## DATA SHEET

## MRS16; MRS25 Professional leaded resistors

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

## 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 $\mathbf{6 0} 062$.

Suitable replacements for M RS16 and M RS25 are the M BA 0204 and M BB 0207 professional.

QUICK REFERENCE DATA

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

## Professional leaded resistors

## ORDERING INFORMATION

## Numeric Ordering code (12NC)

- The resistors have a 12-digit ordering code starting with 232215.
- 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 O rdering code indicating resistor type and packaging

| TYPE | ORDERING CODE 2322 15. ..... |  |  |
| :---: | :---: | :---: | :---: |
|  | BANDOLIER IN AMMOPACK |  | BANDOLIER ON REEL |
|  | 1000 units | 5000 units | 5000 units |
| M RS16 | $71 . .$. | $72 . .$. | $73 . .$. |
| M RS25 | $61 . .$. | $62 . .$. | $63 . .$. |

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 $9,76 \mathrm{k} \Omega$ | 2 |
| 10 to $97,6 \mathrm{k} \Omega$ | 3 |
| 100 to $976 \mathrm{k} \Omega$ | 4 |
| 1 to $9,76 \mathrm{M} \Omega$ | 5 |
| $10 \mathrm{M} \Omega$ | 6 |

Ordering example
The ordering code of a M RS16 resistor, value $750 \Omega$, on a bandolier of 1000 units in ammopack is: 232215717501.

## Professional leaded resistors

## MECHANICAL DATA

Outlines


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

| TYPE | VERSION | $\mathbf{D}_{\max }$ <br> $(\mathbf{m m})$ | $\mathbf{L}_{\max }$ <br> $(\mathbf{m m})$ | $\mathbf{d}_{\text {nom }}$ <br> $(\mathbf{m m})$ | $\mathbf{M}_{\boldsymbol{m i n}}$ <br> $(\mathbf{m m})$ | MASS <br> $(\mathbf{m g})$ |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| M RS 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.

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M39006/22-0577H Y00892K49000BR13L VS-12CWQ10FNPBF M8340109M6801GGD03 VS-MBRB1545CTPBF 1KAB100E CRCW1210360RFKEA VSMF4720-GS08 CRCW04024021FRT7 001789X LTO050FR0500JTE3 CRCW0805348RFKEA
LVR10R0200FE03 CRCW12063K30FKEAHP 009923A CRCW2010331JR02 CRCW25128K06FKEG CS6600552K000B8768 M39003/012289 M39003/01-2784 M39006/25-0133 M39006/25-0228 M64W101KB40 M64Z501KB40 CW001R5000JS73 CW0055R000JE12 CW0056K800JB12 CW0106K000JE73 672D826H075EK5C CWR06JC105KC CWR06NC475JC MAL219699001E3 MCRL007035R00JHB00 PTF56100K00QYEK PTN0805H1502BBTR1K RCL12252K20JNEG RCWL1210R130JNEA RH005220R0FE02

RH005330R0FC02 RH010R0500FC02 132B20103 RH1007R000FJ01 RH2503R500FE01 RH254R220FS03 RH-50-40R2-1\%-C02 134D336X9075C6 132B00301 135D277X0025F6 DG202BDY-T1-E3 DG9426EDQ-T1-GE3

