



ENERGY AUTOMATION PRODUCTS

7PG23

Restricted earth fault

[siemens.com/reyrolle](https://www.siemens.com/reyrolle)

The 7PG23 5B3 relay is designed for restricted earth fault protection of transformer windings as well as phase and earth fault protection of reactors and the stator windings of large machines.

This relay is a high impedance design as they have the advantages over low impedance schemes that a more sensitive setting can be obtained without any loss of stability and the primary fault setting calculation is simplified. The 7PG23 5B3 has a minimum setting of 15V and provides a maximum setting of 270V with 5V steps.



Highlights



Low settings can be achieved



High stability with through faults

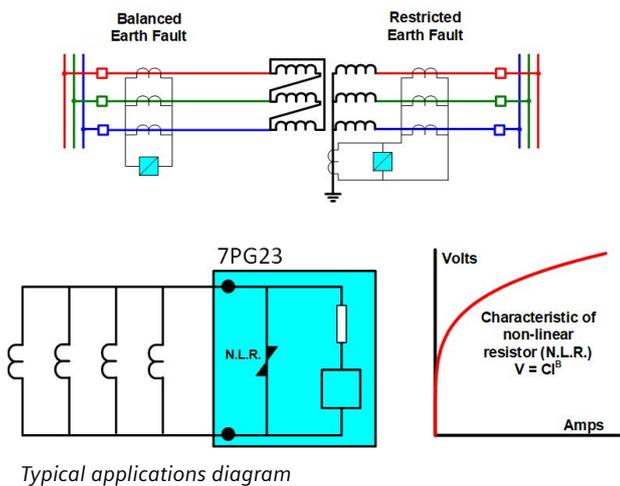


Built in metrosil

Benefits

- Compact design
- Easy parameterization from fascia
- Reliable performance
- No auxiliary power supply required

Applications



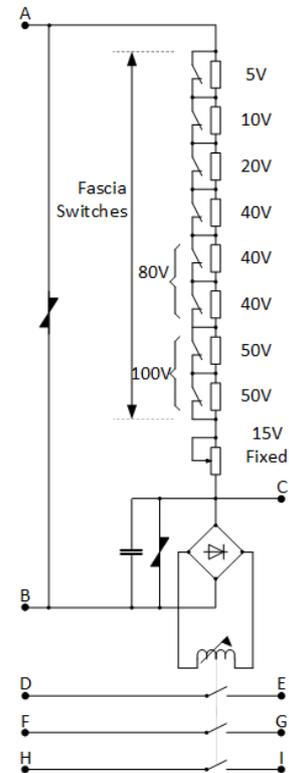
CT requirements

Experience has shown that most protection CTs are suitable for use with high impedance relays and that where the CTs are specifically designed for this protection their overall size may be smaller than that required for an alternative current balance protection. The basic requirements are:

- All CTs should, if possible, have identical turns ratios
- The knee-point voltage of each CT should be at least $2 \times V_s$.
- The knee-point voltage is expressed as the voltage applied to the secondary circuit with the primary open circuit which when increased by 10 % causes the magnetizing current to increase by 50 %.
- CTs should be of the low-leakage reactance type. Most modern CTs are of this type and there is no difficulty in meeting this requirement. A low leakage reactance CT has a jointless ring type core with the secondary winding evenly distributed along the whole length of the magnetic circuit, and the primary conductor passes through the approximate centre of the core

Settings overview

The 7PG23 relay incorporates 8 selection switches located on the fascia to select the required setting by including resistors into the network.



[Catalog Reyrolle 7PG23](#)

[Online shop - Industry Mall](#)

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