

# Series PCS

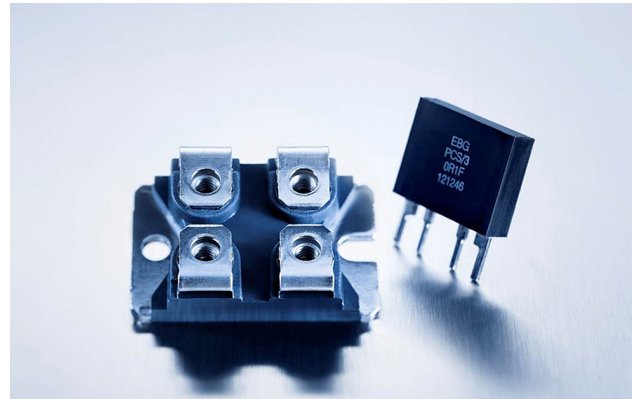
Precision Current Sense Resistors

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The PCS series uses Miba Resistors state-of-the-art technology to provide a highly reliable resistor with a Non-Inductive design. This makes the PCS resistor ideal for many current-monitoring and control applications.

## Features

- 3 W / 60 W / 100 W current sense resistor - 2 unique packages
- Four-terminal Kelvin connection
- 100% QC measurement
- Non-Inductive design
- ROHS compliant
- Housing materials in accordance with UL 94 V-0



## PCS-100

|   |   |
|---|---|
| <b>Resistance value</b>                 | 0.5 mΩ ≤ 1 Ω (other values on special request)  |
| <b>Resistance tolerance</b>             | ±1 % to ±5 % (0.5 % on special request for limited ohmic values)                          |
| <b>Temperature coefficient</b>          | < 60 ppm/°C (< 500 ppm/°C 27 mΩ to 49 mΩ) referenced to 25°C, ΔR taken at 15° and +105°C  |
| <b>Power rating</b>                     | 100 W (at 70°C case temperature) up to 150 A permanent not to exceed Ohm's Law power load |
| <b>Pulse current</b>                    | up to 500 A / 0.5 sec. (depending on ohmic value)   |
| <b>Dielectric strength voltage</b>      | 1,000 V DC (higher other on special request)  |
| <b>Heat resistance</b>                  | R <sub>th</sub> < 0.56 kW/K   |
| <b>Protection class</b>                 | acc. to IEC 950/CSA22.2 950/M – 89 and EN 60950.88:2                                      |
| <b>Mounting – torque for contacts</b>   | 1.1 Nm to 1.3 Nm 8 (static), screw-in depth max. 5 mm                                     |
| <b>Mounting – torque for base plate</b> | 1.3 Nm to 1.5 Nm (static)   |
| <b>Operating temperature</b>            | -55°C to +150°C   |
| <b>Storage temperature</b>              | -40°C to +85°C  |
| <b>Weight</b>                           | ~30 g   |

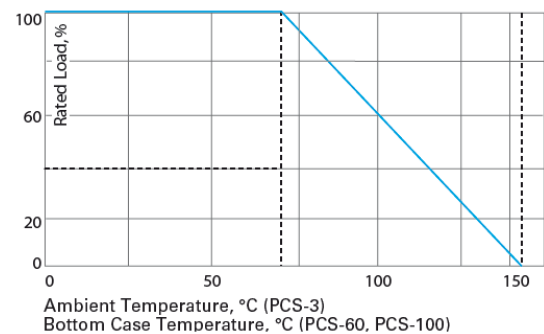
## PCS-3

|                                |  |
|--------------------------------|--|
| <b>Resistance value</b>        | 1 mΩ ≤ 60 mΩ (60 mΩ - 1 Ω on special request)  |
| <b>Resistance tolerance</b>    | ±1 % to ±5 % (0.5 % on special request for limited ohmic values)   |
| <b>Temperature coefficient</b> | 60 ppm/°C (typical) referenced to 25°C, ΔR taken at -15°C and +105°C; for values > 60 mΩ (ask for details) |
| <b>Power rating</b>            | 3 W at 70°C 40 A permanent (higher on special request)   |
| <b>Pulse current</b>           | up to 200 A / 0.5 sec. (depending on ohmic value)  |
| <b>Load life</b>               | 1,000 hours at rated power at +70°C, DR 0.2 % max.   |
| <b>Thermal shock</b>           | MIL-STD-202, method 107, Cond. A, DR 0.2 % max.  |
| <b>Moisture resistance</b>     | MIL-STD-202, method 106, DR 0.2 % max  |
| <b>Terminal material</b>       | Kelvin Terminals; tinned copper  |
| <b>Encapsulation</b>           | polyester over resistance element  |
| <b>Operating temperature</b>   | -55°C to +150°C  |
| <b>Storage temperature</b>     | -40°C to +85°C   |
| <b>Weight</b>                  | ~6 g   |

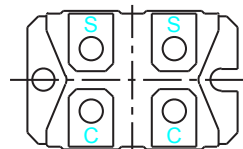
## PCS-60 The resistor equals PCS-100 except:

|                                    |   |
|------------------------------------|---|
| <b>Temperature coefficient</b>     | < 60 ppm/°C (< 500 ppm/°C: 20 mΩ to 49 mΩ) referenced to 25°C, ΔR taken at -15°C and +105°C |
| <b>Power rating</b>                | 60 W (at 70°C case temperature)   |
| <b>Dielectric strength voltage</b> | up to 4,000 V DC or 2,800 V AC (higher values on special request)                           |
| <b>Operating temperature</b>       | -55°C to +150°C   |
| <b>Storage temperature</b>         | -40°C to +85°C  |

## Power Rating (for all models)



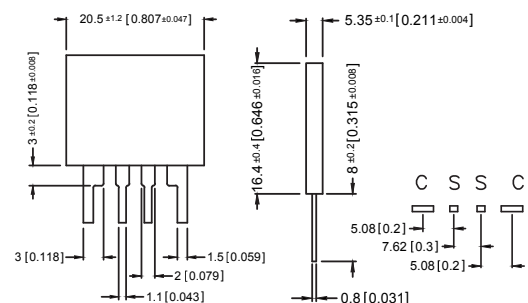
## PCS-100 / PCS-60



C = current connection (source)  
S = voltage connection (sense)

For dimensions, please see our HXP 200 series page 44.

## PCS-3 Dimensions in mm [inches]



## How to make a request

Model no. \_Ohmic Value\_ Tolerance

For example:

PCS-100 0R08 1% or PCS-60 0R001 2%

The above spec. sheet features our standard products. For further options please contact your local Miba Resistors representative



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