

Air load-break switch

P-94_{and} P-94P

24kV - 36kV



- Simple, robust construction
- Large isolating distance
- Considerable creepage distance
- Good performance with short-circuit currents
- Perfect visibility in open position

General description

The P-94 switch-disconnectors are designed for overhead distribution networks (up to 36kV). They allow part of the network to be isolated following the appearance of a permanent fault or work to be undertaken on the line downstream.

The P94 switch is activated locally by means of a mechanical control system and these switches can be fitted horizontally or vertically both on concrete poles and on metal towers.

On this equipment, the classic pantograph of overhead switches has been replaced by an open-profile copper blade with sufficient elasticity to guarantee perfect contact with the stationary contacts on both the “breaking” side and the “articulating” side. This blade is direct driven by the rotation of the mobile insulator.

Thus, the following features are guaranteed:

- Simple construction and mechanically very robust
- High capacity to withstand short-circuit currents with limited heating.
- Excellent air clearance in open position.
- Perfect visibility of “open” position.

Operating principle

In its closing sweep, the whip spring is not hooked until the moment the mobile blade has made perfect contact with the stationary blade.

In its opening sweep, the whip is rapidly released, a classic feature of this type of equipment, but unlike the conventional system, it is slowed down at the end of its travel by the expansion of the coils previously tensed in the closing sweep.

Thanks to the considerable angular displacement of the whip, its end quickly travels a distance that is far superior – under equal conditions – to the distance travelled by the whips of classic systems. The breaking capacity achieved in this way is clearly superior and the duration of the electric arc is very brief.

Mechanical specifications

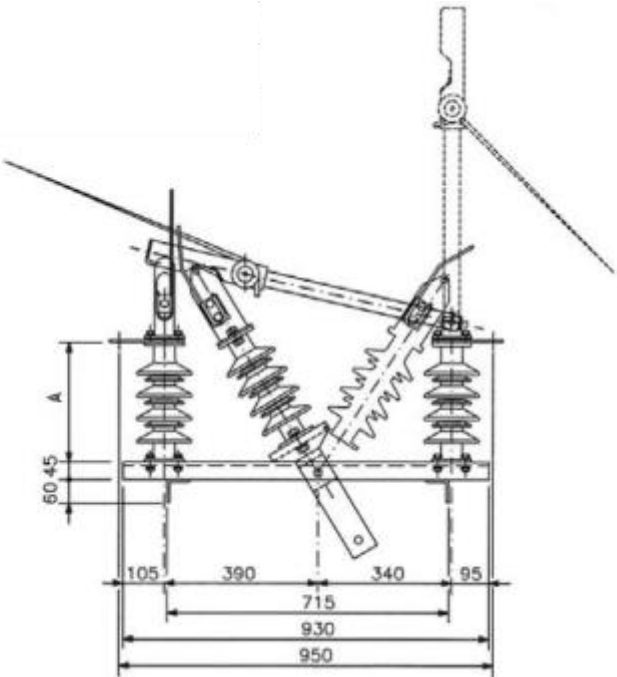
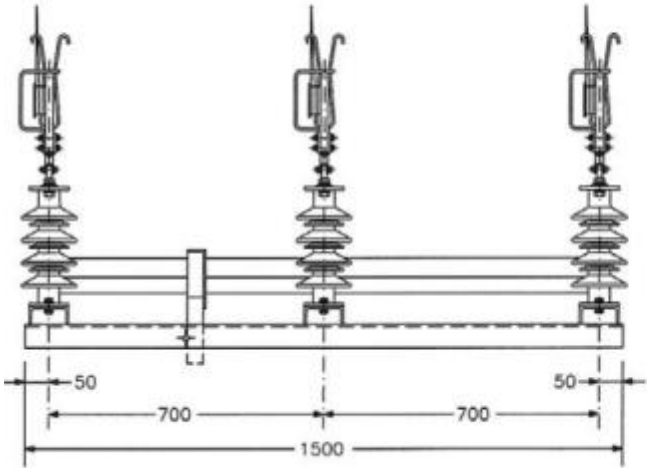
- Frame and remaining metal parts in hot dip galvanized steel in compliance with UNEISO 1461
- Articulation by means of bronze-aluminium bushings.
- Nuts and bolts and metal parts in galvanized steel and stainless steel.
- Brown C4-250 porcelain insulators, in compliance with CEI 672, with cast iron fittings.
- Grey polymeric insulators UNE 21.909 with a fibreglass core and cast-iron fittings.
- Hardened copper blade, open profile, silver plated on the contact surface.
- Optionally, epoxy and polyurethane paint on galvanized steel for guaranteed resistance in marine environments.

Electrical specifications

		24kV		36kV	
		P-94	P-94P	P-94	P-94P
Rated voltage Ur	kV	24		36	
Rated current Ir	A	400			
Breaking capacity 50 operations	A	100			
Rated frequency fr	Hz	50			
Test voltage at 50Hz.	kV	50	110	70	150
Lightning impulse withstand voltage Uw	kV	125	180	170	235
Rated short-time withstand current Ik	kA	10			
Dynamic limit	kA	25			
Insulator creepage distance	mm	656	780	925	975
Weight	kg	119	90	144	92

Dimensions

DIMENSION A	
P-94 kV / 400 A	270 mm
P-94P 24 kV / 400 A	305 mm
P-94 36 kV / 400 A	405 mm
P-94P 36 kV / 400 A	385 mm



References

Code	Description	ET ENDESA
0400000	Disconnecter III Type P-94 24kV/400A standard without drive	
0300000	Switch III Type P-94 24kV/400A standard without drive	
0420000	• Switch III Type P-94P 24kV/400A standard without drive	
0430000	• Switch III Type P-94P 24kV/400A with Endesa Type drive	
0410000	• Switch III Type P-94Psp 24kV/400A special without drive	6779441
0500000	Switch III Type P-94 36kV/400A standard without drive	6700517
0510000	Switch III Type P-94 36kV/400A with Endesa Type drive	6700517/6700520
0520000	Switch III Type P-94 36kV/400A with HV drive and T.M.V. fitting	
0600000	• Disconnecter III Type P-94P 36kV/400A standard without drive	6704698
0610000	• Switch III Type P-94P 36kV/400A with Endesa Type drive	6704698/6700520
0620000	• Switch III Type P-94P 36kV/400A with HV drive and T.M.V. fitting	

Accessories

Reference	Name	Types of support and configuration			
		Metal Tower		Concrete Post	
		Vertical	Horizontal	Vertical	Horizontal
1030000	Fitting for attachment of vertical switch on metal tower				
1020000	Fitting for attachment of horizontal switch on metal tower				
1010000	Fitting for attachment of vertical switch on concrete post				
1000000	Fitting for attachment of horizontal switch on concrete post				
0810000	Complete Endesa type drive for T.M.V.				
2073001	Transmission coupling with cycloaliphatic resin insulator				
2073000	Transmission coupling with epoxy insulator				
3000001	Mounting and drive unit for T.M.V.				
3000002	Mounting and drive unit for T.M.H.				
3000003	Mounting and drive unit for P.H.V.				
3000004	Mounting and drive unit for P.H.H.				

Notes

Codes 0510000 and 0610000 are supplied complete with all accessories (without switch attachment fitting) together with the switch, except for the transmission, which is supplied separately.

Codes 0520000 and 0620000 are supplied complete with all accessories (with switch attachment fitting) together with the switch, except for the transmission, which is supplied separately.

Other possible configurations for horizontal and vertical mounting on concrete posts or metal towers can be supplied to order.

Version with quick closure

We have a version of this switch with closing capacity, on which the closing speed is independent of the operator.

