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FZW28 – 12

BOUNDARY VACUUM LOAD SWITCH

OUTDOOR / THREE-PHASE / SF6 GAS TECHNOLOGY



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DENGGAO ELECTRIC CO.,LTD.

FZW28 OUTDOOR BOUNDARY VACUUM LOAD SWITCH

1. SUMMARY

New problem of distribution network as below:

1. When the main trunk circuit is modified, the branch line failure rate is rising;
2. Due to the failure of branch line user and protect mismatch, spread to the whole feeder power outages and lead to liability disputes;
3. Transformer substation grounding selected-line equipment can not satisfy quick find grounding point demand;
4. Due to protective circuits with multilevel add delay, worsening of power network working.

FZW28-12F type solves the problem as above.

Function of the Boundary Switch

Automatic removal of single-phase grounding fault

When a single-phase grounding fault occurs in the branch line of the user, the tap changer will automatically open, and the users of the substation and other branches on the feeder line will not feel the occurrence of the fault.

Automatic isolation of phase-to-phase short circuit fault

In case of phase-to-phase short-circuit fault of the user's branch line, the boundary switch shall be opened immediately after the outgoing line protection of the substation trips. After the substation is reclosed, the fault line is automatically isolated, and other branch users on the feeder line quickly recover power supply (equivalent to a transient fault).

Quickly locate the fault point

After the boundary switch protection action is caused by the fault of the user's branch line, only the responsible user is responsible for the power failure. The fault information shall be actively submitted by the user, and the power company can quickly send personnel to the site for troubleshooting; If the boundary switch is equipped with a communication module, it will automatically send the information to the power management center.

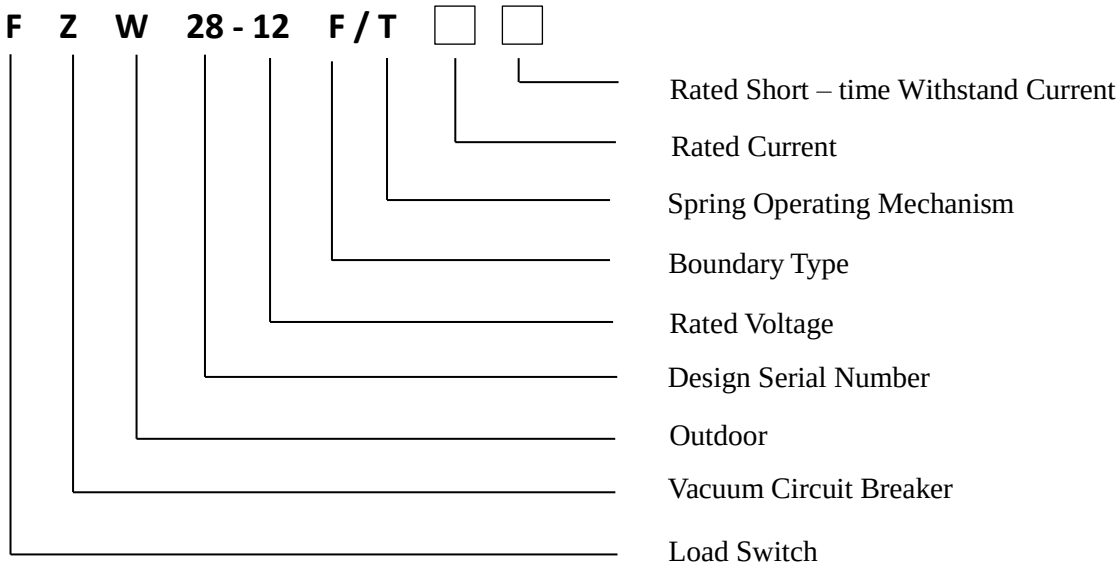
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Monitor user load

The boundary switch can be configured with wired or wireless communication accessories to transmit the monitoring data to the power management center to realize remote real-time data monitoring of the user's load.

The boundary switch complies with GB / T 3804-2004 (3.6kV ~ 40.5kV high voltage AC load switch) and DL (Remote terminal of distribution automation system).

2. MODEL AND MEANING



3. USAGE: ENVIRONMENTAL CONDITIONS

1. Altitude: ≤ 1000 m. If the altitude is higher than 1000m, the rated insulation level shall be corrected.
2. Ambient air temperature: maximum 40 ℃, minimum - 25 ℃, daily temperature difference 25k
3. Temperature: daily average relative humidity ≤ 95%, monthly average relative humidity ≤ 90%
4. Solar auxiliary radiation intensity: 0.1W/cm2
5. Icing thickness: not more than 10mm
6. Earthquake resistance: horizontal acceleration 0.3g, vertical acceleration 0.2g
7. Outdoor Wind speed (Wind pressure): 35m/s (700Pa)
8. Pollution level: not more than e-level

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4. MAIN ADVANTAGES

1. Reliable sealing performance: with mature sealing shell technology, the shell protection level is up to IP67. The shell is processed by dying stretching and a one-time molding process, which is easy to seal the box, with high air tightness and high mechanical strength.
2. Maintenance-free: the main circuit, secondary components, and operating mechanism of the load switch are sealed in SF6 gas (zero gauge pressure) and are not affected by the external environment. The performance is stable, reliable, and maintenance-free.
3. Excellent incoming and outgoing linearity: Porcelain sheathed cable or silicone rubber corner bushing is adopted to make the phase-to-phase distance reach 280mm and the external insulation performance is excellent.
4. Safe use: anti-explosion device is installed on the top of the box, which can effectively prevent high-temperature gas or splashes from escaping in case of switch failure.
5. Flexible installation mode: it can be installed by either pole lifting or pole sitting.
6. Unique functions: it has such unique functions as the automatic removal of single-phase grounding fault, automatic isolation of phase-to-phase short-circuit fault, rapid positioning of fault point and monitoring of user load, three-stage protection, reclosing, remote communication, etc.

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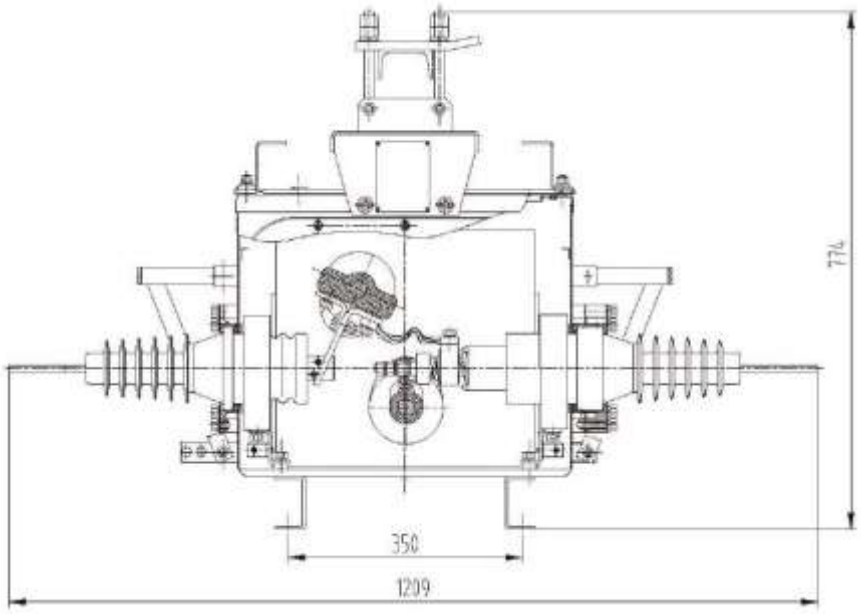
5. TECHNICAL PARAMETER TABLE

No.	Item		Unit	Parameters
1	Rated Frequency		Hz	50 / 60
2	Rated Voltage		kV	12
3	Rated Current		A	630
4	Rated Short-time Power Frequency Withstand Voltage	Phase, to Earth (wet)	kV / min	34 / 1
		Phase, to Earth (dry)		42 / 1
		Extinguishing Chamber Fracture, Isolation Fracture (dry)		49 / 1
		Auxiliary Control Circuit to Earth		2 / 1
5	Lightning Impulse Withstand Voltage	Phase, to Earth	kV	75
		Extinguishing Chamber Fracture, Isolation Fracture (dry)		85
6	Rated Short-Time Withstand Current and Continuous Time		kA/s	20/4
7	Rated Peak Value Withstand Current		kA	50
8	Rated Short-Circuit Closing Current (Peak Value)			50
9	Annual Leakage Gas			≤ 0.5%
10	Main Circuit Resistance		μΩ	≤ 550
11	Usage Life Span		Times	10000
If the altitude is over 1000m, the rated insulation level should be modified as appropriate				

Note: If the parameters requested by the user are beyond the scope of the above table, they can be determined after consultation with our company.

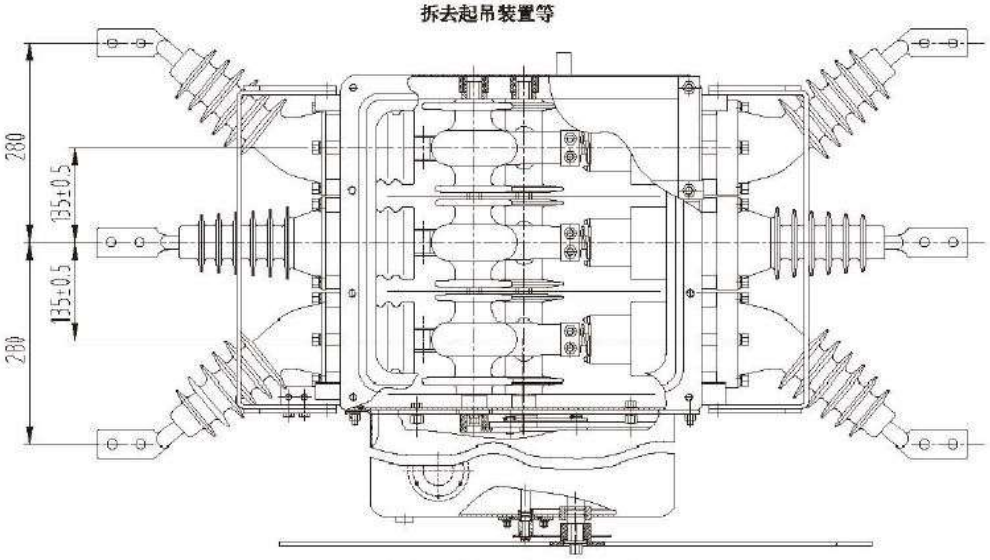
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6. OUTLINE AND INSTALLATION DIMENSIONS

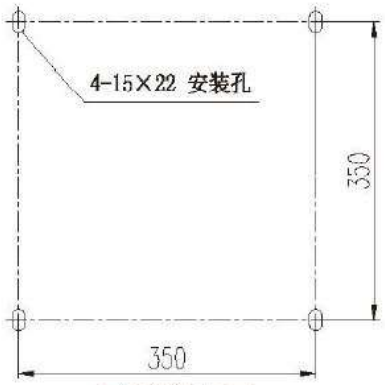


俯视

拆去起吊装置等



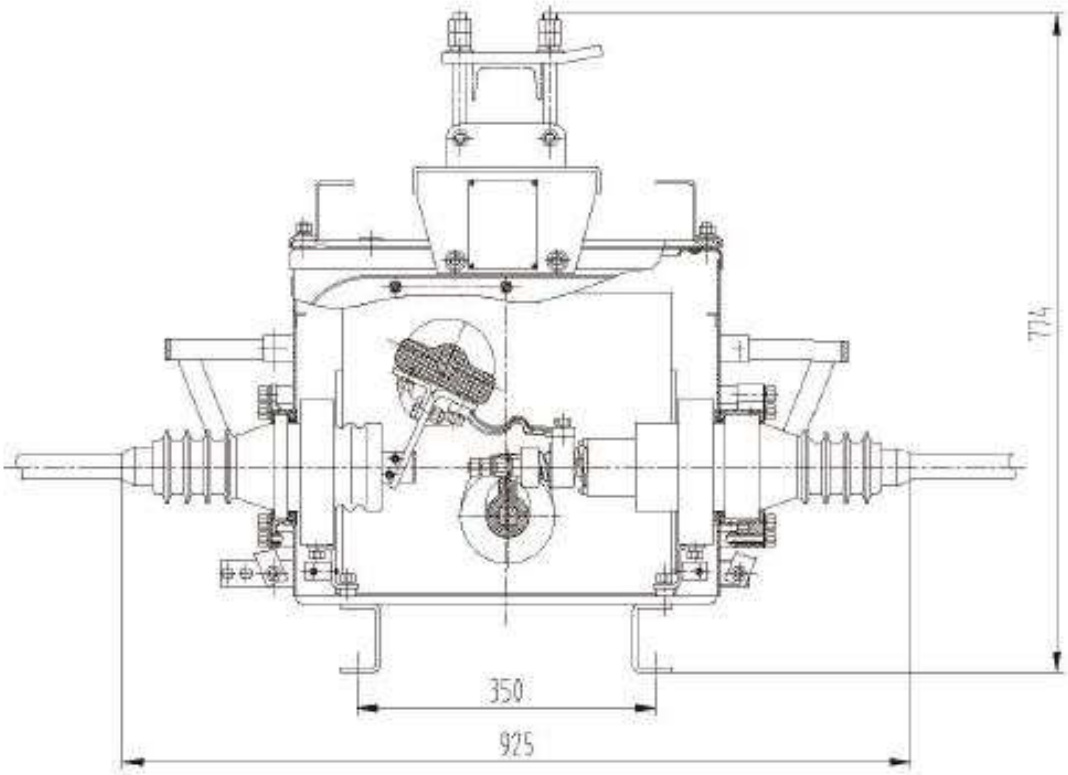
分界开关(拐角套管出线)外形尺寸



底座安装孔尺寸

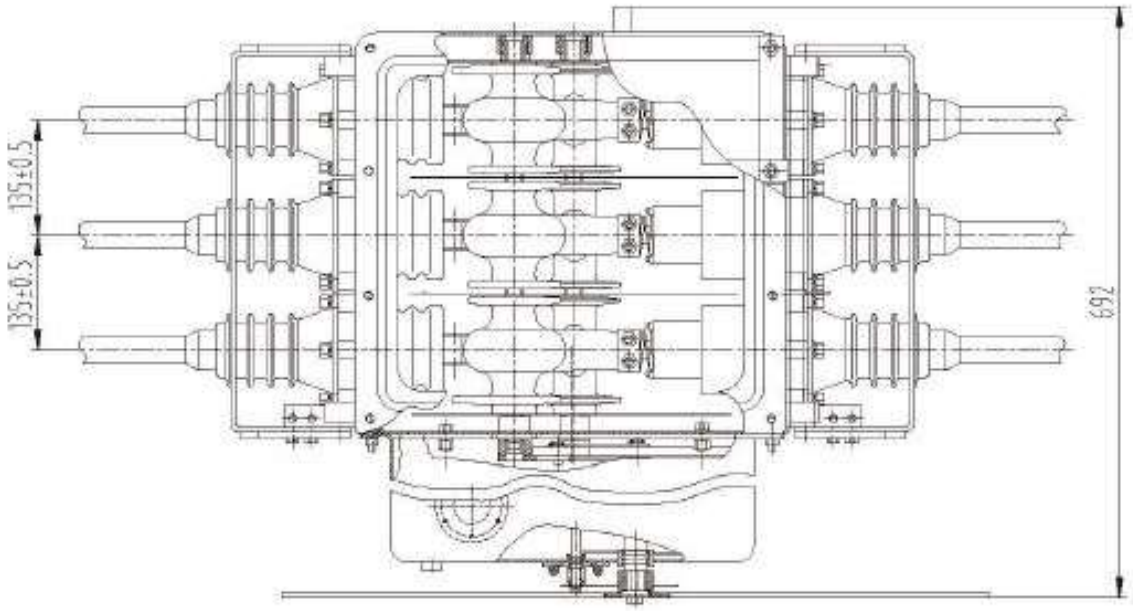
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OUTLINE AND INSTALLATION DIMENSIONS



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分界开关(瓷套电缆出线)外形尺寸图

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