

TGDR-F01 is a digital relay operated by magnitude & phase angle of zero sequence voltage & current get from GPT and ZCT when phase to earth fault occurs. TGDR-F01 is applied to DL(Distribution Line) to protect equipments & power system from short-circuit, over-load, insulation weakness or destroying of equipments, phase to earth fault and etc, also has contact terminals, trip contacts for CB open and signal contacts for alarm. TGDR-F01 has not only various operation time characteristic, convenience & correct operation current setting, but also fault recorder for saving fault waveforms & events data when fault occurs, it makes correct fault analysis of power system, then power system reliability will be improved.



TGDR-F01

### Specifications

Type	TGDR-F01	
Auxiliary Power	Input: AC/DC 110~220V (Free Voltage)	
	Burden: Operate <70W, Standby <30W	
Frequency	50Hz or 60Hz	
Display	Character LCD 4 × 20	
Digital Output	T/S1 (1a×1)	20A at AC250V, 30A at DC125V, Resistive Load
	T/S2~T/S5 (1a×4)	5A at AC250V, 5A at DC125V, Resistive Load
	SYS_ERR (1b×1)	1A at AC250V, 1A at DC125V, CosØ=0.1, Energization Time 25ms
Analog Input	Ground Current	AC 1.5mA (Burden <100, PF=0.5)
	Ground Voltage	AC 190V (Burden <0.5VA)
Communication	Protocol	Modbus
	RS-485(2 Wire)	1 Port (Back Side)
	RS-232	1 Port (Front Panel)
Self Diagnosis	Memory / Setting / Watch Dog / Power Fail	
Fault Record	Tipped value with time stamp	
ZCT	TZS Type ZCT (200mA / 1.5mA)	
Dimension	W x H x D = 168 x 218 x 204 mm	
Weight	About 4kg	

### Setting Range

Protection	Operation Conditions	Setting Values		Time Characteristic		
		Range	Step	Range	Step	Curve
67G Selective Ground Relay (SGR)	Operation Current	0.9~10mA	0.1mA	0.1~10 Lever	0.1	NI
	Operation Voltage	5~100V	1V			
	Basis Angle (MTA)	0~60°	1°	0.04~60 Sec.	0.01 Sec.	DT
	Operation Phase Angle	MTA±90°	X			

## ■ Measurement

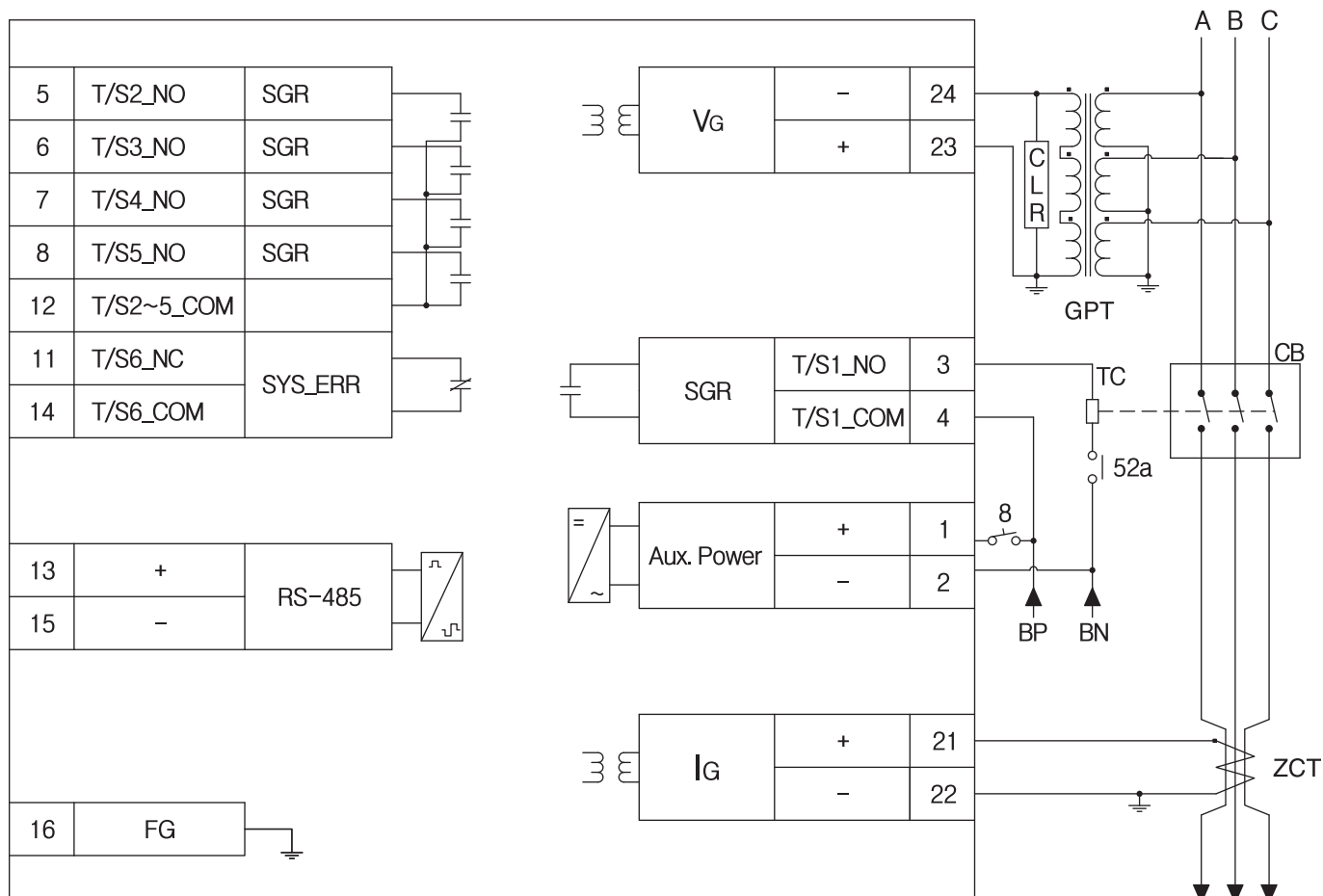
Measurements		Measuring Range
GPT secondary ground voltage effective value	$V_G$	0~250V
ZCT secondary ground current effective value	$I_G$	0~350mA

The measurement range is the range measurable by the secondary side, and when the GPT ratio is input, it is displayed as the primary side value.

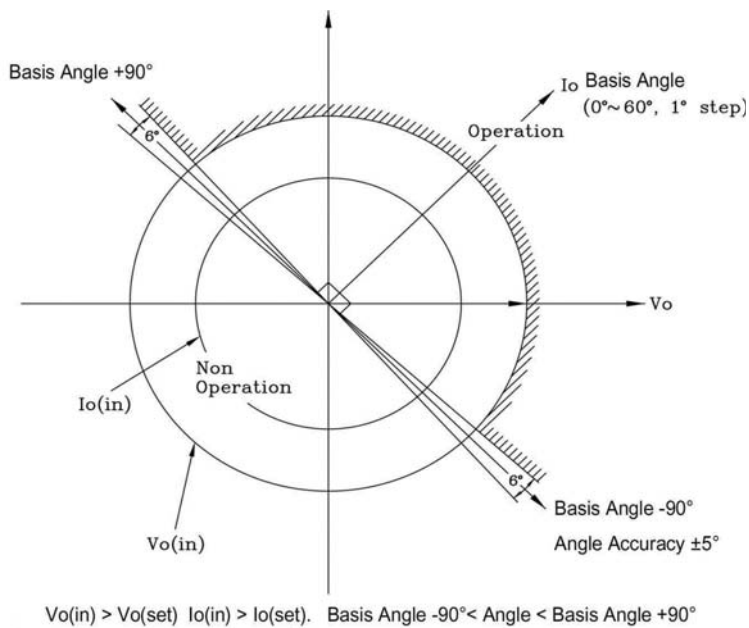
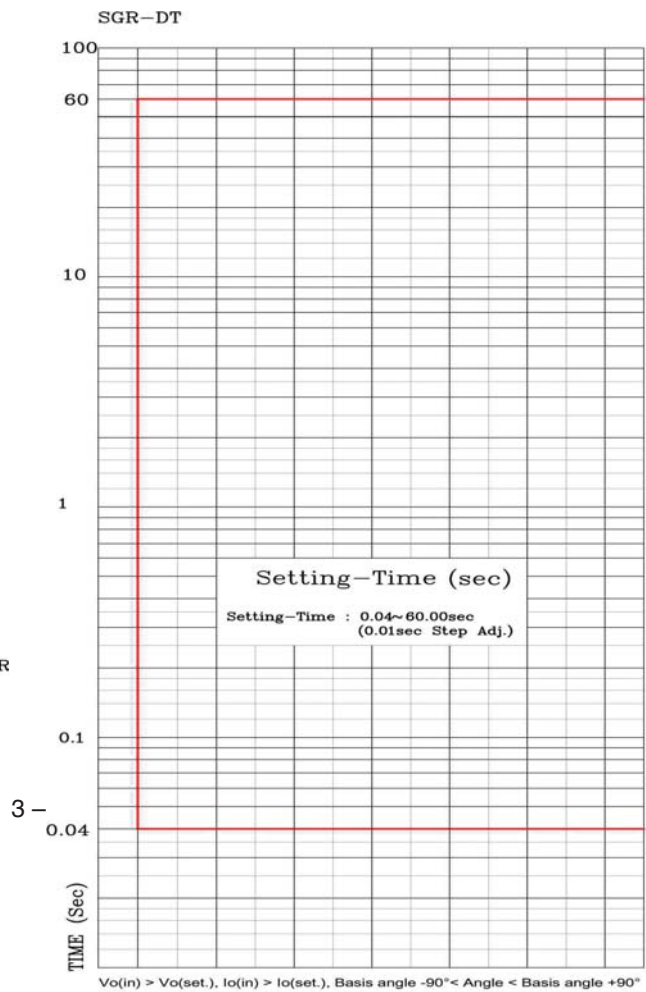
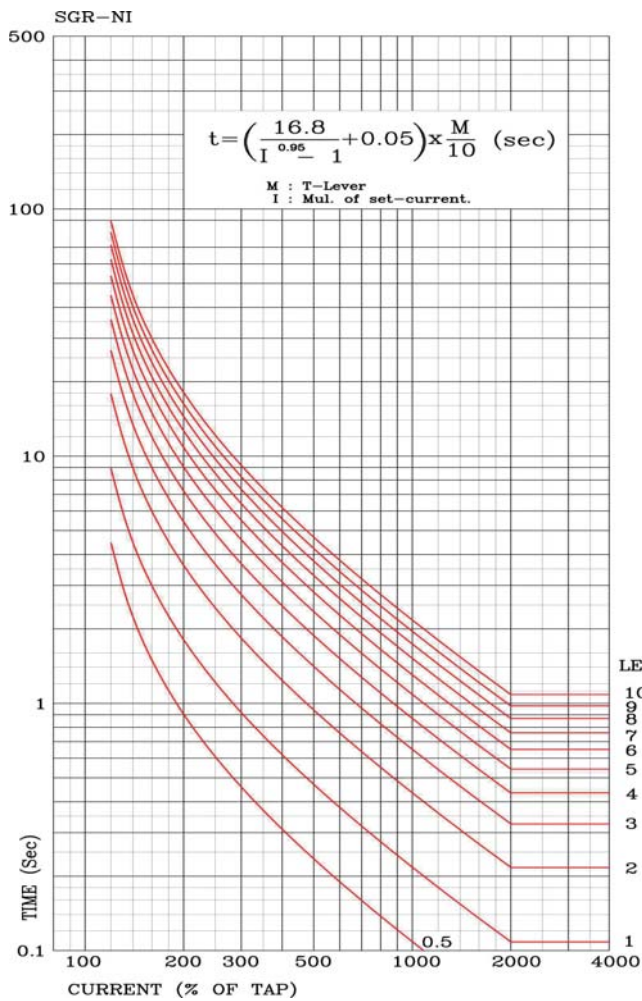
## ■ Terminal

Function	Terminal No.		Function
Aux. Power+	1	2	Aux. Power-
T/S1_NO	3	4	T/S1_COM
T/S2_NO	5	6	T/S3_NO
T/S4_NO	7	8	T/S5_NO
—	9	10	—
T/S6_NC (SYS_ERR)	11	12	T/S2~5_COM
RS-485+	13	14	T/S6_COM
RS-485-	15	16	FG
—	17	18	—
—	19	20	—
IG+	21	22	IG-
VG+	23	24	VG-

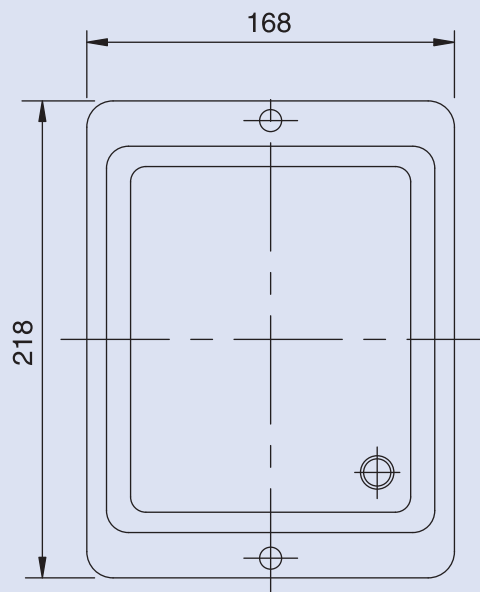
## ■ External Connection



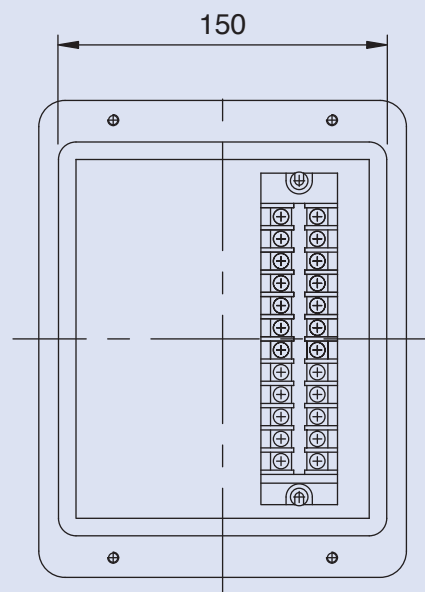
## Time Characteristics



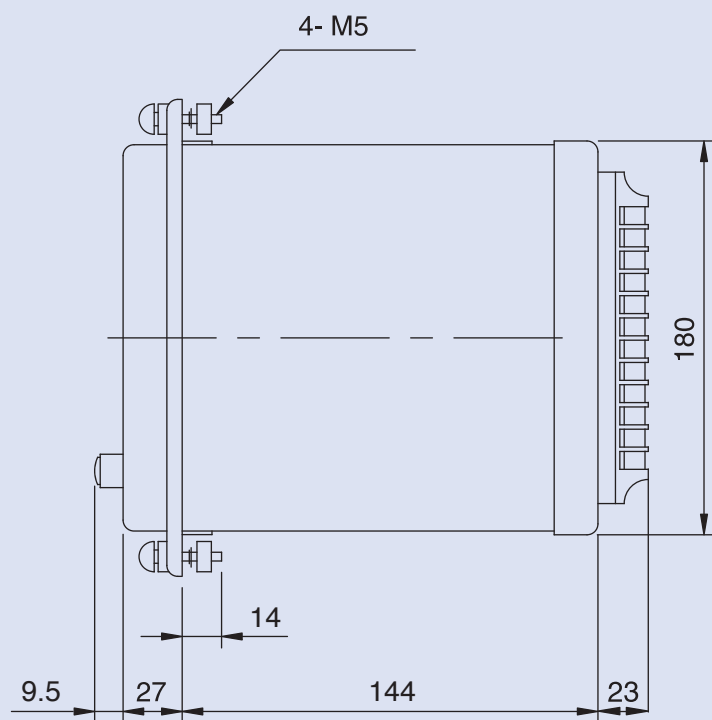
## ■ Dimension Diagram



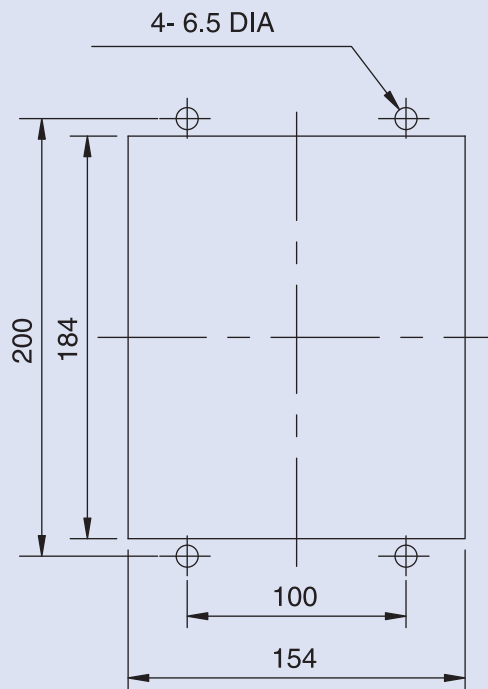
Front



Back



Side



Panel Cut

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