HYP600S Microcomputer Programmable Protection Relay

Product introduction

HYP600S is a kind of programmable protection device , characterized in high -capacity and Resource Redundancy. It applicable for network protection, control, measuring and monitoring of grid with rated voltage no higher than 40.5kV. It can be configured to protect circuit, capacitor group, electric motors, It also applicable for different main wire connection, like a single bus, dual-bus and multi-bus wiring. It is also available for different type of grids , just as ungrounded neutral contact system, the blow-out coil grounding system and the low resistance grounding system.

Function features

1. High reliability design
All the components of HYP600S are industrial-grade, HYP600S adopts professional EMC design ,combined with perfect on-line self-test procedure to have a real-time monitoring towards the input power, analog power and digital power.
2. Flexible AC quantity wiring connection method
There are basic version, intermediate and advanced version of alternate current input, the users are able to make a choice in accordance with their own needs.
3. Powerful programmable logic
It is able to carry graphical programming on internal logic resources of HYP600S in the Windows environment by matching PLPShell ® Package, which is simple operation, flexible application and adaptable.
4. High precision measurement and metrology
Protection CT and measurement CT respectively input and ensure the measurement precision and high reliability. Frequency tracking technology is adopted to monitor the changes of system frequency and adjust the time interval of data sampling. The calculation errors caused by fundamental frequency wave are able to be eliminated. The fundamental frequency component, harmonic component, and sequence component of the system can be worked out accurately in the case that the deviation between base hand and frequency is 50HZ.
5. Rich I / O interface resources
・7/4 channel AC current input：respectively access to protection CT, measuring CT or other current.
・4 channel AC voltage input：respectively access to three-phase AC voltage or other voltage.
・10/16 channel switch quantity input：AC and DC dual-use, can be used in the state of collecting switch quantity.
・7 channel switch quantity input：DO1~DO6 both can access to control circuit.
6. Fault recorder
HYP600S is able to save a total of 8 groups recorded wave records with time-scale wave record.
7. Protection fixed value swift
HYP600S can store 4 groups of protection fixed value into non-volatile registers. Groups can switch through panel and communication. HYP600S is adapt to various operating modes quickly and easily due to group switching capability.
8. Software
We provides software PLPShell ® for device debugging of HYP600S. This software can help consisting input signals, setup protection logic as well as controlling output relay, indicator or alarm.
9. Sequence events recording
・HYP600S can work out 200 articles of message for fault analysis.
10. Accurate timing
・ Artificial device panel timing mode： the coarse timing is generally used in the debugging process.
11. Communication function
・HYP600S is equipped with two standard interfaces: the one on the panel is RS-232 interface, the other on the backplane is RS-485 interface.
・An optional standard Ethernet interface on the backplane can be chosen.
・RS-485 communication protocol: IEC60870-5-103 and Modbus RTU.
・Ethernet communication protocol: Modbus TCP/IP.
・Different communication can set different protocols and can operate simultaneously.
12. Relaying protection function
・ In the clearance interruption (IEC 60255-11) and power loss electricity during the 100ms,the device will not loose electricity (220Vdc or Vac)。
・ After loss power for 50msh,the device will generate loss-electricity SOE and store important data.

Protection function

IEEE code	Function	HYP661S	HYP621S	HYP641S	HYP631S	HYP651S
50P1	Phase transient speed breaking current protection	√		√		√
50P2	Phase limited speed breaking current protection	√	√	√		√
50P3 (27、47、67)	Phase over-current protection (can choose compound voltage interlock, direction interlock）	√	√			√
51P (27、47、67)	Phase normal inverse over-current protection (can choose compound voltage interlock, direction interlock)	√	√	√		√
50N1	Zero-sequence definite time first-section protection	√		√		√
50N2(51N)	Zero-sequence definite time second-section protection (can choose normal inverse protection)	√		√		√
59 A	Over-voltage alarming		√	√	√	
59T	Over-voltage tripping		√	√		
79	Three-phase one shot recloser	√				
	Relay accelerating after auto-reclosing	√				
	Circuit breaking control alarming	√	√	√		√
	Non-energy protection (3 pieces, can choose alarming or tripping)	√		√		
60	PT disconnection alarming	√	√	√	√	√
50Q1	Negative-sequence definite time over-current first-section			√		
50Q2	Negative-sequence definite time over-current second-section			√		
66	Locked-rotor protection			√		
48	Over-long starting time protection			√		
49A	Thermal alarming protection			√		
49T	Thermal tripping protection			√		
59N	Zero-sequence over-voltage protection	√				
59G	Unbalance voltage protection		√			
50G	Unbalance current protection		√	√		
27	Low-voltage protection		√	√	√	√
	Loss of voltage restart			√		
	Incoming Bi-throw/ bus bar back-up throw					√

Outline dimension

Front view　　Side view　　Top view　　Perforated view