |       |       |
| 20 — 20RE   | ✓                                | ✓    | ✓    |      |      |       |       |       |       |        | 1,000 — 1K0E  | ✓                                | ✓    | ✓    | ✓    | ✓    | ✓     | ✓     | ✓     |       |        | 15,000 — 15KE   |                                  | ✓    | ✓    |      |      |       |       |       |
| 25 — 25RE   | ✓                                | ✓    | ✓    | ✓    | ✓    | ✓     | ✓     | ✓     |       |        | 1,250 — 1K25E | ✓                                | ✓    | ✓    | ✓    |      |       |       | ✓     | ✓     |        | 20,000 — 20KE   | ✓                                | ✓    | ✓    | ✓    |      |       |       |       |
| 50 — 50RE   | ✓                                | ✓    | ✓    | ✓    |      | ✓     |       | ✓     |       |        | 1,500 — 1K5E  | ✓                                | ✓    | ✓    | ✓    | ✓    | ✓     | ✓     |       |       |        | 25,000 — 25KE   |                                  | ✓    |      |      |      |       |       |       |
| 75 — 75RE   | ✓                                | ✓    | ✓    | ✓    |      |       |       |       |       |        | 2,000 — 2K0E  | ✓                                | ✓    | ✓    | ✓    |      |       |       |       |       |        | 50,000 — 50KE   |                                  |      |      |      | ✓    |       |       |       |
| 100 — 100E  | ✓                                | ✓    | ✓    | ✓    | ✓    | ✓     | ✓     | ✓     |       |        | 2,500 — 2K5E  | ✓                                | ✓    | ✓    |      | ✓    | ✓     | ✓     |       |       |        | 100,000 — 100KE |                                  |      | ✓    |      | ✓    | ✓     |       |       |

✓ = Standard values; check availability using the worldwide inventory search at [www.ohmite.com](http://www.ohmite.com)

50KΩ and 100KΩ resistance values involve very fine resistance wire and should not be used in critical applications without burn-in and/or thermal cycling.