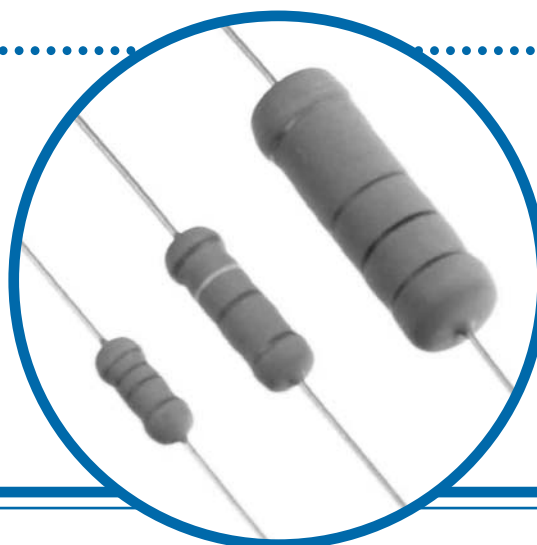


# Flameproof Metal Oxide Resistors

## WMO-S Series

- **Cost effective**
- **Small size for power rating**
- **Good pulse handling capability**
- **Flameproof protection**



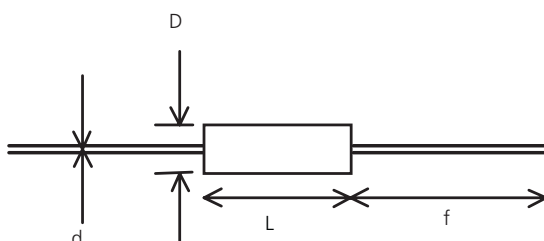
## Electrical Data

		WMO½S	WMO1S	WMO2S	WMO3S	WMO5S
Power rating @70°C	watts	½	1	2	3	5
Resistance range	ohms	10R – 100K				
Limiting element voltage	volts	250	300	350		500
TCR (25 to 75°C)	ppm/°C	350				
Isolation Voltage	volts	250		350		500
Resistance tolerance	%	5				
Standard Values		E24				
Thermal Impedance	°C/watt	125	105	75	63	42
Ambient temperature range	°C	-55 to +155				

## Physical Data

Dimensions (mm) and Weight (g)

Type	L max.	D max.	f min.	d nom.	PCB mounting centres	Min. bend radius	Wt. nom.
WMO½S	7.5	3	27	0.6	12.7	0.6	0.22
WMO1S	10	4.5	27	0.7	15.2	1.05	0.42
WMO2S	12	5	28	0.7	17.8	1.05	0.63
WMO3S	16	5.5	28	0.8	20.3	1.2	1.0
WMO5S	26	8.5	38	0.8	30.5	1.2	3.7



### General Note

Welwyn Components reserves the right to make changes in product specification without notice or liability. All information is subject to Welwyn's own data and is considered accurate at time of going to print.

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## Construction

The resistive film is deposited onto a high purity ceramic rod. End caps are force fitted and termination wires are welded to the end caps. The element is adjusted to the required resistance value by a helical cut. Finally a cement protection is applied to the resistor body prior to marking with indelible ink.

## Marking

WMO-S resistors are colour coded with four bands indicating value and tolerance in accordance with IEC62.

## Solvent Resistance

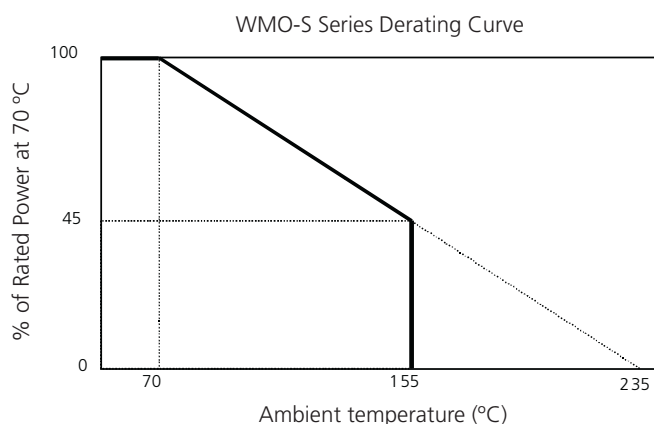
The body protection and marking are resistant to all normal industrial cleaning solvents suitable for printed circuits.

## Flammability

The resistor coating will not burn under any condition of applied temperature or component overload.

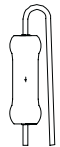
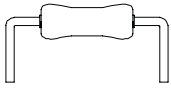
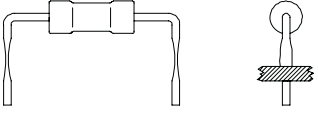
## Performance Data

		Maximum
Load at Rated Power: 1000hrs @ 70°C	$\Delta R\%$	5
Short term (5s) overload	$\Delta R\%$	2 + 0.05 $\Omega$
Derating		See derating curve
Temperature cycling	$\Delta R\%$	2 + 0.05 $\Omega$
Moisture resistance	$\Delta R\%$	5
Resistance to solder heat	$\Delta R\%$	1
Insulation resistance	G $\Omega$	>10



## Application Notes

1. If the resistors are to dissipate full rated power, it is recommended that the terminations should not be soldered closer than 4mm from the body.
2. Due to operating temperature limits imposed by some PCB materials, derating may be necessary. An estimate of the temperature rise to be expected can be calculated using the thermal impedance figures given under Electrical Data.
3. WMO-S resistors can also be supplied with radial, goalpost or lancet pre-formed leads. Consult Factory for details.

Radial	Goalpost	Lancet
		

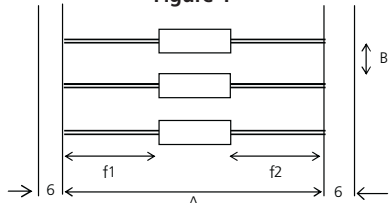
## Packaging

Our standard packaging for WMO-S is taped and boxed. The critical dimensions are shown in Figure 1. The component wires will not protrude beyond the outside edge of the tapes. Pre-formed resistors are supplied loose packed in plastic bags or boxes.

Dimensions mm	WMO½S	WMO1S	WMO2S	WMO3S	WMO5S
A	52	52	52	67	85
B	5	5	5	10	10

**Figure 1**



Body location  $f1-f2 < 1.4\text{mm}$

## Ordering Procedure

Specify type reference, value and tolerance as shown in this example of WMO3S at 1.5KΩ, 5%:

**WMO3S - 1K5J A1**

Type \_\_\_\_\_

Value (use IEC62 code) \_\_\_\_\_

Tolerance (use IEC 62 code) \_\_\_\_\_

Packing Code \_\_\_\_\_

A5	Ammo Pack	WMO½S	5000 / Box
A1		WMO1S, WMO2S, WMO3S	1000 / Box
A05		WMO5S	500 / Box