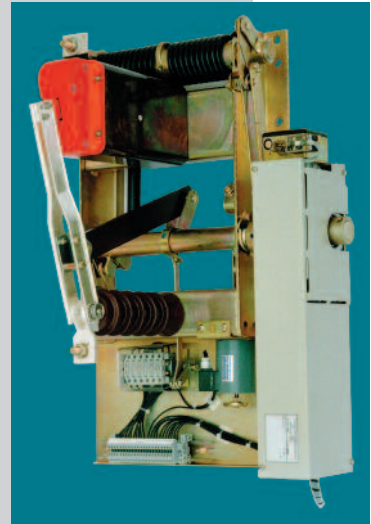
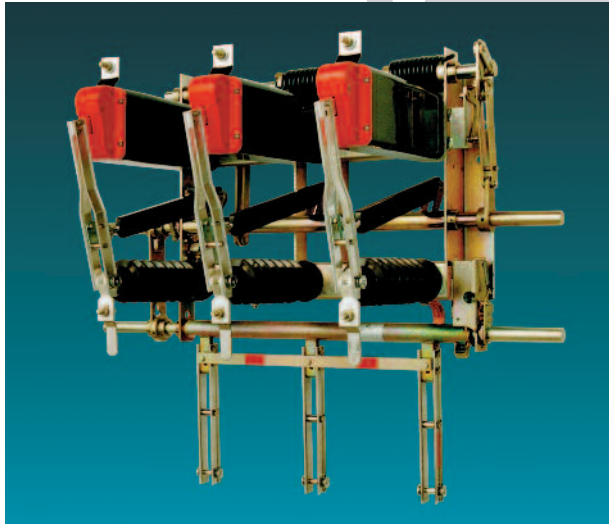


DRIESCHER
Indoor -
Switch-Disconnecter and
switch-fuse combination H 29

- Single- and three pole
- Rated voltage
24 kV and 36 kV
- Rated current 630 A



H 29

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DRIESCHER - Indoor Switch-Disconnecter and switch-fuse combination H 29

acc. to EN 62271-103 and EN 62271-105

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Types of Switch-Disconnectors, Operating conditions

• 3

Main advantages, Energie storage mechanism, Arc extinction

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Technical data

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Three-pole Switch-Disconnecter H 29 EA, pole centres $p = 275$ mm

• 5

Single-pole Switch-Disconnecter H 29 EA, 24 kV, with attached motor-operated mechanism

• 6

Three-pole fuse Switch-fuse combination H 29 SEA, pole centres $p = 275$ mm

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Additional attachment features

• 7

36 kV switch panels

• 8

Range of products includes

Types of Switch-Disconnectors

Typ H 29 EA with quick-make and quick-break operation (with trip-free mechanism)

All types are available with:

- attached earthing switch with high-speed operation
- positive mechanical interlocking between Switch-Disconnecter and earthing switch
- shunt releases
- Pilot switch - also for earthing switch

Typ H 29 SEA with quick-make and quick-break operation (with trip-free mechanism) as well as with fuse holders mounted below for HV HBC fuses with pin release¹⁾, for all-pole disconnection of the switch when a fuse operates.

¹⁾ tripping impact force at least 80 N.

Operating conditions

The switches are designed for normal operating conditions according to EN 62271-1 class „Minus 5 Indoor“. The peak value of the ambient temperature is 40° C; the average value over 24 hours is 35° C at best. The values of the insulating power are related to sea-level. Reduction in insulating capacity at heights up to 1000 m are negligible due to the decreasing insulating capacity of the air. At heights over 1000 m above sea-level the values for rated withstand alternating voltage

and rated impulse withstand voltage must be adjusted (e. g. at a height of 2000 m above sea-level, the insulating power of the air gaps is reduced by a factor of 0.89).

To each switchgear an instruction for transportation, mounting and putting into service is inclosed. This instruction which we certainly would send you in advance, has to be absolutely obeyed.

DRIESCHER - Indoor Switch-Disconnecter H 29

Main advantages

- Convenient dimensions
- Efficient and reliable arc extinction
- Simple functioning, no arcing contacts or lagging contacts
- Isolating distance visible after load disconnection
- Easy operation
- High operating frequency with minimum amount of maintenance

Energy storage mechanism

One of the robust, low-maintenance energy storage mechanisms of type H 29 EA is mounted on the base frame on which the three switch poles are installed. Hundreds of thousands of these devices have already been used successfully in the Switch-Disconnecter H 22.

The EA energy storage mechanism operates with two torsion springs for quick-make and quick-break operation with trip-free release.

Both torsion springs are tensioned when the switch is closed.

While the ON switch spring relaxes after tensioning and releases the energy for switching ON, the OFF

switch spring remains tensioned and can be released by the tripping device, HV HBC fuse with pin triggering or manually for switching OFF.

With non-manual release the operating shaft remains in ON position and must be moved to the neutral position manually for reclosing.

The actuation for wall-mounting devices can take place via a linkage system operated by a lever or using any of the manual actuators given in or motorized actuator given in list 774, according to requirements and situation.

Arc extinction

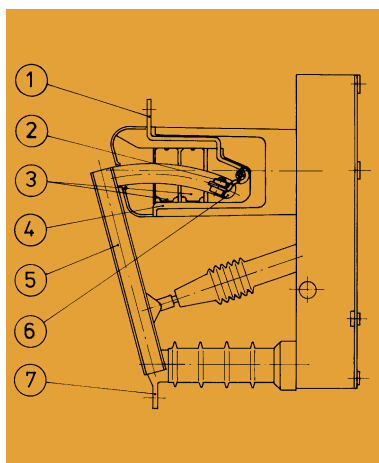
When closing the switch the switch blade (5) with the arcing tip (6) is withdrawn from the contact jaw (2). The arc which occurs is extinguished in the arcing chamber (4). This chamber is enclosed, has four sections and comprises a pressure and an expansion chamber.

In the pressure chamber two pairs of extinguishing plates (3) are forced into the path of the arc by lateral spring pressure.

At low currents the arc is extinguished by deionising action based on the cooling effect of the walls.

Arc extinction is achieved in the higher current ranges by the arc extinguishing gases produced in the pressure chamber flowing out into the expansion chamber. Based on the rational combination of several arc quenching principles the entire current range of the load-break switch is always effectively covered.

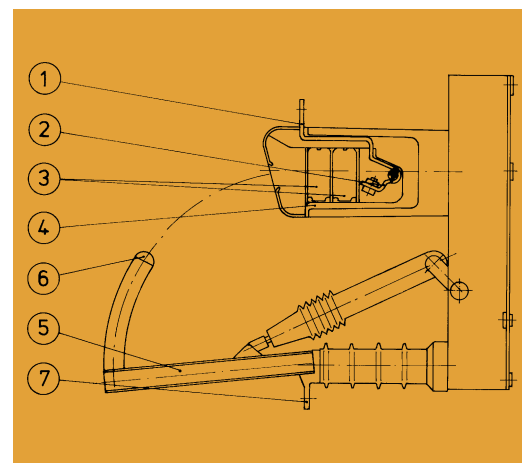
The arcing chambers require no maintenance.



ON

Load-break switch H 29

- 1 Upper connecting contact
- 2 Contact jaw
- 3 Extinguishing plates
- 4 Arcing chamber
- 5 Switch blade
- 6 Arcing tip
- 7 Lower connecting contact



OFF

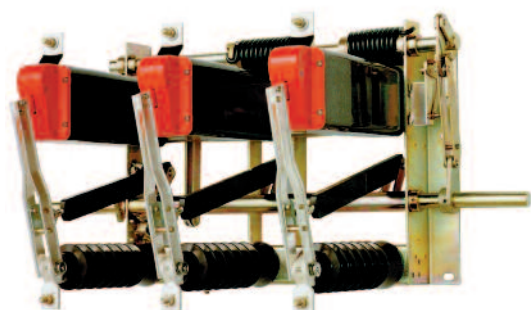
DRIESCHER - Indoor Switch-Disconnecter H 29

Technical data

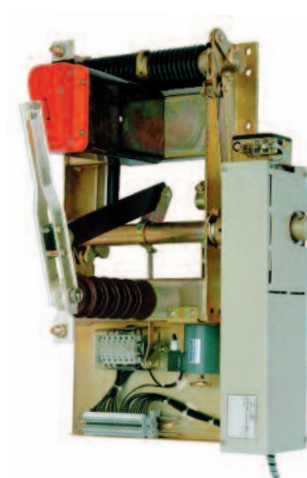
EN 62271-103

Rated voltage	U_r	kV	24	36
Rated frequency	f	Hz	50	50
Rated (operating) current	I_r	A	630	630
Rated peak withstand current	I_p	kA	50	50
Rated short-time current	I_k	kA	20	20
Rated short-circuit making current	I_{ma}	kA	36	20
Rated mainly active breaking current	I_1	A	630	630
Rated closed-loop breaking current	I_2	A	630	630
Rated transformer off-load breaking current	I_3	A	7	5
Rated cable-charging breaking current	I_{4a}	A	22	24
Rated earth fault breaking current	I_{6a}	A	163	134
Rated cable-charging breaking current under earth fault conditions	I_{6b}	A	35	20
Rated frequency at rated transient recovery voltage	f_e	kHz	4,6	4,6
Rated amplitude factor	γ		1,4	1,4

Rated voltage	U_r	kV	24	36
Rated lightning impulse withstand voltage	U_w			
Conductor - Earth		kV	125	170
Conductor - Conductor		kV	125	170
Insulating distance		kV	145	195
Rated power frequency withstand voltage	U_d			
Conductor - Earth		kV	50	70
Conductor - Conductor		kV	50	70
Insulating distance		kV	60	80



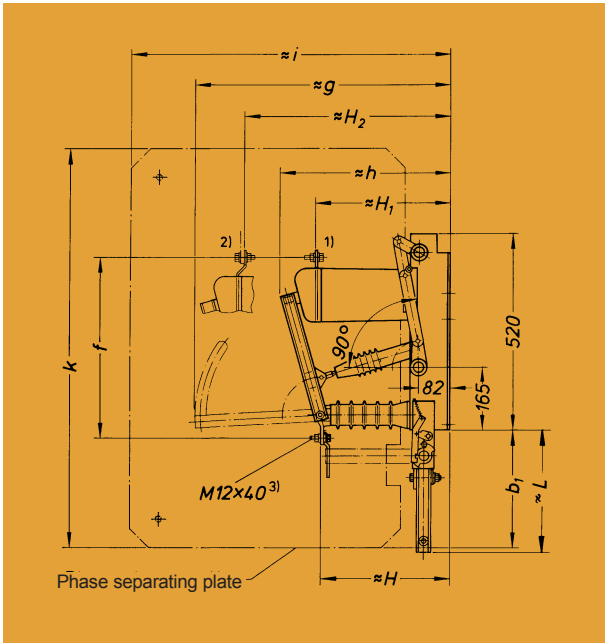
Three-pole indoor Switch-Disconnecter
H 29 EA



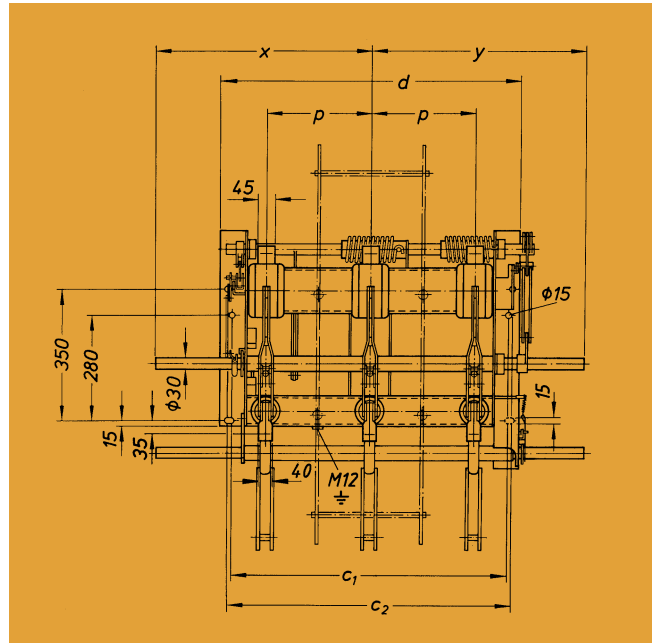
Single-pole indoor Switch-Disconnecter
H 29 EA

DRIESCHER - Indoor Switch-Disconnecter H 29

Three-pole indoor Switch-Disconnecter H 29 EA, 630 A



- 1) Connection with 24 kV
- 2) Connection with 36 kV



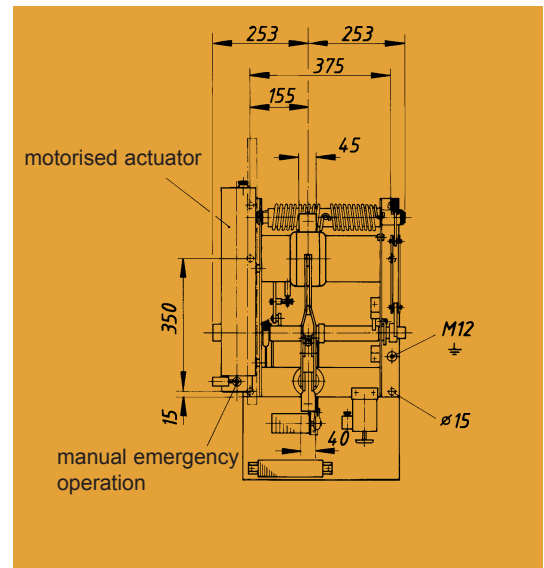
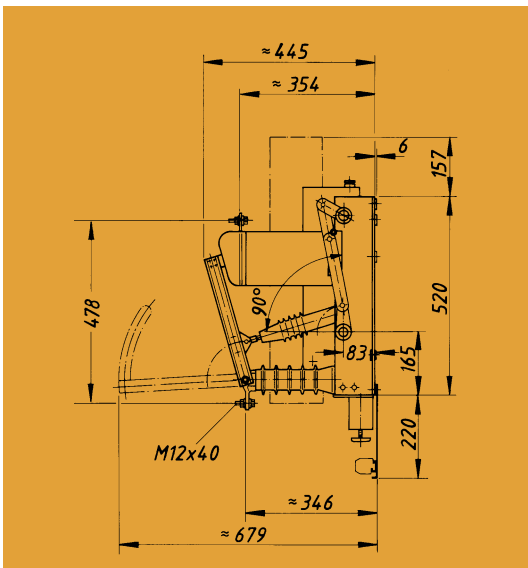
Phase separating plates only with 36 kV
(Drawing no. LG 3-36393/1 or /6)

Rated voltage	p	b ₁	c ₁	c ₂	d	f	≈ g	≈ h	≈ H	≈ H ₁	≈ H ₂	≈ i	k	≈ L	x	y
24 kV	275	-	730	750	790	478	673	445	340	354	-	-	-	326	565	565
36 kV	275	315	730	750	790	502	780	550	445	-	439	950	1060	436	650	650
36 kV	275	665	730	750	790	502	780	550	445	-	439	950	1410	436	650	650

Drawing no. LG 3-38742 (LG 3-26621)

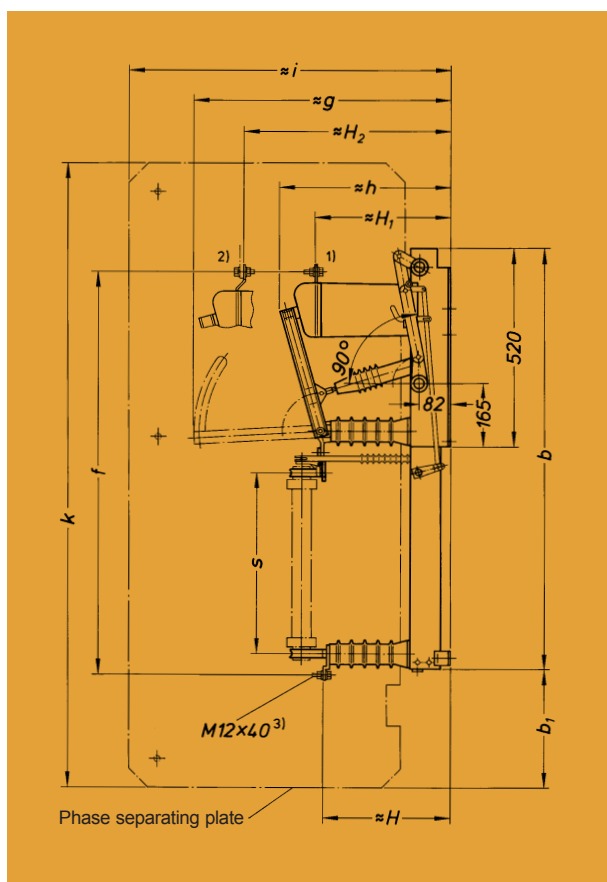
Single-pole indoor Switch-Disconnecter H 29 EA, 24 kV, 630 A

with attached motor-operated mechanism (attachment of motor-operated mechanism can be on the left or on the right)

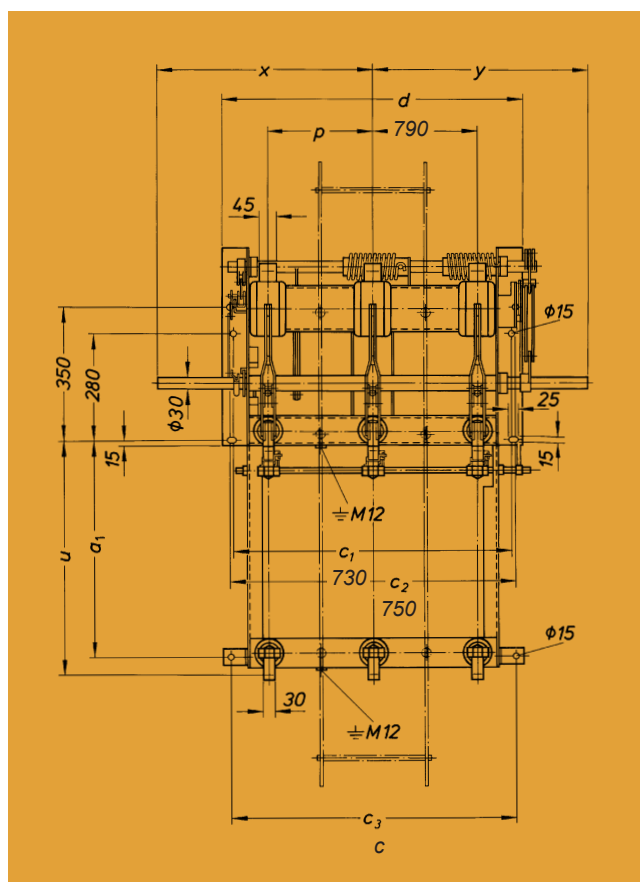


DRIESCHER - Indoor Switch-Disconnecter H 29

Three-pole indoor Switch-fuse combination H 29 SEA, 630 A



1) Connection with 24 kV
2) Connection with 36 kV



Phase separating plates only with 36 kV
(Drawing no. LG 3-36393/2 bzw. /7)

Rated voltage	p	a ₁	b	b ₁	c	f	≈g	≈h	≈H	≈H ₁	≈H ₂	≈i	k	s	u	x	y
24 kV	275	-	1105	-	-	1058	673	445	335	354	-	-	-	475	615	565	565
36 kV	275	655	1200	310	750	1177	780	550	440	-	439	950	1735	570	710	650	650
36 kV	275	655	1200	660	750	1177	780	550	440	-	439	950	2058	570	710	650	650

Drawing no. LG 3-26622

Additional attachment features

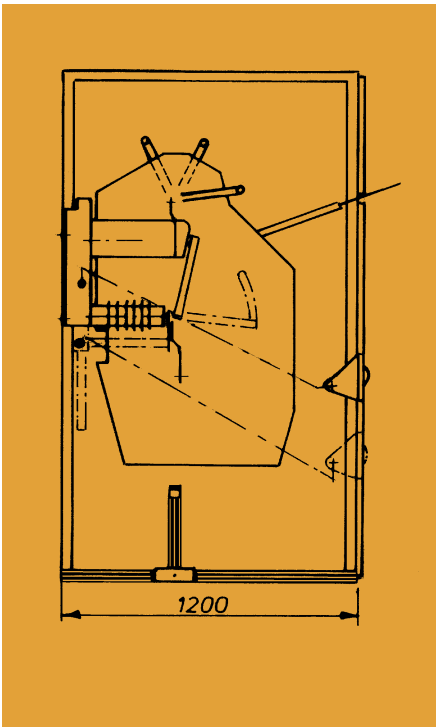
Manual operation using eye bolt (List 774) 320 mm centre distance and switch rod (List 773) or with an actuator in accordance with List 774.

Equipped with

- earthing switch
- positive mechanical locking between load-break and earthing switches,
- pilot switches, also for attached earthing switches,
- shunt releases 100/110 V or 220 V AC or 24 V, 48 V, 60 V, 110 V or 220 V DC
- pneumatic actuator or motorised actuator (List 774)

only when ordered additionally

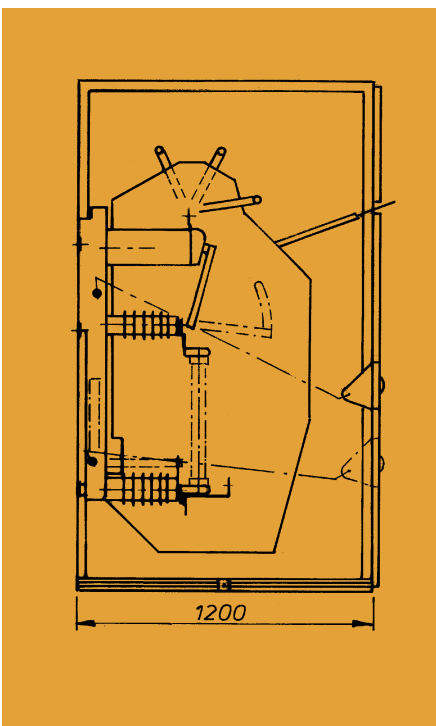
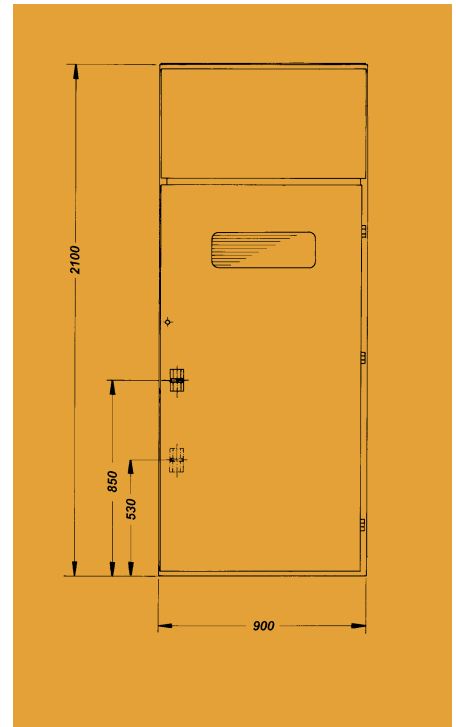
36 kV switch panels • EN 62271-200



Cable switchpanel

in accordance with drawing
HA 2-69798

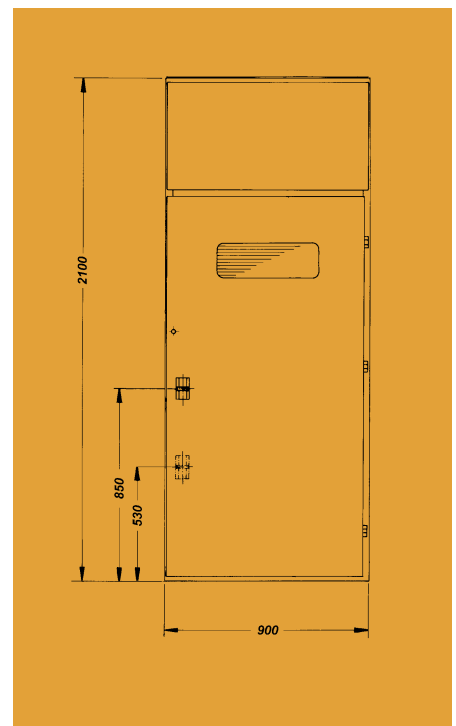
- Welded steel angle construction, with 2 coats of paint,
- Separation between sections
- Busbars 630 A.
- Withdrawable plate applicable with closed section door
- Resistance to accidental arcs 16 kA, 1 sec.



Transformer panel

in accordance with drawing
HA 2-69758

- Welded steel angle construction, with 2 coats of paint,
- Separation between sections
- Busbars 630 A.
- Withdrawable plate applicable with closed section door
- Resistance to accidental arcs 16 kA, 1 sec.



Our range of products includes:

Medium-voltage systems

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

Medium-voltage switches

- 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)
- Railway switches for power supply and catenary
- High-voltage high-breaking-capacity fuses
- Customer-specific models

Low-voltage systems

- Open-framework design
- Enclosed break devices (up to 6.300 A)
- Cable and fixed-station distribution cabinets

Low-voltage switchgear

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

Compact sub-station

- Concrete construction
- Container construction

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

Service

- Maintenance and Service of all switches and switchgears
- Training courses and seminars
- Thermography; Live-line working

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

switching • electricity • safely

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