

# DATA SHEET

## **MRS16; MRS25** **Professional leaded resistors**

Maintenance types (not for new designs)  
File under BCcomponents, BC08

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**Professional leaded resistors****MRS16; MRS25****FEATURES**

- Professional resistors in small outlines
- Low noise.

**APPLICATIONS**

- All general purpose applications.

**DESCRIPTION**

A homogeneous film of metal alloy is deposited on a high grade ceramic body. After a helical groove has been cut in the resistive layer, tinned connecting wires of electrolytic copper are welded to the end-caps. The resistors are coated with lacquer which provides electrical, mechanical, and climatic protection. Four or five colour code rings designate the resistance value and tolerance according to **IEC 60 062**.

Suitable replacements for MRS16 and MRS25 are the MBA 0204 and MBB 0207 professional.

**QUICK REFERENCE DATA**

DESCRIPTION	VALUE	
	MRS16	MRS25
Resistance range	4,99 $\Omega$ to 1 M $\Omega$	1 $\Omega$ to 10 M $\Omega$
Resistance tolerance and series	$\pm 1\%$ ; E24/E96 series	
Maximum dissipation at $T_{amb} = 70$ °C	0,4 W	0,6 W
Thermal resistance ( $R_{th}$ )	170 K/W	150 K/W
Temperature coefficient	$\pm 50$ ppm/K	
Maximum permissible voltage (DC or RMS)	200 V	350 V
Basic specifications	IEC 60115-1 and 60115-2	
Climatic category (IEC 60068)	55/155/56	
Max. resistance change for resistance range, $\Delta R/R$ max., after:		
load:		
$R \leq 100$ k $\Omega$	$\pm(0,5\% + 0,05 \Omega)$	$\pm(0,5\% + 0,05 \Omega)$
$R > 100$ k $\Omega$	$\pm(1\% + 0,05 \Omega)$	$\pm(0,5\% + 0,05 \Omega)$
climatic tests:		
$R \leq 100$ k $\Omega$	$\pm(0,5\% + 0,05 \Omega)$	$\pm(0,5\% + 0,05 \Omega)$
$R > 100$ k $\Omega$	$\pm(1\% + 0,05 \Omega)$	$\pm(0,5\% + 0,05 \Omega)$
soldering:		
$R \leq 100$ k $\Omega$	$\pm(0,1\% + 0,05 \Omega)$	$\pm(0,1\% + 0,05 \Omega)$
$R > 100$ k $\Omega$	$\pm(0,25\% + 0,05 \Omega)$	$\pm(0,1\% + 0,05 \Omega)$
short time overload	$\pm(0,25\% + 0,05 \Omega)$	$\pm(0,25\% + 0,05 \Omega)$

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### ORDERING INFORMATION

#### Numeric Ordering code (12NC)

- The resistors have a 12-digit ordering code starting with 2322 15.
- The subsequent 2 digits indicate the resistor type and packaging; see Table 1.
- The remaining 4 digits indicate the resistance value:
  - The first 3 digits indicate the resistance value.
  - The last digit indicates the resistance decade in accordance with Table 2.

**Table 1** Ordering code indicating resistor type and packaging

TYPE	ORDERING CODE 2322 15. ....		
	BANDOLIER IN AMMOPACK		BANDOLIER ON REEL
	1 000 units	5 000 units	5 000 units
MRS16	7 1....	7 2....	7 3....
MRS25	6 1....	6 2....	6 3....

**Table 2** Last digit of 12NC indicating resistance decade

RESISTANCE DECADE	LAST DIGIT
1 to 9,76 $\Omega$	8
10 to 97,6 $\Omega$	9
100 to 976 $\Omega$	1
1 to 9,76 k $\Omega$	2
10 to 97,6 k $\Omega$	3
100 to 976 k $\Omega$	4
1 to 9,76 M $\Omega$	5
10 M $\Omega$	6

#### ORDERING EXAMPLE

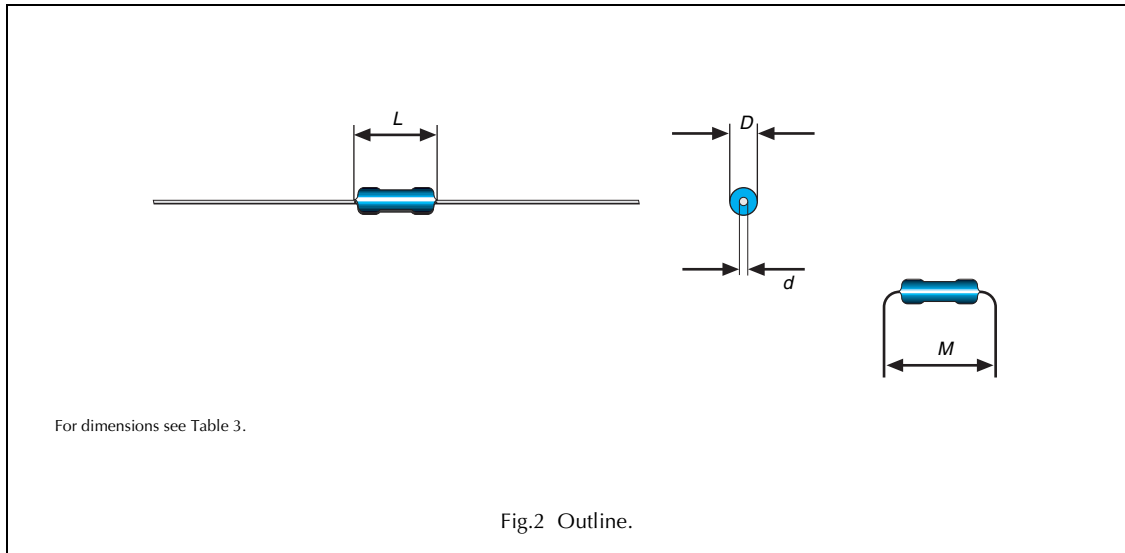
The ordering code of a MRS16 resistor, value 750  $\Omega$ , on a bandolier of 1000 units in ammopack is: 2322 157 17501.

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### MECHANICAL DATA

#### Outlines



**Table 3** Leaded resistor types, mass and relevant physical dimensions; see Fig.2

TYPE	VERSION	$D_{\max}$ (mm)	$L_{\max}$ (mm)	$d_{\text{nom}}$ (mm)	$M_{\min}$ (mm)	MASS (mg)
MRS 16	A	1.6	3.6	0.5	5.0	125
	B	1.9	3.4	0.5	5.0	125
MRS 25	–	2.5	6.5	0.6	10.0	700

#### Note

1. Due to the various sources of production, delivery of specific versions (A or B) of MRS 16 cannot be guaranteed.