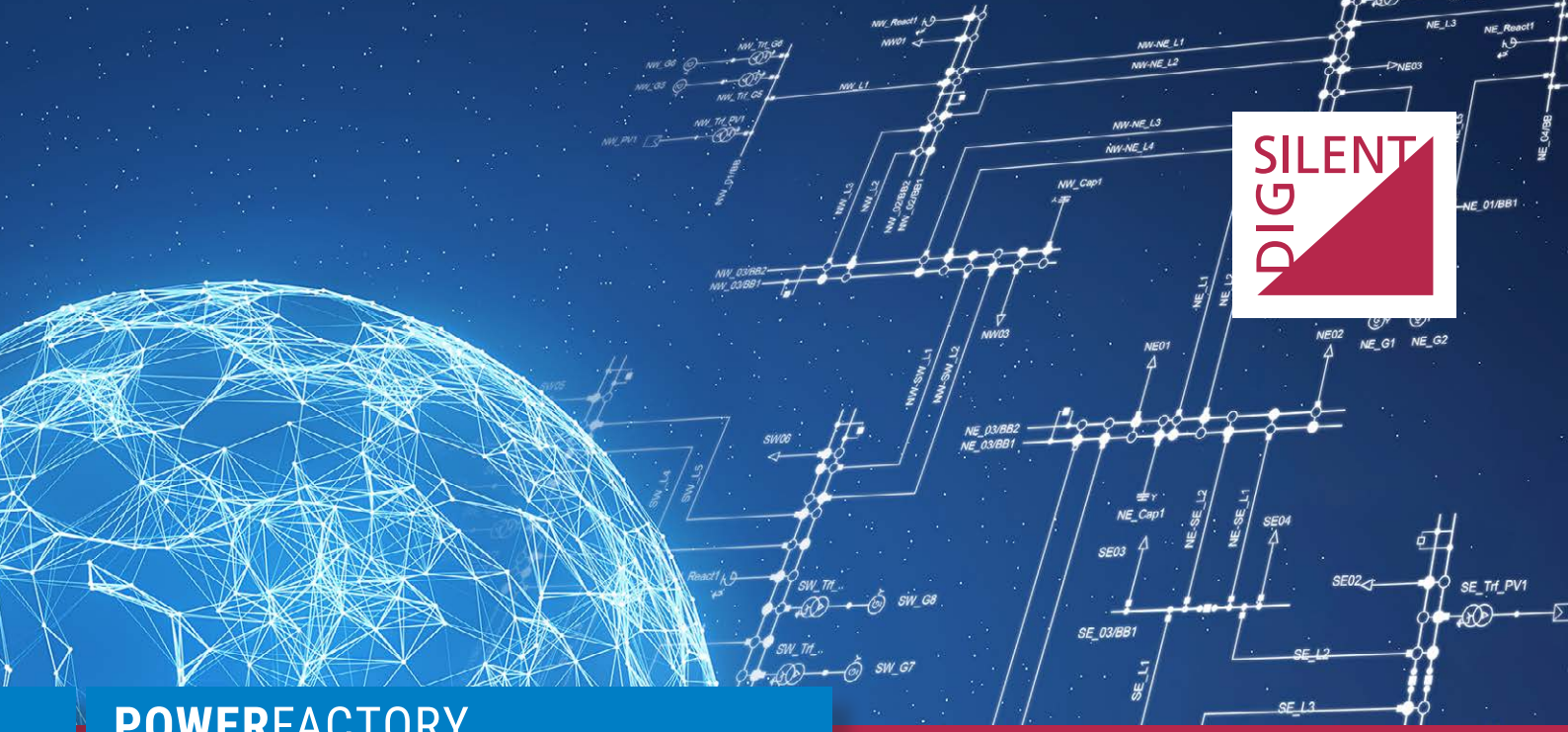

POWERFACTORY

PowerFactory 2021

Technical Reference

Schneider TeSys GV

PF2021

POWER SYSTEM SOLUTIONS

MADE IN GERMANY

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Contents

Disclaimer

DIgSILENT 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 TeSys GV

Variants The Schneider TeSys GV series contains magnetic trip units *"GV2L"*, *"GV3L"* and thermal-magnetic trip units *"GV2P"* and *"GV3P"* for circuit breakers TeSys GV2 and GV3 based on the information given in [2]. Other trip units have similar current ranges. The thermal-magnetic trip unit *"GV7"* is based on the information given in [1]. Each combination of model, trip unit and available sensor rating is a dedicated type.

2 General description

The magnetic or thermal-magnetic trip units consist of thermal and magnetic blocks. The units are modelled as 3-pole without neutral.

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.

Trip logic

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

3 Magnetic trip unit

The magnetic trip unit consists of one phase current stage. The magnetic curves are modelled as ideal DT curves.

Address	Relay Setting	Model Unit	Model Parameter	Note
	Tripping Current Id	Magnetic	Pickup Current	
	Time Delay	Magnetic	Pickup Time	fixed to 8 ms

4 Thermal-magnetic trip unit

The thermal-magnetic trip unit consists of two phase current stages. Thermal characteristics are digitalised according to information given in [2] and [1]. The magnetic curves are modelled as ideal DT curves.

Address	Relay Setting	Model Unit	Model Parameter	Note
	Settings Range	Thermal	Pickup Current	see 1)
	Time Delay	Thermal	Time Setting	
	Thermal Curve	Thermal	Characteristic	see 2)
	Tripping Current Id	Magnetic	Pickup Current	see 3)
	Time Delay	Magnetic	Pickup Time	fixed

Notes:

1) – Setting step size assumed to be 4 steps.

2) – GV2 and GV7: Characteristics 3poles from cold state and 3poles from hot state available.
   – GV3: Characteristics 3poles from cold state and 3poles from hot state for Ir mini available.

3) – GV3: Setting is assumed to be constant for Ir mini and maxi.
   – GV7: Minimum trip and total clear curve 12 to 14 x Ir.

5 Variants

Type	Sensor rating	Trip unit
GV2L (LE)	0.4; 0.63; 1; 2.5; 4; 6.3; 10; 14; 18; 25; 32 A	Magnetic
GV2P (ME, RT)	0.16 (P, ME); 0.25 (P, ME); 0.4; 0.63; 1; 1.6; 2.5; 4; 6.3; 10; 14; 18; 23; 25(P, ME); 32(P) A	Thermal-magnetic
GV3L	25; 32; 40; 40; 50; 65; 73; 80 A	Magnetic
GV3P	13; 18; 25; 32; 40; 50; 65 A	Thermal-magnetic
GV7R (RE, RS)	20; 25; 40; 50; 80; 100; 150; 220 A	Thermal-magnetic

6 References

[1] Schneider Electric GmbH, Gothaer Straße 29, 40880 Ratingen, GERMANY. *Motorschutzschalter TeSys GV*. ZXKTESYSGV.

[2] Schneider Electric Industries SAS, 35 rue Joseph Monier, 92506 Rueil-Malmaison, FRANCE. *TeSys Catalogue 2019-2020*. MKTED210011EN.