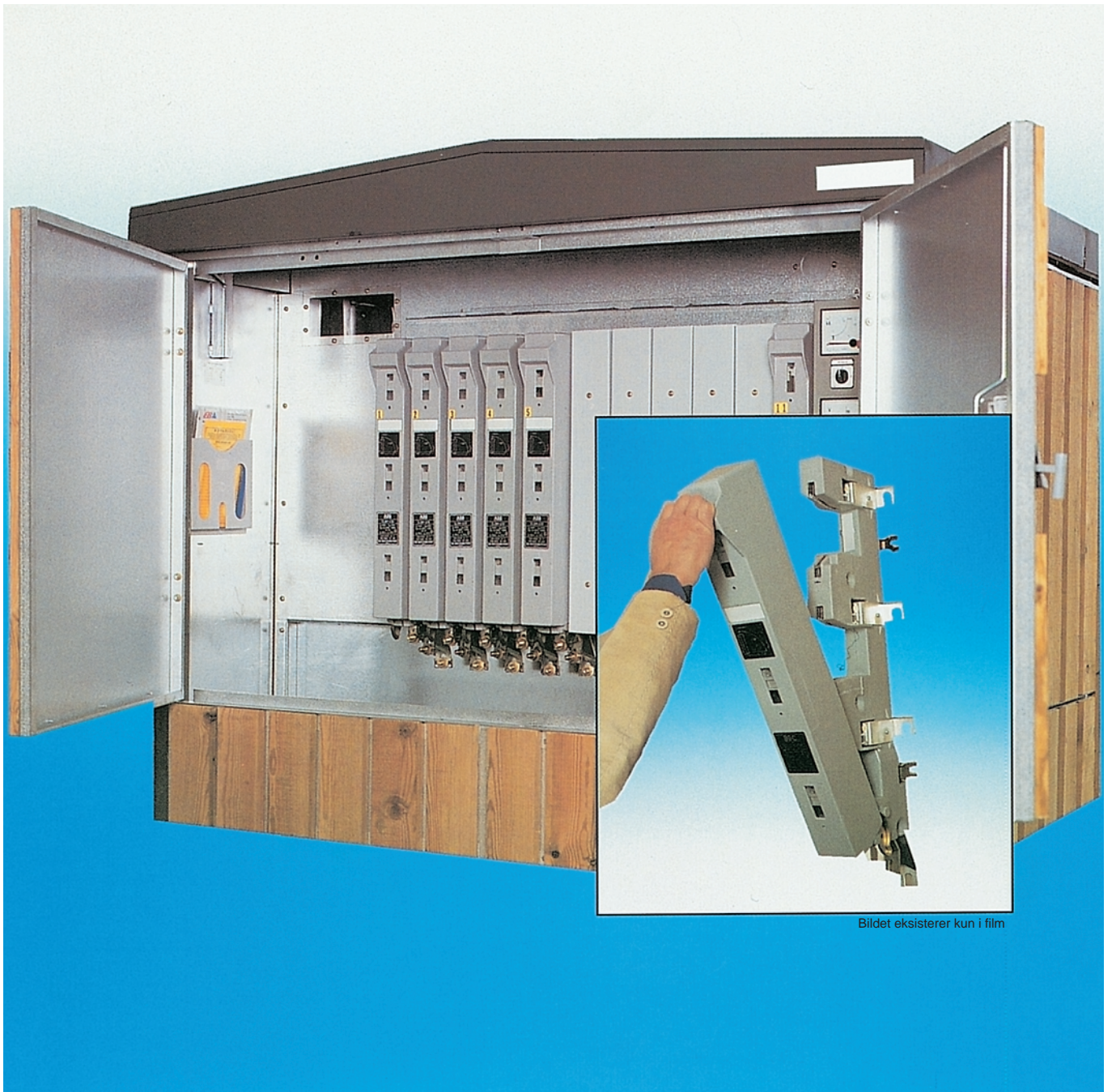


**3-pole tier type Fuse-Switch
Disconnecter Type SLBM**
250, 400, 630, 800, 1200 and
1600 A, 660 V for indoor
installations
Switch-Disconnecter BSL
1600 and 2000 A, 500 V

Catalogue NOCRL 02011 GB Edition 16 July 1999



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3-pole tier type Fuse-Switch Disconnecter Type SLBM and Switch-Disconnecter Type BSL

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R 1120

Fig. 1
SLBM



R 210 G

Fig. 2
Standard distribution board with
three fuse switch disconnectors
type SLBM, one switch
disconnecter type BSL and five
available positions

General description

The **SLBM** is a triple pole HRC fuse-switch disconnecter. It consists of a fuse base with three arc extinguishing chambers and a triple pole fuse carrier pivoted at the lower end of the fuse base.

The **BSL** is a triple pole switch-disconnector. It consists of a base with three main contacts and arc extinguishing chambers, and a triple pole operating cover, in which the main and auxiliary contact knives are placed. The operating cover is pivoted at the lower end of the contact base, and may be removed totally.

Safety

In low voltage installations, the electric short circuit arc is the most frequent cause of accidents. Pulling fuse links on load and closing them on short-circuit, is an important cause of such accidents.

To avoid the hazards when changing fuse links, the fuse-switch disconnecter type SLBM, has the following safety properties :

- * Protection against accidental contact in the closed (normal operation) position and when exchanging fuse links.
- * A manual breaking capacity assuring safe switching of all operating currents including starting currents of motors.
- * Safe closing on short-circuit currents up to 50 kA r.m.s. (corresponding to 100 kA peak) prospective value.

Application

Application of **SLBM** is in distribution boards for transformer substations, for buildings as well as for industrial plants.

Examples of applications of **BSL** are as a main switch, as a branch switch and for sectionnazing of busbars.

Mounting

The apparatus may be mounted on racks and boards and in cabinets by means of the mounting feet (see Fig. 3 pos 8 and the dimensional drawings).

Fig. 2 shows as an example, one distribution board. Spare places are reserved for possible future extensions. If the holes in the busbars for the connecting bolts are drilled beforehand, a subsequent installation of additional apparatus is easy and may even be done without interrupting the operation of the board.

* Frontpicture shows SLBM mounted in a substation.

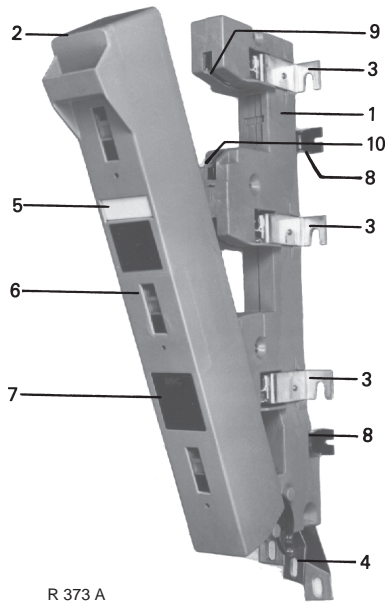


Fig. 3
SLBM

R 373 A

Design

- SLBM(fig. 3)

1. Triple pole base with arc extinguishing chambers.
2. Triple pole fuse carrier.
3. Terminals for busbar connection(also busbar carriers).
4. Terminals for cable connection.
5. Designation label.
6. Window for inspection of fuse links.
7. Name plate.
8. Mounting feet.
9. Upper fuse contact, protected against accidental contact.
10. Lower fuse contact, protected against accidental contact.

Current paths :

SLBM 400 tin plated aluminium.

SLBM 630 tin plated copper.

Fuse contacts : Silver plated copper.

Other main parts : Glassfibre reinforced polyester.

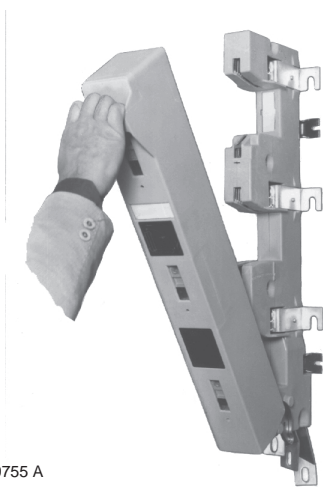


Fig. 4
SLBM.

49755 A

Operation

The SLBM and the BSL are operated in the following way :

The manual switching (making and breaking operation) is done by pivoting the fuse-carrier, resp. main front cover, up- respectively down-wards.

Both the fuse-switch disconnecter and the switch disconnecter have manual operation, and the operation should therefore be made with a determined movement.

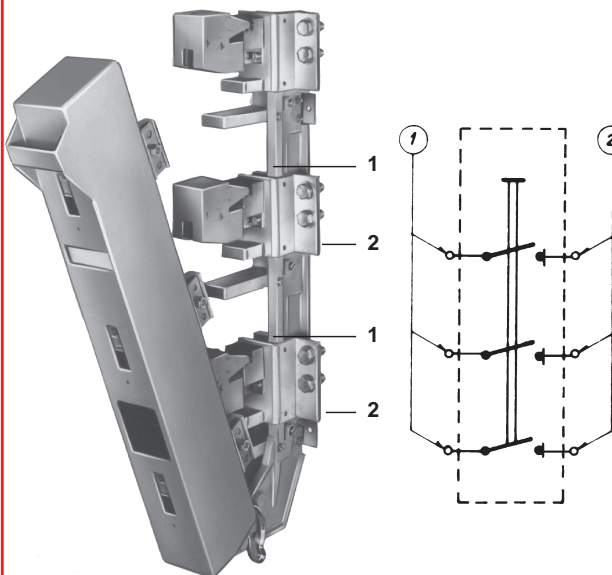


Fig. 5
BSL 1600 A

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Sectionnalizing switch BSL

The BSL is operated in the same way as the SLBM.

When the switch is in off position, a protection cover can be replaced after removing the main cover.

This green coloured protection cover is included when ordering the unit.

Applications:

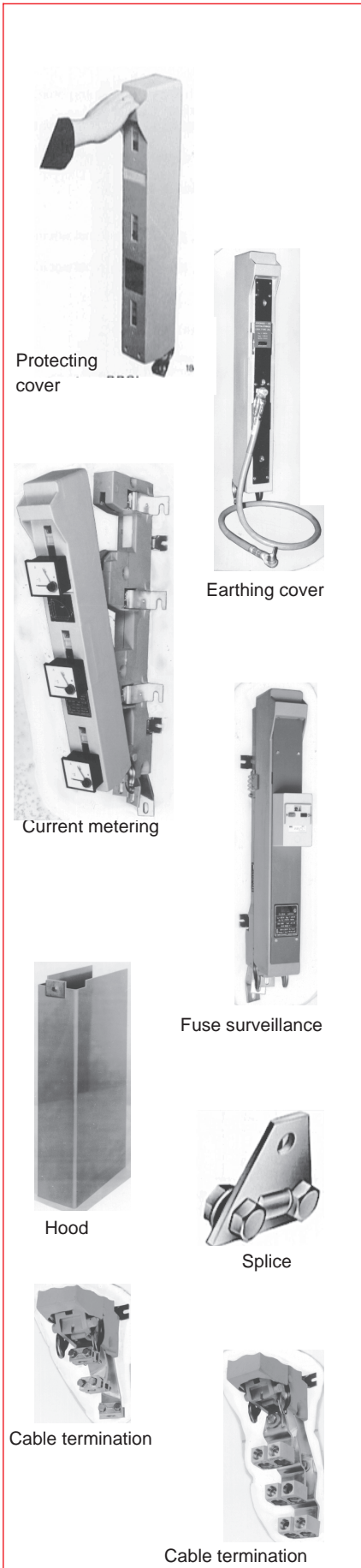
1. Sectionnalizing of busbars.
2. Main switch between the feeding cables and the busbars.

- BSL (fig. 5)

1. Incoming terminals for busbar or cable connection.
2. Outgoing terminals for busbar or cable connection.

3-pole tier type Fuse-Switch Disconnecter Type SLBM and Switch-Disconnecter Type BSL

Ordering table



Designation	List number		Wt.
SLBM 250 (busbar distance 210mm)	NHPL046201R0001		7.3
SLBM 400 (busbar distance 210 mm)	NHPL046202R0001		8.0
SLBM 630 (busbar distance 210 mm)	NHPL046203R0001		10.3
SLBM 800 (busbar distance 210 mm)	NHPL046204R0001		19.4
SLBM 1200 (busbar distance 210 mm)	NHPL046205R0001		19.8
SLBM 1600 (busbar distance 210 mm)	NHPL046206R0001		29.8
SLBM 250 (busbar distance 185/210 mm) ¹⁾	NHPL046251R0001		7.3
SLBM 400 (busbar distance 185/210 mm) ¹⁾	NHPL046252R0001		8.0
SLBM 630 (busbar distance 185/210 mm) ¹⁾	NHPL046253R0001		10.3
BSL 1600 (busbar distance 210 mm)	NHPL013603R0001		15.0
BSL 2000 (busbar distance 210 mm)	NHPL013604R0001		31.5
Fuse surveillance with built on motor protection switch M611 on :			
SLBM 250	NHPL046207R0001		9.8
SLBM 400	NHPL046208R0001		9.8
SLBM 630	NHPL046209R0001		10.0
Hood for cable terminations on the SLBM-family	NHPL046212R0001		0.4
Splice for the SLBM-family when connecting two parallel cables of max. 240 mm ² each.	NHPL046210R0001		1.0
Cable termination 1 x 300 mm². Terminal connection when connecting one cable with cross section 120 mm ² to 300 mm ² .	NHP402098R0003		0.7
Cable termination 2 x 240 mm². Cable connection with splice when connecting two parallel cables with cross section 95 mm ² to 240 mm ² .	NHP402098R0001		1.4
Protecting cover for :			
BSL 1600	NHP040094R0001		
BSL 2000	NHP040094R0002		
Cover, as shown in the middle in fig. 2	NHP019425P0001		
Bracket for fixing cover	NHPL031711R0001		
Earthing cover , type JSL for use in connection with short-circuiting and earthing of cables connected to the SLBMs.	NHP038409R0001		
Equipment for current metering in SLBM 400. SLBM 400 can be supplied with ammeter and current transformer in one or more phases. All SLBMs produced today are prepared for plug-in ammeters (0-200 and 0-400 A) by having two sets of weakened points in the front cover.			
Ammeter 0-200/5, 0-400/5 A	NHPL046270R0001		
Transformer 200/5 A, 400/5 A	NHPL046271R0001		0.17
NH 2-special fuse 250 A	NHPL046272R0001		0.5
NH 2-special fuse 315 A	NHPL046374R0001		0.5
NH 2-special fuse 355 A	NHPL046274R0001		0.5
NH 2-special fuse 400 A	NHPL046375R0001		0.5

1) Busbar distance 185 mm acc. to DIN 43623

3-pole tier type Fuse-Switch Disconnecter Type SLBM and Switch-Disconnecter Type BSL

Technical Data

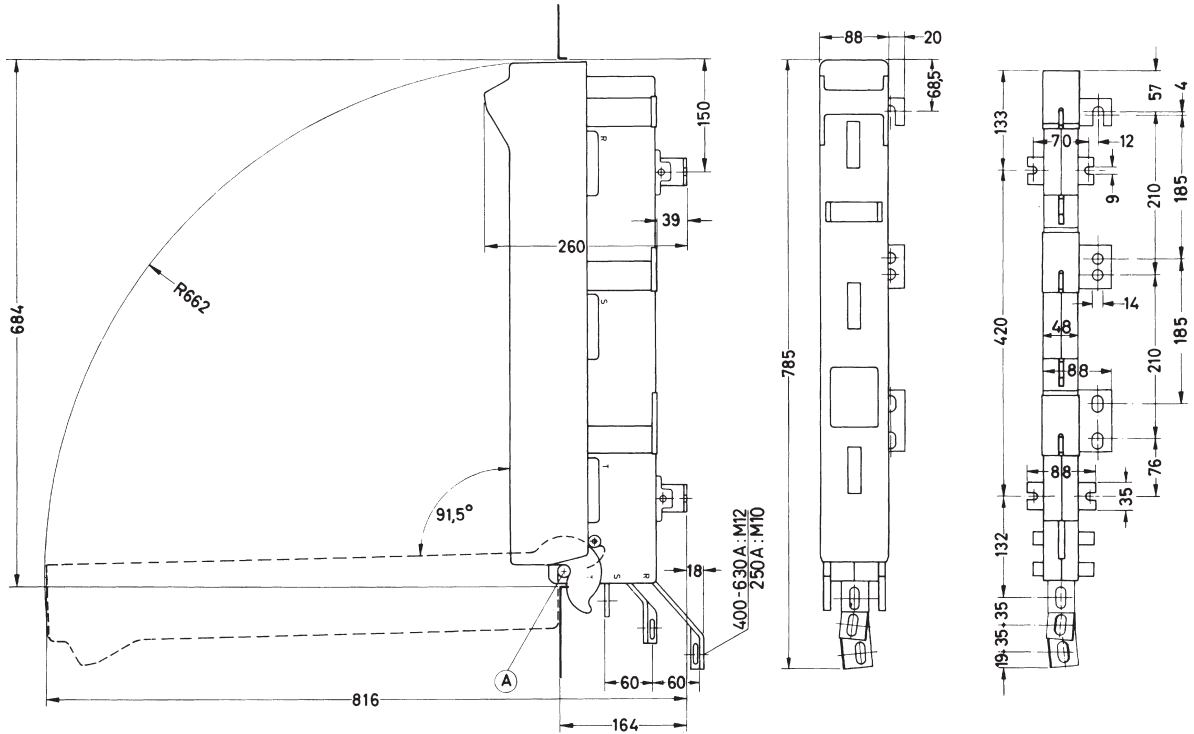
		SLBM						BSL	
		250	400	630	800 ¹⁾	1200 ²⁾	1600 ³⁾	1600	2000 ⁴⁾
For HRC fuse links acc. to DIN 43620/ IEC 269-2-1	Size	1	1-2	3	1-2	3	3		
Rated operational voltage U _e	(V)	690	690	690	690	690	690	500	500
Rated operational current I _e	(A)	250	400	630	800	1200	1600	1600	2000
Rated insulation voltage U _i	(V)	1000	1000	1000	1000	1000	1000	1000	1000
Rated impulse withstand voltage U _{imp}	(V)	8000	8000	8000	8000	8000	8000	8000	8000
Fuse protected short circuit making	(kA _{rms})	50	50	50	50	50	50		
Rated short time withstand current 1 sec.	(kA _{rms})							40	40
Rated making and breaking capacity		AC 22B	AC 22B	AC 22B	AC 21B	AC 21B	AC 21B	AC 20B	AC 20B
Breaking current I _c at cos φ = 0,95	(A)							2440	2400
Rated frequency	(Hz)	50	50	50	50	50	50	50	50
Max. cable cross section to be connected	mm ²	240	240	240	240	240	240	240	240
Ditto with splice for two parallel cables	mm ²	2x240	2x240	2x240	4x240	6x240	6x240	2x240	2x240
Degree of protection from the front acc. to IEC 529	Open Closed	IP 10 IP20	IP 10 IP20	IP 10 IP20	IP 10 IP20	IP 10 IP20	IP 10 IP20	IP 10 ⁵⁾ IP20	IP 10 ⁵⁾ IP20
Weight without fuse links	kg	8,0	8,0	9,5	16,5	21,0	32,5	15,0	31,5

1) Two SLBM 400 A in parallel 3) Three SLBM 630 A in parallel 5) Without IP 20 protecting cover
2) Two SLBM 630 A in parallel 4) Two BSL 1600 A in parallel

Typetested acc. to IEC 947-3

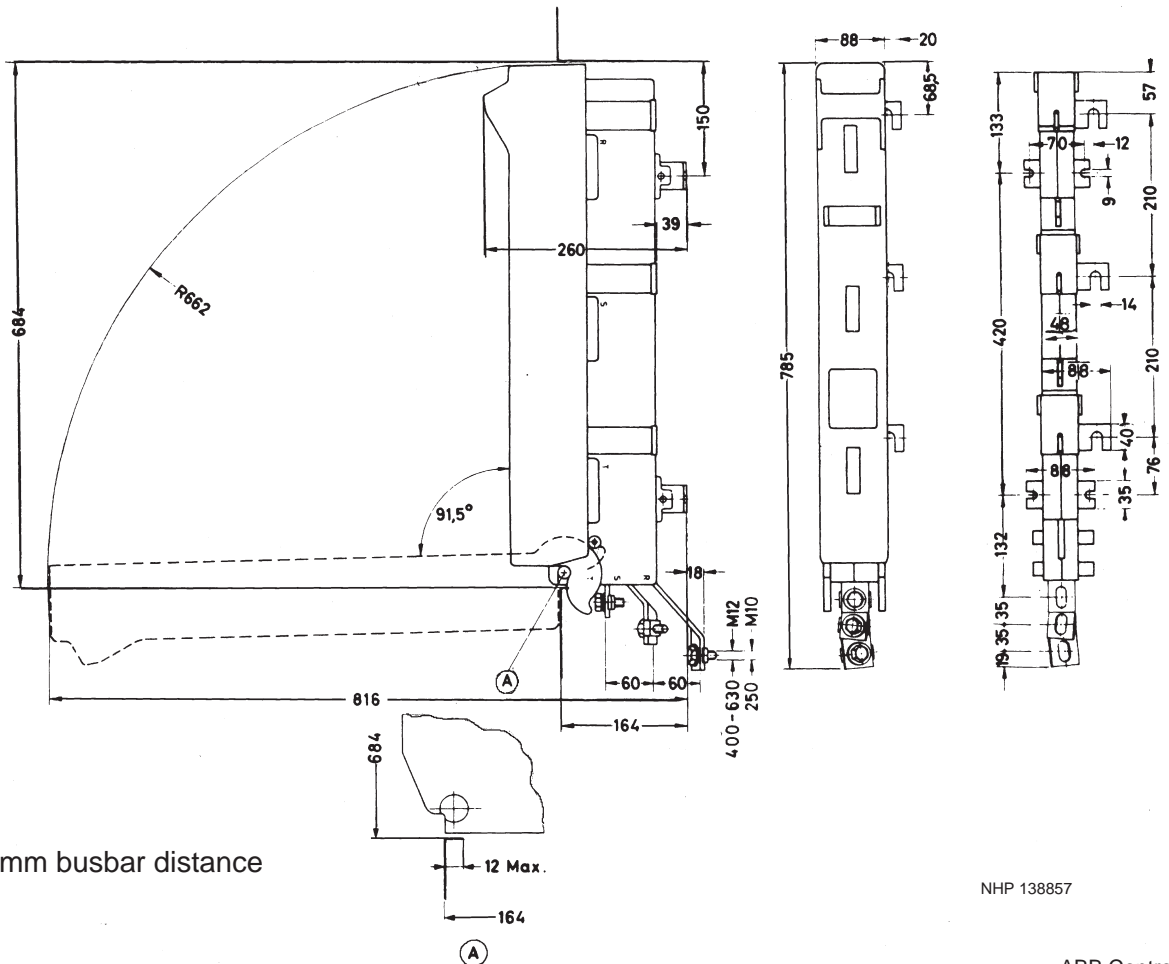
3-pole tier type Fuse-Switch Disconnecter Type SLBM and Switch-Disconnecter Type BSL

Dimensional drawings



SLBM 185/210 mm busbar distance

NHP 138856

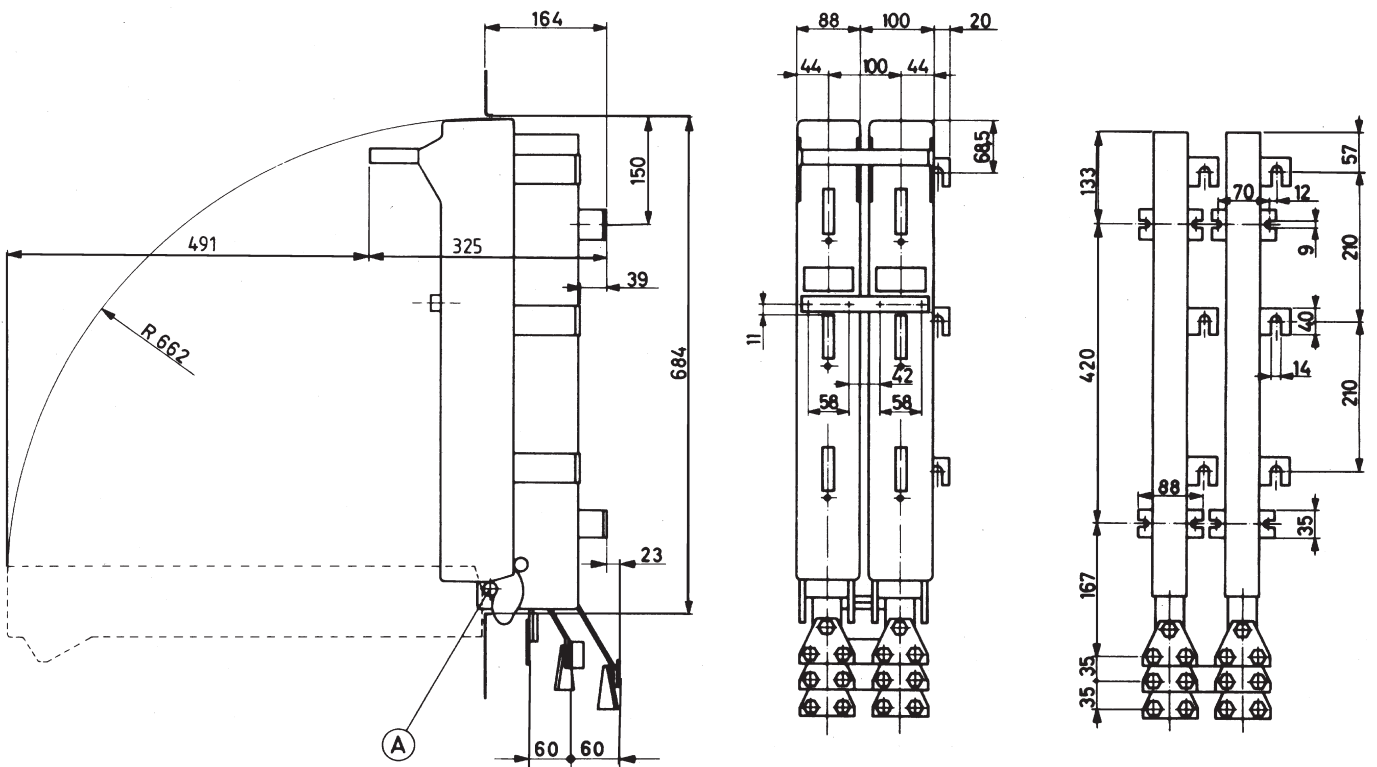


SLBM 210 mm busbar distance

NHP 138857

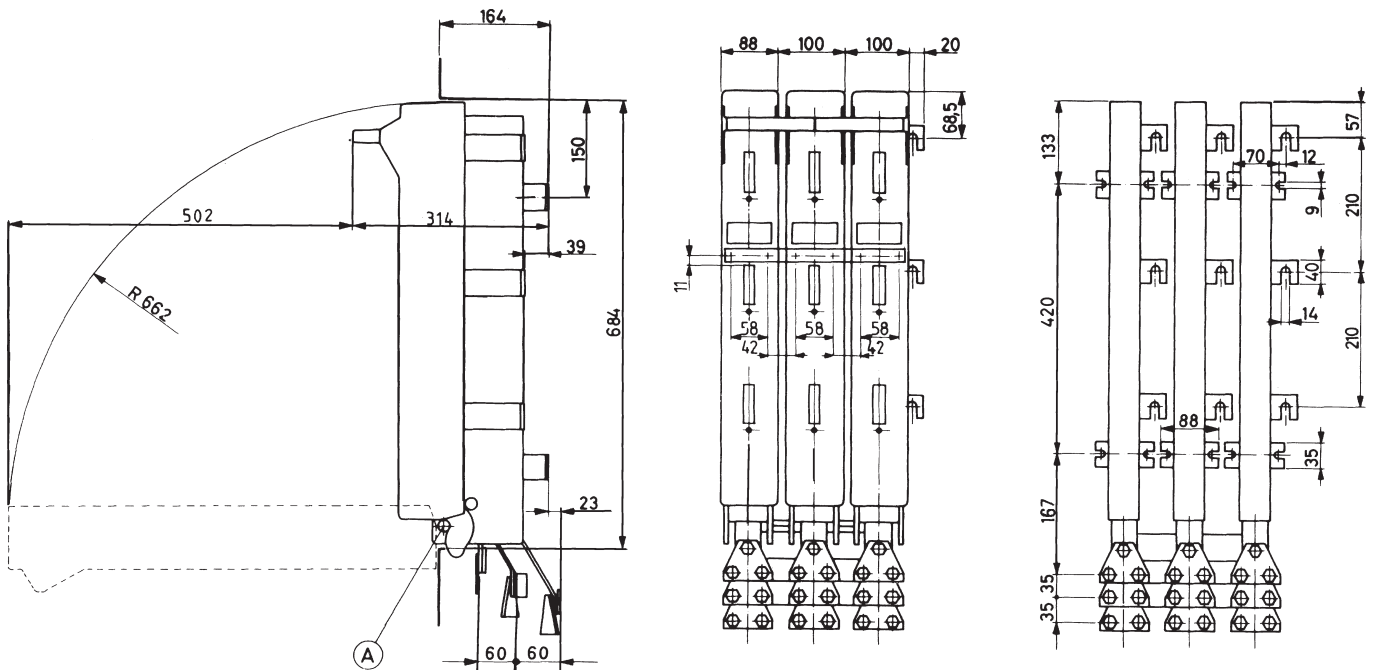
3-pole tier type Fuse-Switch Disconnecter Type SLBM and Switch-Disconnecter Type BSL

Dimensional drawings



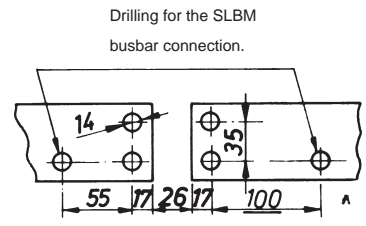
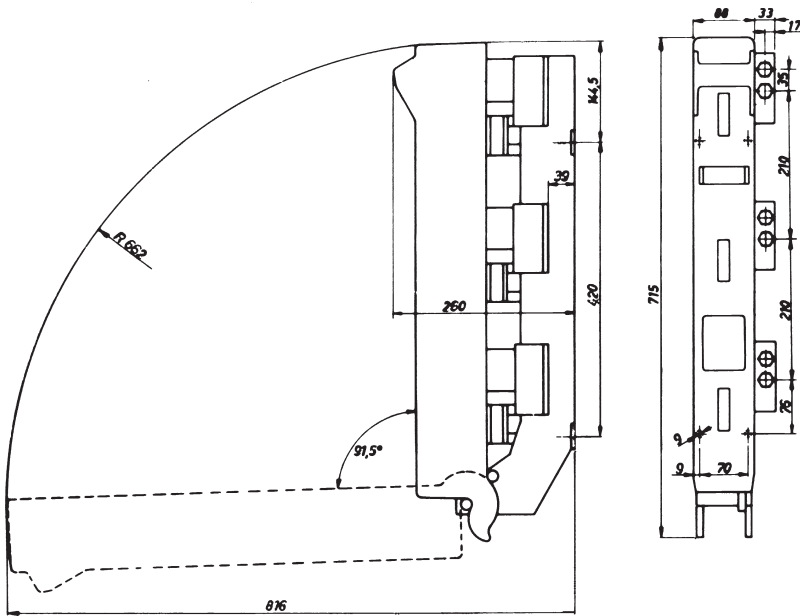
SLBM 800 and 1200

NHP 240861



SLBM 1600

NHP 240865

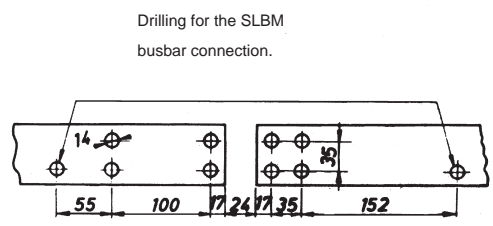
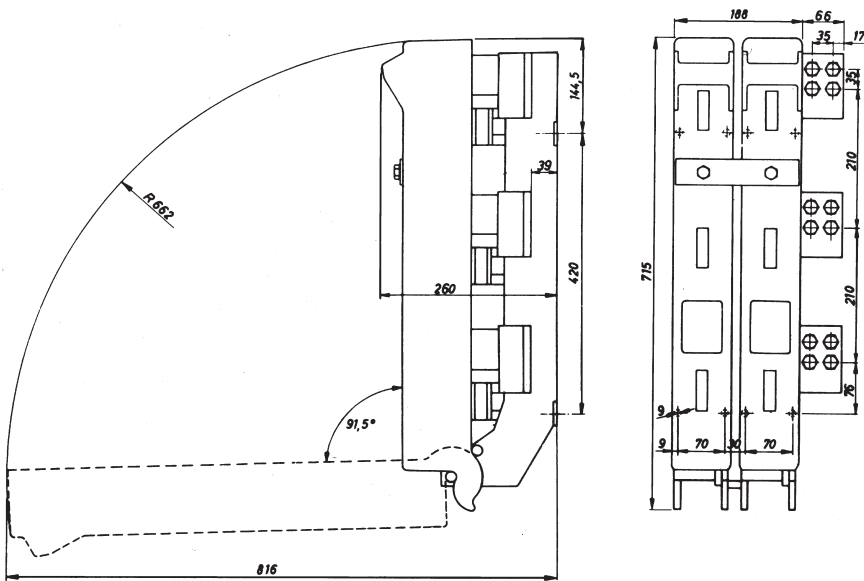


Drilling for the SLBM busbar connection.

Drilling for the BSL 1600 A busbar connection

BSL 1600

NHP 038215



Drilling for the SLBM busbar connection.

Drilling for the BSL 2000 A busbar connection

BSL 2000

NHP 038216



Information given in this publication is generally applicable to equipment described. Changes may be made in future without notice.

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