Precision Resistor Type PLC

Spec Sheet R171-1/2 July 97

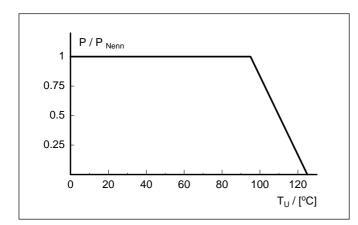
| Technical data | | |
|--|------------------------------|--|
| resistance range | 2,5mOhm - 10hm | |
| tolerances | 1%, 5% | |
| temperature coefficient tcr (R > 20mOhm) | < ±50ppm/K (20°C to 60°C) | |
| applicable temperature range | -55°C to +125°C | |
| load capacity | 1W | |
| thermal resistance to ambiente | Rth < 30K/W | |
| dielectric withstanding voltage | 50VAC | |
| inductance | < 15nH | |
| stability | deviation <0.5% after 2,000h | |

Remarks:

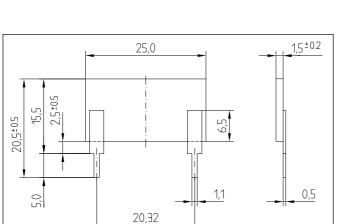
- Standard resistance values according to E6 (Typ PLC E12) with the additionel values of 2 and 5
- Minimum quantity of other values on request

The two terminal resistor type **PLC** was developed to serve as an economic alternative to the type C-N for application as current sensor in linearly regulated power units, switching units, and current sources.

A decisive feature of the resistor is the high transient overload capacity based on its good thermal abductance from resistor material to aluminum substrate. By an additional thermal contact of the aluminum carrier to a dissipator, e.g., by depressing to a heat sink or casing, the loading capacity can be raised to a manifold.



power derating curve

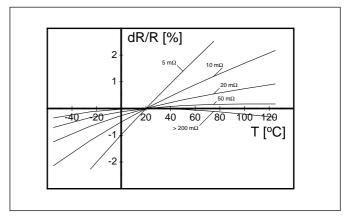


ΔR/R₂₀ [%]

-40 -20 20 40 60 80 100 120

T [°C]

Temperature dependence of the electrical resistance of ISA-PLAN Resistors



Change of the R(T)-curve to the TCR of copper terminals for very low ohmic 2-terminal-resistors

dimensions (mm)

| ordering | example: PLC - I | : PLC - R010 - 5 | |
|----------|------------------|------------------|--|
| type | resistance value | tolerance | |
| PLC | 10 mOhm | 5 % | |

(Technical modifications reserved)