

The logo for Silent DIG, featuring the word "SILENT" in white capital letters above the word "DIG" in red capital letters, all contained within a white square with a red diagonal stripe.The logo for PowerFactory, consisting of the word "POWERFACTORY" in white capital letters on a blue rectangular background.

PowerFactory 2021

Technical Reference

Schneider ComPact NS

POWER SYSTEM SOLUTIONS
MADE IN GERMANY

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Disclaimer

DlgSILENT protection device models are developed using publicly accessible information, such as user manuals, and are not validated or tested by the respective manufacturers.

1 Model information

Manufacturer Schneider

Model ComPact NS

Variants The Schneider ComPact NS series contains the electronic trip unit "*MicroLogic 6.0*" available for circuit breakers NS based on the information given in [1]. Each combination of model and available sensor rating is a dedicated type.

2 General description

The electronic trip unit is modelled as LSIG which corresponds to "*MicroLogic 6.0*". The units are modelled as 3-pole without neutral. The Earth fault input is calculated from the phase currents.

Current transformer

The "*CT*" slot holds the assigned ideal 3-phase current transformers which has to be modelled with a ratio of 1/1 A.

Measurement unit

The "*Measurement*" slot processes the transformer inputs and holds the rated current value of the circuit breaker. The zero-sequence current is determined from the phase values.

Trip logic

The "*Trip Logic*" holds an OR functionality for generating the tripping signal.

3 Electronic trip unit

The electronic trip unit "*MicroLogic 6.0 A*" consists of three phase current stages and one zero-sequence current stage. The underlying phase current stage blocks the overlaying phase current stage if started, e.g. if the short-time stage is started, the long-time stage is blocked.

5 References

Address	Relay Setting	Model Unit	Model Parameter	Note
	Current Setting Ir	Long-time	Pickup Current	
	Time Setting tr	Long-time	Time Setting	see 1)
	Pick-up Isd	Short-time	Pickup Current	
	Time Setting tsd for I2t Off	Short-time	Time Setting	for max breaking time
	Time Setting tsd for I2t On	Short-time	Time Setting	for max breaking time
	Pick-up Ii	Instantaneous	Pickup Current	
	Operating time	Instantaneous	Time Setting	see 2)
	Pick-up Ig	Earth fault	Pickup Current	see 3)
	Time Setting tg for I2t Off	Short-time	Time Setting	for max breaking time
	Time Setting tg for I2t On	Short-time	Time Setting	for max breaking time

Notes:

- 1) – Minimum tripping time set to 0.69 s to avoid curve reversal.
- 2) – Instantaneous Ii tripping time of 20 to 50 ms (non tripping time to max breaking time).
- 3) – Current range depending on sensor rating:
 - * 400 A < In < 1250 A: Ig = 0.2 to 1 p.u.
 - * In > 1250 A: Ig = 500 to 1200 A

4 Variants

Type	Sensor rating	Trip unit
NS 630b	630 A	Electronic
NS 800	800 A	Electronic
NS 1000	1000 A	Electronic
NS 1250	1250 A	Electronic
NS 1600(b)	1600 A	Electronic
NS 2000	2000 A	Electronic
NS 2500	2500 A	Electronic
NS 3200	3200 A	Electronic

5 References

- [1] Schneider Electric Industries SAS, 35 rue Joseph Monier, 92506 Rueil-Malmaison, FRANCE.
ComPact NS Catalogue 2019. LVPED211021EN.