

7SG1635 Ohmega 315

Protection Relays

Document Release History

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Pre release

2010/02	Document reformat due to rebrand

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1 Overcurrent Guard

The relay is microprocessor based and the distance protection measuring elements run continuously on all fault loops and all zones. Previous generations of distance relays were unable to do this due to hardware limitations and power consumption issues. A common method to achieve adequate performance was to use Overcurrent Starting elements which when picked up would initiate the impedance measuring circuits which were otherwise inactive. One characteristic of this system was that distance trips could not occur if the fault current was below the Overcurrent starting setting. The Overcurrent Guard function in the relay produces an identical characteristic by applying an undercurrent blocking signal to the distance function.

This function can be used to provide a direct replacement for older relays where the overcurrent starting was used to provide additional current based protection grading or to prevent mal-operation caused by VT switchover schemes when a dedicated line VT is not available.

2 Settings

OC Guard (Enabled, **Disabled**)

Enables or disables the overall operation of the Overcurrent Guard function which can be used to set the minimum current level for which a Distance element operation can occur.

OC Guard Setting (0.01-25 xIn) **1.5xIn**

Sets the current level as a multiple of rated current which must be exceeded for a Distance protection operation to occur.

OC Guard Z1 (OCG Z1 Enabled, **OCG Z1 Disabled**)

OC Guard Z2 (OCG Z2 Enabled, **OCG Z2 Disabled**)

OC Guard Z3 (OCG Z3 Enabled, **OCG Z3 Disabled**)

OC Guard Z4 (OCG Z4 Enabled, **OCG Z4 Disabled**)

The zones upon which the current block is applied are individually selected using these settings. When Disabled the zone will operate for an impedance inside it regardless of the current level.