# HXGN15–12(F · R)

box stationary–type AC metal closed – loop network switch equipment



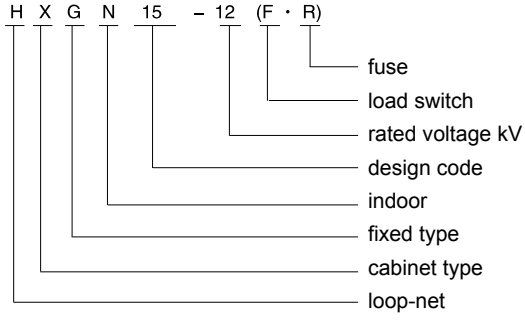
## General description

The box stationary–type AC metal closed–loop network switch equipment shortly named rig–net box is produced for meeting the need of electric network reconstruct and construction in cities. It can be used to open the load current and short–circuit current and close the short–circuit current. This rig–net box is equipped with a vacuum load switch, and its operation mechanism is spring mechanism. This one can be operated not only by hand, but also by electric. The earth switch and isolated switch are equipped with hand–operating mechanism. The rig–net box packed easier, and its physical volume small, no combustion and explore risk, and has the capacity of five preventions.

## The scope of application

The rig–net box is suitable for trophies AC 50Hz electric power system for distributing electric emergency. It is widely used electric network reconstruct and construction in cities industrial and mining business high–rise building and common facilities. As the rig–net electrical supplement units and terminal devices, it takes charge of the distribution and control of electric energy and the protection for electrical equipment. It can be also used in box–type substation. this rig–net box complies with pertinent regulations of 《High–voltage AC load switch and fuse combined electric appliances》 and 《3~35kv AC metallic packing switch equipment》

## Model No.



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### peration environment conditions

4.1 absolute altitude: less then 1000m.
4.2 ambient temperature: max +40℃， min–25℃
4.3 ambient humidity: daily average relative humidity ≤ 95%
monthly average relative humidity ≤ 90%
4.4ambient air is not apparent polluted by corrosive or flammable gas and water vapor.
4.5 earthquake–resistance: earthquake intensity less then 8.
4.6 place without frequent severe shock.

### The main technical parameter (see the following table)

| code | item | | unit | data |
|---|---|---|---|---|
| 1 | rated voltage | | kV | 12 |
| 2 | rated current | load cabinet | A | 630 |
| | | combined cabinet | | 125 |
| 3 | rated short-circuit close current(peak) | | kA | 50 |
| 4 | rated short-circuit break current | | kA | 31.5 |
| 5 | rated active load break current | | A | 630 |
| 6 | 4s thermal stable current | | kA | 20 |
| 7 | rated dynamic stable current(peak) | | kA | 50 |
| 8 | 1min power prequency withstand voltage | | kV | 42(break port,48) |
| 9 | thunder impulse withstand voltage | | kV | 75(break port,85) |
| 10 | mechanical life | | 次 | 10000 |
| 11 | rated exchange current(combined appliance) | | A | 3150 |
| 12 | operate mode | | | manual or motor |
| 13 | protect level | | | IP2X |

### The rig–net current supply principle

The rig–net current supply is commonly comprised of three basic parts(see the following drawing) The in–and–out line boxes as the rig–net units, when the any circuit appears the breakdown, can be isolated in time, and another unit guarantees customer transformer a road consecution power supply. Customer rig–net box can protect and isolate the transformer, which is facility to examine and repair. The rig–net box can be arbitrarily extended, and have many schemes according to the customer requirements.

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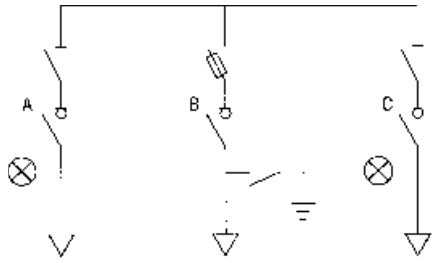
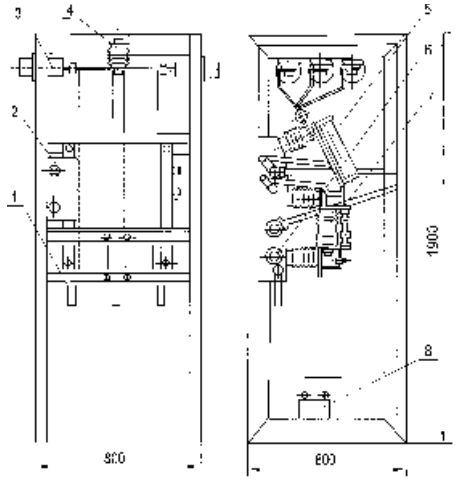



figure1

| | |
|---|---|
| 电缆进出线柜 | in–and–out cable box |
| 用户变压器支路柜 | in–and–out cable box |
| 电缆进出线柜 | |




1.earth switch 2.operation mechanism
3. sleeve through walls
4.isolator 5 protective fuse (isolating knife switch)
6 spring operating mechanism 7 load switch
8 current transformer

Drawing2

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### The structural features

7.1 structural properties features the shell of rig–net box includes the basic framework、coverboard、enclosed construction comprised by lateral plate. The cover of rig–net box is bus room, and the front of bus room is load switch room, the middle and under of it is in–and–out cable and other components. The main devices of rig–net box are vacuum load switch、isolating switch ( the isolating knife switch with protective fuse ) 、earth switch、lightning arrester、operating mechanism、interlocking gear and measurement and computation circuit ( see drawing 2)the rig–net is assembled with vacuum load switch of the type FN25–12. the vacuum switch opens failures and excess current, the isolating switch、vacuum switch、earth switch and door interlock each other according to some program, which can effectively prevent from misoperations. The vacuum switch box and operation mechanism with electric spring storing energy can switch on and off knife switch fast. According to customer’ s requirements it can assembled with some protective relay, protective fuse combined wiring box, fusion tube with firing pin, under the short circuit condition, the firing pin stock the knife switch and imply quickly closing and opening, which can effectively protect appliances.

7.2 Functional unit
The rig–net box mainly assemblies with two– service–position vacuum load switch of the type FN 25–12D, the main scheme is the incoming line and outlet line box

7.2.1The incoming line box scheme
the box assemblies with two– service–position vacuum load switch of the type FN 25–12D, the CT and PT can be placed in the box freely. The major loop is controlled by vacuum load switch of the type FN 25–12D assembled with isolation and earth knife switch, and can attach to three service positions including switching on generatrix、isolating、earth.

7.2.2 The outlet line box scheme
The box assemblies with two– service–position vacuum load switch of the type FN 25–12D.R and protective fuse. the CT and PT and lightning arrester can be placed in the box freely. Hence the computation box can be omitted

7.3 “Five preventions” atresia factions
7.3.1 Electric transmission: unless the box door is closed and locked, the console switch is place on the “turn on”, the operation load switch can be closed.

7.3.2 power–off operation: unless the load switch is on the isolating place, the earth switch can be closed. The door of box can be opened unless the earth switch is on cut–on place and the insulating clapboard is infixed in its place.

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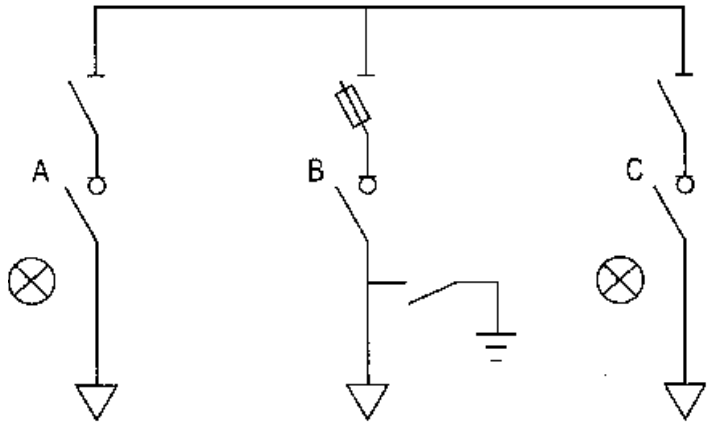



figure1

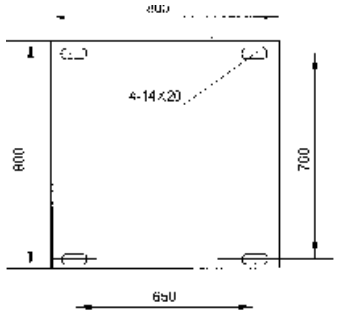
电缆进出线柜　用户变压器支路柜　电缆进出线柜
in–and–out cable box　in–and–out cable box

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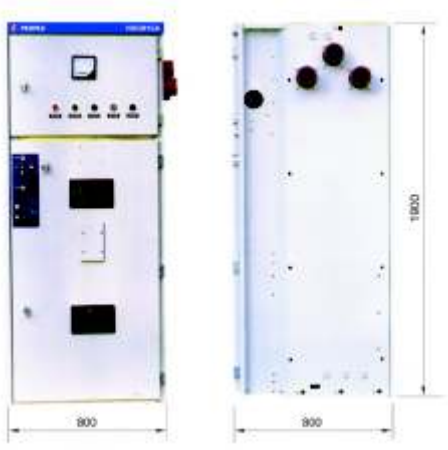
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### Outline and installation dimension




see the drawing 3 about the rig–net installation dimension




see the drawing 4 about the rig–net outline dimension

### Notice when ordering

What should be supplied as follow when ordering

10.1First circuit scheme, number or the first system diagram

10.2Secondary electrical schematic diagram and control loop diagram

10.3If needing nonstandard first, secondary circuit scheme, it can be committed to our company to design and produce.

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