

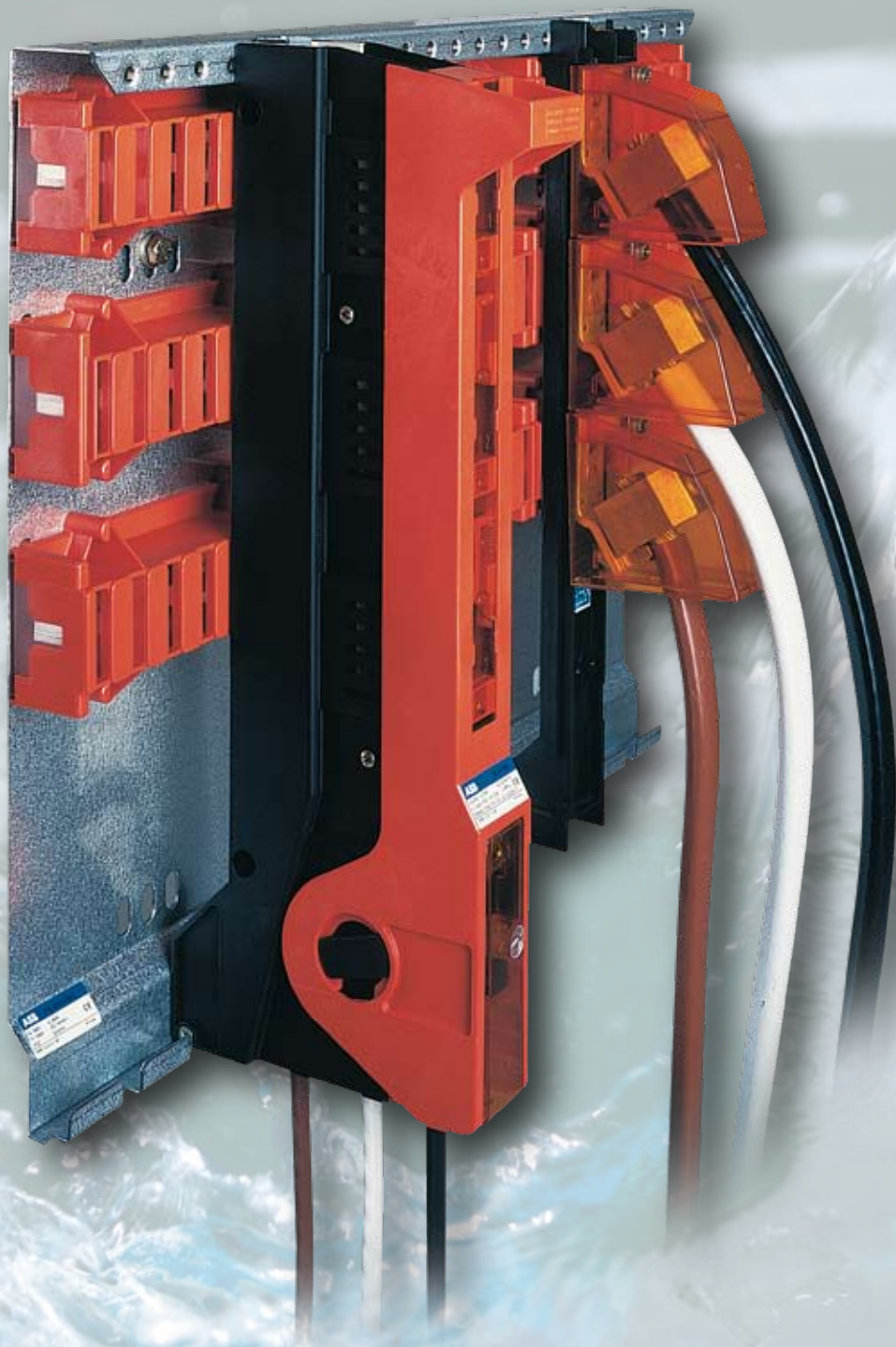


Product brochure

ABB Fusegear

FastLine

Distribution System, 400-2500A





FastLine

Distribution System
400-2500 A

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FastLine

1. Fuse protection

Fuse protection – Easy and reliable

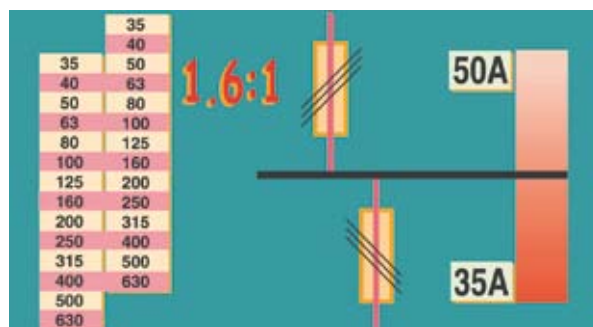
The fuse is a superior short circuit protection element regarding the maximum allowed cut-off current (peak let through current) and energy value.

This is more important the higher the voltage and prospective fault levels are. The FastLine switch fuses fulfil the highest requirements for modern switch fuses with a total safety concept. The switch fuses are tested according to the EN 60947-3 standard with more stringent requirements for isolation, making, performance and safety. The fuse rails are tested according to IEC 60269-2-1.

The melting curves and current limiting diagrams for NH fuse links are given in the IEC 269-2 standard. The standardised fuse characteristics and high degree of current limitation ensure that there is a simple and effective co-ordination with fuse links and other devices.

Fuse links provide a simple procedure for selecting the right fuse type for your installation, without complicated calculations or calculation tools. Fuses prevent “blackouts”. Only the fuse nearest a fault trips without upstreams fuses (feeders or mins) being affected. Fuses thus provide selective coordination.

When more power is needed in an installation, more feeders can be added without changing the present structure or any new selectivity calculations. Fuse links will assure selectivity in the installation by 1,6:1 difference in the rated current.



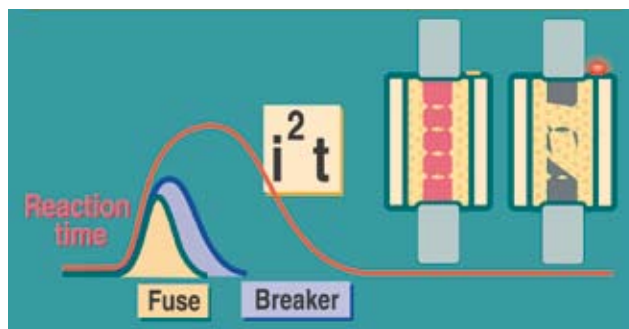
No need for calculation tools
- Easy and economical selectivity

Economical installation

Lifetime costs of fuse systems are low. Fuse links which can withstand a high fault level and a fault current, are available at economical prices. After fuse operation, only the fuse link has to be changed. Because the fuse links can be rapidly and easily replaced, plant down time and maintenance are substantially reduced with a fuse link system.

Because the fusing elements operate in a cylinder, they are not affected by their surroundings. Thus their protecting characteristics remain stable year after year. The dynamic stress on the network and its equipment is dependent of the let through energy (i^2t) at a short circuit. The fuse link provides the best protection compared to other solutions, at high short circuit currents.

As the fuse link body is filled with quartz sand, there will be no emission of gases or arcs when a short circuit occurs. This again leads to less stress on the network and a higher degree of personal safety.



No moving parts
- No extra operation time

Fuse protection – Easy and reliable

- Economical installation
- Easy and economical selectivity
- No need for calculation tools
- No need to change the present structure when more power is needed
- No moving parts
- No extra operation time
- No arc space
- No emission of gasses at short circuits

FastLine

2. General

The distribution system FastLine is a modular system consisting of a busbar assembly plate with plug in modules as incomer and outgoing circuits.

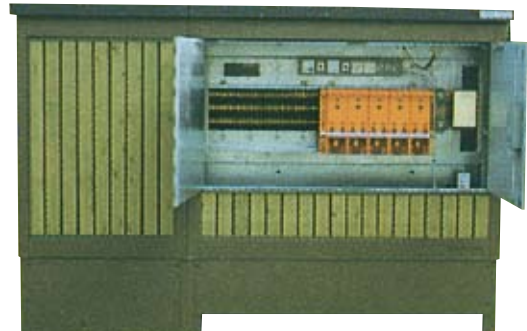


Properties of FastLine

- Complete distribution system up to 2500 A
- Very fast and easy assembly
- Modular design
- Personal safety, IP 20
- Modern cable connection technology for Al and Cu cables
- Integrated IP 20 degree of protection
- Flexibility by use within several areas
- Typetested in accordance with IEC / EN 60947- 3
- Developed and produced in accordance to ISO 9001
- Easy to recycle in accordance with ISO 14001 standards

Areas of application

- Cable distribution cabinets (CDC)
- Installation
- Low voltage distribution in transformer substations
- Switchboards for industry, housing and office buildings
- FastLine is also approved for horizontal assembly



FastPlan (software for FastLine)



FastPlan is a software for planning and document applications where FastLine/ SLK is being used. With FastPlan you have the possibility to make a fast and simple arrangement where the result is:

- **Front view drawing**
- **Single line diagram**
- **Material list**

These can all be printed and used for documentation, requests, offers, orders or circuit list in cabinets, secondary substations or installations.

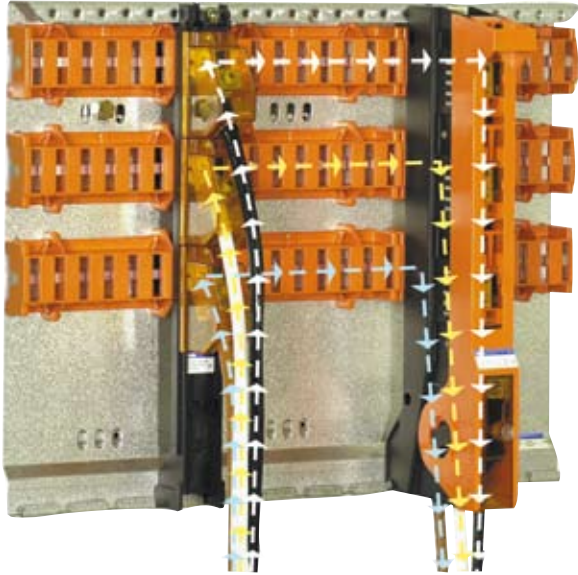
FastPlan may be installed on PC's having Windows® 95/ 98/ 2000/ NT or XP operating system (NB! not for Vista). One of the challenges of distributing software has been to keep track of the users and ensure that the latest program updates are being sent out.

In FastPlan we will solve this problem by sending out the first release on a CD. All future updates will automatically be made via the Internet. FastPlan is available free of charge and may be used by both sales people and customers.

FastLine

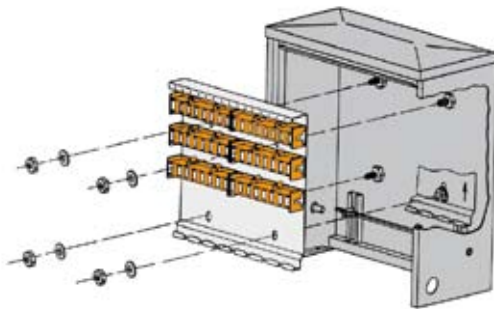
3. Description

FastLine - A LEGO system for the smart engineer

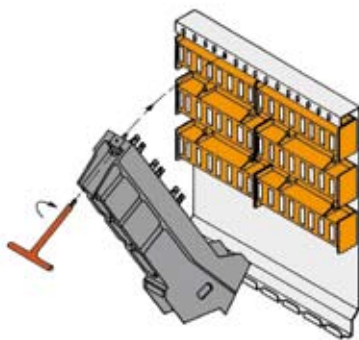


The FastLine distribution system is a modular system consisting of :

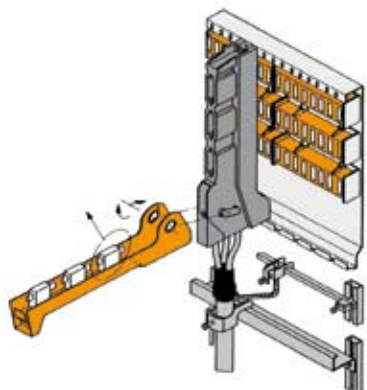
- Busbar assembly plates type FS, FD, FM, FF or FST
- Direct incomer modules
- Incomer modules with disconnecting function
- Fuse switch disconnector modules
- Fuse switch modules, single poles
- SLK- E adapters for T-max



1: FS busbar assembly plate bolted into a cable distribution cabinet



2: Plug the module into the FS, FD, FM or FST busbar assembly plate

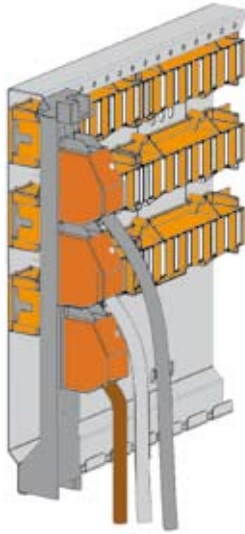


3: Connect the cables
4: Hook the front cover with fuses on the base and switch in to ON position

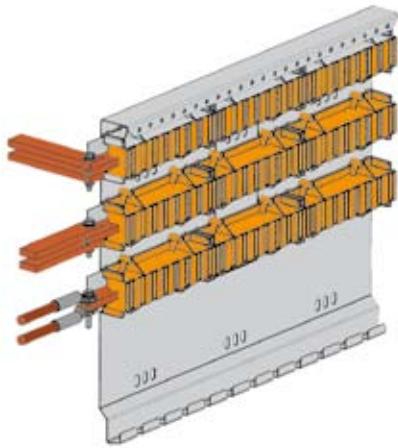
FastLine

3. Description

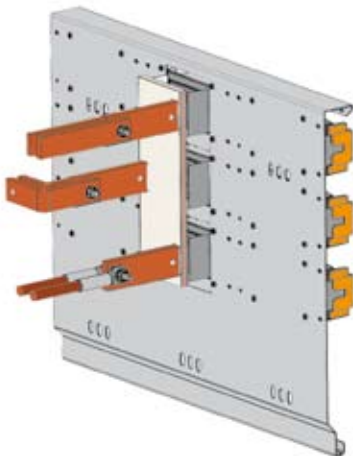
FS, 400 - 630 - 1200A



- FS, FD, FM
From front by use of:
- Direct incomer modules
 - With or without disconnecting function
 - Circuit breaker in adapter
 - Fuse switch disconnecter

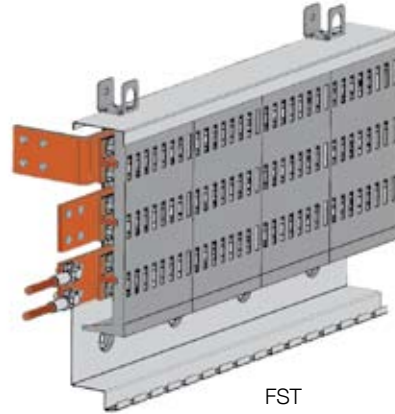


- FS - SR/ SL
- From side R (right) or L (left) by your own cu- bars or cables.

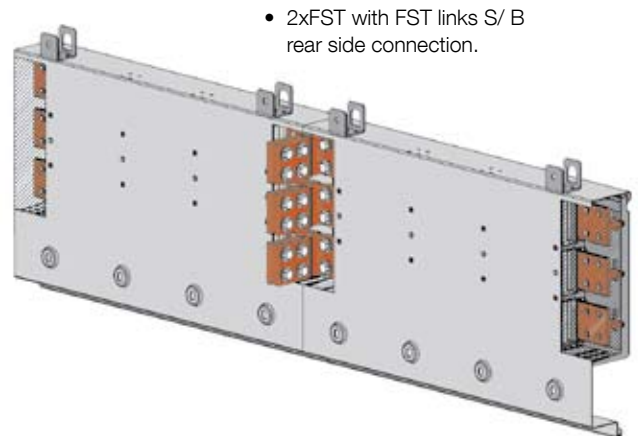


- FS - R
- From rear side by your own cu- bars or cables.

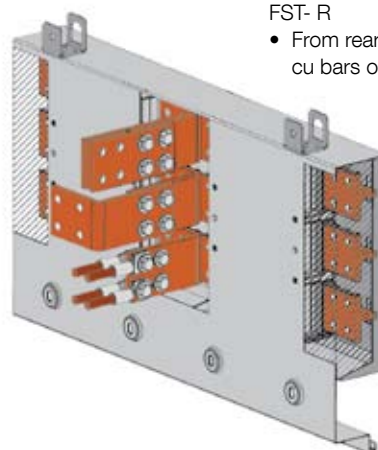
FST, 1200 - 1600 - 2500A



- FST
From front by use of:
- Direct incomer modules
 - With or without disconnecting function
 - Circuit breaker in adapter
 - Fuse switch disconnecter
 - FST- links



- 2xFST with FST links S/ B rear side connection.

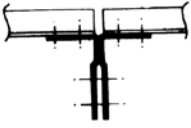

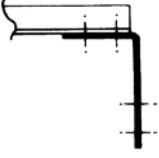



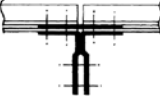

- FST- R
- From rear side by your own cu bars or cables.

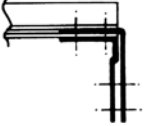
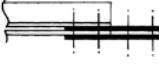

FastLine

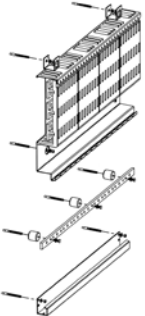
3. Description

FST busbar accessories

FST-link 1600 S/B	FST-link 1600 S	FST-link 1600 E/B
		
Feeding from rear side between 2 pcs FST 1200A/1600 A assembly plates Order code: NHP 403073R001	Cu link between 2 pcs FST 1200A/1600 A assembly plates Order code: NHP 403073R002	Feeding from rear side at end of FST 1200A/1600 A assembly plate Order code: NHP 403073R003

FST-link 1600 E	FST-link 2500 S/B	FST-link 2500 S
		
Feeding from end of FST 1200A/1600 A assembly plate Order code: NHP 403073R004	Feeding from rear side between 2 pcs FST 2500 A assembly plates Order code: NHP 403070R001	Cu link between 2 pcs FST 2500 A assembly plate Order code: NHP 403070R002

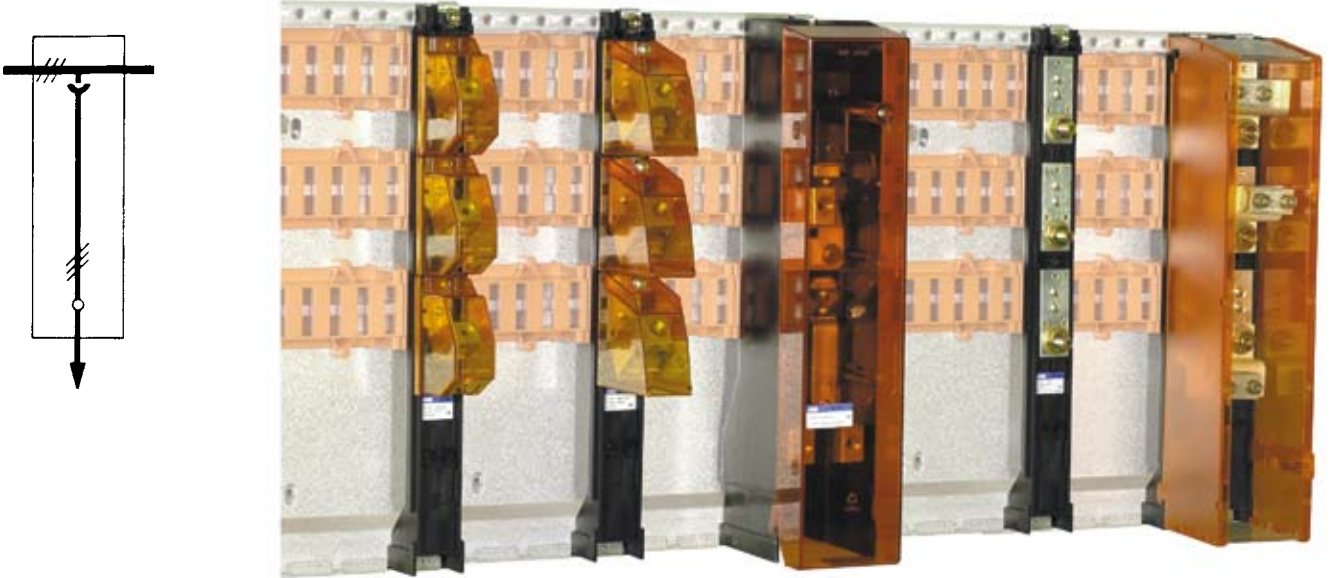
FST-link 2500 E/B	FST-link 2500 E	FST-link 1200/1600 A
		
Feeding from rear side at end of FST 2500 A assembly plate 1200/1600 A assembly plates Order code: NHP 403070R003	Feeding from end of FST 2500 A assembly plates Order code: NHP 403070R004	Feeding from end of FST for current transformer Order code: NHP 200711R001

FST Mounting kit		
	The kit includes : <ul style="list-style-type: none"> • PE/PEN bar • Cable holder bar • Insulators • Expansion bolts for concrete wall • Washers, nuts, bolts • Installation instruction. 	Note: FST plate to be ordered separately
	FST 1200-2500 A / 800 Order code: 1SEP407703R001	FST 1200-2500 A / 1200 Order code: 1SEP407704R001

FastLine

4. Module types

Direct incomer modules



The modules are delivered as shown above.

	DK 95	DK 240 / 50	DK 240 / 100	DS 400	DK 300
Rated current	250 A	400 A	400 A	400 A	800 A
Module width	50 mm	50 mm	100 mm	50 mm	100 mm Cable
Al / Cu	10 - 95 mm ²	95 - 240 mm ²	95 - 240 mm ²		120 - 300 mm ²
Cable terminal	Clamps	Clamps	Clamps	M 12 bolts	Clamps
Order code	NHP 139226R0001	NHP 100009R0001	NHP 139227R0001	NHP 139230R0001	NHP 139228R0001
Special description				Can be linked together by copper links 2xDS 400 = 800 A 3xDS 400 = 1200 A	

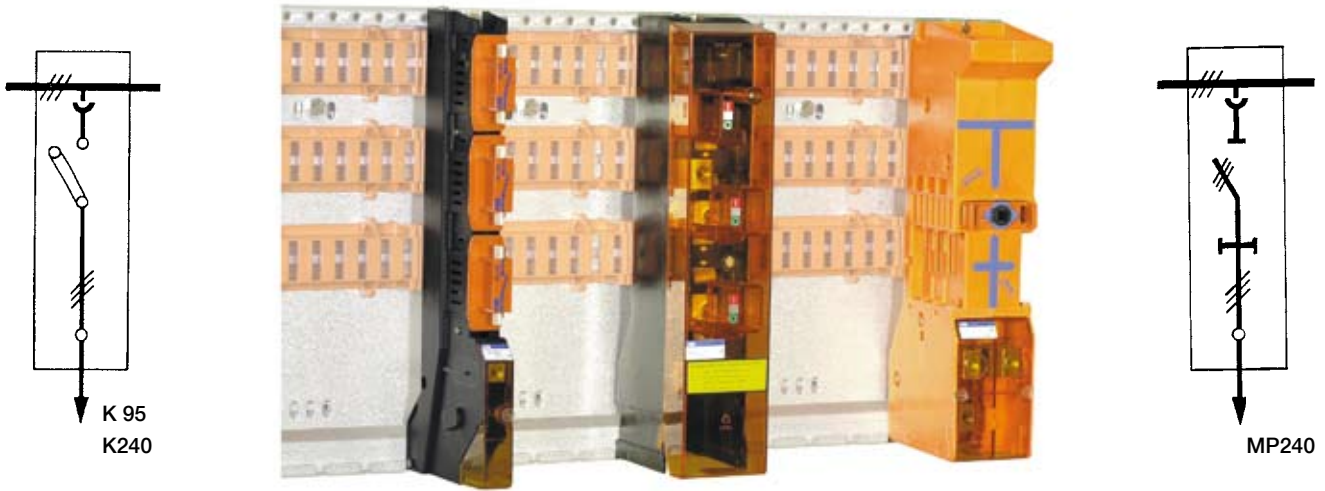
Module accessories:

	For DK 95	For DK 240/ 50	For DK 240/100	For DS 400	For DK 300
				<p>Copper links</p> <p>Protection cover</p>	

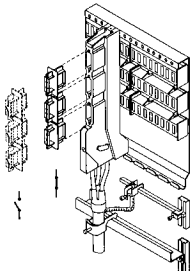
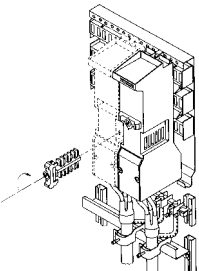
FastLine

4. Module types



Incomer modules with disconnecting function



The modules are delivered as shown above.

	K 95	K 240	MP 240
Rated current	250 A	400 A	400 A
Module width	50 mm	100 mm	100 mm
Cable Al / Cu	10 - 95 mm ²	95 - 240 mm ²	95 - 240 mm ²
Cable terminal	Clamps	Clamps	Clamps
Order code	NHP 139220R0001	NHP 139221R0001	NHP 139222R0001
Special description			Bypass connection by using 2 modules MP 240 

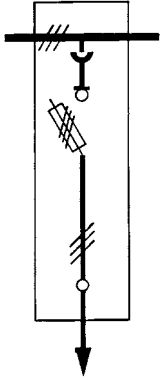
Module accessories:

For K 95	For K 240	For MP 240
		  
Earthing front cover KJK 95	Earthing front cover KJK 240	Operating handle Earthing front cover KJM 240 Spare switch element

FastLine

4. Module types

Fuse switch disconnecter modules



The modules are delivered as shown above.

	SLK 160	SLK-B 160	SLK 400	SLK-B 400	SLK-B 630
Fuse link	NH 00	NH 00	NH 1 - 2	NH 1 - 2	NH 3
Rated current	160 A	160 A	400 A	400 A	630 A
Module width	50 mm	50 mm	150 mm	150 mm	200 mm
Cable Al / Cu	10 - 95 mm ²	-95 mm ²	95 - 240 mm ²	- 240 mm ²	2 x 120 - 300 mm ²
Cable terminal	Clamps	M8 bolts	Clamps	M10 bolts	M12 bolts
Order code	NHP 139224R0001	NHP 139224R0005	NHP 139225R0001	NHP 139225R0006	NHP 139235R0001
Special description					

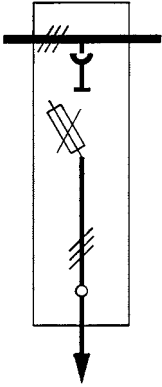
Module accessories:

For SLK 160	For SLK 400	For SLK 630
<p>Earthing front cover KJK 95</p>	<p>Earthing front cover KJS 240</p>	<p>Cable terminal single 70 - 240 mm²</p> <p>Cable terminal single 120 - 300 mm²</p> <p>Cable terminal double 2 x 120 - 300 mm²</p>

FastLine

4. Module types

Fuse switch modules, single poles



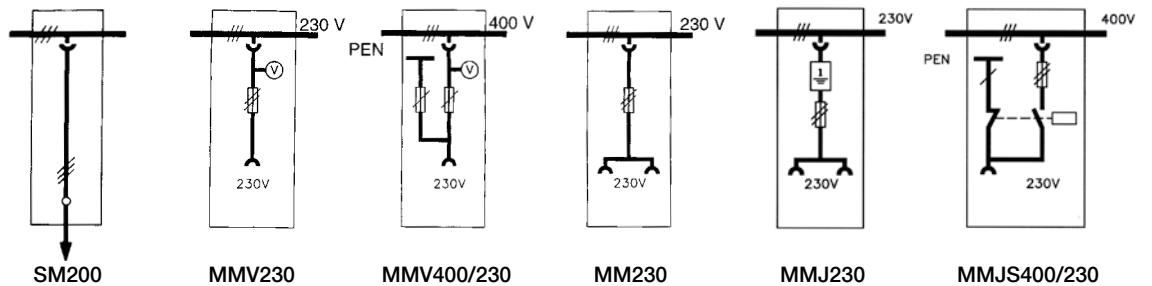
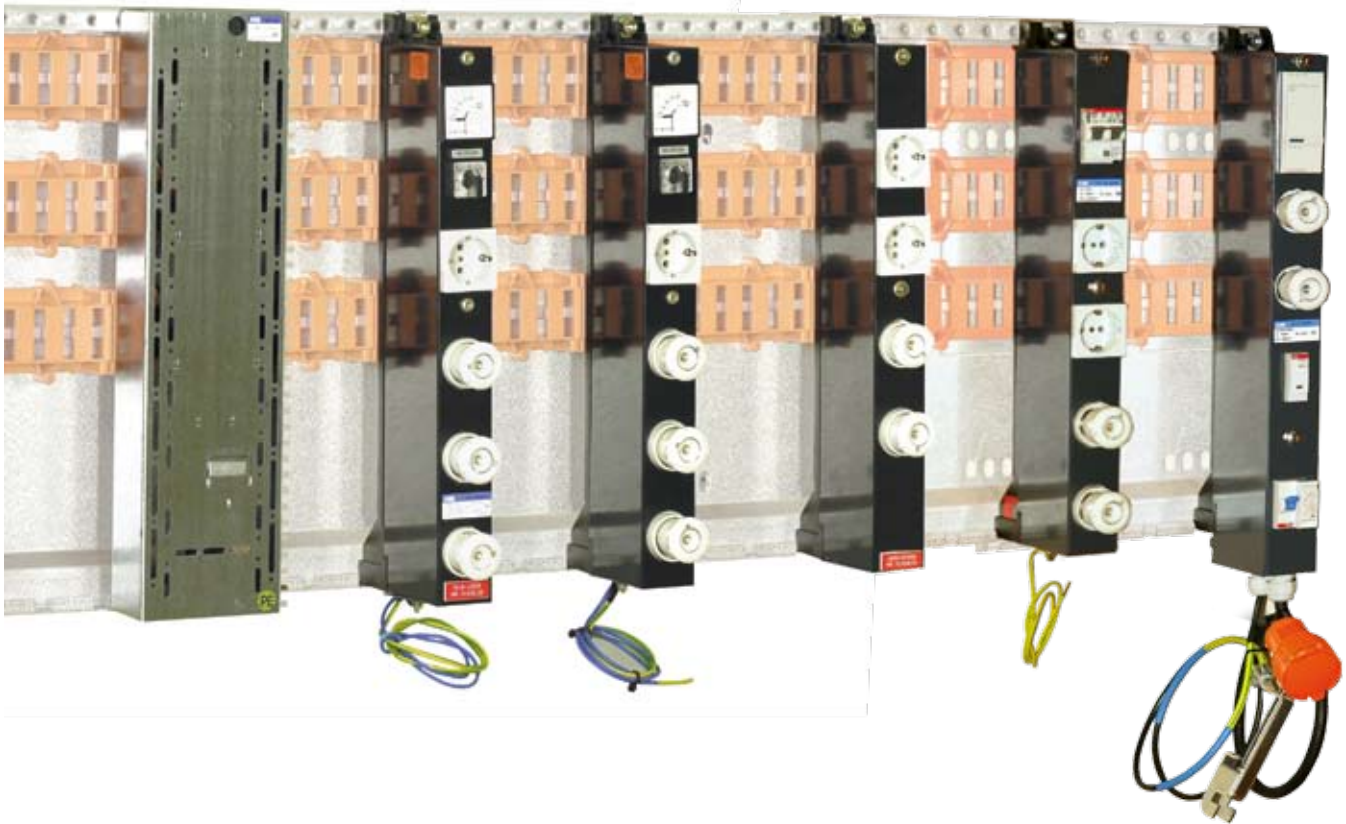
The modules are delivered as shown above.

	SLKD 63	SLK-NH 160
Fuse link	Diazed D II-25 A / D III-63 A	NH 00
Rated current	63 A	160 A
Module width	50 mm	50 mm
Cable Al / Cu	6 - 50 mm ²	10 - 95 mm ²
Cable terminal	Clamps	Clamps
Order code	NHP 139223R0001	NHP 139238R0001
Special description		

FastLine

4. Module types

Fuse switch modules, single poles



The modules are delivered as shown above.

	SM 200	MMV230	MMV400/230	MM230	MMJ230	MMJS400/230
Rated current	200 A	16 A	16 A	16 A	16 A	16 A
Module width	150 mm	50 mm	50 mm	50 mm	50 mm	50 mm
Order code	NHP 139237R0001	NHTF001990R0001	NHTF001990R0002	NHTF001990R0003	NHTF001990R0004	1SEP201479R0001
Special description	Module for your own arrangement	Module for 230 V system The module includes: 3 Fuse holders 1 Contact 16A w/ earth 1 Voltmeter 0-250 V w/ switch	Module for 400V / 230V system The module includes: 3 Fuse holders 1 Contact 16A w/ earth 1 Voltmeter 0-500 V w/ switch	Module for 230V system The module includes: 2 Fuse holders 2 Contacts 16A w/ earth	Module for 230V system The module includes: 2 Fuse holders 2 Contacts 16A w/ earth 1 Earth failure switch	Module for 400V / 230V system The module includes: 2 Fuse holders 1 Voltage relay 1 Auxiliary outlet 1 Socket outlet

FastLine

4. Module types

Adapters for Tmax



3 pole adapters

	Adapter T2	Adapter T4	Adapter T5	Adapter T6	Adapter T7
Module width	100 mm	150 mm	200 mm	250 mm	250 mm
Suitable for adapter type:	Tmax 3P T2 160 A	Tmax 3P T4 320 A	Tmax 3P T5 440 A	Tmax 3P T6 850 A	Tmax 3P T7 1100 A
Order code	1SEP304557R0001	1SEP304604R0001	1SEP304605R0001	1SEP102236R003	1SEP102237R003

4 pole adapters

	Adapter T2	Adapter T4	Adapter T5	Adapter T6
Module width	150 mm	200 mm	250 mm	300 mm
Suitable for adapter type :	Tmax 4P T2 160 A	Tmax 4P T4 320 A	Tmax 4P T5 440 A	Tmax 4P T6 850 A
Order code	1SEP304653R0001	1SEP304654R0001	1SEP304655R0001	1SEP102236R004

The adapters are designed for mounting the Tmax circuit breaker range from ABB SACE. All adapters are delivered as empty units for mounting the Tmax circuit breaker locally by the end user.

The range of FastLine Tmax adapters are available in 3-pole version for T2, T4, T5, T6 and T7 and 4-pole version for T2, T4, T5 and T6. A new range of 4 pole IP 20, FST-assembly busbar plates has been developed for these 4 pole adapters. These assembly plates have ratings 1200A and 1600A and are available in 800mm and 1200mm widths.

FastLine

5. Applications

FastLine in Cable Distribution Cabinets

For the FastLine system, ABB can supply either steel or polyester cable distribution cabinets.

Polyester cable distribution cabinets

ABB's cable distribution cabinets (CDC) are made of reinforced polyester and satisfy DIN 43629 Parts 1 and 3, and IEC 439-5.

They are available in four different widths to take FastLine assembly plates sizes 400, 500, 700 and 1000 mm.

The cable distribution cabinet consists of one upper part (cabinet) and a lower part (base).

The cabinet has a lockable, side hinged door which can be opened approx. 160 degrees.

For further details, please see catalogue 1SEC320001B0201.



Steel cable distribution cabinets

The steel cable distribution cabinet (CDC) family consists of 5 different widths.

The upper part is available in two versions:

- made of hot galvanized steel plate.
- made of aluzinc steel plate and painted (green RAL 6012).

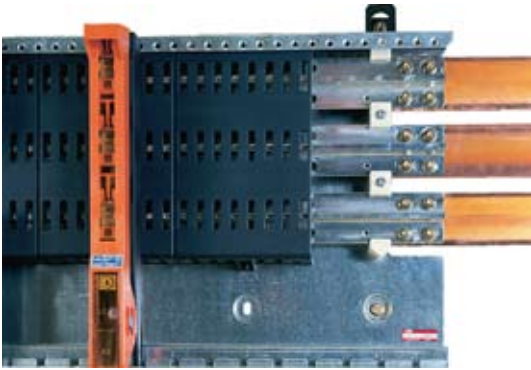
The lower part with foundation can also be delivered in stainless steel.

The front door can easily be removed.

To get access to the PE/PEN bar and the top part of the cable joint, a cover situated below the door has to be lifted and removed.

FastLine

5. Applications



FastLine in Secondary Substations

Direct connection

Transformer – FST

Easy access to arrange bolted connection with standard Cu-bars to the FST Busbar assembly plate by:

- removing left or right IP 20 front shroud from the FST Busbar assembly plate
- and remove the transparent side protection shroud



Switched connection

Different complete **FST-OETL Installation kits** are available to connect a switch disconnecter type OETL as a switchable incomer to the Busbar assembly plate type FST.

The kits are suitable for:
OETL 1000 K3 / 1250 K3 and 1600 K3.

The FST-OETL Installation kits include:

- Cu-links between FST-OETL
- Distance pieces for cable connection (when cable kit)
- Bolts / nuts / distance pieces / washers
- OETL Protection cover



Alternative feeding for Switched connection: Transformer – OETL –FST



Fig. 1 Cable con. below



Fig. 2 Cable con. above



Fig. 3 Cable con. sideways



Fig. 4 Cable con. sideways with OETL protection cover mounted

FastLine

6. Technical Data

Modules

		DK95	DK240/50 DS400	DK300	DK240	K95	K240	SM200	M/P240	SLKD63	SLK-NH160	SLK160	SLK400	SLK630	
Width of module	mm	50	50	100	100	100	50	100	150	100	50	50	150	200	
Weight	kg	1.2	3.5	1.4	5	3.5	2.2	4.7	2.0	4.8	2.0	2.1	2.1	6.5	7.3
Cable Al/ Cu.	mm ²	10-95	95-240	300	95-240	10-95	95-240	-	95-240	6-50	10-95	10-95	95-240	2x(120-300)	
Rated current I 1)	A								400		160	160	400	630	
Thermal load capacity Ith 1)	A									63	160				
Rated voltage Ue	V	500	500	500	500	500	500	500	500	400	500	500	500	500	
Insulation voltage Ui	V	1000	1000	1000	1000	1000	1000	1000	1000	660	1000	1000	1000	1000	
Frequency zone	Hz	50	50	50	50	50	50	50	50	50	50	50	50	50	
Breaking capacity: at 400 V, cat. AC 21 B	A								X						
at 500 V, cat. AC 22 B	A										X	X	X	X	
Closing capacity with: Short-circuiting at 500 V	kAeff								50	50	50	50	50	50	
With largest fuses	A								630	63	160	160	400	630	
Electrical lifetime, number of operations 2)									200			200	200	200	
Mechanical lifetime, number of operations									800			1400	800	800	
Type of fuse: Diazed										DII / DIII 25A/63A	00	00	1-2	3	
NH-fuse or link															
Degree of protection	IP	20	20	20	20	20	20	20	-	20	20	20	20	20	

Typetested according to IEC 60947- 3.

1) When built in to a box, the power load must be reduced in accordance with the reduction factor in the table (IEC 60439) on page 11.

2) With fuses connected.

Service modules

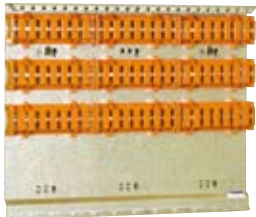
		SM200	MMV230	MMV400/230	MM230	MMJ230	MMJS400/230
Width of module	mm	150	50	50	50	50	50
Weight	kg	2.0	2.2	2.3	2.4	2.7	2.8
Rated current I	A	200	16	16	16	16	16
Rated voltage Ue	V	230	230	400	230	230	230
Isolation voltage Ui	V	1000	1000	1000	1000	1000	1000
Frequency zone	Hz	50	50	50	50	50	50
Type of fuse			DII	DII	DII	DII	DII
Degree of protection	IP	20	20	20	20	20	20

Busbars type FS and FST

Specifications		FS400	FS630	FS 1200	FST1200	FST1600	FST2500
Rated voltage Ue	V	500	500	500	690	690	690
Insulation voltage Ui	V	1000	1000	1000	1000	1000	1000
Rated current Ie	A	400	630	1200	1200	1600	2500
Short circuit - withstand current 1 sec Icn	kArms	40	40	40	50	50	50
Peak- withstand current Ipk	kApeak	84	84	84	105	105	105
Degree of protection	IP	20	20	20	20	20	20

FastLine

7. Ordering tables



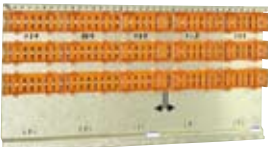
FS



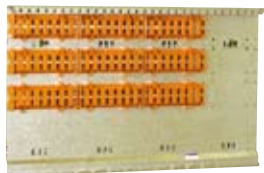
FS-SR/SL



FS-R



FD

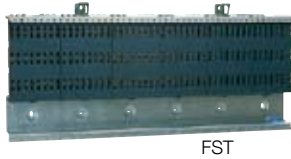


FM

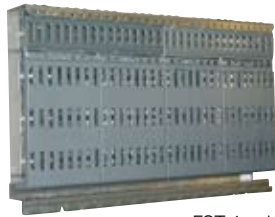
Type	Rated current	Width	Ordering details Type No.	Weight Price 1 pc/kg
Busbar assembly plates type FS w/ insulated busbar				
FS 400A/150	400 A	150 mm	NHP 406455R0001	1,9
FS 400A/250	400 A	250 mm	NHP 139201R0001	3,2
FS 400A/400	400 A	400 mm	NHP 139202R0001	5,1
FS 400A/600	400 A	600 mm	NHP 139203R0001	7,8
FS-400A/800	400 A	800 mm	NHP 139204R0001	
FS 630A/400	630 A	400 mm	NHP 139212R0001	7,7
FS 630A/600	630 A	600 mm	NHP 139213R0001	11,4
FS 630A/800	630 A	800 mm	NHP 139214R0001	15,4
FS 630 A/1000	630 A	1000 mm	NHP 139215R0001	19,4
FS 1200A/600	1200 A	600 mm	NHP 139216R0001	15,8
FS 1200A/800	1200 A	800 mm	NHP 139217R0001	21,2
FS 1200A/1000	1200 A	1000 mm	NHP 139218R0001	26,7
FS 1200A/1600	1200 A	1600 mm	1SEP102164R0001	43
Busbar assembly plates type FS-SR/SL with bolted side connection				
FS-SR 630A/250	630 A	250 mm	1SEP201480R0001	5,5
FS-SL 630A/250	630 A	250 mm	1SEP201480R0002	5,5
FS-SR 630A/400	630 A	400 mm	1SEP201475R0001	8,3
FS-SL 630A/400	630 A	400 mm	1SEP201475R0002	8,3
FS-SR 630A/600	630 A	600 mm	1SEP201468R0001	12,2
FS-SL 630A/600	630 A	600 mm	1SEP201468R0002	12,2
FS-SR 630A/800	630 A	800 mm	1SEP201469R0001	16,1
FS-SL 630A/800	630 A	800 mm	1SEP201469R0002	16,1
FS-SR 630A/1000	630 A	1000 mm	1SEP201470R0001	20
FS-SL 630A/1000	630 A	1000 mm	1SEP201470R0002	20
FS-SR 630A/1000 4-pole	630 A	1000 mm	1SEP201691R0001	23,5
FS-SL 630A/1000 4-pole	630 A	1000 mm	1SEP201691R0002	23,5
FS-SR 1200A/1600	1200 A	1600 mm	1SEP201513R0001	44
FS-SL 1200A/1600	1200 A	1600 mm	1SEP201513R0002	44
Busbar assembly plates type FS-R with rear connection				
FS-R 630A/400	630 A	400 mm	1SEP201476R0001	10,3
FS-R 630A/600	630 A	600 mm	1SEP201471R0001	14,1
FS-R 630A/800	630 A	800 mm	1SEP201472R0001	18
FS-R 630A/1000	630 A	1000 mm	1SEP201473R0001	22
Busbar assembly plates type FD with sectionalised busbars				
FD 400A/400+400	400 A	800 mm	1SEP304296R0001	
FD 630A/200+200	630 A	400 mm	1SEP304282R0001	7,3
FD 630A/400+400	630 A	800 mm	1SEP304262R0001	14,6
FD 630A/600+400	630 A	1000 mm	1SEP304261R0001	14,6
FD 630A/400+600	630 A	1000 mm	1SEP304261R0002	
Busbar assembly plates type FM with space at the right or left hand side for extra installations				
FM 630A/200B+200E	630 A	400 mm	1SEP304283R0001	5
FM 630A/600B+200E	630 A	800 mm	1SEP304263R0001	
FM 630A/200E+600B	630 A	800 mm	1SEP304263R0002	
FM 630A/400E+200B	630 A	600 mm	1SEP304264R0001	8,7
FM 630A/200B+400E	630 A	600 mm	1SEP304264R0002	
FM 630A/200E+400B	630 A	600 mm	1SEP304264R0003	
FM 630A/400B+200E	630 A	600 mm	1SEP304264R0004	
FM 630A/400B+400E	630 A	800 mm	1SEP304265R0001	10
FM 630A/400E+400B	630 A	800 mm	1SEP304265R0002	
FM 630A/600B+400E	630 A	1000 mm	1SEP304306R0001	14
Busbar assembly plates w/ insulated busbars type DCN for polyester cabinets				
DCN00-FS400A / 400-P	400 A	400 mm	1SEP201620R0001	7
DCN00-FS400A / 500-P	400 A	500 mm	1SEP201620R0002	8,2
DCN00-FS630A / 500-P	630 A	500 mm	1SEP201620R0003	9,6
DCN00-FS400A / 700-P	400 A	700 mm	1SEP201620R0004	11
DCN00-FS630 A / 700-P	630 A	700 mm	1SEP201620R0005	14,5
DCN00-FS630 A / 1000-P	630 A	1000 mm	1SEP201620R0006	20
Busbar assembly plates type FF without busbars, for extra installations				
FF 350 290X600mm	350 A	290 mm	1SEP304646R0001	2
FF 500 440X600mm	500 A	440 mm	1SEP304646R0002	4
FF 700 640X600mm	700 A	640 mm	1SEP304646R0003	4,8
FF 900 840X600mm	900 A	840 mm	1SEP304646R0004	
FF1100 1040X600mm	1100 A	1040 mm	1SEP304646R0005	

FastLine

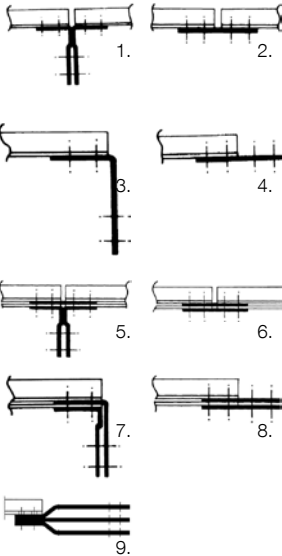
7. Ordering tables



FST



FST 4 pole



Type	Rated current	Width	Ordering details Type No.	Weight Price 1 pc/kg
Busbar assembly plates w/ insulated busbars				
FST 1200A/800	1200 A	800 mm	NHP 139243R0001	30
FST 1200A/1200	1200 A	1200 mm	NHP 139247R0001	46
FST 1600A/800	1600 A	800 mm	NHP 139241R0001	30
FST 1600A/1200	1600 A	1200 mm	NHP 139245R0001	46
FST 2500A/800	2500 A	800 mm	NHP 139242R0001	44
FST 2500A/1200	2500 A	1200 mm	NHP 139246R0001	65
FST-R 2500A/800*	2500 A	800 mm	NHP 139248R0001	44.5
FST-R 2500A/1200*	2500 A	1200 mm	NHP 139249R0001	65.5

* Only for connection from the rear in the middle of the busbars. FST links, screws and washers are included.

Type	Rated current	Width	Ordering details Type No.	Weight Price 1 pc/kg
Busbar assembly plate 4-pole w/ insulated busbars				
FST 1200A/800 4-pole	1200 A	800 mm	1SEP102099R0002	37.5
FST 1200A/1200 4-pole	1200 A	1200 mm	1SEP102124R0002	57.5
FST 1600A/800 4-pole	1600 A	800 mm	1SEP102099R0001	37.5
FST 1600A/1200 4-pole	1600 A	1200 mm	1SEP102124R0001	57.5

Accessories for FST- busbar

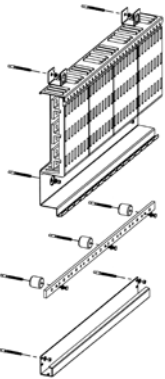
Type	Description	Ordering details Type No.	Weight 1 pc/kg
1.	FST - link 1200/1600 - S/B	NHP 403073R0001	10.1
2.	FST - link 1200/1600 - S	NHP 403073R0002	5.2
	FST4P link 1200/1600 - S	NHP 403073R0005	
3.	FST - link 1200/1600 - E/B	NHP 403073R0003	5.6
4.	FST - link 1200/1600 - E	NHP 403073R0004	4.2
5.	FST - link 2500 - S/B	NHP 402700R0001	13.4
6.	FST - link 2500 - S	NHP 402700R0002	8.5
7.	FST - link 2500 - E/B	NHP 402700R0003	9.9
8.	FST - link 2500 - E	NHP 402700R0004	8.2
9.	FST - link 1200/1600 - E	NHP 200711R0001	14.4

FastLine

7. Ordering tables



FST-OETL



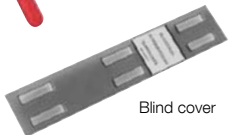
FST Mounting kit - 3P



Cable terminal torque spanner



Ins. hexagon key



Blind cover

FST- OETL installation kits

Type	Description	Ordering details Type No.	Weight 1 pc/kg
FST - OETL 1250 A	Inst. kit. Cable con. below/ above	1SEP407718R0001	9.5
FST - OETL 1250 A	Inst. kit. Cable con. sidew.	1SEP407718R0002	7.5
FST - OETL 1600 A	Inst. kit. Cable con. sidew.	1SEP407751R0002	10.1

FST Mounting Kit

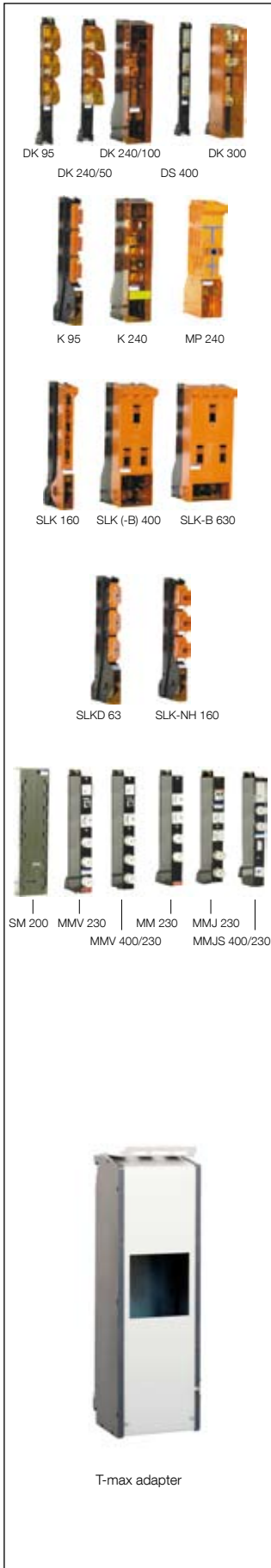
Type	Description	Ordering details Type No.	Weight 1 pc/kg
FST 800 installation kit	For concrete substations	1SEP407703R0001	6
FST 1200 installation kit	For concrete substations	1SEP407704R0001	8.4

Accessories for assembly plates

Type	Ordering details Type No.	Weight 1 pc/kg
Cable terminal torque spanner	NHSN950001P0002	
Insulated hexagon key NV 6	NHSN950001P0006	0.1
Blind cover (50mm)	NHP 300185R0001	0.1

FastLine

7. Ordering tables



Modules

Type	Description / Cable size mm ² / Module width mm	Ordering details Type No.	Weight 1 pc/kg
DK 95 / 250 A	Feeding module / 10- 95 mm ² / 50	NHP 139226R0001	1.2
DK 240 / 50 / 400 A	Feeding module / 95- 240 mm ² / 50	NHP 100009R0001	1.5
DK 240 / 100 / 400 A	Feeding module / 95 - 240 mm ² / 100	NHP 139227R0001	3.5
DK 300 / 800 A	Feeding module / 120 - 300 mm ² / 100	NHP 139228R0001	5
DK240/50-M12	Direct incomer modul	NHP 139239R0001	12
DS 400 / 400 A	Feeding module (bolt) / 50	NHP 139230R0001	1.4
K 95 / 250 A	Cable conn. module / 10 - 95 mm ² / 50	NHP 139220R0001	2.2
K 240 / 400 A	Cable conn. module / 95 - 240 mm ² / 100	NHP 139221R0001	4.2
MP 240 / 400 A	Cable switch module / 95 - 240 mm ² / 100	NHP 139222R0001	4.8

Fuse switch disconnecter modules

Type	Description / Cable size mm ² / Module width mm	Ordering details Type No.	Weight 1 pc/kg
SLK 160 / 160 A	Fuse switch module / 10 - 95 mm ² / 50	NHP 139224R0001	2.1
SLK-B 160 / 160 A	Fuse switch module / - 95 mm ² / 50	NHP 139224R0005	2.1
SLK 400 / 400 A	Fuse switch module 95 - 240 mm ² / 150	NHP 139225R0001	6.5
SLK-B 400 / 400 A	Fuse switch module / - 240 mm ² / 150	NHP 139225R0006	6.5
SLK-B 630 / 630 A	Fuse switch module / 2x(120 - 300) mm ² / 200	NHP 139235R0001	7.3

Fuse disconnecter modules single phase

Type	Description / Cable size mm ² / Module width mm	Ordering details Type No.	Weight 1 pc/kg
SLKD 63 / 63 A	Fuse switch module Diazed DII / 10 - 95 mm ² / 50	NHP 139223R0001	2
SLK- NH 160 / 160 A	Fuse switch module / 10 - 95 mm ² / 50	NHP 139238R0001	2

Meetering modules

Type	Description / Module width mm	Ordering details Type No.	Weight 1 pc/kg
SM 200 Service module	200 A / 150mm	NHP 139237R0001	2
MMV 230 Meetering module	230V, 16 A / 50mm with voltmeter	NHTF001990R0001	2,2
MMV 400/230 Meetering module	400/230V, 16 A / 50mm with voltmeter	NHTF001990R0002	0,3
MM 230 Meetering module	230V, 16 A / 50mm	NHTF001990R0003	2,4
MMJ 230 Meetering module	230V, 16 A / 50mm, with circuit breaker	NHTF001990R0004	2,7
MMJS 400/230 Meetering module	400/230V, 16 A / 50mm with circuit breaker and sectioning	1SEP201479R0001	3,7

Type	Ordering details Type No.	Weight 1 pc/kg
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Tmax adapters

Adapter 160A for MCCB Tmax T2	3P T2 160A / 100mm	1SEP304557R0001	1,4
Adapter 250/320A for MCCB Tmax T4	3P T4 250/320A / 150mm	1SEP304604R0001	3,7
Adapter 400/630A for MCCB Tmax T5	3P T5 400/630A / 200mm	1SEP304605R0001	4,8
Adapter 850A for MCCB Tmax T6	3P T6 850A / 250mm	1SEP102236R0003	5,5
Adapter 1100A for MCCB Tmax T7	3P T7 1100A / 250mm	1SEP102237R0003	8,9

Tmax adapters for Multimeter 72x72 mm

Adapter 160A for MCCB Tmax T2 for Multimeter 72x72 mm		1SEP304557R0003	1,6
Adapter 250/320A for MCCB Tmax T4 for Multimeter 72x72 mm		1SEP304604R0003	3,9
Adapter 400/630A for MCCB Tmax T5 for Multimeter 72x72 mm		1SEP304605R0003	5
Adapter 850A for MCCB Tmax T6 for Multimeter 72x72 mm		1SEP102236R0013	5,7

Tmax adapters 4-pole

Adapter 160A for MCCB Tmax T2 4-pole	4P T2 160A / 150mm	1SEP304653R0001	3,7
Adapter 250/320A for MCCB Tmax T4 4-pole	4P T4 250/320A / 200mm	1SEP304654R0001	4,9
Adapter 400/630A for MCCB Tmax T5 4-pole	4P T5 400/630A / 250mm	1SEP304655R0001	6,1
Adapter 850A for MCCB Tmax T6 4-pole	4P T6 850A / 300mm	1SEP102236R0004	9,8

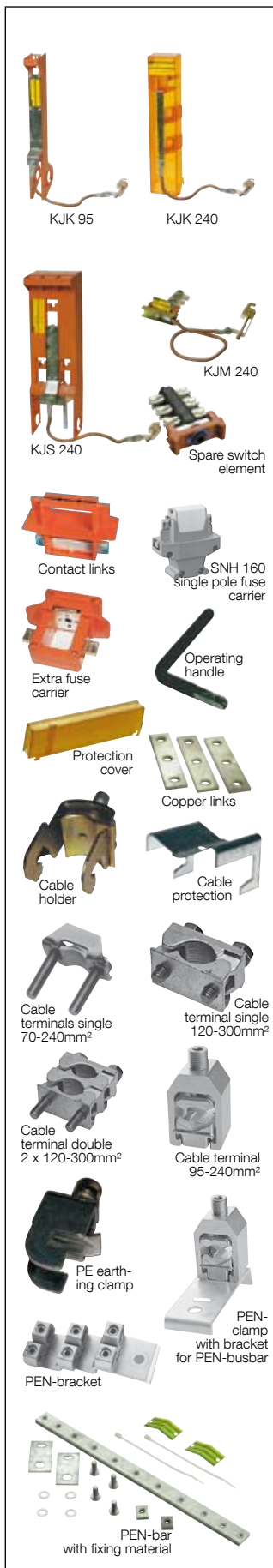
Tmax adapters 4 pole for Multimeter 72x72 mm

Adapter 160A for MCCB Tmax T2 for Multimeter 72x72 mm		1SEP304653R0003	3,9
Adapter 250/320A for MCCB Tmax T4 for Multimeter 72x72 mm		1SEP304654R0003	5,1
Adapter 400/630A for MCCB Tmax T5 for Multimeter 72x72 mm		1SEP304655R0003	6,3
Adapter 850A for MCCB Tmax T6 for Multimeter 72x72 mm		1SEP102236R0014	10,1

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7. Ordering tables

Accessories for modules



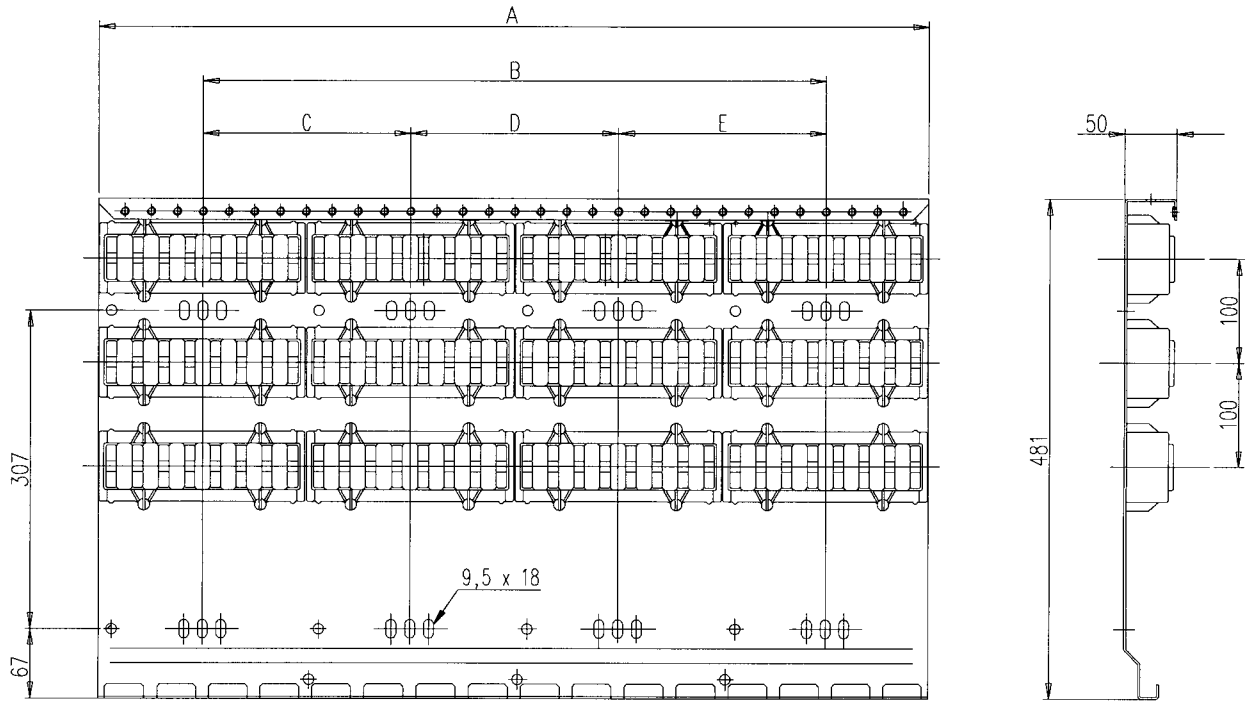
Designation	Description / Cable size mm ²	Ordering details Type No.	Packing unit	Weight 1 pc/kg
KJK 95 Earthing cover	for SLK 160	NHP 139231R0001	1	1,3
KJK 240 Earthing cover	for K 240	NHP 139232R0001	1	1,6
KJM 240 Earthing cover	for MP 240	NHP 139233R0001	1	1,5
KJS 240 Earthing cover	for SLK 400	NHP 139234R0001	1	2,2
Upper cable clamp 10-95 mm ²		NHP 407188R0002	3	0,2
Upper cable clamp 95-240 mm ²		NHP 407192R0001	3	0,3
K95 Spare contact link		NHP 300221R0001	1	0,3
MP 240 Spare switch element		NHP 300222R0001	1	1,0
SLK 160 Spare front cover		1SEP407654R0001	1	
SLK 400 Spare front cover		NHP 139125R0002	1	
SLKD 63 Spare fuse carrier		NHP 300223R0001	1	0,5
SLK-NH 160 Protection cover		NHP 301570R0001	1	0,3
DS 400 Protection cover		NHP 139236R0001	1	0,6
2 x DS 400 Protection cover		NHP 139236R0002	1	0,7
3 x DS 400 Protection cover		NHP 139236R0003	1	0,8
2 x DS 400 Copper links		NHP 300213R0001	3	0,3
3 x DS 400 Copper links		NHP 300214R0001	3	0,5
Cable holder Ø 20-40	Cable 10-95 mm ²	NHP 300141R0001	1	0,17
Cable holder Ø 35-60	Cable 95-240 mm ²	NHP 300143R0001	1	0,27
Cable holder Ø 55-90	Cable 300-500 mm ²	NHP 300145R0001	1	0,45
Cable protection Ø 20-40	Cable 10-95 mm ²	NHP 300142R0001	1	0,02
Cable protection Ø 35-60	Cable 95-240 mm ²	NHP 300144R0001	1	0,03
Cable terminal single 120-300 mm ²		NHP 300173R0001	1	0,40
Cable terminal double 2 x (120-300 mm ²)		NHP 300174R0001	1	0,80
Cable terminal single 70-140 mm ²	Cu/Al cable	NHP 300175R0001	1	0,20
PE earthing clamp, up to 50 mm ²		1SEP408430R0001	1	0,01
PE earthing clamp, up to 120 mm ²		NHP 300162R0001	1	0,05
PE earthing clamp, up to 240 mm ²		NHP 300163R0001	1	0,08
Cable terminal 10-95 mm ² M8		NHP 407190R0001	1	0,08
Cable terminal 95-240 mm ² M10		NHP 407194R0001	1	0,24
PEN-clamp, 16-95 mm ²	Cu/Al cable	NHP 406213R0001	1	0,12
PEN-clamp, 16-240 mm ²	Cu/Al cable	NHP 406214R0001	1	0,18
Bracket with 6 PEN clamps	Cu/Al cable	NHP 405108R0001	1	1,80
PEN clamp with bracket, 10-95 mm ²	Cu/Al cable	NHP 407174R0001	1	0,21
PEN clamp with bracket, 95-240 mm ²	Cu/Al cable	NHP 407178R0001	1	0,40
PEN-bar 350 mm		NHP 405065R0001	1	0,80
PEN-bar 500 mm		NHP 405065R0002	1	1,19
PEN-bar 700 mm		NHP 405065R0003	1	1,69
PEN-bar 900 mm		NHP 405065R0004	1	2,25
PEN-bar 1100 mm		NHP 405065R0005	1	2,75
Rating plate for PEN-bar		NHP 405066R0001	1	
Neutral isolator	For N-bar	GZN 560029P0016	1	
Operating handle		NHP 300212P0001	1	0,01

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8. Dimensional drawings

Busbars

FS 400 - 630 - 1200 A



NHP 300 983

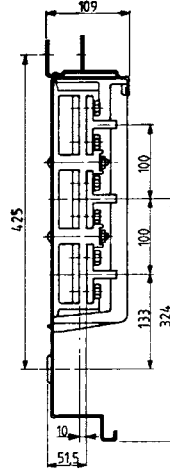
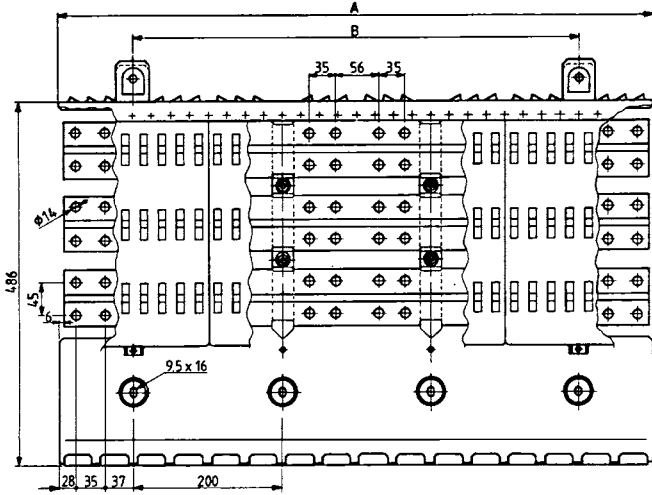
Type	A	B	C	D	E
FS 400A/150	150	100			
FS 400A/250	250	150			
FS 400A/400	400	200			
FS 400A/600	600	400	200		200
FS 630A/400	400	200			
FS 630A/600	600	400	200		200
FS 630A/800	800	600	200	200	200
FS 630A/1000	1000	800	200	400	200
FS 1200A/600	600	400	200		200
FS 1200A/800	800	600	200	200	200
FS 1200A/1000	1000	800	200	400	200

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8. Dimensional drawings

Busbars

FST 3P 1200 – 1600 – 2500 A

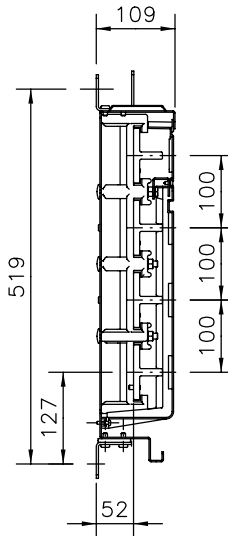
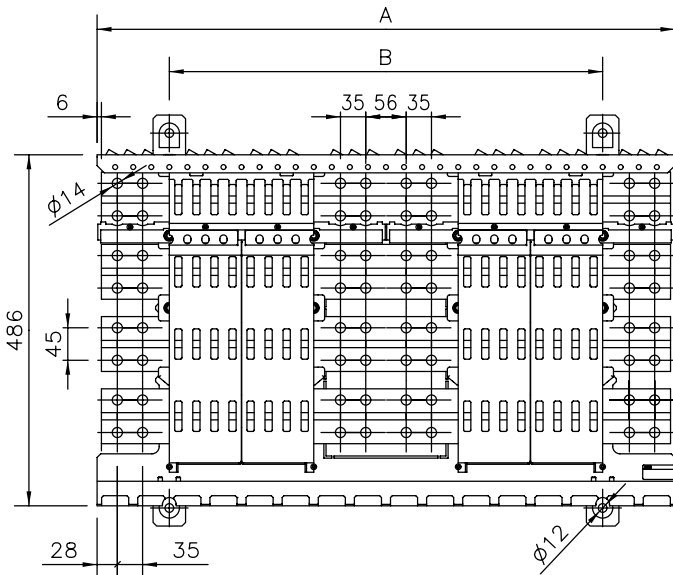


Type	A	B
FST 1200A/800	800	600
FST 1200A/1200	1200	1000
FST 1600A/800	800	600
FST 1600A/1200	1200	1000
FST 2500A/800	800	600
FST 2500A/1200	1200	1000

NHP 139 332

Busbars

FST 4P 1200 – 1600 A



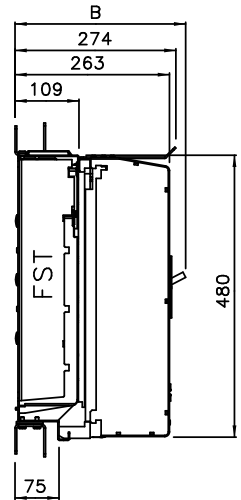
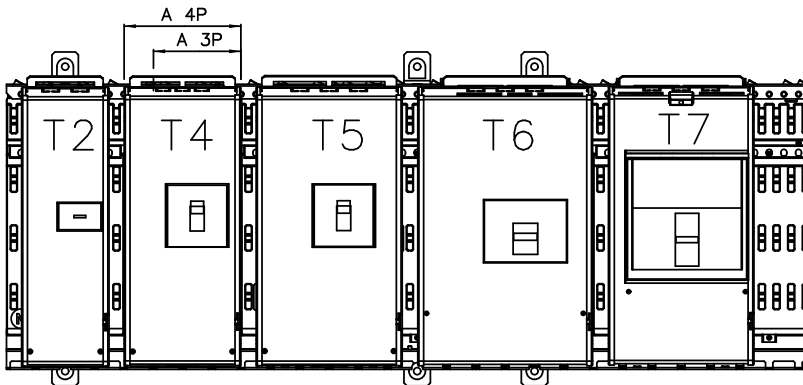
Type	A	B
FST4P 1200A/800	800	600
FST4P 1200A/1200	1200	1000
FST4P 1600A/800	800	600
FST4P 1600A/1200	1200	1000

1SEB000178

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8. Dimensional drawings

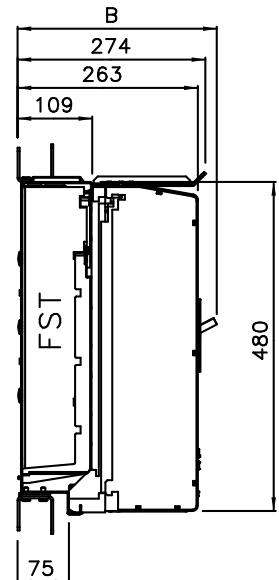
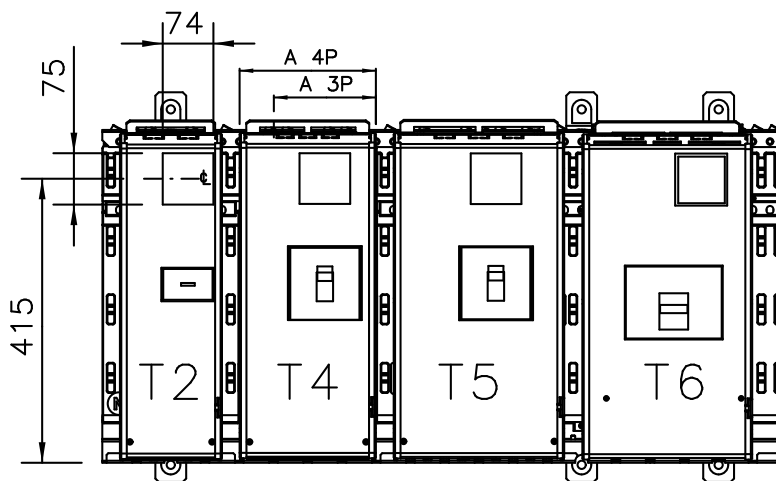
Adapters for Tmax



Ident nr.	Type	A	B
1SEP304557R0001	SLK-E T2 3P	99	283
1SEP304604R0001	SLK-E T4 3P	149	294
1SEP304605R0001	SLK-E T5 3P	199	294
1SEP102236R0003	SLK-E T6 3P	248	306
1SEP102237R0003	SLK-E T7 3P	248	379
1SEP304653R0001	SLK-E T2 4P	149	283
1SEP304654R0001	SLK-E T4 4P	199	294
1SEP304655R0001	SLK-E T5 4P	249	294
1SEP102236R0004	SLK-E T6 4P	298	306

1SEB000166

Adapters for Tmax for Multimeter



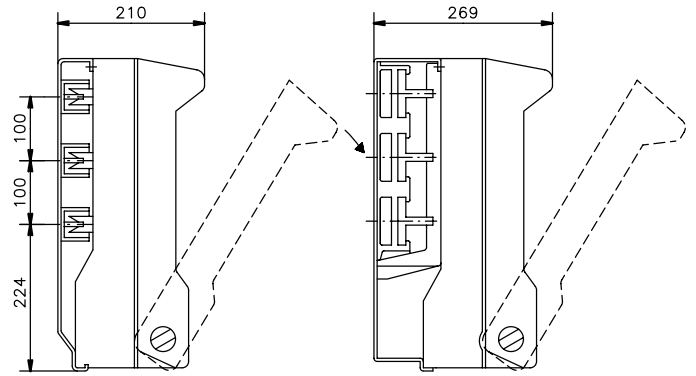
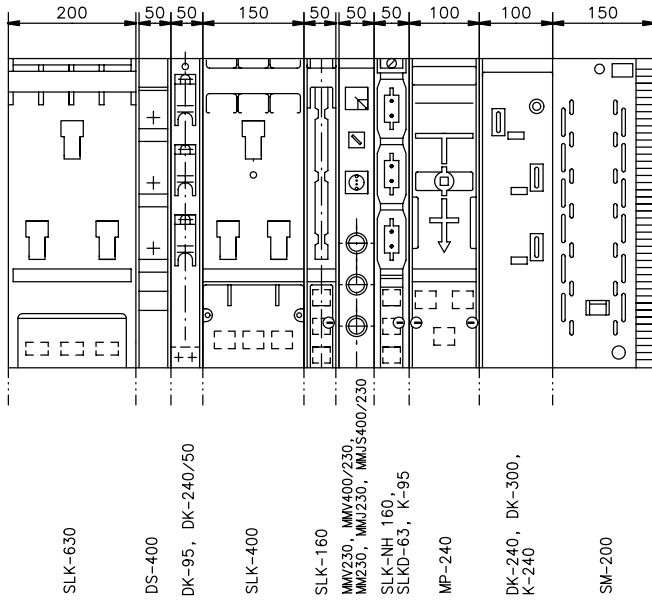
Ident nr.	Type	A	B
1SEP304557R0003	ADAPTER T2 3P FOR MULTIMETER	99	283
1SEP304604R0003	ADAPTER T4 3P FOR MULTIMETER	149	294
1SEP304605R0003	ADAPTER T5 3P FOR MULTIMETER	199	294
1SEP102236R0013	ADAPTER T6 3P FOR MULTIMETER	248	306
1SEP304653R0003	ADAPTER T2 4P FOR MULTIMETER	149	283
1SEP304654R0003	ADAPTER T4 4P FOR MULTIMETER	199	294
1SEP304655R0003	ADAPTER T5 4P FOR MULTIMETER	249	294
1SEP102236R0014	ADAPTER T6 4P FOR MULTIMETER	298	306

1SEB000201

FastLine

8. Dimensional drawings

Module types



FS-400A-630A-1200A

FS-1600A-2500A

NHP 300 462

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