

Medium voltage switchgear type F 24 (F 600)

with H 27 load disconnectors
rated voltage 25 kV
rated current 400 and 630 A



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ISO 9001
BUREAU VERITAS
Certification



General

The air-insulated switchboards of F 24 (F 600) type consist of insulated, type-tested panels, with one common bus bar system.

The switchboards and load disconnecter used meet the requirements of the EN 62271-1, EN 62271-102, EN 60265-1 and EN 60298 standards. The resistance to accidental arcs of the switch panels has been determined at 16 kA; 1 s (PEHLA tests), by and independent testing institute.

The switchboards are equipped with the H 27 F type load disconnectors. The earthing switches used feature short-circuit making capability, and are provided with interlocking.

The small installation area makes switchboard panels especially suitable for installation into small rooms. The welded structure of the frames and the supporting parts is painted with two varnish layers. The panel features either one single HV space with fixed cladding installed in the bus bar area, or is equipped with separated terminal box with one-wing doors.

The panel front side is provided with one-wing metallic doors (with hinges on the right or left side, by customer request), with mimic diagram drawn on them, and with sight window made of glued

multilayer safety glass. In standard the doors and the bus bar covers are painted in RAL 2004 (orange) or RAL 7032 (grey) colour.

From the rear part all the panels are covered with 2 mm galvanized sheet. From the left side is each panel equipped with PE 5 mm insulation plate stiffened with glass fibres and provided with bushings. The switchboard sides have metallic sheets casing (on the right side including the PE insulation plate).

The panels are equipped with a central lock, which uses a special-type key to DIN 43668, size 5. The safety windows in the doors provide safe inspection of devices.

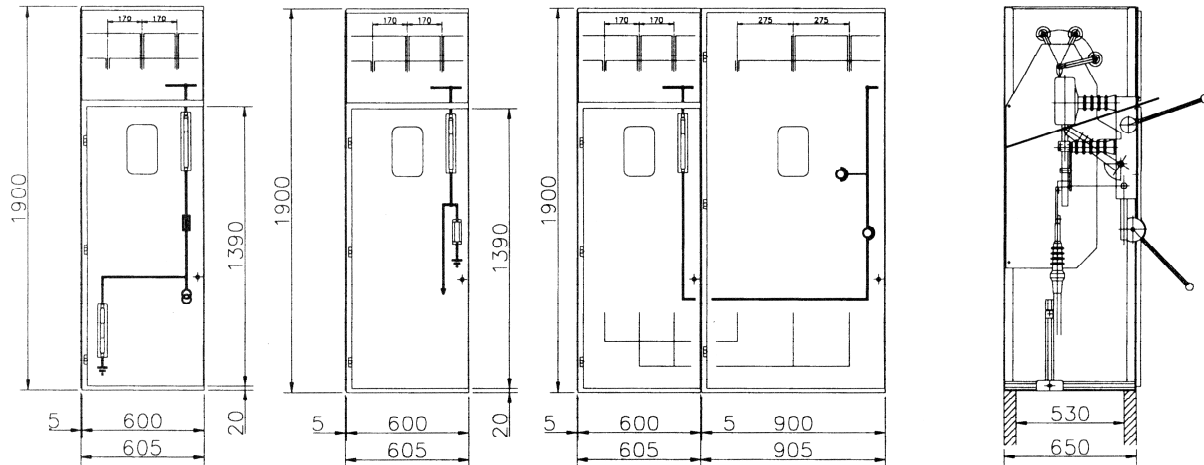
An insulating protective plate can be inserted when the panel door is closed.

The design and the set out of the panels are based on building-block principle. This provides the possibility of customer specific arrangements and also provides for later changes in the switchboard configuration. On request the switchboards can be provided with accessories such as the bases, consoles for mounting of instrument transformers, electric motor drive units, cable compartments etc.

Technical data

rated voltage	25 kV		
rated frequency	50 Hz		
degree of protection	IP 3X		
rated short-time withstand voltage	50 kV		
rated lightning impulse withstand voltage	125 kV		
rated current of bus bar	up to 630 A		
rated current level of branches	up to 630 A		
rated short-time current	16 kA		
rated peak current	40 kA		
ambient temperature („minus 15, indoor“ class, as defined in the EN 62271-1 standard)	-15 ~ +40 °C		
24 hours temperature average	max. +35 °C		
resistance to accidental arc	16 kA/1 sec.		
rated short-time withstand power frequency voltage / 1 min.			
against the earth, across the poles and between contacts	kV	75	125
across the isolating distance	kV	85	145
rated lightning pulse withstand voltage			
against the earth, across the poles and between contacts	kV	28	50
across the isolating distance	kV	32	60

F 24 (F 600) panel



Switch panel types

Type	Designation	Weight in kg
FK	cable panel	153
FT	transformer feeder panel	166
FP	transition panel – right hand side	178
FP	transition panel – left hand side	178
FM1	measuring panel	123*
FM2	measuring panel (with cable outlet)	128*
FH	upper outlet	107
-	end face	21

* weight without instrument transformers

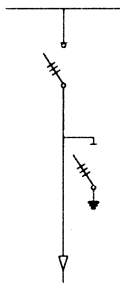
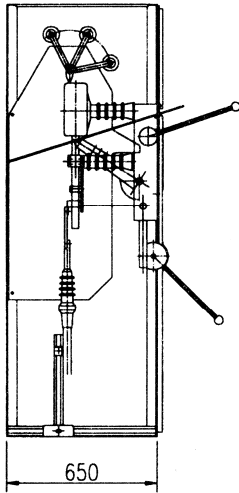
Accessories

- 2 end faces, left and right hand sides (27 mm)
- 1 manual drive lever for the load disconnecter (500 mm long)
- 1 manual drive lever for the earthing switch (365 mm long)
- 1 door key, double-side, to DIN 43668, size no. 5
- 1 FRP withdraw able plate, red, type 1165, VDE 0681, part 8
- bus bars 630 A, of round profile $\phi 18$ mm, made of insulated copper

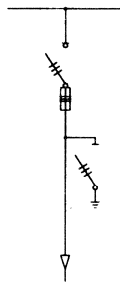
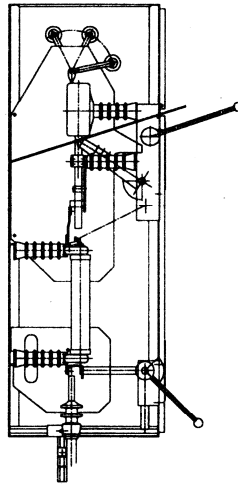
Available auxiliary equipment

- earthing switches with short-circuit making capability and mechanical interlocking
- cable panel with surge voltage protector
- transformer panel with working current trip
- cable panel with electric motor drives
- cable panel with measurement loop
- capacitive voltage sensors
- mounting of fuse boxes into the incoming or measurement panel
- cable panel with 630 A load disconnecter
- mounting of short-circuit current indicators
- cylindrical locks, lockable drive units
- base (200 or 220 mm high)

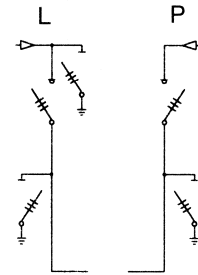
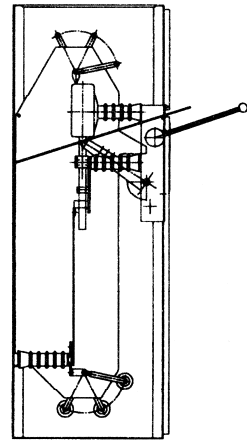
Cable panel FK



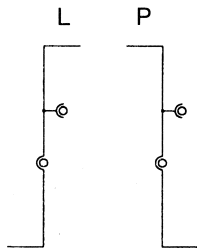
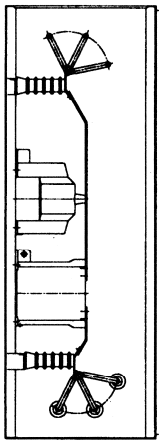
Transformer panel FT



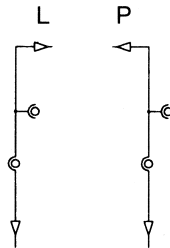
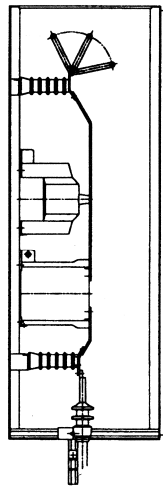
Transition panel FP



Measuring panel FM1



Measuring panel FM2



Upper outlet FH

