GE TLS 1000

The GE TLS 1000 model supports:

- 3 protection zones (M1,MG1,MT,MT1,M2 and MG2)
- Blocking zones (MB and NB)
- 4 timers (TL1,TL2,TL3,TL4)
- 2 separated starting units (I0-I0and I0 sens settings) for M1/MG1 , M2/MG2 and MT/MTG

Data entry notes:

Board	Relay setting	Model setting
ABM101/102	r	Replica impedance (Zm)-MB block
	I1	Current I>> (Ip2)-AMB101/102 I1 block
	K	k0(k0) - ABM101/102 k0 block
	KV	KV („Logic“ tab page)ABM101-102 KV block
	I0 shift	I0shift („Logic“ tab page)ABM101-102 I0I2shift block
	I2 shift	I2shift („Logic“ tab page)ABM101-102 I0I2shift block
	OFFSET	Zoff/Zmax(Koff) - MB block
	Pol	I2shift („Logic“ tab page)ABM101-102 Pol shift block
AFM101/104	r	Replica impedance (Zm) - M1 & MG1 block (2 settings)
	MULT	Reach multiplier (Zres)) - M1 & MG1 block (2 settings)
	K0	k0(k0) - AFM101/104 K0 block
	S, AFIL, 0SUP,BFIL,MULT, ZRO	Not supported
AFM102/105	r	Replica impedance (Zm) –M2 & MG2 block (2 settings)
	MULT	Reach multiplier (Zres)) –M2 & MG2 block (2 settings)
	K0	k0(k0) - AFM102/105 K0 block
	S, AFIL, 0SUP,BFIL,MULT, ZRO	Not supported
AFM103/106	r	Replica impedance (Zm)–MT & MTG block (2 settings)
	MULT	Reach multiplier (Zres))–MT & MTG block (2 settings)
	K0	k0(k0) - AFM103/106 K0 block
	S, AFIL, 0SUP,BFIL,MULT, ZRO	Not supported
ETM101	IΦ-Φ	Current I>> (Ip2)-ETM101 I0-I0 & I0 sens block
	I0 sens	Earth current 3*I0 (Ie)-ETM101 I0-I0 & I0 sens block
	PHA,PHB&PHC(I0,I2,Vp)	AFM101/104 Ground Upol Selector AFM102/105 Ground Upol Selector
	VP SENS Φ-Φ	Voltage (Uset) - ETM101 Vp sens O-O
	VP SENS Φ-G	Voltage (Uset) - ETM101 Vp sens O-G
ETM102	IΦ-Φ	Current I>> (Ip2)-ETM102 I0-I0 & I0 sens block
	I0 sens	Earth current 3*I0 (Ie)-ETM102 I0-I0 & I0 sens block
	PHA,PHB&PHC(I0,I2,Vp)	AFM103/106 Ground Upol Selector
	VP SENS Φ-Φ	Voltage (Uset) - ETM102 Vp sens O-O
	VP SENS Φ-G	Voltage (Uset) - ETM102 Vp sens O-G
ISM101/102	ΦZ1	Relay angle(phi)-M1,M2, MT block (3 settings)
	ΦZ0	Relay angle(phi)-MG1,MG2, MTG block (3 settings)
	Ib, IT	Not supported
ULM141	TL1	Time setting(Tdelay)-TL1 block
	TL2	Time setting(Tdelay)-TL2 block
	TL3	Time setting(Tdelay)-TL3 block
UTM101	M1 Characteristic timer	Characteristic angle(alpha)-M1 block
	MG1 Characteristic timer	Characteristic angle(alpha)-MG1 block
	MT Characteristic timer	Characteristic angle(alpha)-MT block
	MTG Characteristic timer	Characteristic angle(alpha)-MTG block
UTM102	M2 Characteristic timer	Characteristic angle(alpha)-M2 block
	MG2 Characteristic timer	Characteristic angle(alpha)-MG2 block
VMM101/102	I2LD	VMM101/102 I2LD block
	KI2Z	K („Logic“ tab page) - ABM101-102 K2IZ block
	NB	Replica impedance (Zm)–NB block

	OFFSET M1/MG1	Zoff/Zmax(Koff) – M1 and MG1 block (2 settings)
	OFFSET MT/MTG	Zoff/Zmax(Koff) – MT and MTG block (2 settings)
	VP ANG	shift(„Logic“ tab page) - VMM101-102 VP ANG

Note: the relay Setting ΦZ0 and ΦZ1 (Module ISM101/102) are modelled by the “Relay angle” variable (phi setting) inside the M1,M2,MT (ΦZ1) block and the MG1,MG2,MT,MTG block (ΦZ0). The user must insert the same value inside M1,M2,MT and inside MG1,MG2,MT,MTG.