

DRIESCHER - Air-Insulated Medium-Voltage Switchgears

- Type D 12 - 507519
- Rated voltage 12 kV
- Rated current 630 A
- Type D 24 - 601119
- Rated voltage 24 kV
- Rated current 400 A and 630 A



D 24

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DRIESCHER - Medium-Voltage Switchgears Type D

in compliance with DIN VDE 0670, Teil 6

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General

The metal-encapsulated, air-insulated medium-voltage switchgears, Type D are for universal application:

They range from compact ring cable switchgears up to complex power distribution switchgears.

Tailored to meet the needs of public utility networks and power supply companies in industry and municipal buildings.

These medium-voltage switchgears meet the user's specific requirements in full and ensure a satisfactory power distribution.

The standard panel types are available in two different dimensional sizes:

1. **D 12 - 507519; B x T x H: 500 x 750 x 1900 mm**
2. **D 24 - 601119; B x T x H: 600 x 1100 x 1900 mm**

They are available as individual panels or as a combined switchgear, where the equipment, panel sequence etc. can be determined by the customer.

The switch panels are type-tested in compliance with DIN VDE 0670, Part 6.

Operating Conditions

The switch panels of Type D are installed in closed electrical operating areas which are only to be entered by skilled personnel and appropriately instructed persons.

The equipment can be used at an altitude of up to 1000 m above sea level.

For installations above an altitude of 1000 m the rated insulating level of the switchgear must be corrected accordingly. The switch panels are designed for use under normal operating conditions in compliance with the standard DIN VDE 0670, Part 1000 (IEC 60694).

Technical Standards

The design of the air-insulated switch panels corresponds to the specifications of the DIN VDE 0670, Part 6 (IEC 60298). The resistance to accidental arcs of the switch panels has been determined at 16 kA and 20 kA; 1 s, by and independent testing institute. The installed switchgear equipment is designed in compliance with DIN VDE 0670, Part 1000 (IEC 60694).

The degree of protection of the switch panels corresponds to IP 3X.

Technical data on the installed switchgear equipment are available for

- Switch-disconnector H 27 *see list 727*
- Earthing switch *see list 731*

Technical Data

Rated voltage	U_r 12 / 24 kV	Rated short-circuit duration	t_k 1 s
Rated lightning impulse withstand voltage	U_p 75 / 125 kV	Rated frequency	f_r 50 Hz
Rated short-time withstand voltage	U_d 28 / 50 kV		

Technical data for the installed switchgear equipment	Rated (operating) current I_r	Rated short-time current I_k	Rated peak current I_p
Panels with switch-disconnector H27	400 A and 630 A	up to 20 kA	up to 50 kA

Description of the Switch Panels Type D

Design

The air-insulated medium-voltage switch panels of type D with a panel width of 500 mm and 600 mm are metal-encapsulated.

The switch panel frame is made of a screwed, hot-galvanized composite structure.

The front of the switch panels has a single-wing door of steel sheet with door hinge optionally on the right or left. At Type D 12 the door hinge is locally rearrangeable. A window of compound glass is inserted in the door.

The cover in front of the bus bar compartment is either screwed on or designed as a door for the relay box positioned behind it.

Each switch panel has a screwed on rear panel of galvanized sheet metal.

Connecting cables are conducted into the switch panels from below and are mounted on cross rails which can be adjusted in two dimensions.

The doors and covers of the switchgear are painted in structural paint (available in different colours according to the customer's request).

Equipment

The switch panels of Type D are available in the following versions:

- Cable panel Typ DK
- Transformer feeder panel Typ DT
- Measuring panel Typ DM
- Bus sectionalizer panel Typ DÜ
- Bus sectionalizer/Measuring panel Typ DÜM
- Riser panel Typ DKH

All switch panels of type D 12 - 507519 are partitioned off from panel to panel, in the busbar area, by means of fibrous-glass reinforced plastic plates with lead-in openings.

All switch panels of type D 24 - 601119 will be partitioned off from panel to panel auf Wunsch.

Pressure relief can be in upward or downward direction.

Switch panels equipped with switch-disconnectors can optionally be fitted with an earthing switch and a set of voltage transformers as well.

The optional interlocking of the equipment practically rules out any form of incorrect operation.

All built-in switchgear equipment can be operated manually or via motor-operated mechanisms when the panel door is closed.

Earthing switches or spherical fixed points are available for earthing and short-circuiting.

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

It is possible to install appropriate surge voltage protectors in the panel, if required.

The product program is completed by special measuring panels which are fitted with current and voltage transformers.

All switch panels are designed with central locking and double-bit key.

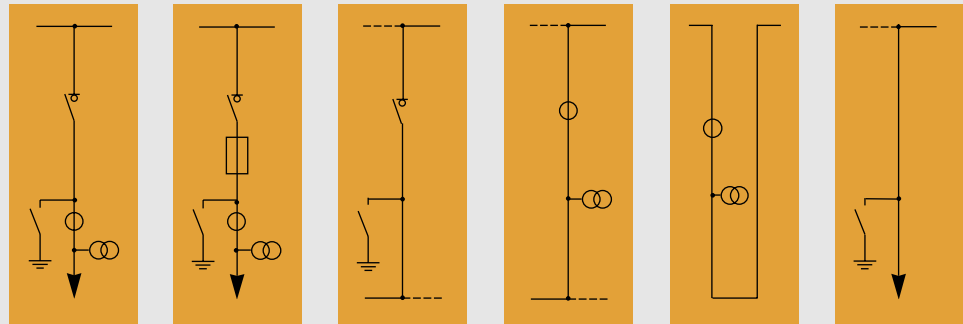
There are additional locking features available in the form of profile cylinders or padlocks, if required.

Benefits

- **Flexible**, based on the combination possibility with panel type D 24
- **Safe and reliable** through the high quality of our products
- **Economical** based on continuous further development
- **Compact dimensions**
- **Easy handling**
- **Minimum amount of maintenance**
- **Minimized amount of plastics**

Air-Insulated Medium-Voltage Switch Panels Type D 12 - 507519 and Type D 24 - 601119

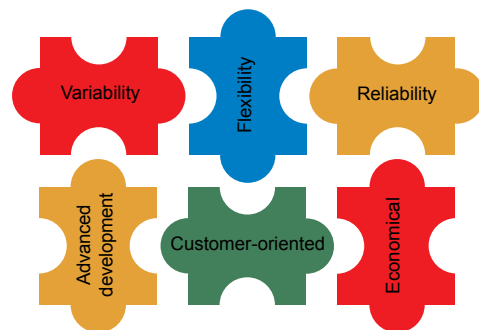
- optional
- not possible
- * only possible with current or voltage transformer



Switch Panels Type D 12 - 507519	(DK) Cable panel Fig. 2,10	(DT) Transformer feeder panel Fig. 3,11	(DÜ) Bus sectionalizer panel Fig. 4,12	(DM) Measuring panel Fig. 5,6,13,14	(DÜM) B. sectional- izer / Measuring panel Fig. 7,15	(DKH) Riser panel Fig. 8,16
Switch-disconnector	H 27 EK	H 27 SEA	H 27 EK	-	-	-
Earthing switch				-	-	
Current transformer		*	-			-
Voltage transformer		*	-			-
Switch Panels Type D 24 - 601119						
Switch-disconnector	H 27 EK	H 27 SuT	H 27 EK	-	-	-
Earthing switch				-	-	
Current transformer	*	-	-			-
Voltage transformer	*	-	-			-

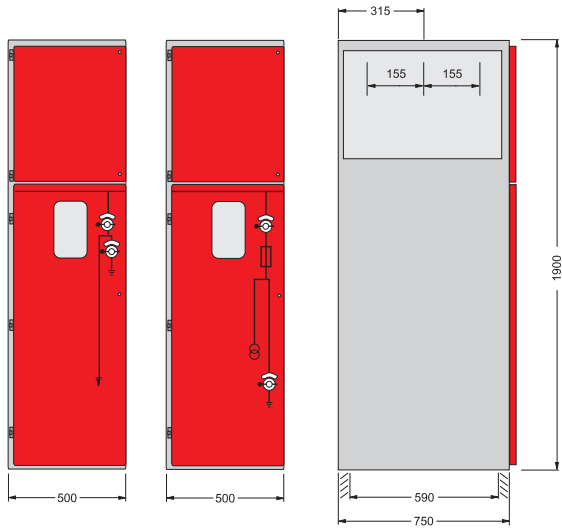
Medium-Voltage Switch Panels Type D 12 - 507519 and D 24 - 601119

- ① Pressure relief plate
- ② Bus terminal
- ③ Switch-disconnector H 27
- ④ Earthing switch
- ⑤ Withdrawable plate*
- ⑥ Current transformer
- ⑦ Voltage transformer
- ⑧ HV-HBC fuse
- ⑨ Cable terminal



* The FRP withdrawable plate can be inserted when the switchgear unit is switched off

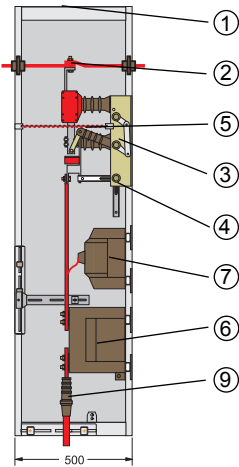
Medium-Voltage Switch Panels Type D 12 - 507519



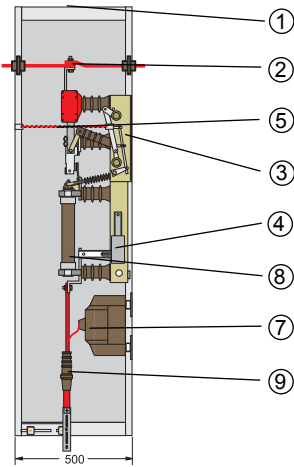
12 kV Switch panel in compliance with drawing HA3-094658

- Rated voltage 12 kV
- Rated (operating) current 630 A
- Rated insulation level 75 kV / 28 kV
- Resistance to accidental arc 20 kA; 1 s

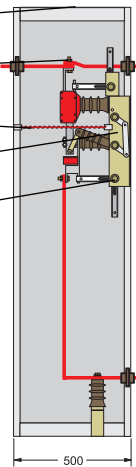
*Fig. 1:
D 12 Cable and transformer feeder panel
in front and side view*



*Fig. 2:
D 12 Cable panel with
switch-disconnector H 27 EK*

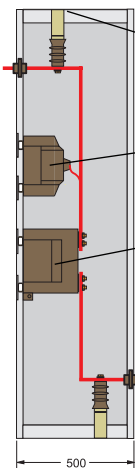


*Fig. 3:
D 12 Transformer Feeder panel
with switch-disconnector H 27 SEA*

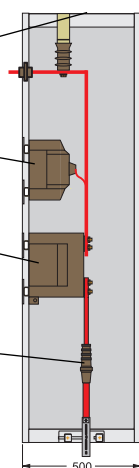


*Fig. 4:
D 12 Bus sectionalizer panel with
switch-disconnector H 27 EK*

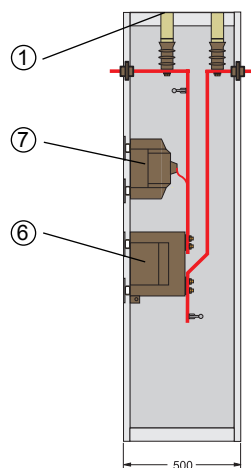
Earthing switch on top is only possible at an end panel on the right side



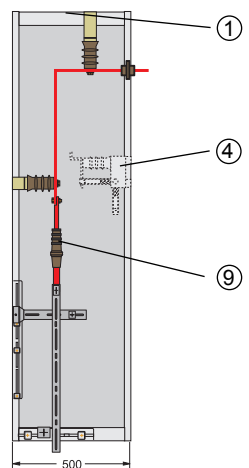
*Fig. 5:
D 12 Measuring panel with
current and voltage transformer*



*Fig. 6:
D 12 Cable/Measuring
panel*

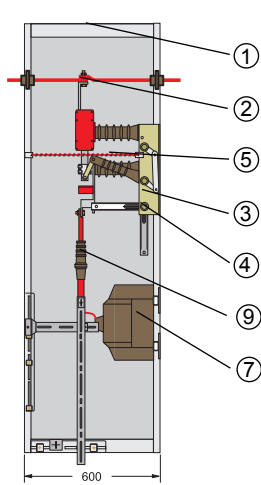
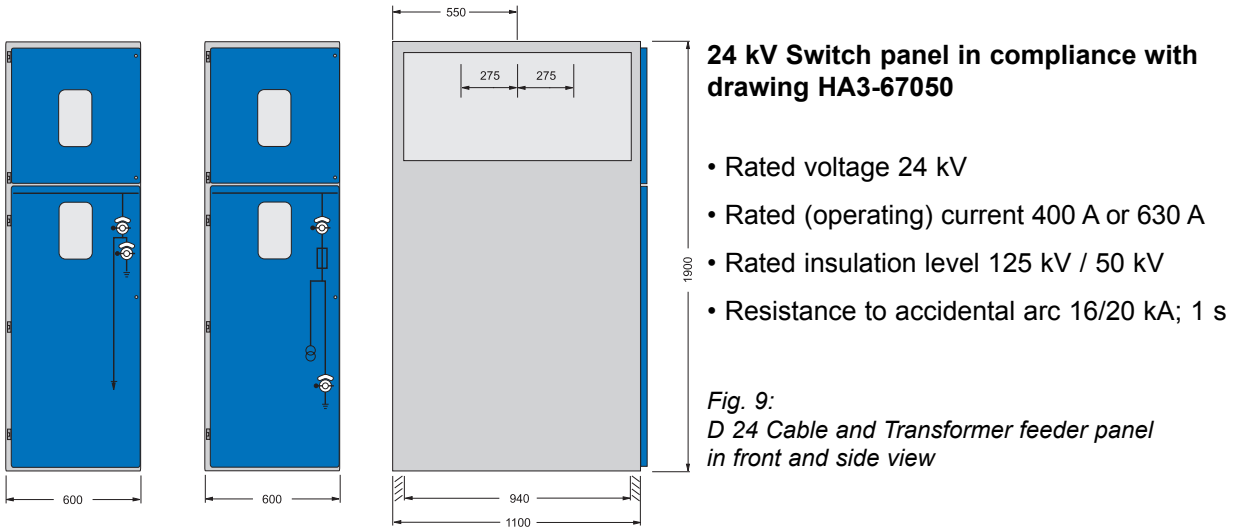


*Fig. 7:
D 12 Bus sectionalizer/ Measuring
panel in longitudinal rails*

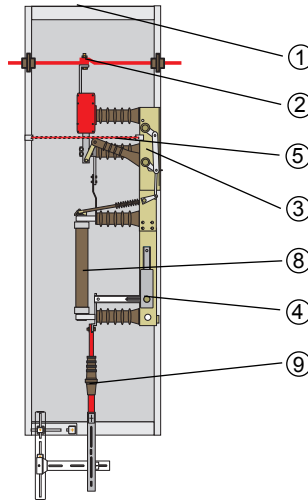


*Fig. 8:
D 12 Riser panel with
earthing switch optional*

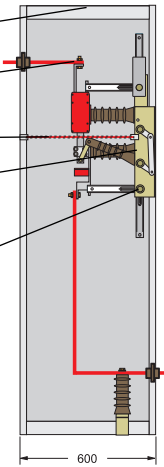
Medium-Voltage Switch Panels Type D 24 - 601119



*Fig. 10:
D 24 Cable panel with
switch-disconnector H 27 EK*

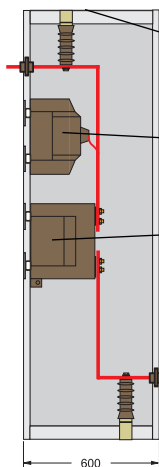


*Fig. 11:
D 24 Transformer Feeder panel with
switch-disconnector H 27 SuT*

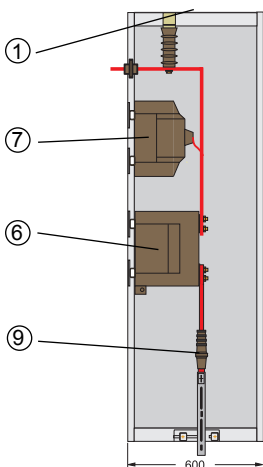


*Fig. 12:
D 24 Bus sectionalizer panel with
switch-disconnector H 27 EK*

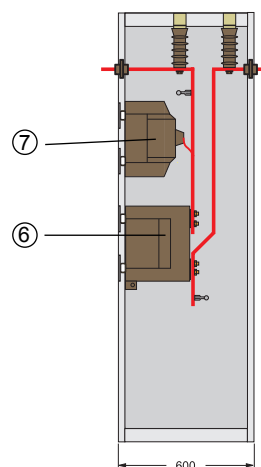
Earthing switch on top is only possible at an end panel on the right side



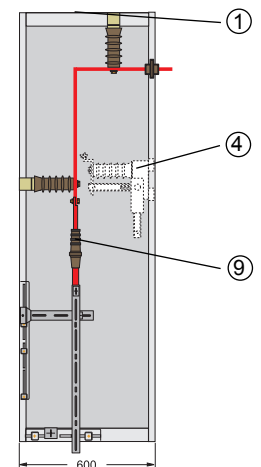
*Fig. 13:
D 24 Measuring panel with
current and voltage transformer*



*Fig. 14:
D 24 Cable/Measuring
panel*



*Fig. 15:
D 24 Bus sectionalizer/ Measuring
panel in longitudinal rails*



*Fig. 16:
D 24 Riser panel with
earthing switch optional*

DRIESCHER - Medium-Voltage Switchgears Type D

Available Auxiliary Equipment

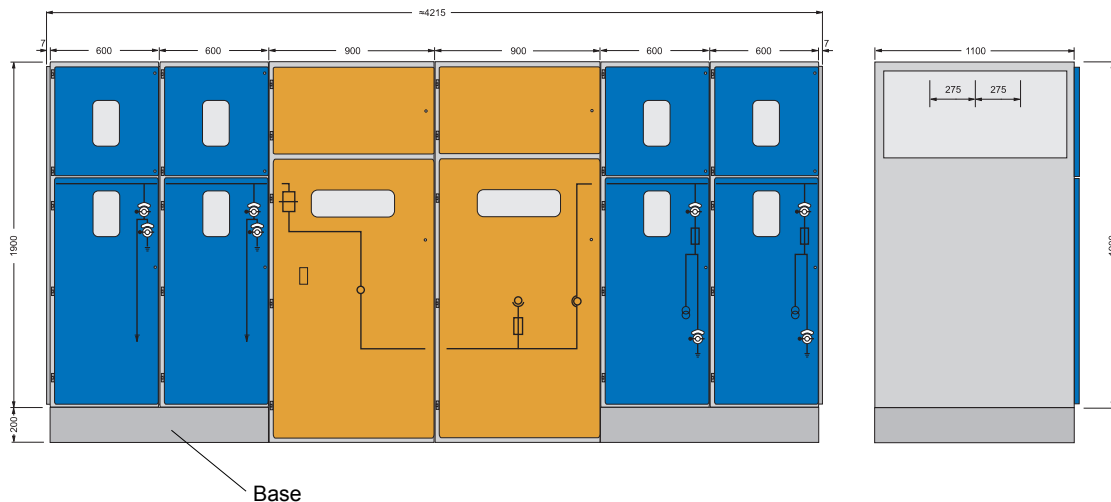
Designation	Zeichnungs-Nr. 12 kV	Zeichnungs-Nr. 24 kV
• Cable panel with surge voltage protector	-	HA 2 - 67020
• Cable panel with measuring loop	-	HA 2 - 67009
• Installation of test sockets for capacitive voltage tapping	-	HA 2 - 67004
• Busbar segregation from panel to panel	-	HA 4 - 66997
• Attachment of a fuse box	-	HA 4 - 67061
• Cable panel with switch-disconnector 630 A	HA 3 - 094658	HA 1 - 68722
• Transformer panel with switch-disconnector 630 A	HA 3 - 094659	HA 1 - 67064
• Additional locking features with profile cylinder and lockable operating mechanisms	-	HA 2 - 44652
• Base (200 mm or 320 mm high)	-	HA 2 - 63903
• Installation of various short-circuit display systems	-	-
• Delivery is possible with voltage display and transformer system DEHNcap/AWS for measuring phase-to-earth and phase-to-phase voltages for control and protection	-	-

Required Plant Accessories

Designation

- 1 manual operating lever
- 1 door key with double-bit DIN 43668, size 5
- 1 FRP withdrawable plate, red, Type 1165, VDE 0681, Part 8
- For additional station accessories please refer to List 773

Kombination D 24 - 601119 and W 24 - 901121



Weights

Type	Designation	Weight approx. kg	Drawing-no.
DK 12 kV / 24 kV	Cable panel	175 / 200	HA3 - 094658 / HA3 - 67050
DT 12 kV / 24 kV	Transformer feeder panel	180 / 210	HA3 - 094659 / HA3 - 67050
DÜ 12 kV / 24 kV	Bus sectionalizer panel	180 / 200	- / HA3 - 67050
DM 12 kV / 24 kV	Measuring panel (longitudinal rails)	200 / 250	- / HA3 - 67050
DM 12 kV / 24 kV	Measuring panel (cable bridge)	200 / 250	- / HA3 - 67050
DH 12 kV / 24 kV	Riser panel	120 / 150	- / HA3 - 67050

For assembly, commissioning and maintenance always proceed as specified in the appropriate instructions.

Our range of products includes:

Medium-voltage systems

- Single-bus and duplicate-bus switchgear
- Non-withdrawable, withdrawable, and truck-type units
- Compact switchgear assemblies
- Custom-made models
- Industrial systems

Medium-voltage switchgear

- Indoor switches, disconnectors, and earthing switches (single and triple pole)
- Indoor circuit breakers (low oil content and vacuum)
- Outdoor switches (low oil content and vacuum)
- High-voltage high-breaking-capacity fuses

Low-voltage systems

- Open-framework design
- Enclosed break devices (up to 6,000 A)
- Cable and fixed-station distribution cabinets

Low-voltage switchgear

- Switch disconnectors
- Switch and fuse blocks
- Low-voltage high-breaking-capacity fuses

Driving gear

- Hand-operated and motor-operated mechanisms
- Indoor and outdoor driving gear

Accessories

- For medium and low voltages
- For station equipment
- Insulators (0.5 kV - 38.5 kV)
- Plastic and glass-reinforced plastic screening

Dimensions, weights , diagrams and descriptions in the list are non-binding. Subject to change without notice.

switching • electricity • safely

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