

60 Series

Two Terminal Metal Element Current Sense

These non-inductive, 3-piece welded element resistors offer a reliable low-cost alternative to conventional current sense products. With resistance values as low as 0.005Ω, and wattages from 0.1w to 3w, the 60 Series offers a wide variety of design choices.



FEATURES

- Low inductance
- Low cost
- Wirewound performance
- Flameproof

CHARACTERISTICS

| | |
|------------------------------|---|
| Resistor | Nichrome resistive element |
| Terminals | Copper clad steel or copper depending on style. RoHS solder composition is 96% Sn, 3.5% Ag, 0.5% Cu |
| Derating | Linearly from 100% @ +25°C to 0% @ +275°C |
| Tolerance | ±3% standard, others available |
| Power rating | Based on 25°C ambient |
| Overload | 5x rated power for 5 seconds |
| Inductance | <10nh |
| To calculate max amps | use the formula $\sqrt{(P/R)}$ |

TCR as a function of resistance



ORDERING INFORMATION

(Partial listing; contact Ohmite for others)

| Part Number | Watts | Ohms | Tolerance | Dimensions | | | Lead Ga. |
|-------------|-------|-------|-----------|------------|----------|------------|----------|
| | | | | A (ref.) | B (max.) | C (±0.010) | |
| 600HR050E | 0.1 | 0.05 | 3% | 2.440 | 0.155 | 0.655 | 24 |
| 600HR033E | 0.1 | 0.033 | 3% | 2.440 | 0.155 | 0.655 | 24 |
| 600HR036E | 0.1 | 0.036 | 3% | 2.440 | 0.155 | 0.655 | 24 |
| 601HR027E | 0.125 | 0.027 | 3% | 2.440 | 0.155 | 0.655 | 24 |
| 601HR030E | 0.125 | 0.03 | 3% | 2.440 | 0.155 | 0.655 | 24 |
| 601HR025E | 0.125 | 0.025 | 3% | 2.440 | 0.155 | 0.655 | 24 |
| 602HR050E | 0.2 | 0.05 | 3% | 3.530 | 0.250 | 0.559 | 22 |
| 603HR005E | 0.25 | 0.005 | 3% | 2.440 | 0.155 | 0.655 | 24 |
| 603HR010E | 0.25 | 0.01 | 3% | 2.440 | 0.155 | 0.655 | 24 |
| 603HR015E | 0.25 | 0.015 | 3% | 2.440 | 0.155 | 0.655 | 24 |
| 603HR050E | 0.25 | 0.05 | 3% | 3.685 | 0.330 | 1.310 | 20 |
| 604HR010E | 0.375 | 0.01 | 3% | 3.530 | 0.250 | 0.559 | 22 |
| 604HR020E | 0.375 | 0.02 | 3% | 3.530 | 0.250 | 0.559 | 22 |
| 604HR025E | 0.375 | 0.025 | 3% | 3.530 | 0.250 | 0.559 | 22 |
| 604HR100E | 0.375 | 0.01 | 3% | 3.587 | 0.65 | 1.125 | 20 |
| 605HR010E | 0.5 | 0.01 | 3% | 3.685 | 0.355 | 1.310 | 20 |
| 605HR020E | 0.5 | 0.02 | 3% | 3.685 | 0.330 | 1.310 | 20 |
| 605HR030E | 0.5 | 0.03 | 3% | 3.685 | 0.330 | 1.310 | 20 |
| 605HR100E | 0.5 | 0.1 | 3% | 3.981 | 0.750 | 1.675 | 18 |
| 607HR050E | 0.75 | 0.05 | 3% | 3.587 | 0.630 | 1.106 | 20 |
| 607HR005E | 0.75 | 0.005 | 3% | 3.674 | 0.320 | 1.310 | 20 |
| 610HR005E | 1 | 0.005 | 3% | 3.587 | 0.650 | 1.125 | 20 |
| 610HR010E | 1 | 0.01 | 3% | 3.587 | 0.630 | 1.106 | 20 |
| 610HR020E | 1 | 0.02 | 3% | 3.587 | 0.630 | 1.106 | 20 |
| 610HR030E | 1 | 0.03 | 3% | 3.587 | 0.650 | 1.106 | 20 |
| 610HR050E | 1 | 0.05 | 3% | 3.981 | 0.750 | 1.675 | 18 |
| 615HR010E | 1.5 | 0.01 | 3% | 3.981 | 0.750 | 1.675 | 18 |
| 615HR020E | 1.5 | 0.02 | 3% | 3.981 | 0.750 | 1.675 | 18 |
| 615HR030E | 1.5 | 0.03 | 3% | 3.981 | 0.750 | 1.675 | 18 |
| 620HR005E | 2 | 0.005 | 3% | 3.981 | 0.750 | 1.675 | 18 |
| 630HR010E | 3 | 0.01 | 3% | 4.125 | 0.781 | 1.68* | 18 |
| 630HR015E | 3 | 0.015 | 3% | 4.125 | 1.11 | 2 | 18 |
| 630HR025E | 3 | 0.025 | 3% | 4.125 | 1.279 | 2.125 | 18 |
| 630HR050E | 3 | 0.05 | 3% | 4.125 | 1.664 | 2.375 | 18 |



E = RoHS compliant

605HR020E

| | | | | |
|-----------|-------------|------------|------------|-------------|
| Series | 605 | HR | 020 | E |
| Wattage | 00 = 1/10 | 07 = 3/4 | | |
| | 01 = 1/6 | 10 = 1.0 | | |
| | 02 = 1/5 | 15 = 1.5 | | |
| | 03 = 1/4 | 20 = 2.0 | | |
| | 04 = 3/8 | 30 = 3.0 | | |
| | 05 = 1/2 | | | |
| Tolerance | F = 1% | H = 3% | J = 5% | |
| Ohms | R005 = .005 | R010 = .01 | R020 = .02 | R050 = .05 |
| | | | | R100 = 0.10 |

*Reference dimensions; contact Ohmite for details