

## DRIESCHER - Air-Insulated Medium-Voltage Switchgears

- Type W 36 - 121526
- Rated voltage 36 kV
- Rated current 630 A / 1250 A



# W 36

## DRIESCHER - 36 kV Switch Panels

in compliance with DIN VDE 0670, Part 6 and IEC 60298

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### General

The compartment-type air-insulated medium-voltage switchgears of Type W 36 are used by our customers whenever a high security of supply has to be guaranteed and also for ensuring operator safety and operating convenience.

These medium-voltage switchgears are able to meet the specific user requirements in full and provide a satisfactory power distribution. With a switch panel width of 1200 mm it is possible, at a rated voltage of

36 kV, to omit the use of phase separator plates.

The main dimensions of the panels are W x D x H: 1200 x 1500 x 2600 mm.

These are delivered in the form of individual panels where the electrical equipment, panel order etc. can be determined by the customer.

The switch panels have been type-tested in compliance with DIN VDE 0670, Part 6 including the Pehla directive No. 4.

### Operating Conditions

The switch panels of type W 36 are installed in closed electrical operating areas which are only to be entered by skilled personnel and appropriately instructed persons.

The installation can be implemented up to an altitude of 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 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; 1 s by an independent testing institute. The installed switchgear electrical equipment are designed in compliance with DIN VDE 0670, Part 1000 (IEC 60694).

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

For technical data on the installed switchgear equipment please refer to our brochures:

- for switch-disconnector H 22 see 722
- for earthing and disconnecting switches see 731
- for circuit breakers see 745

## Technical Data

Rated voltage	$U_r$ 36 kV	Rated short-time current	$I_k$ 16/(20) kA
Rated lightning impulse withstand voltage	$U_p$ 170 kV	Rated short-circuit duration	$t_k$ 3 s
Rated short-time withstand voltage	$U_d$ 70 kV	Permissible short-circuit duration with internal faults	1 s
Rated operating current	$I_r$ 630/1250 A	Rated frequency	$f_r$ 50 Hz

Technical data for the installed switchgear equipment	Rated (operating) current $I_r$	Rated short-time current $I_k$	Rated peak current $I_p$
Switch-disconnector H 22	630 A	16 kA	40 kA
Circuit breaker	630 A and 1250 A	20 kA	50 kA

## Switch Panels

### Design of switch panels

The switch panels of Type W 36 are of compartment-type design using fibrous glass reinforced plastic partition plates with lead-in openings. Connecting cables are introduced from below into the switch panels where they are attached to the provided fastening straps.

All built-in switchgear equipment can be manually operated with closed panel door.

### The switch panel housing

The framework of the switch panels is of a welded angular steel design.

The switch panels are fitted with a single-wing door of solid steel plate with door hinge optionally on the right or on the left. A window of compound glass is inserted in the door.

The cover in front of the bus bar area is designed as a door for the relay box behind. This relay box has the dimensions W x D x H: 1200 x 350 x 822 mm and can be fitted with one or several protection relays, as required by the customer.

The corrosion protection of the framework, doors and covers as well as the end covers on the side of the switchgear is provided by structural paint (color RAL-in accordance with customer's request).

The partition of the busbar area bordering the next panel is in the form of fibrous glass reinforced plastic plates with lead-in openings.

Each switch panel has a bolted-on rear wall of galvanized sheet metal.

Pressure relief is in upward direction. It is possible to insert an insulating barrier plate (in compliance with DIN VDE 0681, Part 8) with the panel door closed.

### Equipment

The switch panels of Type W 36 - 121526 can be designed as cable or transformer feeder panels or also as circuit-breaker switch panels.

For this purpose they are fitted with switch-disconnector or fuse-switch-disconnectors (Type H 22) to which a short-circuit-proof earthing switch with quick-make operation can optionally be attached.

Spherical fixed points are available as an alternative for earthing and short-circuiting.

Switch-disconnectors and earthing switches are mechanically interlocked, if so requested by the customer.

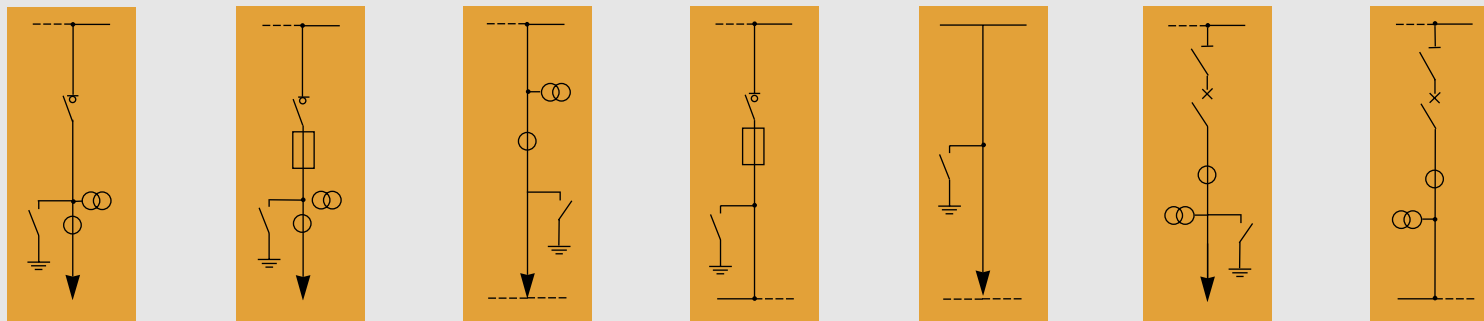
It is possible to install corresponding surge voltage protectors in the panel if required.


















A special measuring panel equipped with current and voltage transformers completes the program.


Circuit-breaker panels are equipped with a bus isolator, a vacuum circuit-breaker as well as with a set of current transformers.

The equipment can be optionally supplemented with an earthing switch and a set of voltage transformers. The interlocking conditions are in compliance with DIN VDE 0670, Part 6.

## Air-Insulated Medium-Voltage Switch Panels 36 kV Type W 36 - 121526



<b>Switch Panels Type W 36 - 121526</b>	Cable switch panel (WK) Fig. 1, 2	Transformer feeder panel (WT) Fig. 3	Measuring panel (WM) Fig. 4	Bus sectionalizer panel (WÜ) Fig. 5	Riser panel (WH)	Circuit-breaker panel (WL) Fig. 6	Circuit-breaker feeder panel (WÜL) Fig. 7
Disconnecting switch	-	-	-	-	-		
Switch-disconnector / Circuit-breaker	H 22 EK/EA	H 22 SEA	-	H 22 EK/EA	-	V620 KUF/BKF	V620 KUF/BKF
Earthing switch							-
Current transformer		 *		-	-		
Voltage transformer		 *		-	-		-

 = optional

- = not possible

\* only possible with current or voltage transformer

## Switch Panels Type W 36 - 121526

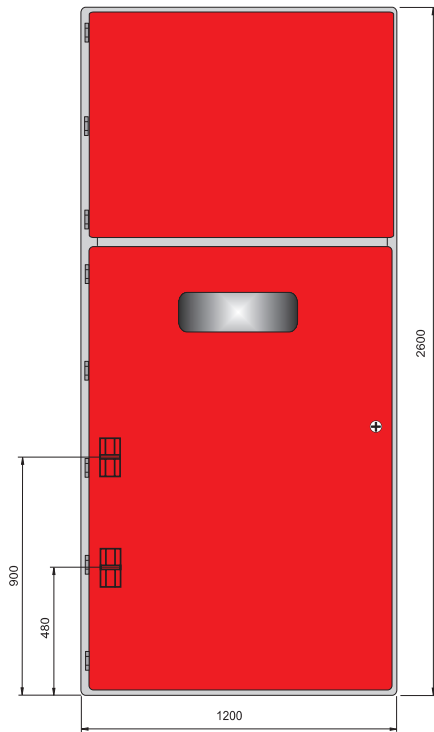


Fig. 1: 36 kV Switch panel

### 36 kV Switch-Disconnecter Panels

- Rated (operating) current 630 A
- Rated insulation level 170 kV
- Resistance to accidental arcs 16 kA; 1 s

### 36 kV Circuit-Breaker Panels

- Rated (operating) current 630 A / 1250 A
- Rated insulation level 170 kV
- Resistance to accidental arcs 16 kA (20 kA); 1 s

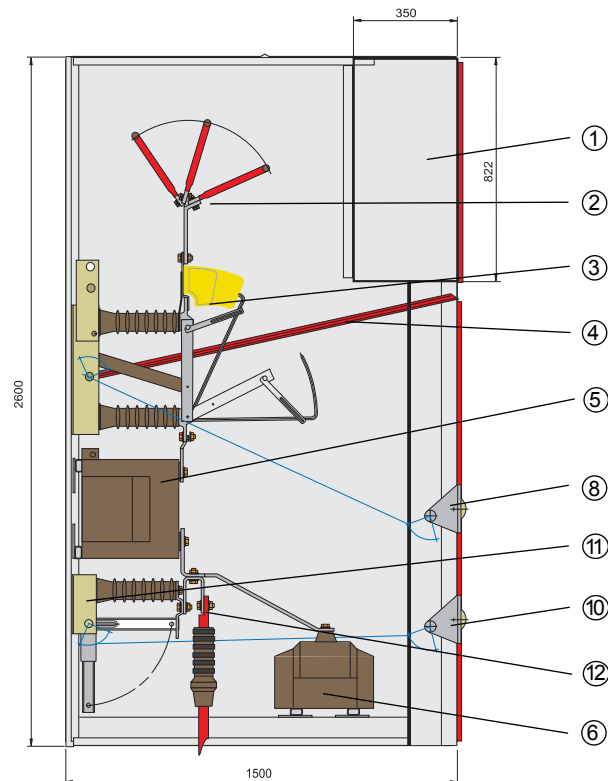


Fig. 2: 36 kV Cable panel

- ① Relay box
- ② Busbar connection
- ③ Switch-disconnector H 22
- ④ Withdrawable plate \*
- ⑤ Current transformer
- ⑥ Voltage transformer
- ⑦ Vacuum circuit-breaker
- ⑧ Operating and position indicator for switch-disconnector H 22
- ⑨ HV-HBC Fuse
- ⑩ Operating and position indicator for earthing switch
- ⑪ Earthing switch
- ⑫ Cable terminal
- ⑬ Disconnecting switch

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

Switch Panels Type W 36 - 121526

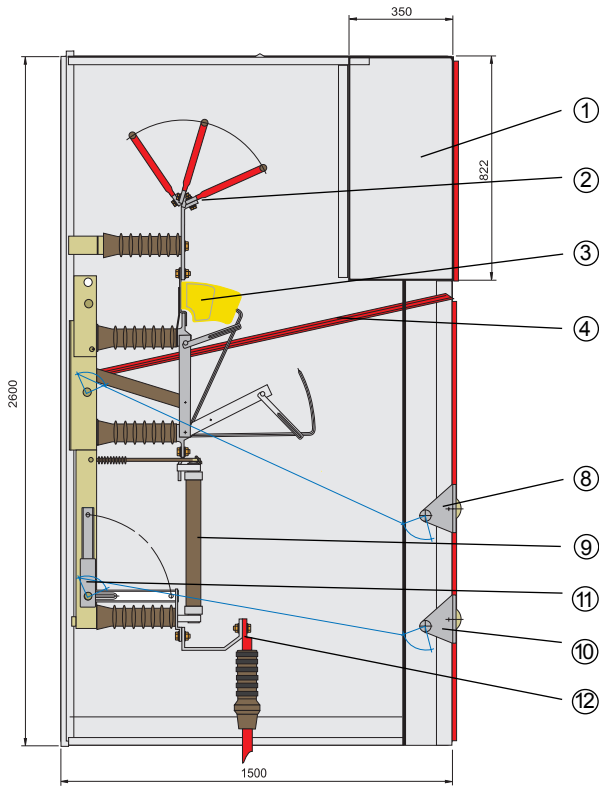


Fig. 3: 36 kV Transformer feeder panel with fuse-switch-disconnector H22 SEA

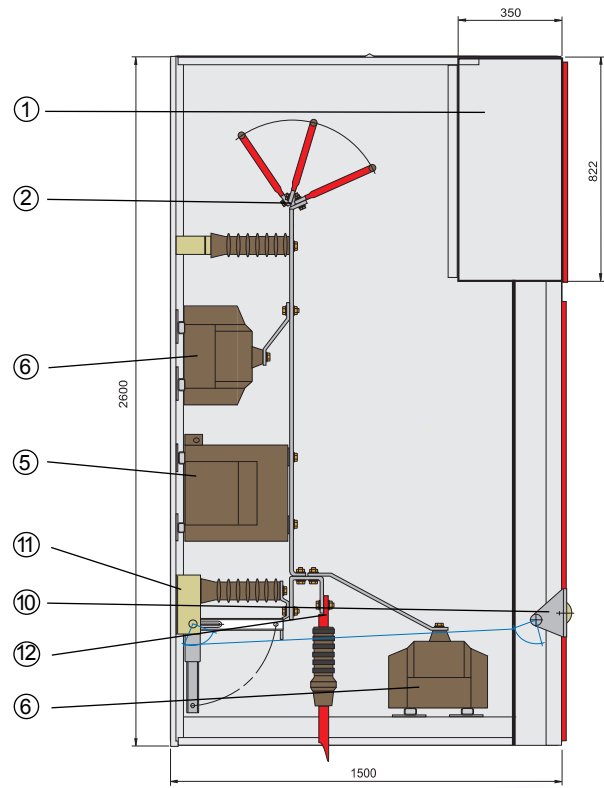


Fig. 4: 36 kV Measuring panel

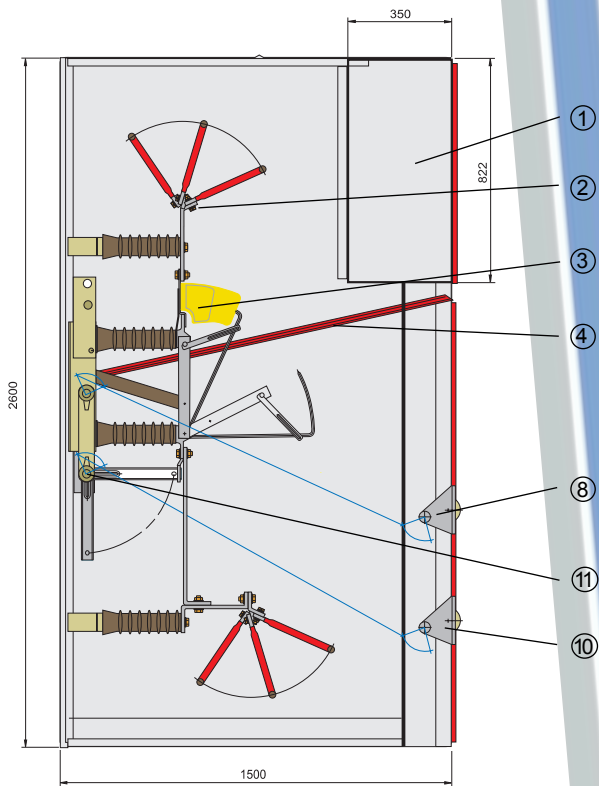


Fig. 5: 36 kV Bus sectionalizer panel with switch-disconnector H22 EK

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**TYPPRÜFBERICHT**

Nr. 1283.5200.290

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Metallolektrotechnik Luftisolierte Mittelspannungsschaltanlage

E/W 36-121526

10 00 00 14

Bemessungs-Spannung	36 kV	BEMESSUNGS-DATEN NACH ANFRAGEN DES AUFTRAGGEBERS
Bemessungs-Betriebsstrom	1250/630 A	
Bemessungs-Stoßstrom	40 kA	
Bemessungs-Kurzschlussstrom	16 kA	
Bemessungs-Kurzschlussdauer	3 s	
Zulässige Kurzschlussdauer bei inneren Fehlern	1 s	

EC 60298:1990  
 DIN EN 60298 (VDE 0670 Teil 6):1998-05

Prüfung des Verhaltens bei inneren Fehlern für den Zugänglichkeitsgrad A

23. Oktober 2000

Die Bewertungsstufen 1 bis 6 der DIN EN 60298 (VDE 0670 Teil 6):1998-05 wurden erfüllt.  
 Das Prüfobjekt hat die Typprüfung BESTANDEN.

H. GÜNBICH  
 Leiter Hochleistungs-Prüfteil

L.M. BOETICHER  
 Verantwortlicher Prüflingenieur

Wetzlar, den 25. Dezember 2000

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Switch Panels Type W 36 - 121526

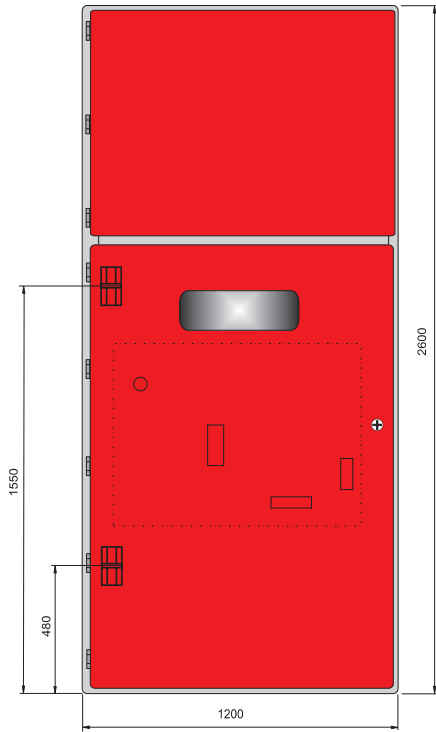


Fig. 6: 36 kV Circuit-breaker panel

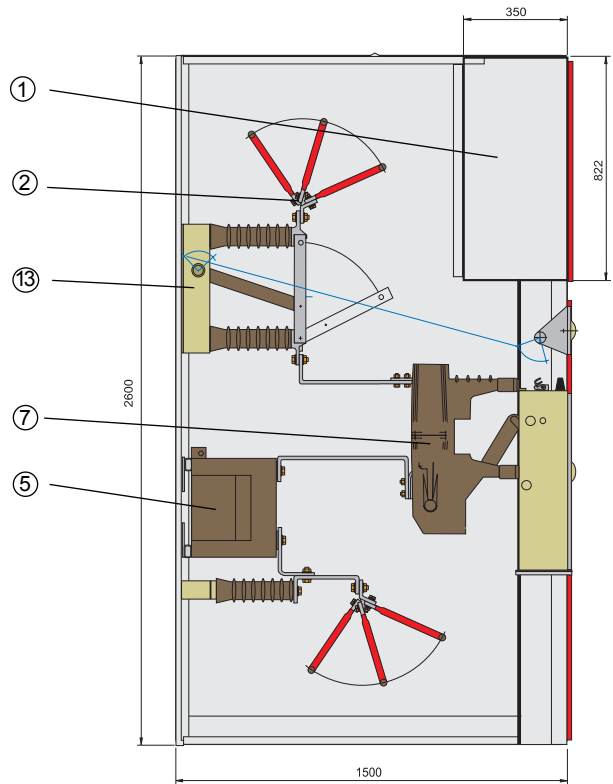


Fig. 7: 36 kV Circuit-breaker bus sectionalizer panel

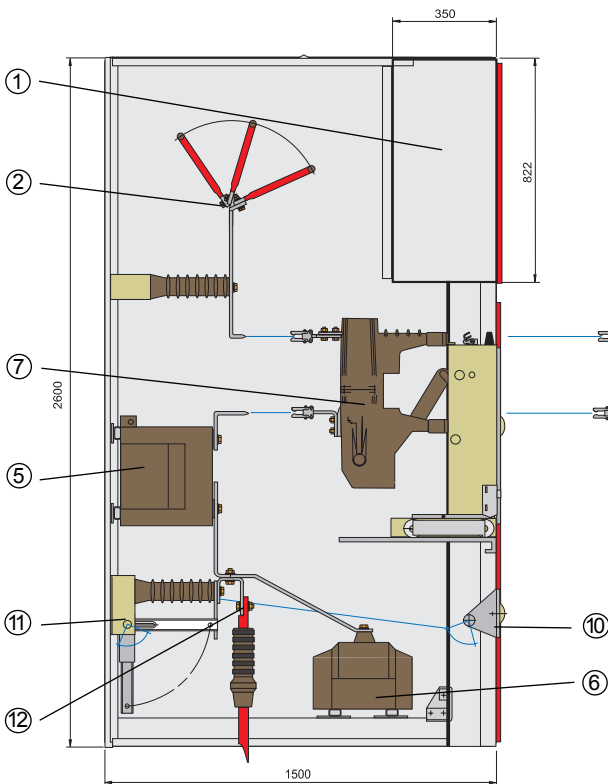
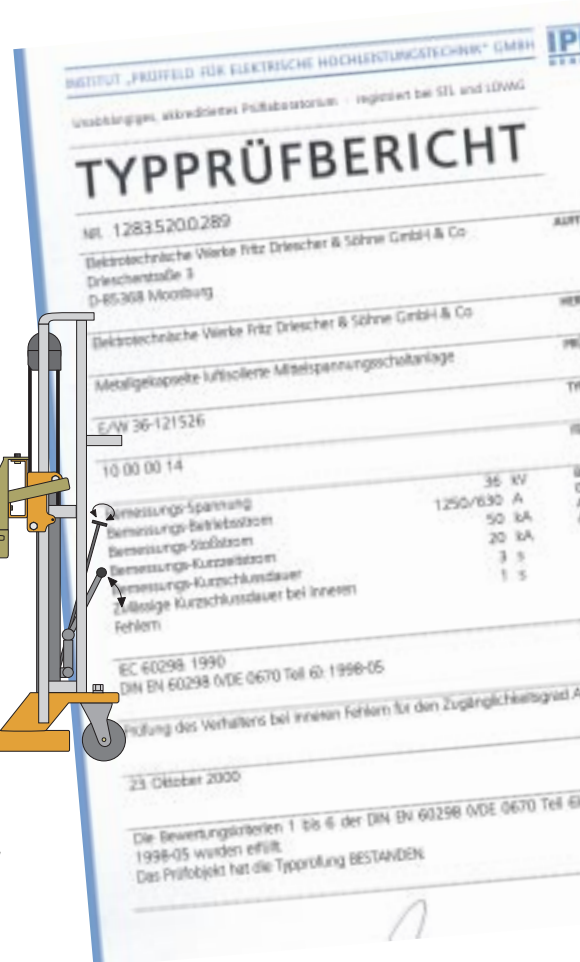
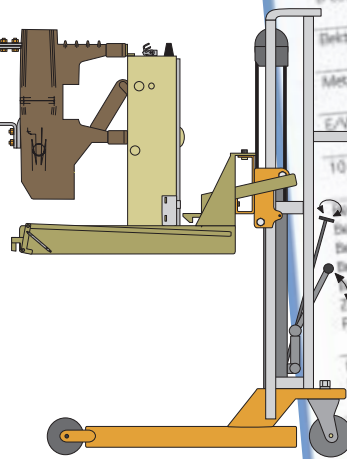
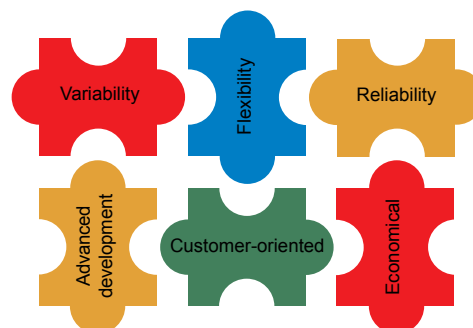


Fig. 8: 36 kV Switch panel with circuit-breaker V 620 and 1220 KUF and earthing switch in withdrawable design



## Customer Benefits

- **Reliability based on the high quality of our products**
- **Economic efficiency through continuous further development**
- **Flexibility**
- **Easy operation**
- **Long service life**
- **Minimum maintenance**



## Withdrawable Plates

This insulating barrier plate is to prevent any impermissible approach or accidental contact of live parts. It is to be inserted with the panel door closed, if work is to be carried out on the panel and the switchgear

cannot be switched completely dead. By pulling the grip hole the plate can be removed again after closing the panel door.

## Accessories

- Insulating barrier plate in compliance with DIN VDE 0681 Part 8
- Panel lighting or capacitive voltage testing system in compliance with (E) DIN VDE 0682 Teil 415
- Short-circuit indicator
- Floor covers
- Surge voltage protector

## Weights

Type	Designation	Weight approx.kg	Drawing-no.
WK 36-121526-22	Cable panel	350	HA3 - 093660
WT 36-121526-22	Transformer feeder panel	360	HA3 - 7093520
WM 36-121526	Measuring panel	420	HA2 - 095693
WH 36-121526	Riser panel	250	HA2 - 093982
WÜ 36-121526-22	Bus sectionalizer panel	370	HA2 - 70870
WL 36-121526-620	Circuit-breaker panel	800	HA3 - 093519

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

switching • electricity • safely

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