



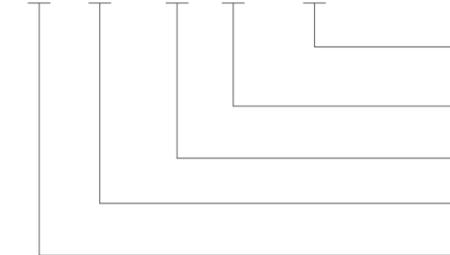
7 Intelligent Phase-change System Series (HY-TPS)

Intelligent Phase-change System Series

HY-TPS Intelligent phase-change system adopts the power carrier communication way, realizes data exchange between the master switch and the branch phase-change switch, can adjust the unbalanced three-phase automatically in the case of without breaking down the user power supply. Because of the zero-crossing switching technology and preemptive time-sharing communication mechanism, effectively overcome the shortcomings of traditional artificial encountered adjust three-phase unbalanced and conflict and interference between different branch communication. HY - TPS are widely used in the 380V/220V low voltage power distribution system, is becoming one of low voltage distribution three-phase unbalanced load solution.

MODEL

HY-TPS-□/120-4L



Method of connecting wire: 3L Three-phase three-wire system/4L Three-phase four-wire system
Rated current: 120A
Voltage level: 0.22/0.38 kV
Intelligent phase-change system series
Huayi LV electric brand name

PRODUCT FEATURE

The load side realizes balance

- Realize all-round balance from the load side to the entire transformer area

Triple locking against short circuit

- Fire test pressure interlock, control power supply interlock and control signal interlock

The power consumption of the device is small

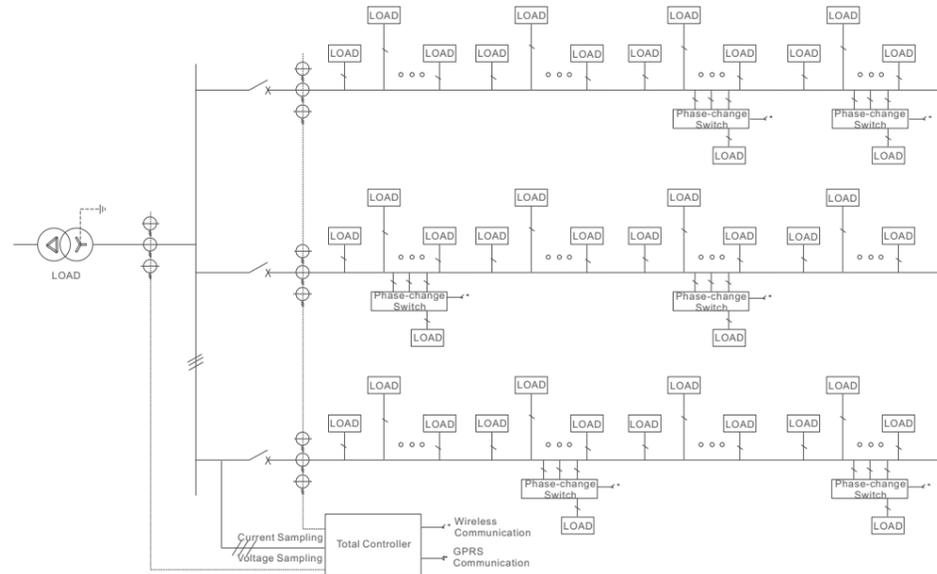
- Operation power consumption of the equipment $\leq 8W$
- The phase-change process is continuous, smart zero-crossing switching and shock-proof

No maintenance or management

- Without a specialist maintenance and management after putting into operation

WORKING PRINCIPLE

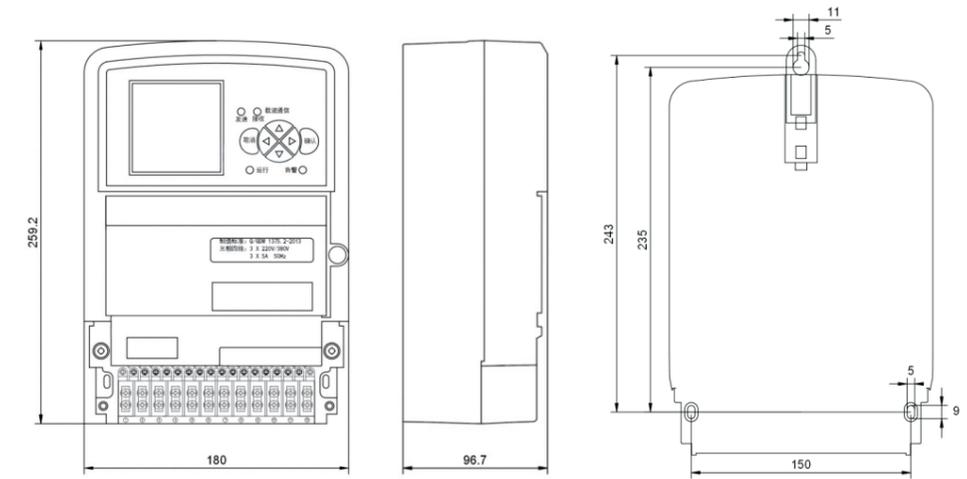
HY-TPS consists of master switch and phase-change switch, master switch collects and analyzes the three-phase load data of the station area, intelligently controls the phase-change switch to switch the single-phase load, and realizes the three-phase balance of the entire station area from the load end.



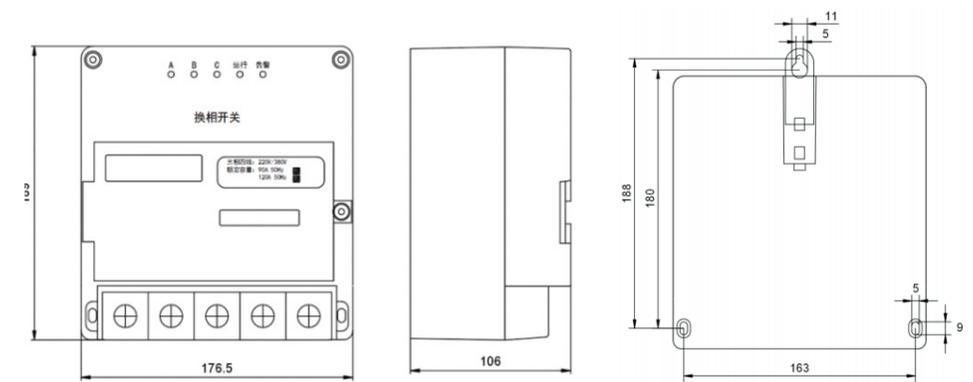
TECHNICAL PARAMETERS

| Item | Parameters | |
|---|--|--|
| | Phase-change Switch | Master-control Switch |
| Rated Operational Voltage | AC380V/220V | AC380V/220V |
| Nominal Insulation Voltage | AC660V | AC660V |
| Rated Withstand Voltage | AC2500V (1min power frequency) | AC2500V (1min power frequency) |
| Overall Power Consumption | ≤10W | ≤10W |
| Rated Current | 120A | / |
| Commutation Time | ≤10ms | / |
| Texture | stainless steel | stainless steel |
| Protection Grade | IP65 | IP65 |
| Boundary Dimension (Width*Depth*Height)/mm | 177*106*189 | 180*97*206 |
| Installation Way | pole-mounted, wall-mounted | pole-mounted, wall-mounted |
| Communication Interface | / | RS485, RS232 |
| Communication Mode | wireless communication (communication distance ≥ 1.5km) | wireless communication (communication distance ≥ 1.5km) |
| Ambient Temperature | -40~+70°C | -40~+70°C |
| Working Altitude | ≤2000m, special elevation needs to be customized | ≤2000m, special elevation needs to be customized |
| Relative Humidity | 40°C, ≤95% | 40°C, ≤95% |

装置外形尺寸



size figure of master switch



size figure of phase-change switch

Note: this size is for reference only, refer to the manual for details

TYPICAL CASE

Question scene: A certain station area in Linyi, Shandong

Problem description: A certain station area in Linyi, Shandong with 315kVA public substation capacity, 190 families power users, radius of power supply is about 530 meters. Before installation, the specific unbalance is about 67.6%, imbalance problems urgently need governance

Treatment measure: install a set of HY-TPS series intelligent phase-change switch for governance, including 1 set of master switch, 19 sets of phase-change switches

Governance effect: after the devices put into operation, degree of unbalance is down to 12.3%, decreasing amplitude is reached 81.8%, governance effect is remarkable

