

Wirewound Resistors, Industrial Power, Vitreous Coated, Fixed Edgewound Tubular



FEATURES

- High temperature vitreous coating
- Complete welded construction
- Excellent stability in operation (< 3 % change resistance)
- Material categorization:
For definitions of compliance please see www.vishay.com/doc?99912



RoHS
COMPLIANT
HALOGEN
FREE
GREEN
(5-2008)

STANDARD ELECTRICAL SPECIFICATIONS

| GLOBAL MODEL | HISTORICAL MODEL | POWER RATING $P_{25^{\circ}\text{C}}$ W | RESISTANCE RANGE Ω $\pm 5\%$ | RESISTANCE RANGE Ω $\pm 10\%$ | WEIGHT (typical) g |
|--------------|------------------|---|---|--|--------------------------|
| FVE0050 | FVE-50 | 50 | 1 to 4.1 | 0.1 to 4.1 | 18 |
| FVE0090 | FVE-90 | 90 | 1 to 14.1 | 0.1 to 14.1 | 36 |
| FVE0100 | FVE-100 | 100 | 1 to 12.2 | 0.1 to 12.2 | 41 |
| FVE0110 | FVE-110 | 110 | 1 to 15.4 | 0.1 to 15.4 | 49 |
| FVE0120 | FVE-120 | 120 | 1 to 18.4 | 0.1 to 18.4 | 54 |
| FVE0155 | FVE-155 | 155 | 1 to 22.4 | 0.1 to 22.4 | 129 |
| FVE0240 | FVE-240 | 240 | 1 to 44.75 | 0.1 to 44.75 | 186 |
| FVE0300 | FVE-300 | 300 | 1 to 62.5 | 0.1 to 62.5 | 236 |
| FVE0375 | FVE-375 | 375 | 1 to 80.5 | 0.1 to 80.5 | 286 |
| FVE0420 | FVE-420 | 420 | 1 to 92 | 0.1 to 92 | 320 |

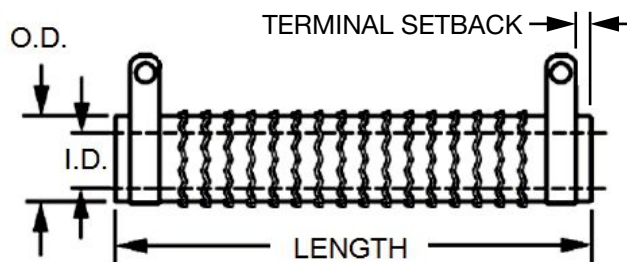
GLOBAL PART NUMBER INFORMATION

Global Part Numbering example: **FVE030020E15R0JE** (visit www.vishay.net Vishay Dale parts numbering manual for all options)

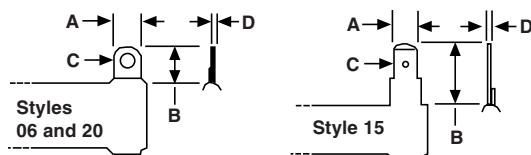
| | | | | | | | | | | | | | | | | | |
|--|-------------------------------------|----------|------------------------------|----------|--|----------|---|---|----------|--|----------|----------|----------|----------|----------|--|--|
| F | V | E | 0 | 3 | 0 | 0 | 2 | 0 | E | 1 | 5 | R | 0 | J | E | | |
| GLOBAL MODEL (7 digits) | TERMINAL DESIGNATION (2 digits) | | TERMINAL FINISH (1 digit) | | VALUE (4 digits) | | TOLERANCE (1 digit) | PACKAGING CODE (1 digit) | | SPECIAL (up to 2 digits) | | | | | | | |
| (See Standard Electrical Specifications Global Model column for options) | 06 15 20 | | E = Lead (Pb)-free | | R = Decimal 1R50 = 1.5 Ω | | J = $\pm 5\%$ K = $\pm 10\%$ | E = E01 = Lead (Pb)-free skin pack | | (Dash number) From 1 to 99 as applicable 91 = 100 style BKT 92 = 200 style BKT 93 = 300 style BKT | | | | | | | |

Historical Part Number example: **FVE-300-15-5 %**

| | | | |
|------------------|-------------------------------|------------|---------|
| FVE-300 | 15 Ω | 5 % | |
| HISTORICAL MODEL | RESISTANCE VALUE | TOLERANCE | SPECIAL |

DIMENSIONS in inches [millimeters]


| MODEL | DIMENSIONS in inches [millimeters] | | | | | | | |
|---------|------------------------------------|------------------|------------------|------------------|-----------------------------------|----------------------|--------------------------|---------------|
| | CORE DIMENSIONS | | | TERMINAL SETBACK | DISTANCE BETWEEN TERMINALS (REF.) | TERMINAL DESIGNATION | | BRACKET TYPES |
| | LENGTH | O.D. | I.D. | | | STANDARD | OPTIONAL (QUICK CONNECT) | |
| FVE0050 | 2.000 [50.8] | 0.750 [19.05] | 0.500 [12.70] | 0.086 [2.18] | 1.328 [33.73] | 06 | 15 | 101, 203, 301 |
| FVE0090 | 4.000 [101.6] | 0.563 [14.30] | 0.313 [7.95] | 0.094 [2.39] | 3.312 [84.12] | 06 | 15 | 101, 203, 301 |
| FVE0100 | 3.500 [88.90] | 0.750 [19.05] | 0.500 [12.70] | 0.079 [2.01] | 2.842 [72.19] | 06 | 15 | 102, 206, 303 |
| FVE0110 | 4.000 [101.6] | 0.750 [19.05] | 0.500 [12.70] | 0.125 [3.18] | 3.250 [82.55] | 06 | 15 | 102, 206, 303 |
| FVE0120 | 4.500 [114.3] | 0.750 [19.05] | 0.547 [13.89] | 0.125 [3.18] | 3.750 [95.25] | 06 | 15 | 102, 206, 303 |
| FVE0155 | 4.500 [114.3] | 1.125 [28.58] | 0.750 [19.05] | 0.282 [7.16] | 3.436 [87.27] | 20 | 15 | 103, 205, 303 |
| FVE0240 | 6.500 [165.1] | 1.125 [28.58] | 0.750 [19.05] | 0.250 [6.35] | 5.376 [136.6] | 20 | 15 | 103, 205, 303 |
| FVE0300 | 8.500 [215.9] | 1.125 [28.58] | 0.750 [19.05] | 0.267 [6.78] | 7.342 [186.5] | 20 | 15 | 103, 205, 303 |
| FVE0375 | 10.500 [266.7] | 1.125 [28.58] | 0.750 [19.05] | 0.266 [6.76] | 9.344 [237.3] | 20 | 15 | 103, 205, 303 |
| FVE0420 | 11.375 [288.9] | 1.125 [28.58] | 0.750 [19.05] | 0.266 [6.76] | 10.219 [259.6] | 20 | 15 | 103, 205, 303 |

TERMINAL DIMENSIONS


| DIMENSIONS | TERMINAL STYLE | | |
|--------------------------|------------------|------------------|------------------|
| | 06 | 15 | 20 |
| A | 0.250 [6.35] | 0.250 [6.35] | 0.375 [9.53] |
| B | 0.563 [14.29] | 0.594 [15.08] | 0.625 [15.88] |
| C (HOLE DIAMETER) | 0.166 [4.22] | 0.065 [1.65] | 0.196 [4.98] |
| D | 0.020 [0.51] | 0.031 [0.79] | 0.196 [4.98] |



MATERIAL SPECIFICATIONS

Element: Copper-nickel alloy or nickel-chrome alloy, depending on resistance value

Core: Ceramic, steatite or cordierite

Coating: Special high temperature vitreous

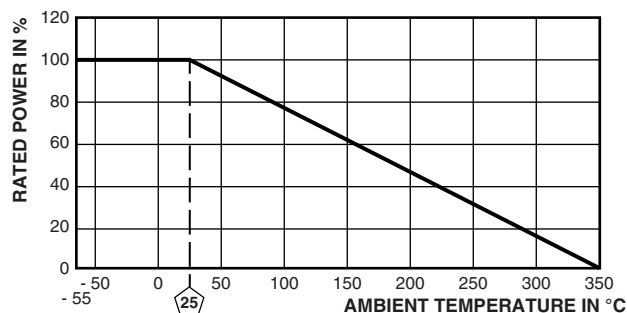
Standard Terminals: Tinned alloy 42

Optional Terminals (Quick Connect): Alloy 42

Terminal Bands: Alloy 42

Part Marking: HEI, model, wattage, value, tolerance, date code

DERATING



TECHNICAL SPECIFICATIONS

| PARAMETER | UNIT | FVE RESISTOR CHARACTERISTICS |
|------------------------------|-----------------|---|
| Temperature Coefficient | ppm/°C | ± 260 for 20 Ω and above, ± 400 for 1 Ω to 19.99 Ω, special TC's available please contact factory |
| Short Time Overload | - | 10 x rated power for 5 s |
| Dielectric Withstand Voltage | V _{AC} | 1000, from terminal to mounting hardware |
| Maximum Working Voltage | V | $(P \times R)^{1/2}$ |
| Operating Temperature Range | °C | - 55 to + 350 |



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