



# Micron Power Resistors

**MBP**

## Screw-Fastening Terminal Types (For High Torque)

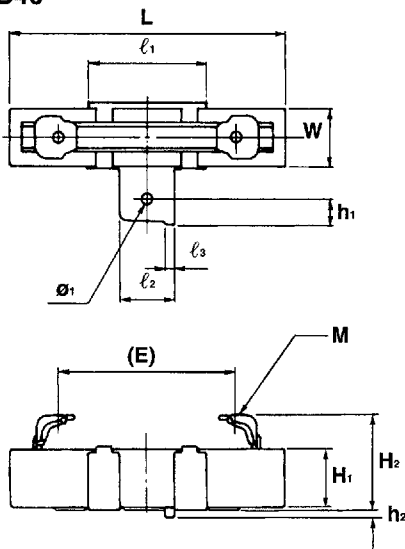
**MBC**

Please refer to MDS-21211 for more detailed information.

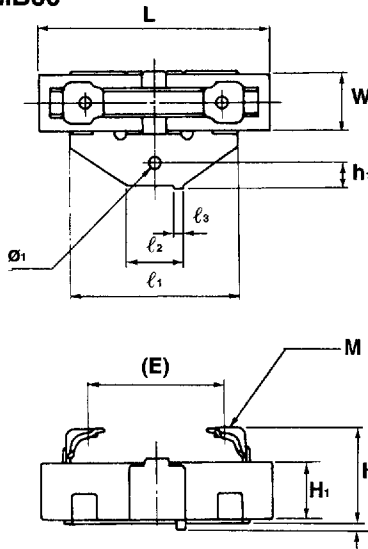
**MBS**

Making the best use of the fail-safe feature offered by cement resistors, this type has been developed for use in industrial equipment and general applications. This type of resistor is provided with M4 (M5) screwfastening terminals. A pneumatic screwdriver is available for fastening.

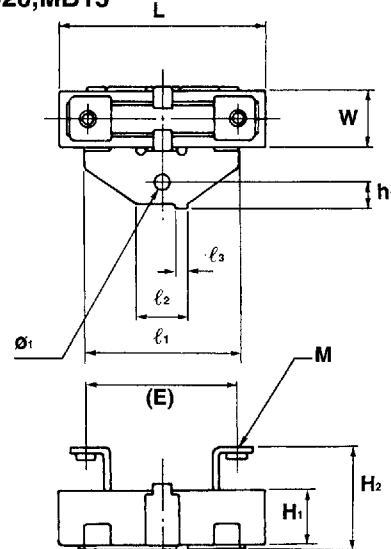
**MB40**



**MB30**



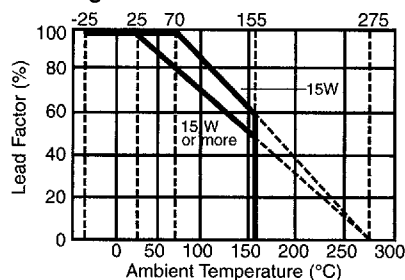
**MB20, MB15**



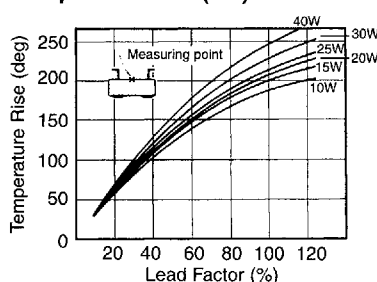
**External Dimensions**

| Shape | L      | W        | H <sub>1</sub> | H <sub>2</sub>                   | (E) | M       | l <sub>1</sub> | l <sub>2</sub> | l <sub>3</sub> | ø1  | h <sub>1</sub> | h <sub>2</sub> | Holder Plate Thickness |
|-------|--------|----------|----------------|----------------------------------|-----|---------|----------------|----------------|----------------|-----|----------------|----------------|------------------------|
| MB40  | 90±2.5 | 19±1.5   | 19±1.5         | 31 <sup>+3</sup> <sub>-1</sub>   | 58  | M5xP0.8 | 39             | 18             | 3              | 4.2 | 8              | 2.2            | 0.8                    |
| MB30  | 75±2.5 | 19±1.5   | 19±1.5         | 31 <sup>+3</sup> <sub>-1</sub>   | 44  | M5xP0.8 | 55             | 18             | 3              | 4.2 | 8              | 2.2            | 1.0                    |
| MB20  | 63.5±2 | 12.5±1.2 | 12.5±1.2       | 23.5 <sup>+2</sup> <sub>-1</sub> | 50  | M4xP0.7 | 36             | 12             | 3              | 4   | 6              | 2.2            | 1.0                    |
| MB15  | 48±1.5 | 12.5±1.2 | 12.5±1.2       | 23.5 <sup>+2</sup> <sub>-1</sub> | 35  | M4xP0.7 | 36             | 12             | 3              | 4   | 6              | 2.2            | 1.0                    |

**Derating Curve**



**Temperature Rise (ref.)**



**Nominal Resistance Values**

| Shape | Element Construction | Inductivel/Non-Inductive | Rated Power | Nominal Resistance Range | Tolerance |           |
|-------|----------------------|--------------------------|-------------|--------------------------|-----------|-----------|
|       |                      |                          |             |                          | Symbol    | Tolerance |
| MB15  | P(Band wire)         | I                        | —           | —                        | J         | ±5%       |
|       | N                    | 15W                      | 15mΩ~160mΩ  |                          |           |           |
|       | C(coil)              | I                        | 15W         | 0.14Ω~0.9Ω               |           |           |
|       | N                    | 15W                      | 0.14Ω~0.9Ω  |                          |           |           |
|       | S(Wirewound)         | I                        | 9W          | 0.7Ω~1.2kΩ               |           |           |
| MB20  | N                    | 11W                      | 0.6Ω~120Ω   |                          | K         | ±10%      |
|       | I                    | 5W                       | 100Ω~27kΩ   |                          |           |           |
|       | R(Metal oxide film)  | N                        | —           | —                        |           |           |
|       | P(Band wire)         | I                        | —           | —                        |           |           |
|       | N                    | 20W                      | 5.5mΩ~200mΩ |                          |           |           |
| MB30  | C(Coil)              | I                        | 20W         | 0.19Ω~1.3Ω               |           |           |
|       | N                    | 20W                      | 0.19Ω~1.3Ω  |                          |           |           |
|       | S(Wirewound)         | I                        | 15W         | 0.8Ω~2kΩ                 |           |           |
|       | N                    | 15W                      | 0.8Ω~2kΩ    |                          |           |           |
|       | R(Metal oxide film)  | I                        | 7W          | 220Ω~55kΩ                |           |           |
| MB40  | P(Band wire)         | I                        | —           | —                        |           |           |
|       | N                    | 30W                      | 5mΩ~160mΩ   |                          |           |           |
|       | C(Coil)              | I                        | 30W         | 0.16Ω~1.8Ω               |           |           |
|       | N                    | 30W                      | 0.16Ω~1.8Ω  |                          |           |           |
|       | S(Wirewound)         | I                        | 24W         | 1.2Ω~3.3kΩ               |           |           |
|       | N                    | 24W                      | 0.8Ω~330Ω   |                          |           |           |
|       | R(Metal oxide film)  | I                        | 15W         | 500Ω~110kΩ               |           |           |
|       | P(Band wire)         | I                        | —           | —                        |           |           |
|       | N                    | 40W                      | 5mΩ~0.35Ω   |                          |           |           |
|       | C(Coil)              | I                        | 40W         | 0.2Ω~2.6Ω                |           |           |
|       | N                    | 40W                      | 0.2Ω~2.6Ω   |                          |           |           |
|       | S(Wirewound)         | I                        | 32W         | 1.5Ω~5kΩ                 |           |           |
|       | N                    | 32W                      | 1.3Ω~470Ω   |                          |           |           |
|       | R(Metal oxide film)  | I                        | 20W         | 500Ω~180kΩ               |           |           |
|       | N                    | —                        | —           | —                        |           |           |

## Part Numbering System

|              |   |                  |                |   |                        |            |   |   |           |                                        |
|--------------|---|------------------|----------------|---|------------------------|------------|---|---|-----------|----------------------------------------|
| 1            | 2 | 3                | 4              | 5 | 6                      | 7          | 8 | 9 | 10        | 11                                     |
| M            | B | S                | 4              | 0 | A                      | 1          | 0 | 0 | K         | I                                      |
| Generic name |   | Resistor element | External shape |   | Mounting metal fitting | Resistance |   |   | Tolerance | Distinction of Inductive/non-Inductive |