400V Low Voltage Hydroelectric Generator Protection Relay

POWER SYSTEM PROTECTION EQUIPMENT



This small hydro unit control system based on our device features automatic startup, excitation, regulation, synchronization, power adjustment, normal & emergency shutdown, and multi-protection for voltage, current, frequency and temperature.

KEY FEATURES

- 87GT Generator Transformer Protection Relay
- 400V Low Voltage Generator Protection Relay
- Generator Backup Protection Relay 441H
- 87G/50/51 Generator Protective Relay

KEY SPECIFICATIONS

Item	Specification
Generator Voltage	400V
Unit Capacity	<1000 kW
Application	Small hydropower
Protection	Overcurrent, voltage, frequency, reverse power, earth fault
Control	Startup / shutdown / speed regulation
Synchronization	Generator synchronization
Water Control	Water-level startup/shutdown/regulation
Recording	Fault waveform recording

MAIN PROTECTION FUNCTIONS

No.	Setting Name	Setting Range	Unit	Parameter Description
1	Instantaneous Overcurrent	0.1-100	A	Set according to actual conditions, this setting is for printing only
2	Time-Delayed Instantaneous Overcurrent	0.1-100	A	Default as Zone 1
3	Time-Delayed Instantaneous Overcurrent Time Delay	0-100	S	–
4	Phase Overcurrent	0.1-100	A	–
5	Phase Overcurrent Time Delay	0-100	S	–
6	Low Voltage Blocking	1-400	V	–
7	Negative Voltage Blocking	1-400	V	–
8	Inverse Time Phase Overcurrent	0.1-100	A	–
9	Inverse Time Phase Overcurrent Time Delay	0-100	S	–
10	Inverse Time Phase Overcurrent Type	0~3	–	0=Disabled, 1=Normal Inverse, 2=Very Inverse, 3=Extremely Inverse

No.	Setting Name	Setting Range	Unit	Parameter Description
11	Overload	0.1-100	A	–
12	Overload Time Delay	0-100	S	–
13	Overload Type	0~2	–	0=Disabled, 1=Trip, 2=Alarm
14	Zero-Sequence Overcurrent Stage I	0.1-100	A	–
15	Zero-Sequence Overcurrent Stage I Time Delay	0-100	S	–
16	Zero-Sequence Overcurrent Stage II	0.1-100	A	–
17	Zero-Sequence Overcurrent Stage II Time Delay	0-100	S	–
18	Zero-Sequence Overcurrent Stage III	0.1-100	A	–
19	Zero-Sequence Overcurrent Stage III Time Delay	0-100	S	–
20	Zero-Sequence Overcurrent Stage III Type	0~2	–	0=Disabled, 1=Trip, 2=Alarm
21	Zero-Sequence Voltage Blocking Setting	1-400	V	–
22	Negative-Sequence Overcurrent Stage I	0.1-100	A	–
23	Negative-Sequence Overcurrent Stage I Time Delay	0-100	S	–
24	Negative-Sequence Overcurrent Stage II	0.1-100	A	–
25	Negative-Sequence Overcurrent Stage II Time Delay	0-100	S	–
26	Negative-Sequence Overcurrent Stage II Type	0~2	–	0=Disabled, 1=Trip, 2=Alarm
27	Reverse Power Protection Setting	0.10~900.00	W	Reverse power protection setting, set with secondary value
28	Reverse Power Protection Time Delay	0-100	S	–
29	Overvoltage Setting	1-600	V	–
30	Overvoltage Time Delay	0-100	S	–
31	Undervoltage Setting	1-400	V	–
32	Undervoltage Time Delay	0-100	S	–
33	Zero-Sequence Overvoltage Setting	1-400	V	–
34	Zero-Sequence Overvoltage Time Delay	0-100	S	–
35	Zero-Sequence Overvoltage Type	0~2	–	0=Disabled, 1=Trip, 2=Alarm
36	Underfrequency Protection Setting	35-65	Hz	–
37	Underfrequency Protection Time Delay	0-100	S	–
38	Low Voltage Blocking Underfrequency Setting	1-400	V	–
39	Slip Frequency Blocking Underfrequency Setting	1-30	Hz/s	–
40	Overfrequency Protection Setting	35-65	Hz	–
41	Overfrequency Protection Time Delay	0-100	S	–
42	PT Circuit Breakage Time Delay	0-100	S	–
43	Control Circuit Breakage Time Delay	0-100	S	–
44	Non-Electrical Quantity 1 Time Delay	0-100	S	–
45	Non-Electrical Quantity 2 Time Delay	0-100	S	–
46	Non-Electrical Quantity 3 Time Delay	0-100	S	–
47	Non-Electrical Quantity 4 Time Delay	0-100	S	–
48	DC Channel 1 Lower Conversion Limit	0-600	–	Transmitter calculation value, this setting corresponds to 4mA
49	DC Channel 1 Upper Conversion Limit	0-600	–	Transmitter calculation value, this setting corresponds to 20mA
50	DC Channel 2 Lower Conversion Limit	0-600	–	–
51	DC Channel 2 Upper Conversion Limit	0-600	–	–
52	DC Channel 3 Lower Conversion Limit	0-600	–	–
53	DC Channel 3 Upper Conversion Limit	0-600	–	–

ORDERING INFORMATION

MOQ	LEAD TIME	TRADE TERMS	PAYMENT	WARRANTY
1 unit	7-15 working days	EXW / FOB / CIF / DDU	T/T, L/C, WU, PayPal	12 months