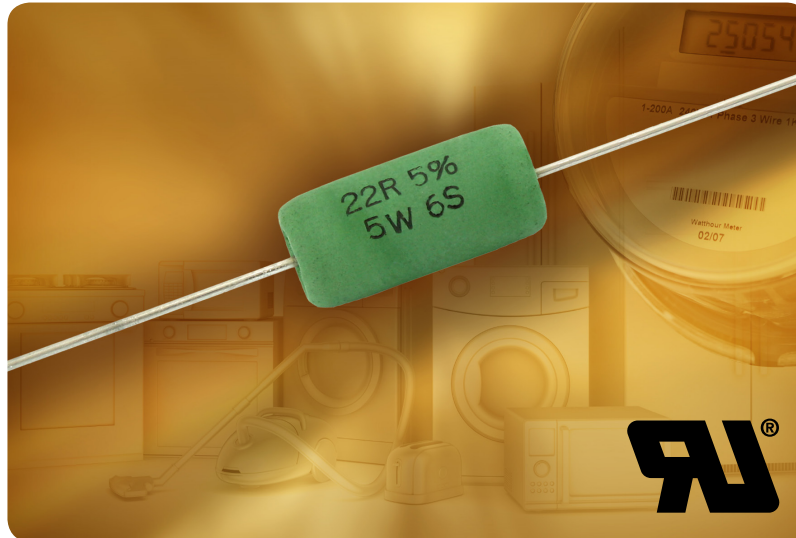


### Axial Cemented, Fusible, Leaded Wirewound Safety Resistor



#### KEY BENEFITS

- Complies with UL1412 safety requirements
- Acts as an inrush current limiting resistor during normal operation
- Eliminates the need to utilize additional fuses in series with the input resistor
- Maximum surge voltage handling capability: 6 kV ( $R \geq 22 \Omega$ ), as per IEC 61000-4-5
- Specially developed lacquer coating for immediate interruption without flame and explosion when mains voltage (110 V<sub>AC</sub> / 230 V<sub>AC</sub>) is applied
- Fusing time: < 45 s for 100 W overload
- $P_{40} = 5.0 \text{ W}$

#### APPLICATIONS

- High surge handling fusible resistor for energy meters
- Fusible safety input resistor for home appliances (e.g. washing machines)
- Inrush current limiting resistor for power supplies

#### RESOURCES

- Datasheet: AC05-CS - [www.vishay.com/ppg?28909](http://www.vishay.com/ppg?28909)
- For technical questions contact [ww1resistors@vishay.com](mailto:ww1resistors@vishay.com)
- Material categorization: for definitions, please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)

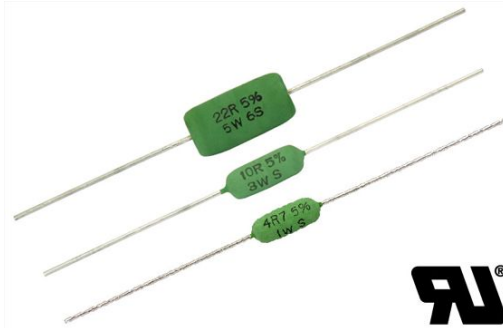


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A **WORLD OF**  
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### Axial Cemented, Fusible, Leaded Wirewound Safety Resistor



#### DESIGN SUPPORT TOOLS AVAILABLE



ACxx-CS series wirewound safety resistors are designed to be used as fusible safety resistors (or AC mains input resistors). The resistor fuses “without a bang” when AC mains voltage is applied. At the same time, it acts as an in-rush current limiting resistor for normal operation. The specially developed lacquer coating has superior thermal and electrical insulating properties. This allows designers to more easily meet the requirements of safety approval, whilst eliminating the need to put additional fuses in series with the input resistor.

#### FEATURES

- UL1412 recognized; UL file no. E362452
- Surge voltage handling capability (up to 6 kV) (1.2 / 50  $\mu$ s pulse in IEC 61000-4-5)
- Silent and safe fusing
- Material categorization: for definitions of compliance please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)



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#### APPLICATIONS

- Energy meters
- LED drivers
- White goods
- Power supplies

#### STANDARD ELECTRICAL SPECIFICATIONS

TYPE	POWER RATING $P_{40}$	POWER RATING $P_{70}$	LIMITING VOLTAGE $U_{max.}$ V	RESISTANCE RANGE <sup>(1)</sup>	TOLERANCE	TEMPERATURE COEFFICIENT
AC01-CS	1.1 W	1 W	$\sqrt{P \times R}$	3 $\Omega$ to 100 $\Omega$	$\pm 5 \%$	$\pm 200$ ppm/K
AC03-CS	3 W	2.5 W	$\sqrt{P \times R}$	4.7 $\Omega$ to 100 $\Omega$	$\pm 5 \%$	$\pm 200$ ppm/K
AC05-CS	5 W	4.5 W	$\sqrt{P \times R}$	10 $\Omega$ to 100 $\Omega$	$\pm 5 \%$	$\pm 200$ ppm/K

#### Note

<sup>(1)</sup> Resistance value to be selected for  $\pm 5 \%$  from E24 series

#### TECHNICAL SPECIFICATIONS

DESCRIPTION	AC01-CS	AC03-CS	AC05-CS
Operating temperature range	-40 °C to 200 °C		
Max. resistance change for 116 % of $P_{70}$ , $\Delta R$ max., after 1000 h:	$\pm (5 \% R + 0.1 \Omega)$		

Revision: 10-May-2019