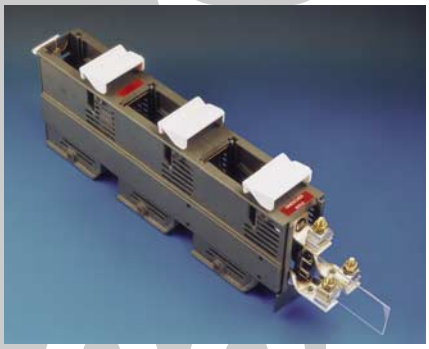
DRIESCHER -
Low voltage fused-
switch-disconnector system 403

- **Rated current**
  400 A up to 1445 A



403

403

403

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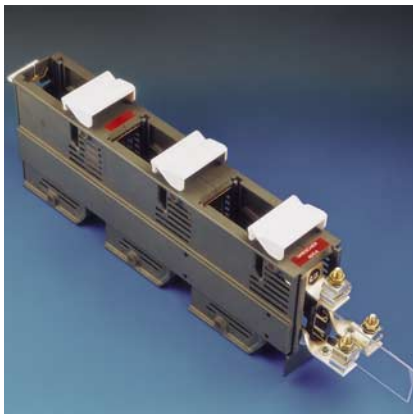
DRIESCHER - Low voltage fused-switch disconnector system 403

protected against accidental contact according to BGV A2, 1-pole and 3-pole switchable

Index:

Technical data

Rated current	400 A	630 A
Rated voltage according to VDE 0660	690 V AC	690 V AC
Rated frequency	45 - 65 Hz	45 - 65 Hz
Rated insulation	2,5 kV	2,5 kV
Rated impulse voltage	8,0 kV	8,0 kV
50 ON-OFF operations at 500 V / cos φ 0.7	400 A	630 A
50 ON-OFF operations at 500 V / cos φ 0.2	400 A	630 A
Short circuit making with lv-fuses	100 kA	100 kA
Permissible ambient temperature	-20 °C bis +50 °C	-20 °C bis +50 °C
Degree of protection	IP 2X	IP 2X
Leakage current	0,2 mA	0,2 mA
Mechanical operations	5000	5000
Electrical operations	500	500



DRIESCHER - Low voltage fused-switch disconnector system 403

protected against accidental contact according to DGUV V3, 1-pole and 3-pole switchable

General

The requirement of protection against accidental contact as well as switching under load was taken into consideration when developing this system.
That means: maximum possible operational and functional saftey!
The distribution system is made of high quality plastic press parts and guarantees an ideal circulation of air.

The electrical circuit consists of three single poles, vertically arranged and under load switchable fused-switch-disconnectors. The ON-OFF operation of the fuses is done as shown in the diagram with the operating slider, that arretierst automatically in the OFF position.

The operating slider is provided with gaps for controlling the NH fuses as well as for placing a voltage tester.

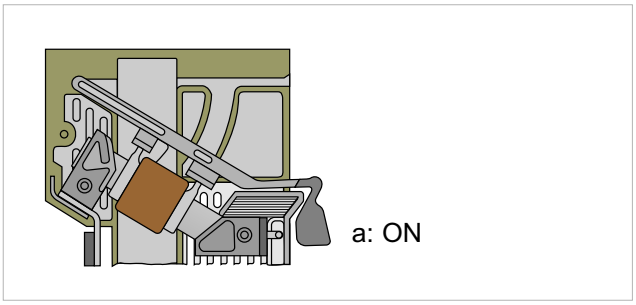
For current conduction, silver plated contacts with connection cables leading below or above are provided, by which the current path from the cable connection up to the fuses are without any screw connections.

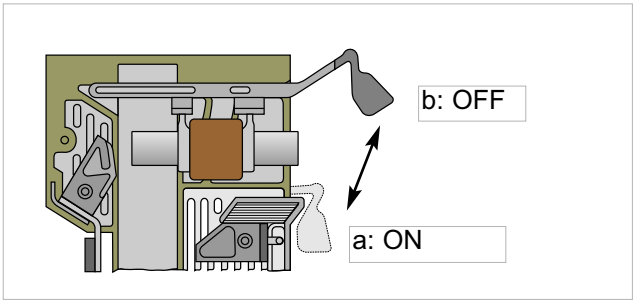
The switches can be arranged adjacent to each other to make complete distribution systems. During the assembly of such a distribution sytem the busbar can be extended for a possible expansion in the future. The free end of the busbar is covered with isolating plates (page 10).

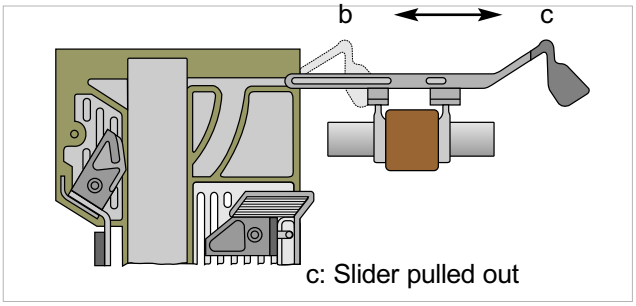
By means of an isolating plug-in lever (page 10), further switches can be mounted on the busbars without switching off the supply.
Furthermore slideable covering and work bonnets (page 10) are available.

For mounting and demounting the switches under live conditions work bonnets to cover the live parts of the neighbouring circuits are absolutely necessary.

50 ON-OFF operations each were carried out at 550 V/320 V AC and cos φ 0,7 by 500 A, 750 A and 1000 A successfully. By all switching operations the arc was successfully extinguished.







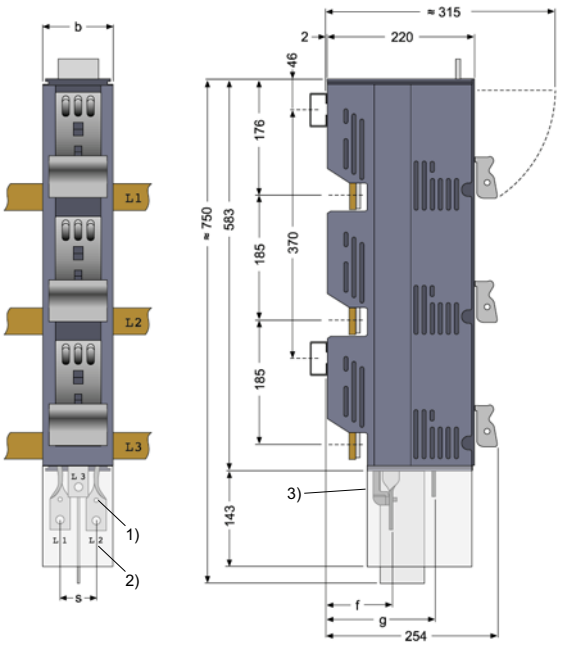
The slider has different colours according to the application:

Standard colour	**white-grey**
for coupling circuits	**orange**
for earthing arrangements	**red**
for line seperation	**green**

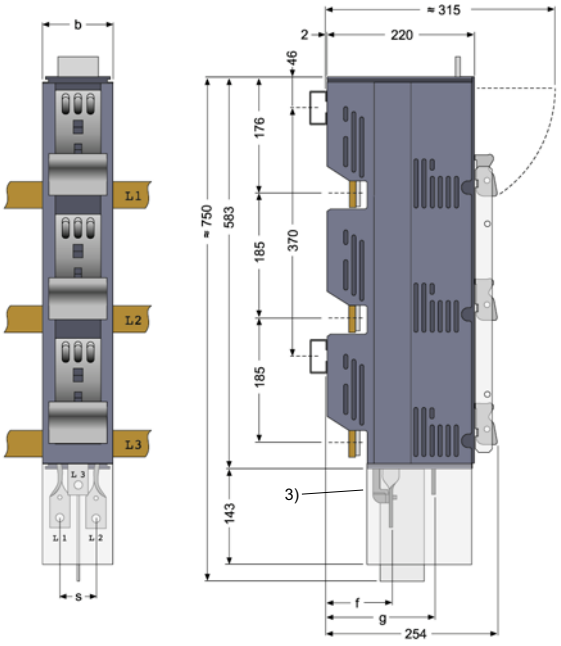
DRIESCHER - Low voltage fused-switch disconnector system 403

protected against accidental contact according to DGUV V3, 1-pole and 3-pole switchable

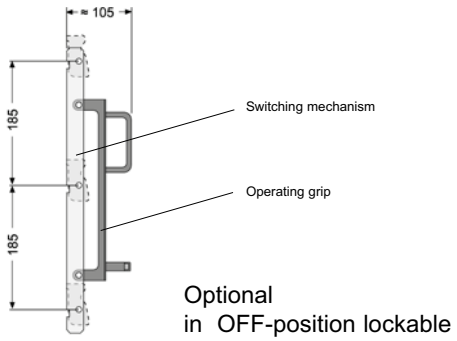
Basic version with twisted cable-connection acc. to drawing NN4-71026



Version 1-pole switchable



Version 3-pole switchable



Optional
in OFF-position lockable

Version 3-pole switchable with grip

1) possible connection types, see page 6
2) Cable-covering bonnet, see page 10, on ordering
3) Support only for 400 A

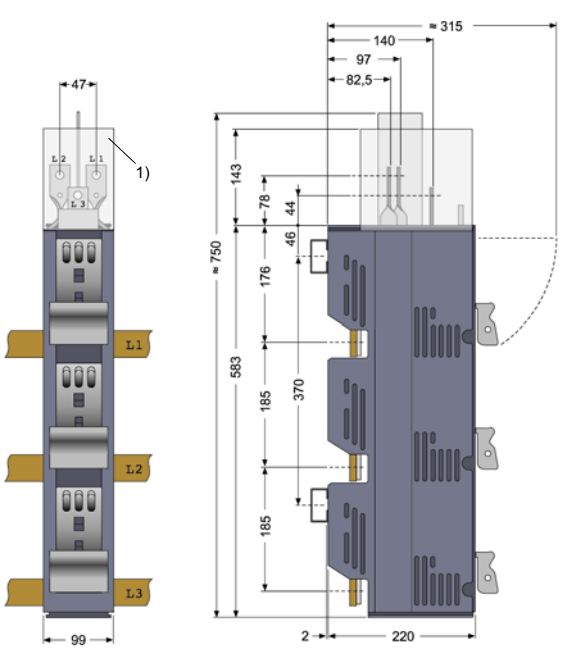
Part-no.	Rated Current	For lv-fuses	Operation	b in mm	f in mm	g in mm	s in mm	Weig. in kg
843 22112	400 A	Size 2 [4]	1-pole	99	96,5	171	54	8,0
843 62112	400 A	Size 2 [4]	3-pole	99	96,5	171	54	8,5
843 62412	400 A	Size 2 [4]	3-pole + Grip	99	96,5	171	54	9,0
843 32112	630 A	Size 3 [4]	1-pole	119	98	172	54	9,3
843 72112	630 A	Size 3 [4]	3-pole	119	98	172	54	9,9
843 72412	630 A	Size 3 [4]	3-pole + Grip	119	98	172	54	10,4

4) Use of lv-fuses size 1 in 400 A system and size 2 in 630 A system, possible without changing the connecting element.

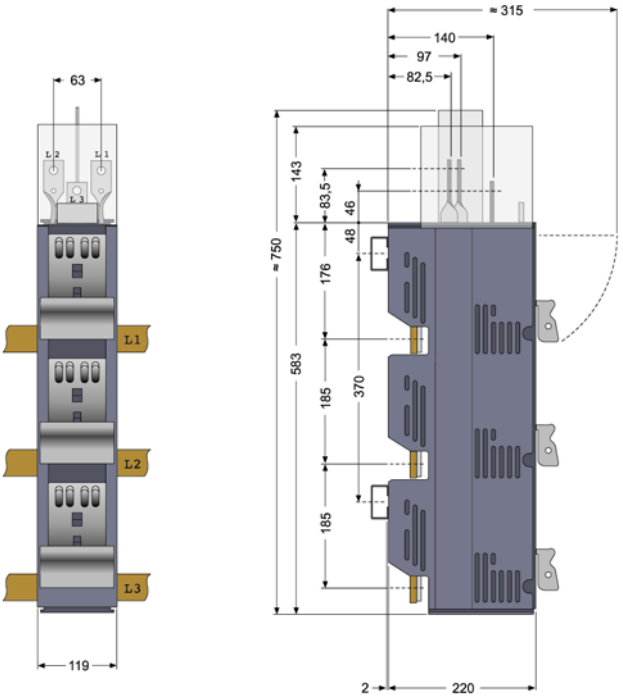
DRIESCHER - Low voltage fused-switch disconnector system 403

protected against accidental contact according to DGUV V3, 1-pole and 3-pole switchable

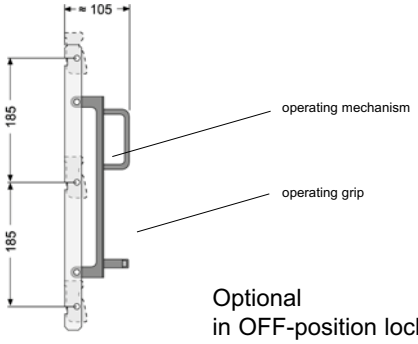
Version with cable-connections above according to drawing NN4-71026



400 A



630 A



Optional
in OFF-position lockable

Version 3-pole switchable with grip

1) 2) Cable-covering bonnet, see page 10, on order

Part-no.	Rated current	for lv-fuses	Operation	Weight in kg
843 24112	400 A	size 2 [4]	1 pole	9,0
843 64112	400 A	size 2 [4]	3 pole	9,5
843 64412	400 A	size 2 [4]	3 pole + grip	10,0
843 34112	630 A	size 3 [4]	1 pole	11,1
843 74112	630 A	size 3 [4]	3 pole	11,7
843 74412	630 A	size 3 [4]	3 pole + grip	12,2

4) Use of lv-Fuses size 1 in 400 A and size 2 in 630 A system, is possible without changing the connecting element.

DRIESCHER - Low voltage fused-switch disconnector system 403

protected against accidental contact according to DGUV V3, 1-pole and 3-pole switchable

Possibilities of cable connections

Direct terminals
50 - 185 mm² se
(35 - 150 mm² sm)

V-terminals
50 - 240 mm² se
(35 - 185 mm² sm)

Version with built in current transformers
up to max. 630 A
(Connection screws M12 x 55)

Version with built in current transformers
up to max. 1250 A
(Connection screws M12 x 55)

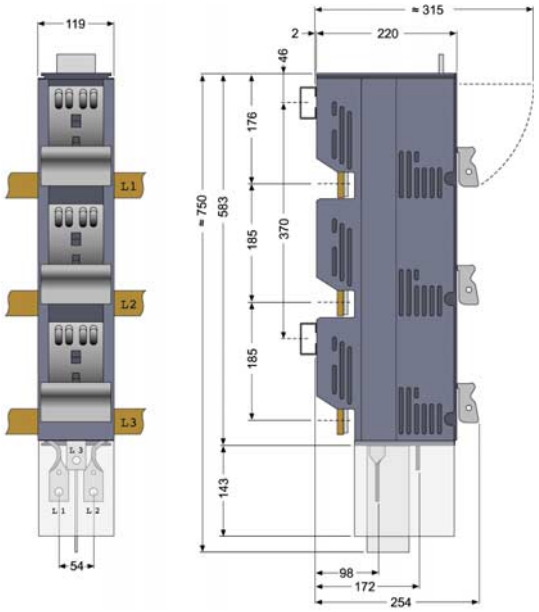
1)	Connection type
① .. 113	Flat direct-terminals 95 - 185 mm² se (95 - 150 mm² sm)
② .. 122	V-terminal 50 - 240 mm² se (35 - 185 mm² sm)
③	Transformer bus for system 403 up to max. 630 A (Connection type acc. to Pos. 1 to 4
④	Transformer bus for system 403 up to max. 1250 A (Connection screws M12 x 55)

1) for example 843 22 **113** means distribution system 403 / 400 A, 1-pole switchable

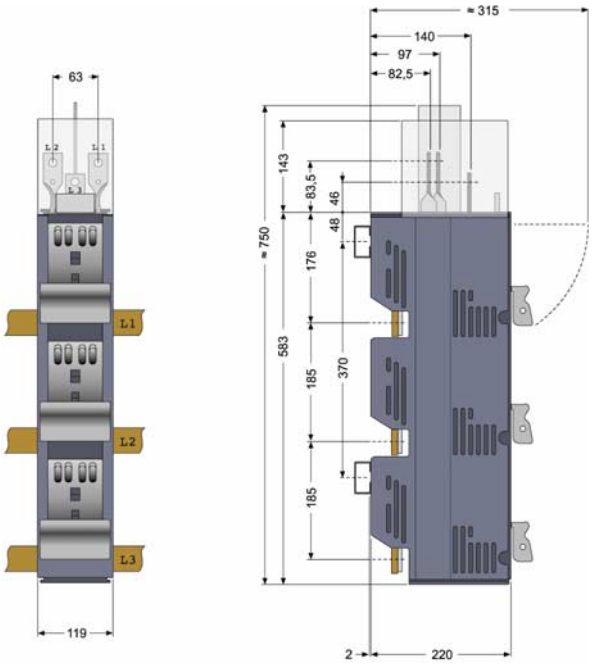
DRIESCHER - Low voltage fused switch disconnector system 403

protected against accidental contact according to DGUV V3, 1-pole and 3-pole switchable

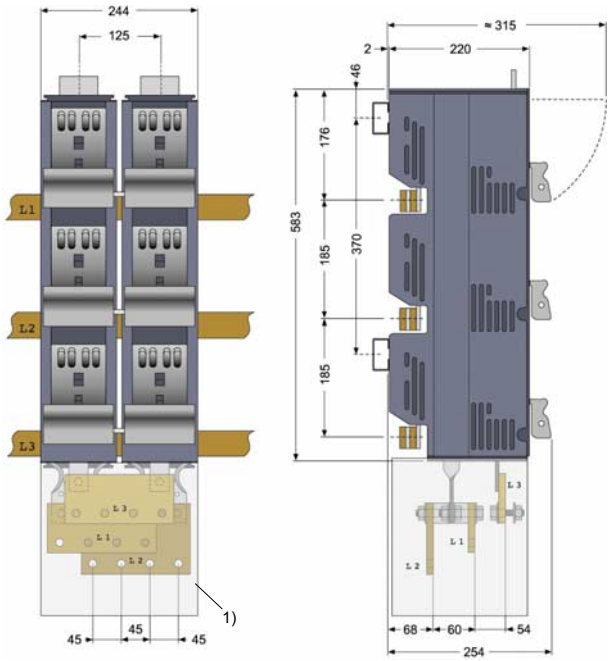
Incomer circuit for transformers up to 1000 kVA (1445 A)



630 kVA (909 A) connection below



630 kVA (909 A) connection above



1000 kVA (1445 A) connection below

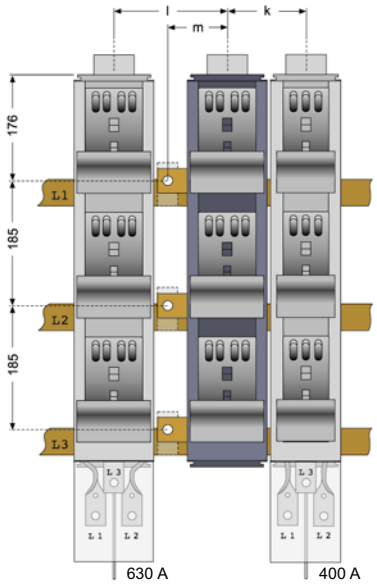
1) Cable-covering bonnet, see page 10, on ordering

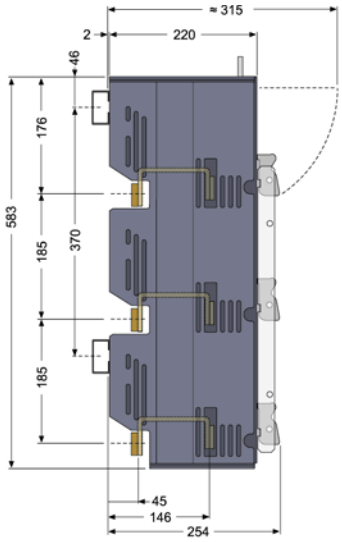
Transformer-rating	Part-no.	lv-fuses	Connection	Operation	Drawing-Nr.	Weight in kg
630 kVA	843 42212	gTr-size 3	below	1-pole	NN4-71540	9,6
630 kVA	843 82212	gTr-size 3	below	3-pole	NN4-71540	10,1
630 kVA	843 44212	gTr-size 3	above	1-pole	NN4-71590	11,2
630 kVA	843 84212	gTr-size 3	above	3-pole	NN4-71590	11,7
1000 kVA	843 49216	gTr-size 3	below	1-pole	NN3-71824	26,4
1000 kVA	843 89216	gTr-size 3	below	3-pole	NN2-71797	26,8

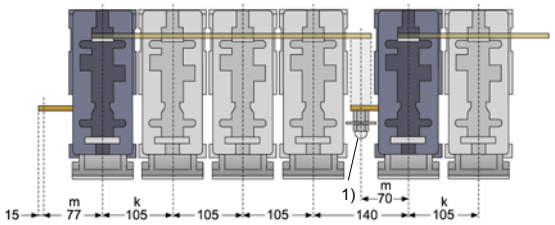
DRIESCHER - Low voltage fused-switch disconnector system 403

protected against accidental contact according to DGUV V3, 1-pole and 3-pole switchable

Incomer or coupling circuit according to drawing NN3-71303







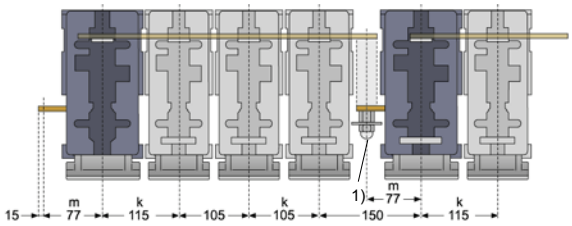
Examples for arrangement

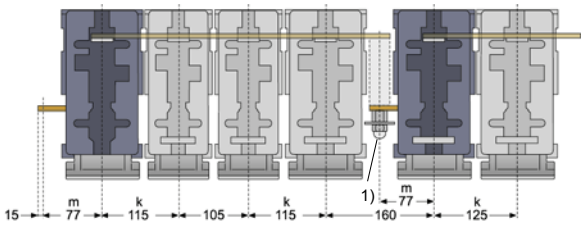
from incomer and outgoing circuit as well as from coupling and outgoing circuit

The dimensions k, l and m are dependent on the different system sizes.

1) Cover (page 10) and 3 cap nut made of plastic only on ordering.
Screw extension from metal nut 8 mm to 15 mm.

Connecting bracket (drawing-no. NN4-40947) coupler circuit and busbars only on ordering.





Rated current Incomer or coupler	Operation	Part-no. Connection on theleft led through	Part-no. Connection on the right led through	Rated current outgoing circuit	k	l	m
400 A[2)]	1-pole	843 25127	843 26127	400	105	140	70
400 A[2)]	3-pole	843 65127	843 66127	400	105	140	70
630 A[2)]	1-pole	843 35127	843 36127	400	115	150	77
630 A[2)]	1-pole	843 35127	843 36127	630	125	160	77
630 A[2)]	3-pole	843 75127	843 76127	400	115	150	77
630 A[2)]	3-pole	843 75127	843 76127	630	125	160	77

By exchanging the connecting element on the slider the use of lv-fuses size 1 in 400 A-system and lv-fuses size 2 in 630 A system is possible.

DRIESCHER - Low voltage fused-switch disconnector system 403

protected against accidental contact according to DGUV V3, 1-pole and 3-pole switchable

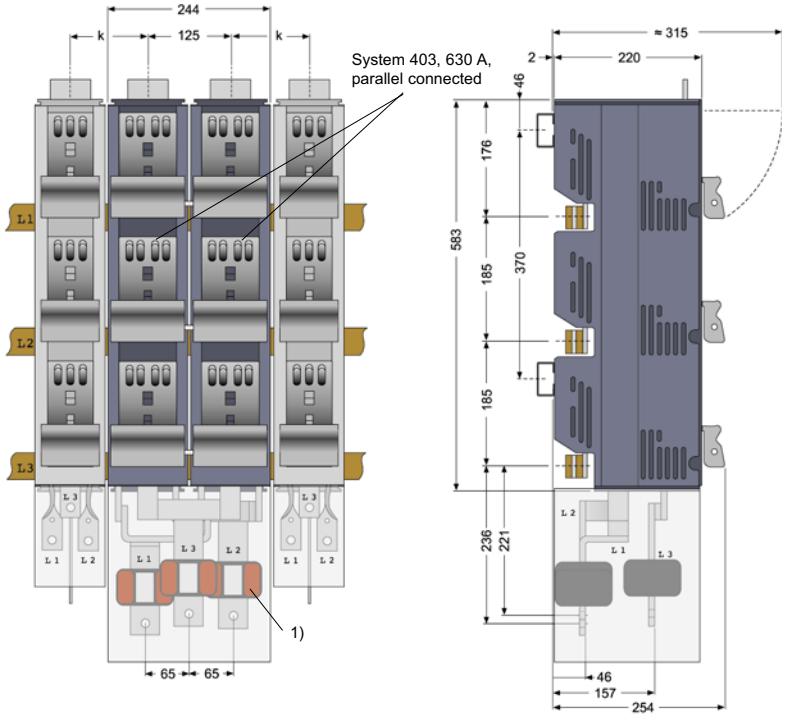
Feeder and coupler 1000 A
consisting of two parallel connected distribution system 403, 630 A

Feeder circuit 1000 A

according to drawing NN3-71305

Operation	Part-no.	Outgoing section	k
1-pole	843 41112	400 A	115
1-pole	843 41112	630 A	125
3-pole	843 81112	400 A	115
3-pole	843 81112	630 A	125

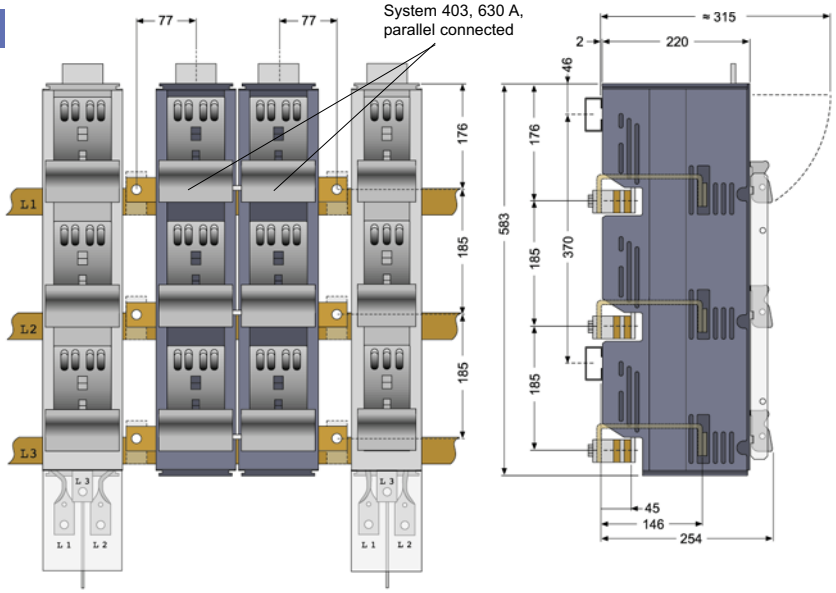
1) Current transformer is not included in the delivery

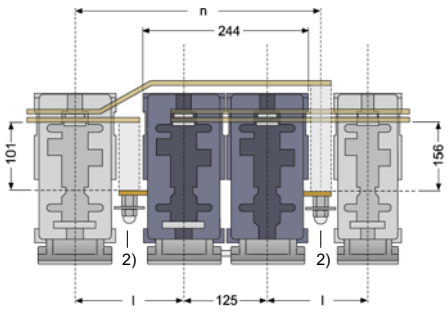


Coupling circuit 1000 A

according to drawing NN3-71307

Operation	Part-no.	Outgoing section	l	n
1-pole	843 49119	400 A	150	352
1-pole	843 49119	630 A	160	362
3-pole	843 89119	400 A	150	352
3-pole	843 89119	630 A	160	362





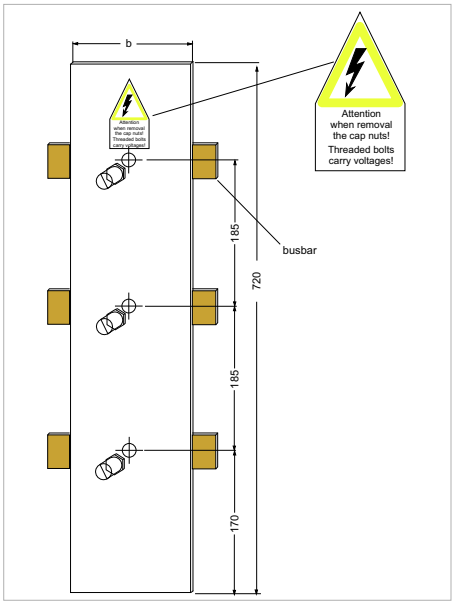
2) Cover (page 10) and 3 cap nuts made of plastic only on ordering.
Screw extension from metal nut 8 mm to 15 mm.

Connecting bracket (drawing-no. NN4-40947), between coupling circuit and busbars only on ordering.

DRIESCHER - Low voltage fused-switch disconnector system 403

protected against accidental contact according to DGUV V3, 1-pole and 3-pole switchable

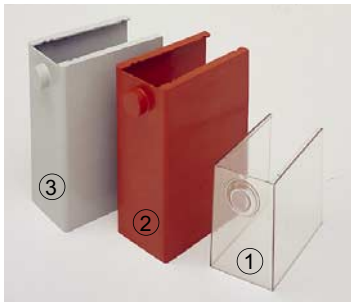
Accessories



Busbar-covering plate for the distribution system 301 and 403

Made of GFK • 2,5 mm, grey colour with cap nuts made of plastic

• for system 301/160 A	b=50 mm	
Part-no. 840 30005	Weight 0,10kg	Drawing-no. NN4-36540
• for system 403/400 A	b=105 mm	
Part-no. 840 30001	Weight 0,29 kg	Drawing-no. NN4-36540
• for system 403/630 A	b=125 mm	
Part-no. 840 30002	Weight 0,34 kg	Drawing-no. NN4-36540
• for coupling circuit	b=45 mm	
Part-no. 840 30003	Weight 0,13 kg	Drawing-no. NN4-36540



Work and covering bonnet for distribution system type 403

acc. to DGUV V3 • acc. to drawing NN4-39041 and NN4-41231

Pic.	Application	Colour	Rated current	Part-no.	Height	Width	Depth
①	Covering bonnet for system with normal conn.	transparent	400 A	453 21724	150	92	166
①	Covering bonnet for system with normal conn.	transparent	630 A	453 35345	150	112	166
①	Covering bonnet for system with normal conn.	transparent	800 A	453 65417	350	207	217
①	Covering bonnet for system with normal conn.	transparent	1000 A / 1445 A	453 41231	350	247	217
②	Work bonnet for all connection types	red	400 A	453 20703	253	101	167
②	Work bonnet for all connection types	red	630 A	453 35415	253	121	167
②	Work bonnet for all connection types	red	1000 A	453 35416	253	246	167
③	Covering bonnet for systems with transformer	grey	400 A	453 35525	253	101	167
③	Covering bonnet for systems with transformer	grey	630 A	453 35526	253	121	167
③	Covering bonnet for systems with transformer	grey	630 A / 909 A	453 35945	350	121	167

Isolating Plug-in lever with 1/2“ ratchet and insert bit with width 13 and 19 including linking element for washer, lock washer and nuts.

For working on live low voltage switchgear,
tested according to VDE/GS up to 1000 V

• Length 300 mm
Part-no. 840 31005 Weight 1,50 kg Drawing-no. NN4-97429

DRIESCHER - Low voltage fused-switch disconnector system 403

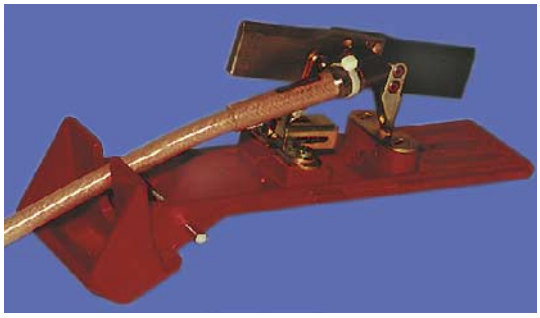
protected against accidental contact according to DGUV V3, 1-pole and 3-pole switchable

Earthing and shorting arrangements

Earthing slider (without earthing set),

for conventional earthing accessories with 35 mm² and 50 mm²

- for rated current 400 A
  Part-no. 840 31031 Drawing-no. NN4-71309
- for rated current 630 A
  Part-no. 840 31032 Drawing-no. NN4-71309



Earthing accessories

Part-no. 773 11535 Earthing accessory Ø Cu 35 mm²
Part-no. 773 11550 Earthing accessory Ø Cu 50 mm²

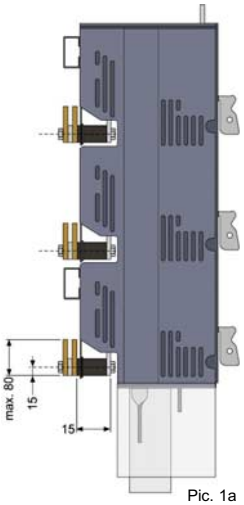
Universal earthing case

with earthing accessory Ø Cu 35 mm² (10 kA, 0,5 sec)
for low voltage fused-switch-disconnector system 403 / 400 A
and open distribution system size 00 - 3

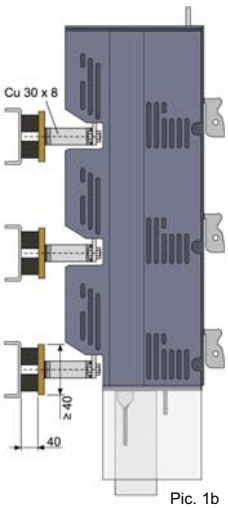
DRIESCHER - Low voltage fused-switch-disconnector system 403

protected against accidental contact according to DGUV V3, 1-pole and 3-pole switchable

Mounting of busbars with width more than 40 mm



Pic. 1a



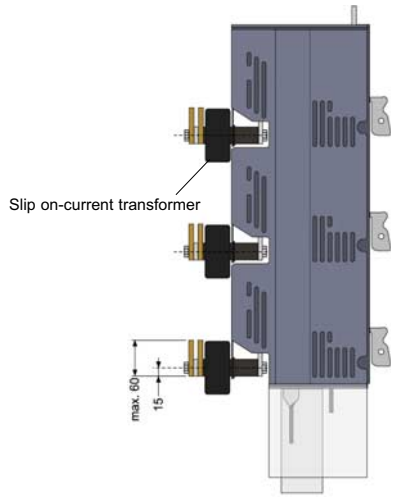
Pic. 1b

Version 1a and 1b (Picture left)

The busbars (≥ 40 mm) are connected to fused switch disconnector system 403 with distance pieces.

Part-no.	Rated Current	Operation	Connection	Drawing-no.
843 62143	400 A	3-pole	M12 x 35	NN4-22049
843 72143	630 A	3-pole	M12 x 35	NN4-22049

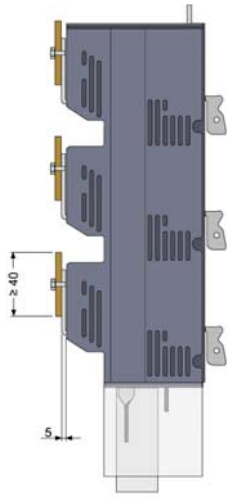
Copper-brackets can also be used instead of distance pieces (see Pic. 1b).



Version 2 (Picture right)

The busbar (≥ 40 mm) is connected to the fused switch disconector system 403 with distance pieces. Due to the extended distance pieces current transformers can be mounted for three phase outgoing section measurement.

Part-no.	Rated current	Operation	Connection	Drawing-no.
843 62125	400 A	3-pole	M12 x 35	NN4-38232
843 72125	630 A	3-pole	M12 x 35	NN4-38232



Version 3 (Picture left)

Direct mounting of fused-switch disconnector system 403 on busbars with width more than 40 mm according to drawing NN3-97101.
Variouss options of the fused-switch disconnector, as described are possible.

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

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