# FTU BF2-0



ZHUHAI GOPOWER SMART GRID CO.，LTD

# BF2-0 FTU

## 1. Product profile

This FTU is a new type of high voltage switch control device which combines DSP high speed sampling operation chip and high performance ARM chip. It can quickly and stably complete the monitoring of switch body. It integrates the functions of protection, measurement, control, monitoring, communication and tele-control. It has the characteristics of high integration, flexible configuration and friendly interface. the invention is widely applied to radiation type power supply and ring network power supply system , can help the system identify the transient fault and permanent fault of the circuit , can automatically eliminate the influence of the transient fault on the line , can isolate the permanent fault section , avoid the large - area power outage for a long time , and automatically restore the power supply of the non - fault section grid , so that the distribution network automation can be realized economically and practically .

## 2. Main technical parameters

Work environment
Ambient temperature：-40 ~ 85℃
Relative humidity：10% ~ 100%
Height above sea level：≤2000m
Atmospheric pressure：70 ~ 106KPa
Operating environment：Outdoor, free of flammable, explosive, chemical corrosion and violent vibration

Remote measurement
Ac current sampling accuracy：Class 0.5
Ac voltage sampling accuracy：Class 0.5
Power sampling accuracy：Class 1

Remote signalling open in
Signal input mode: passive contact
Remote signalling open in resolution ratio：≤2ms
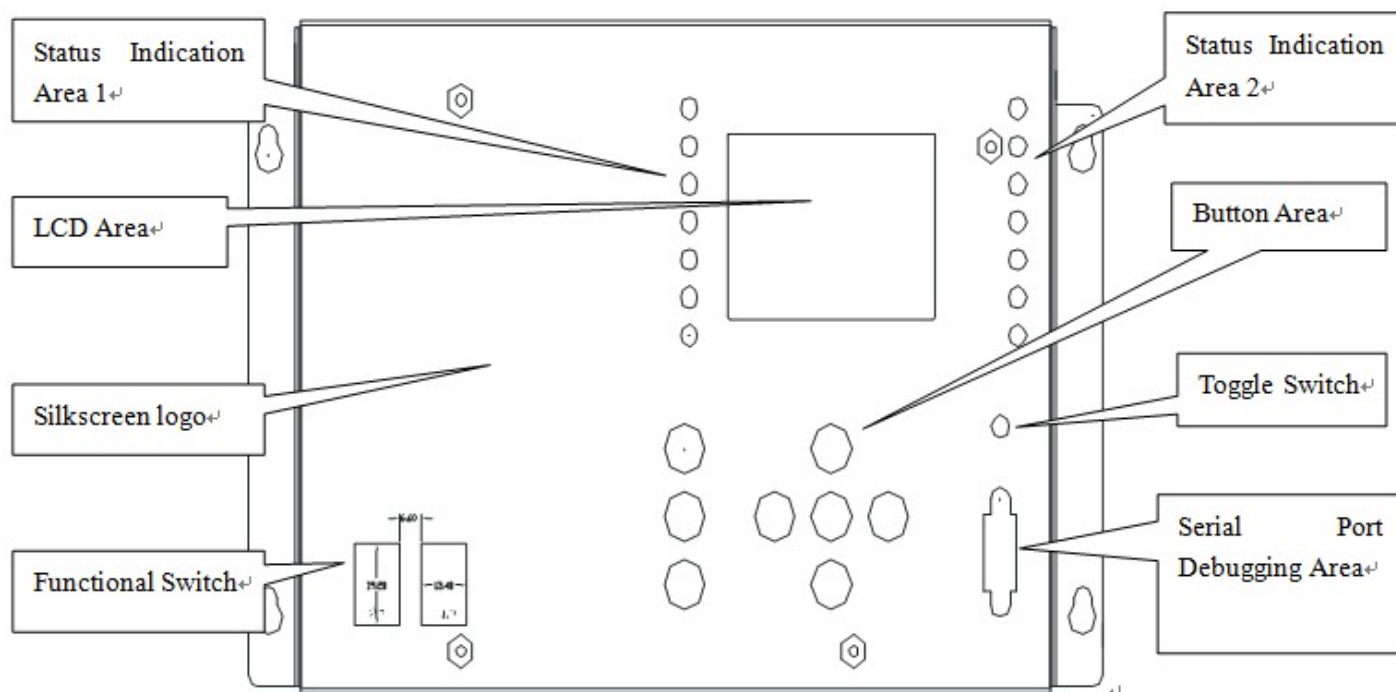Software anti-shake time：10-1000ms settable

Electromagnetic compatibility
Meet fast transient interference test
Meet high frequency interference test
Meet surge test
Meet static discharge interference test, etc.

# 3. Visual human-maching interface



Status Indication Area 1

LCD Area

Silkscreen logo

Functional Switch

Status Indication Area 2

Button Area

Toggle Switch

Serial Port Debugging Area

## 4. Key functions:

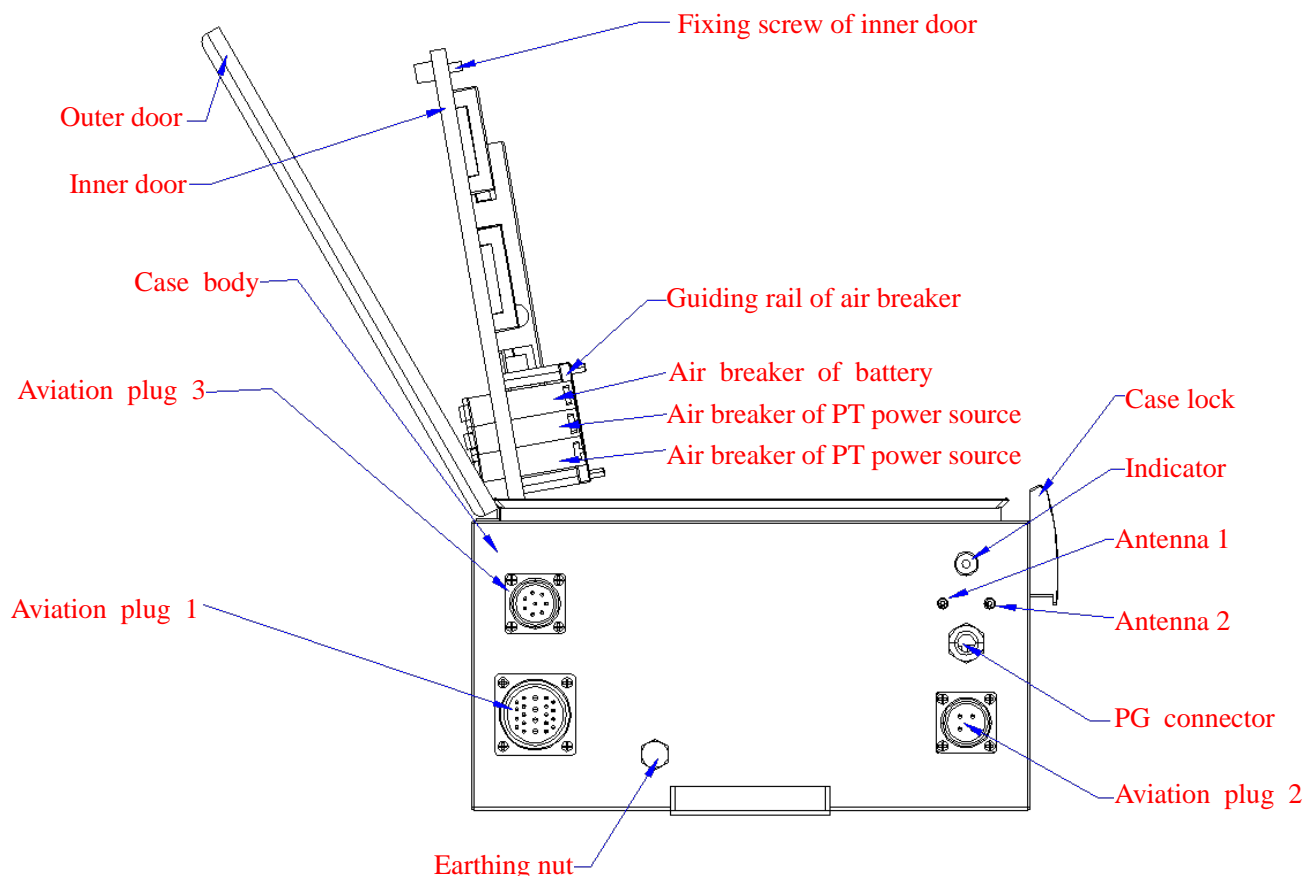| S/N | Functions | Remarks |
| --- | --- | --- |
| 1. | Three section protection | Each protection can be vote back independently |
| 2. | Over-current count protection | Failure time count, output after meeting the number of times, output mode is optional |
| 3. | Zero-sequence protection | Output options: exit, alarm and tripping |
| 4. | Pre - voltage fault protection | Protection can be accelerated when combined at fault point |
| 5. | Post-reclosing acceleration | Vote back independently |
| 6. | Constant time-lag | The protection time is fixed |
| 7. | Inverse time limit | Multiple protection curves optional |
| 8. | Ring network protection | Hardware needs to configure double PT |
| 9. | Event Log | The recording time is exactly millisecond |
| 10. | Status enquiry | The main content is remote control and remote metering |
| 11. | Remote programmable | Remote input support programmable |
| 12. | | |

## 5. Communication protocols

| S/N | Protocols | Remarks |
| --- | --- | --- |
| 1. | IEC60870-5-101 balanced | |
| 2. | IEC60870-5-101 unbalanced | |
| 3. | IEC60870-5-104 | |
| 4. | DNP3.0 | Now support level 3 |
| 5. | Modbus | |
| 6. | | |
| 7. | | |

## 6. Communication interface

| S/N | Interface | Remarks |
| --- | --- | --- |
| 1. | RS232 | Standard configuration |
| 2. | RS485 | Selective configuration |
| 3. | Ethernet | Selective configuration |
| 4. | Optical fiber | Selective configuration |
| 5. | Interface | |
| 6. | | |

# 7. Product drawing

The case of this device is stainless steel with sprayed powder. It is beautiful and has sufficient rigidity and excellent anti-rust performance. The following picture is the overall structure and layout of the device.

Fixing screw of inner door

Outer door

Inner door

Case body

Guiding rail of air breaker

Air breaker of battery

Air breaker of PT power source

Air breaker of PT power source

Aviation plug 3

Case lock

Indicator

Antenna 1

Antenna 2

Aviation plug 1

PG connector

Aviation plug 2

Earthing nut

Overall Structure and Layout of the Device

Note: This picture is only describing the location and layout. Parts of the components are optional.