



Protection and Connection

SlimLine XR Switch Disconnector Fuse 63-630 A

Power and productivity
for a better world™

ABB

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Introduction

Fuse protection

1

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 get. The SlimLine switch disconnector fuse 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 upstream fuses 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.

Economical installation

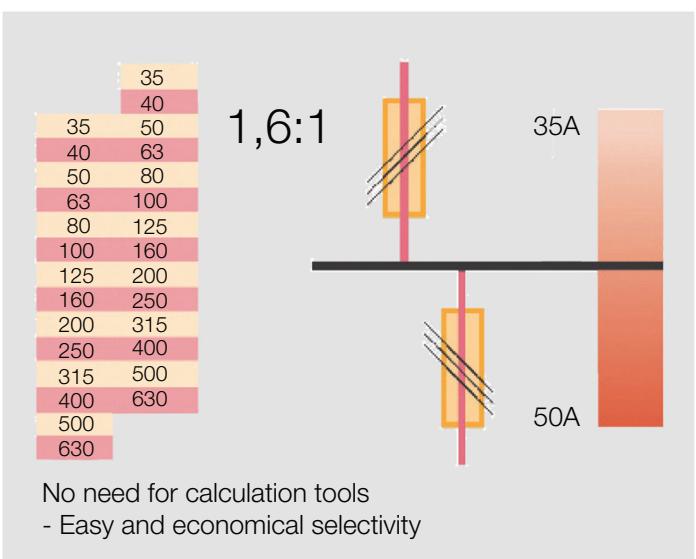
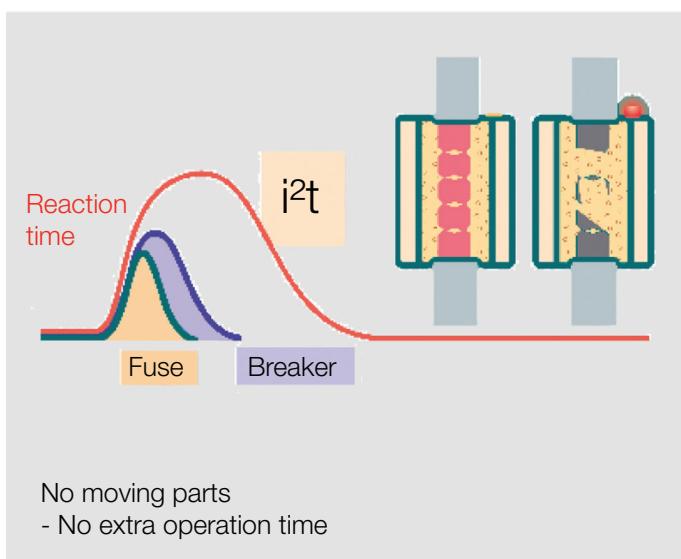
Lifetime costs of fuse systems are low. Fuse links which can withstand a high fault level and a fault current, are available at economical prices.

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.

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



Introduction

SlimLine XR

1

The latest within optimal operation and design

The SlimLine XR fulfils all increasing demands in the industry for safe energy distribution. Installation of the SlimLine XR is even easier and more time saving than ever before. The increased space in the cable termination area will allow better access for the cable installation.

Motor operation

SlimLine XR offers an integrated motor (as option) for remote or local operation. The motor operation unit is 100% integrated inside the SlimLine XR. The front operated ON / OFF buttons are shrouded by a transparent cover with padlocking facility.

Electronic Fuse Monitoring (EFM)

The SlimLine XR fuse monitor (EFM) is an integrated fuse blown monitoring device for local indication in the front by LED indicator and for remote alarm via an internal relay output. After replacement of a blown fuse, the EFM will automatically be reset and the green LED in the front will turn on.

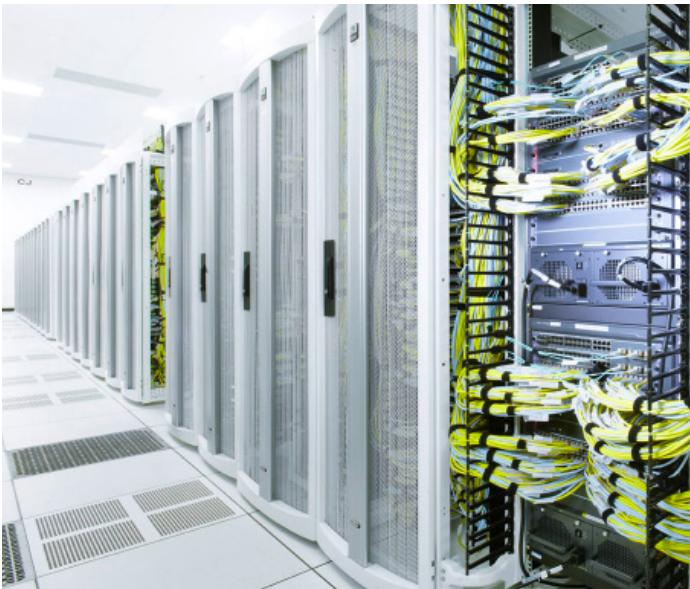
Intelligent Tier Switch (ITS2)

SlimLine XR can also be delivered with an integrated energy monitoring device (ITS2) for remote communication by using Bus connection. All parameters of setting alarm levels can be done via a laptop connected to all SlimLine XR.



General Applications and approvals

2



Applications:

- Distribution boards
- Building industry
- Oil and Gas industries
- Data centers
- Hospitals
- Airports
- Banks
- Shopping center
- In combination with Motor Control Centers
- When using emergency power supply
- Photovoltaic Power Plants

Approvals:

- IEC / EN 60947-3
- CB
- EAC
- CCC

General Advantages



2

Advantages:

- 3 / 4 pole AC, 2 pole DC version and Busbar Section Switch
- For horizontal and vertical installation
- Plug in/out at live busbars / Integrated interlock
- Retrofittable integrated 3 phase CT's even up to 4 CT's
- Integrated Motor operation (MOT)
- Electronic Fuse Monitoring (EFM) for AC and DC
- Intelligent Tier Switch XR ITS2 for local and remote monitoring
- Easy access to Multiplug for all external auxiliary wiring
- Integrated slide support for safe and easy installation
- Space for cabling up to 2 x 300mm² at XR 2/3
- Compact design => space saving => total cost saving
- Real position indication
- Modular design
- Developed for plug-in switchboard systems
- 3 / 4 pole AC and 2 pole DC version
- Maintenance free
- High degree of personal safety, IP41
- Available for depth of 200mm or 400mm



Apparatus overview DIN- and BS- version

DIN

XR00 160 A



BS

XR 63 A, 100 A, 160 A

XR1 250 A



XR 250 A

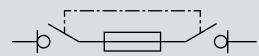
XR2 400 A
XR3 630 A



XR 400 A
XR 630 A

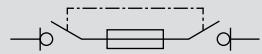
Apparatus overview

Available XR versions:



XRE

- AC22B at 690 V
- Interruption on both sides of the fuses.



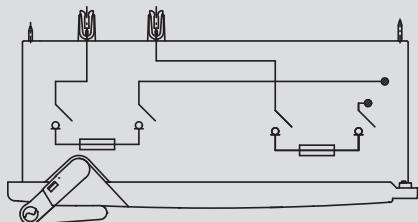
XRM

- AC23B at 690 V
- Interruption on both sides of the fuses.

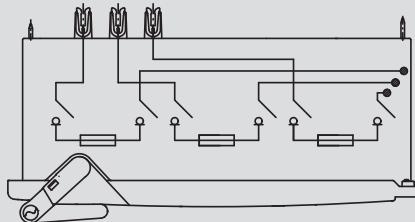
3

XR is available for the following busbar phase distances

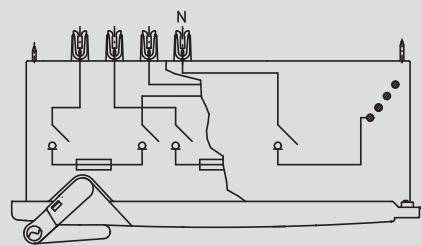
50 mm distance between phases, 5 mm busbar



2 - pole DC

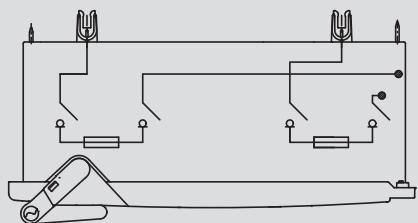


3 - pole

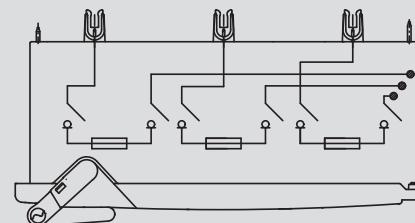


4 - pole

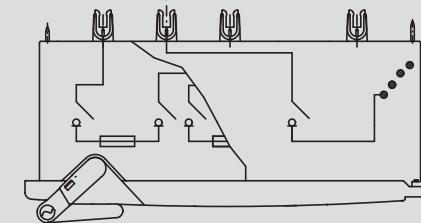
185 mm distance between phases, 10 mm busbar



2 - pole DC



3 - pole



4 - pole

4 Pole version

- The 4th pole neutral switch (N) is located at the top of the XRE 3-pole unit
- The height of the additional 4th pole unit is 50mm for all sizes
- The neutral switch is fully rated
- The neutral switch is switched "First in" and "Last out"
- Common cable shroud for the 4th pole (N) for all sizes

2 Pole DC version

- The XRM DC is rated up to 500 V DC

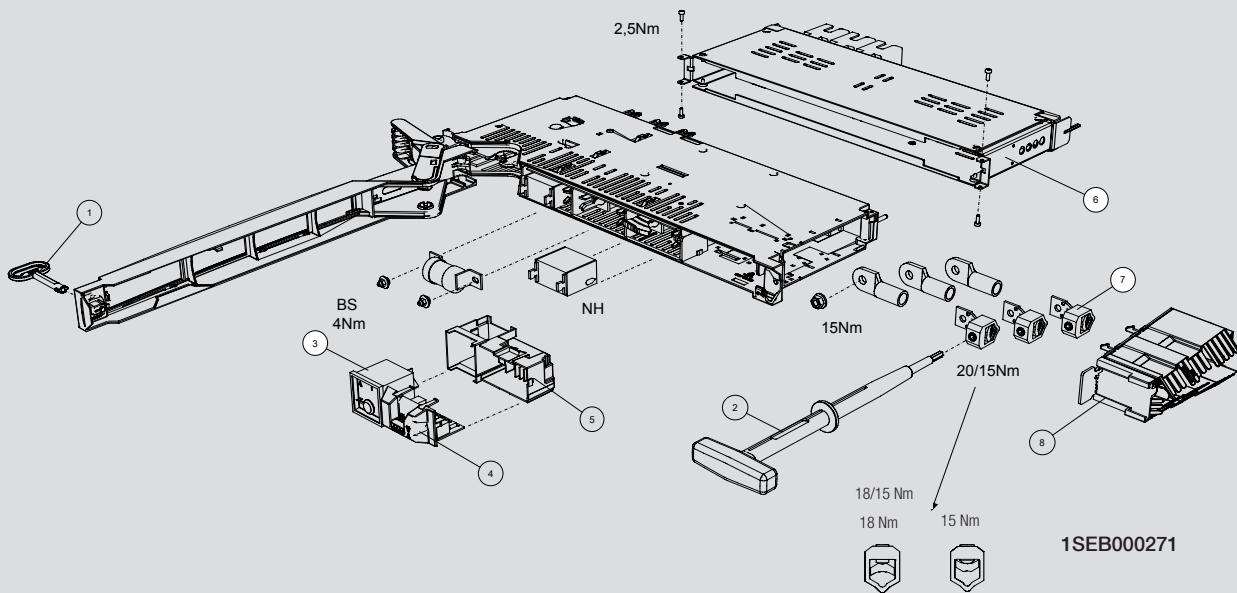


XR 4 pole

Apparatus overview

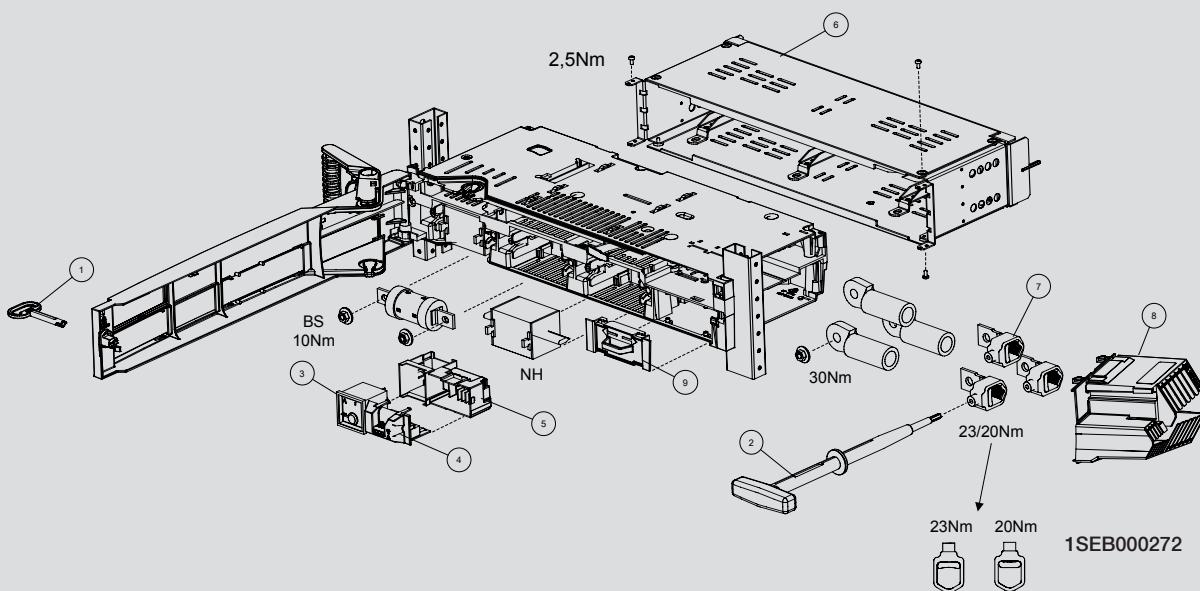
Assembly

3



XR00, 160 A

- 1. Front cover key
- 2. Cable terminal key
- 3. A-meter
- 4. Electronic fuse monitoring, EFM
- 5. A-meter bracket
- 6. Contact extensions
- 7. Cable clamp
- 8. Cable terminal shroud



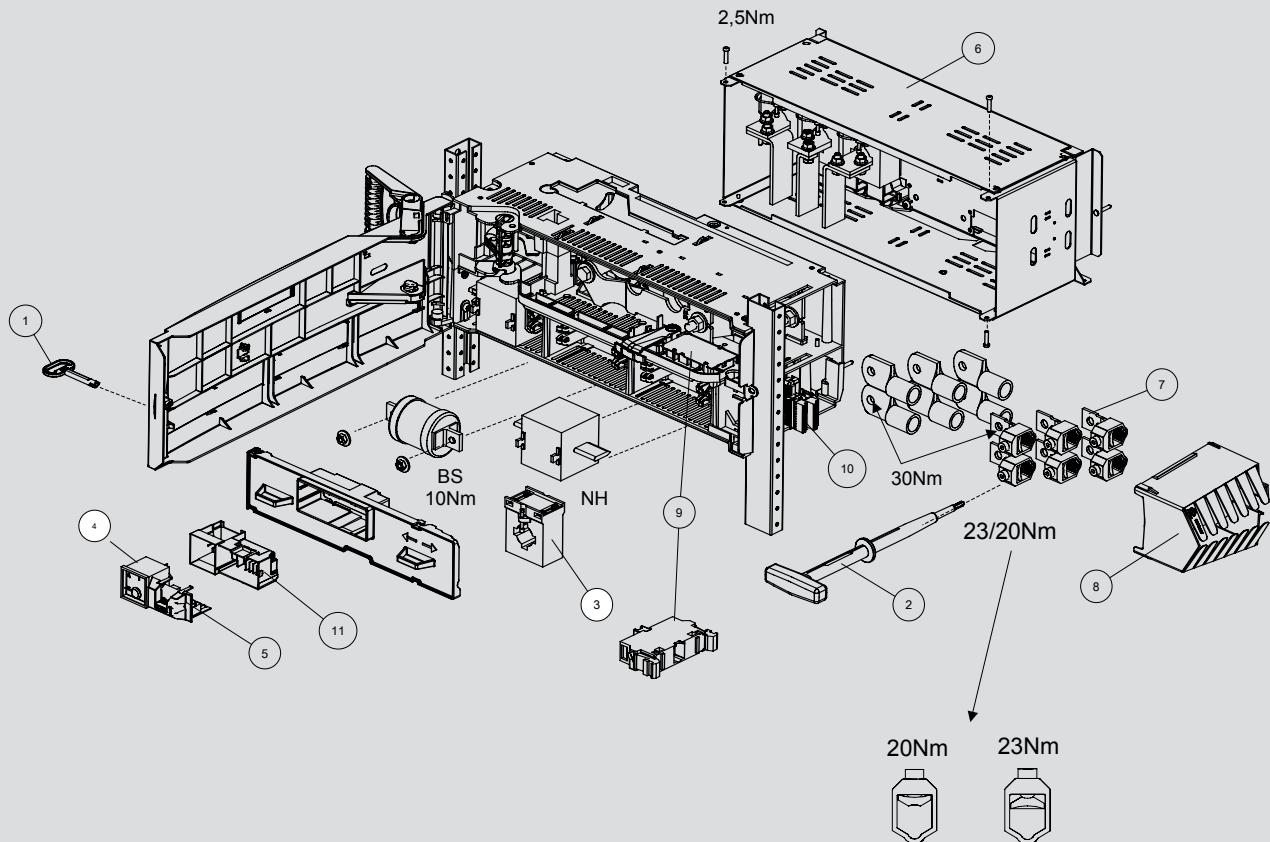
XR1, 250 A

- 1. Front cover key
- 2. Cable terminal key
- 3. A-meter
- 4. Electronic fuse monitoring, EFM
- 5. A-meter bracket
- 6. Contact extension
- 7. Cable clamp
- 8. Cable terminal shroud
- 9. Terminal cover

Apparatus overview

Assembly

3



XR2/3, 400-630 A

- | | |
|------------------------------------|--------------------------|
| 1. Front cover key | 7. Double cable clamp |
| 2. Cable terminal key | 8. Cable terminal shroud |
| 4. A-meter | 9. Auxiliary switch |
| 5. Electronic fuse monitoring, EFM | 10. Multi plugs |
| 6. Contact extensions | 11. A-meter bracket |

Apparatus overview

Busbar Section Switch



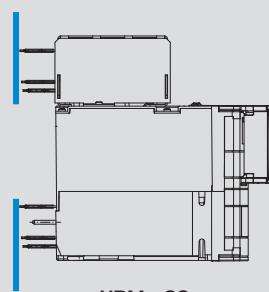
3

XR-SS/SP

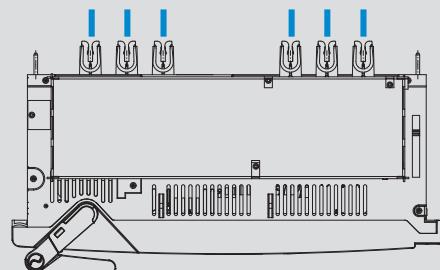
- Switch disconnector fuse which can sectionalize two parallel (SP) or serial busbar systems (SS)
- Fuse DIN size 3
- AC 23 B, 690V, 630A
- Two ventilated blind covers are included

XR is available for the following busbar phase distances

50 mm distance between phases, 5 mm busbar

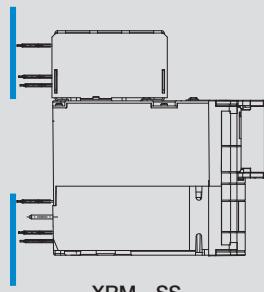


XRM - SS



XR - SP

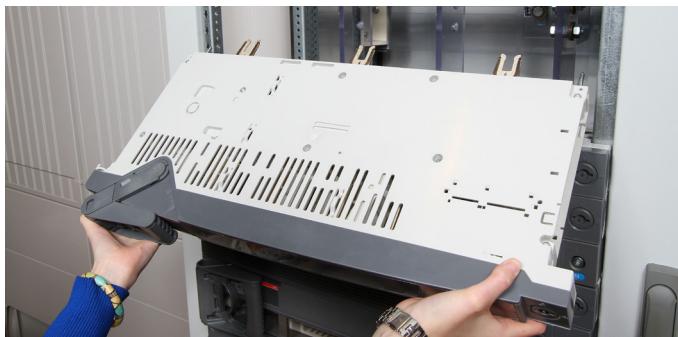
185 mm distance between phases, 10 mm busbar



XRM - SS

Apparatus overview

Installation and operation



Plug-in contacts - Fast, easy and safe

Years of experience and development are put into the plug-in contacts used in the XR. The basis for the technology is that the current floats in small spots within the apparent contact point. These spots are named "effective contact areas". A spring loaded contact achieves a high contact force. This again leads to a high "effective contact area".

The design of the contact will increase the closing force if a short circuit appears. The use of plug-in contacts at distribution busbars will give easier and faster installation.



Operation

The XR is operated by moving the operating handle sideways, approx. 90°. The handle can be folded in both "On" and "Off" position. The true ON / OFF position is shown by the switch indicator in front.



Voltage testing

In the case of voltage testing directly on the live fuses, the transparent front window may be opened by using a screw driver to release from the right side of the window.



Installation

Slide the SlimLine apparatus into the panel until the guide pins fit into the rear profiles and the contact fingers are connected to the busbars. The integrated slide support will ensure safe, fast and easy installation.



Padlocking the XR

The folded operating handle can be padlocked in OFF position with up to 3 padlocks, Ø5mm. If more space is wanted for the padlocks, a padlock extension is available as an accessory.

Apparatus overview

Plug in/out at live busbars and double handle

3



Integrated interlocks

Plug in/out at live busbars

The SlimLine apparatus can be removed/replaced in a switchboard with live busbars according to IEC EN 61439 8.5.2. An integrated interlock device at the side of the apparatus will prevent any possibility to plug out/plug in the apparatus at live busbars as long as the XR apparatus is switched to ON position.

We recommend the following procedure when removing/replacing SlimLine XR in a switchboard with live busbars:

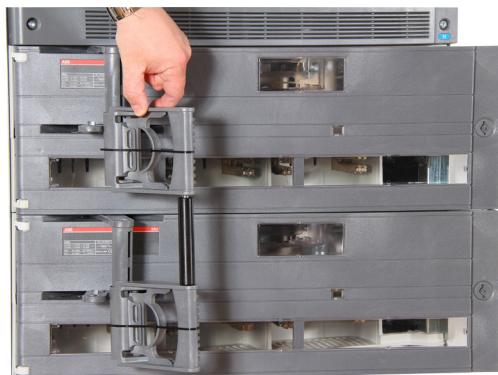
1. The replacement is carried out by a skilled or instructed person
2. The switch fuse disconnector is in OFF position
3. The main and auxilliary cables are disconnected
4. The switch fuse disconnector to be replaced is either supported by stacking the apparatus on each other or it is supported by the XR guide rails
5. The XR replacement tool has to be used (universal for all the XR sizes)

Double handle

In order to operate 2 pcs SlimLine XR size 2 or 3 in parallel, a special kit is available to connect the 2 operating handles together as a fixed solution.



Double handle kit



Sliding on the double handle



Double handle at SlimLine XR

Apparatus overview

Replacement of the NH fuses in the XR

How to replace NH fuses in a XR 00 that is placed between other XR apparatus in ON position



1. Switch OFF the XR where the NH fuses shall be replaced and open the frontcover.



2. The operating handles of the XR's placed above and below can be released by use of a screwdriver and moved to park-position with the XR's still in ON position.



3. With the operating handles above and below in park-position, there is easy access to the L1 fuse in the XR in the middle.



4. By use of a NH replacement tool, the NH fuses in the XR 00 in the middle can easily be removed / replaced.



5. All operating handles at XR 00,1,2 and 3 can be placed into live park-position.

Apparatus overview

Electronic Fuse Monitoring (EFM)

The SlimLine XR EFM gives an alarm at any fault conditions if a fuse is blown. An internal potential free relay (1NC+1NO) will trip to transfer a signal for a remote fuse blown alarm. The EFM unit is self supplied, which means no additional power supply is required.

3



Properties

- The green LED in the front panel indicates all fuses are OK.
- The red LED will turn on if one or more fuses are blown.
- Internal plug inside the multiplug (XR00 and XR1) to the cables connected to the EFM display box.
- When removing the EFM display box, it will also be fully disconnected from the fuse contacts. This will make it easy to completely remove/disconnect/replace the display box when needed, for instance test of the complete switchboard.
- Delivered with Multiplug P16 for XR00/1 and P20 for XR2/3 as factory fitted.

The EFM is available in 3 different variants:

- AC-version: 340-770VAC
- DC-versin 110V: 45-140VDC
- DC-version 550V: 135-550VDC

The EFM will automatically be reset after the blown fuse has been replaced, and the green LED will switch on again.

Insulation test

The EFM unit will survive an insulation test voltage of 1,6kV. However, by insulation test, we recommend to disconnect the EFM module. This will also avoid leakage current between the main phases. If needed, the EFM module can be completely removed by also disconnecting the internal plug to the rear side of the multiplug.

Power supply

The EFM is powered by the XR busbar contacts, and it starts to operate once the XR switch is in closed position.

Fuse status		Relay contacts					
		Green LED	Red LED	NO contact 11,12		NC contact 13,12	
1. XR in ON position				Open	Closed	Open	Closed
Fuses OK				X			X
Fuses BLOWN					X	X	
2. XR in OFF position							
Fuses OK				X			X
Fuses BLOWN				X			X

Apparatus overview

Electronic Fuse Monitoring (EFM)

3

Technical data for XR EFM

Input voltage limits	DC	AC
Rated AC voltage U_e		340 ... 770VAC
DC 110: Rated DC voltage U_e	45 ... 140VDC	
DC 550: Rated DC voltage U_e	135 ... 550VDC	
Power consumption	2W	< 3VA
Functional characteristics		
Operating time t_o	$\leq 4s$	$\leq 2s$
Measuring accuracy	$\pm 5\%$	
Signaling relay output terminals (multiplug)		
Normaly open	Terminal 11 - 12	Terminal 11 - 12
Normaly closed	Terminal 12 - 13	Terminal 12 - 13
Rated load, resistive	4A at 24VDC Utilization category DC-1	5A at 24VDC
Rated load, inductive	2A at 24VDC Utilization category DC-13	5A at 24VDC
Rated load, resistive	4A at 240VAC Utilization category AC-1	5A at 240VAC
Rated load, inductive	3A at 240VAC Utilization category AC-15	5A at 240VAC
Wiring capacity (mm^2)	Stranded/solied 0,14 - 1,5 Stranded with ferrule, with/without plastic sleeve 0,25-0,5/0,25-1,5	Stranded/solied 0,14 - 1,5 Stranded with ferrule, with/without plastic sleeve 0,25-0,5/0,25-1,5
Dielectric properties (IEC 60947-1)		
Rated impulse withstand voltage (U_{imp}), basic insulation	2,5kV/6,0kV	9,8kV
All poles connected together/Earth	1,5kV / 1,89kV / 1min 50Hz	3,5kV / 1min 50Hz
All poles connected together/Auxiliary contacts	1,89kV / 1min 50Hz	3,5kV / 1min 50Hz
Insulation resistance	> 1MΩ, 500VDC	
EMC characteristics		
Electrostatic Discharge EN 6100-4-2 Air	8kV	$\pm 8kV$
Electrostatic Discharge EN 6100-4-2 Contact	4kV	$\pm 4kV$
Electrostatic Fast Transient EN 6100-4-4	Level 3	Level 3
Surge immunity EN 6100-4-5	Level 2	Level 2
Power frequency magnetic field EN 6100-4-8	Level 5	Level 5
MTBF		1.103.137 hours at 80°C



Diagram XR AC EFM

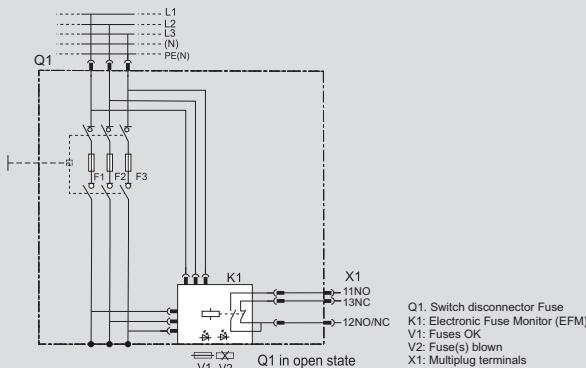
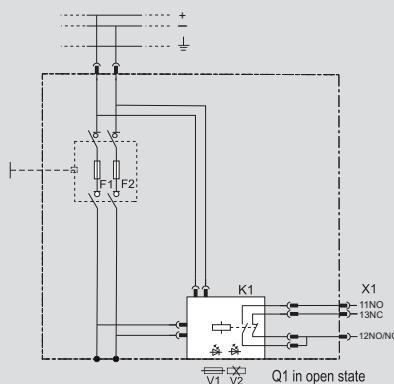


Diagram XR DC EFM



Apparatus overview

Intelligent Tier Switch ITS2.1 and ITS2.D

The SlimLine XR ITS2.1 and ITS 2.D (with integrated Display) is developed for easy set up, reliable remote control, and monitoring via bus communication.



SlimLine XR ITS2.1



SlimLine XR ITS2.D with integrated Display

XR ITS2.1 / 2.D is the optimal solution for Energy Management systems to analyze, optimize and control the energy consumption in modern commercial and industrial buildings.

XR ITS2.1 / 2.D has a common interface with ABB's series of breakers which both use the EKIP Connect software for the configuration.

The Ekip Display can be plugged into the front of ITS2.1



1. Press in the 3 dedicated areas for fixing the Display.



2. Plug the Ekip Display into the front of the ITS2.1.



3. Fix the Ekip Display by rotating the closing button to closed position by using a screw driver.

SlimLine XR ITS2.1: which data can be monitored

Features		
Line Voltage	(V AC)	V12, V23, V31
Phase Voltage	(V AC)	V1N, V2N, V3N
Current	(A)	L1, L2, L3
Active power	(kW)	L1, L2, L3
Reactive power	(kVA)	L1, L2, L3
Cos phi	(Cos)	L1, L2, L3
Power factor	(PF)	Sum
Energy	(kWh)	Sum
Fuse status	(EFM)	L1, L2, L3
Temperature	(°C)	Terminal L2
Switch position		On/Off
Motor Control		by bus
Communication bus		RS485
Protocol		Modbus RTU

Configurable Modbus RTU parameters

Default setting	19200 E,8,1 Default Modbus addr. 3
Baudrates	9600, 19200
Parity, stop- start bits	E,8,1 – O,8,1 – N,8,2 – N,8,1
Modbus address range	1 – 247

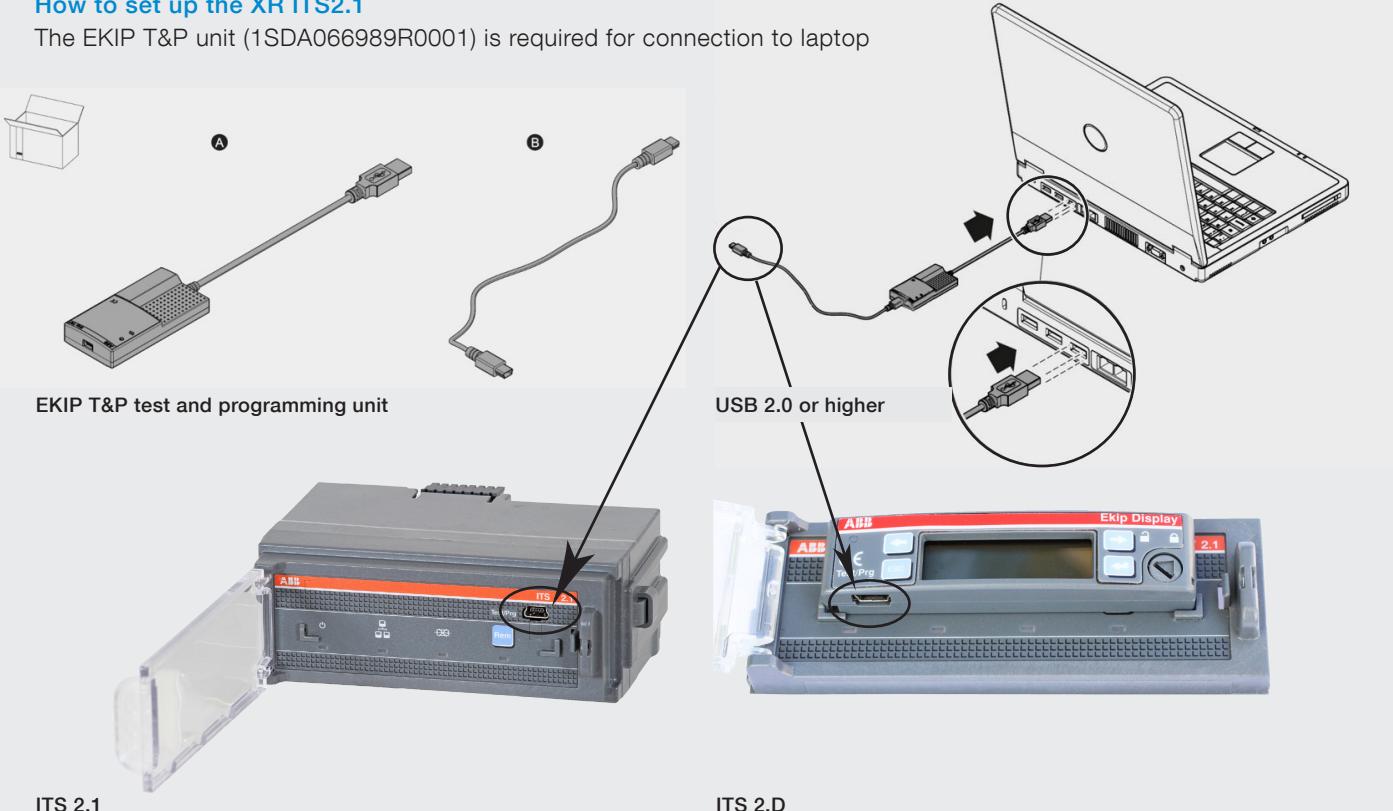
Apparatus overview

Intelligent Tier Switch ITS2.1 and ITS2.D

How to set up the XR ITS2.1

The EKIP T&P unit (1SDA066989R0001) is required for connection to laptop

3



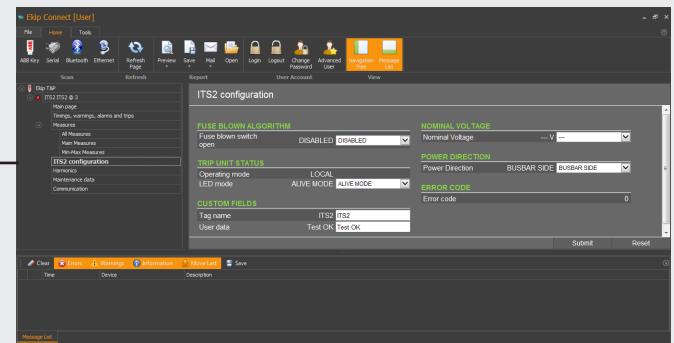
ITS 2.1

ITS 2.D

Download the EKIP software tool



EKIP T&P



EKIP Connect Software

With EKIP Connect Software is possible to

1. Give the ITS unit a unique modbus slave address
2. Set the Nominal Line Voltage
3. And if needed: Set the power direction



Apparatus overview

Intelligent Tier Switch ITS2.1 and ITS2.D

3



SlimLine XR ITS2.1/2.D features

- Easy to set up via the software tool Ekip Connect
- Reliable remote monitoring via bus communication
- Serial bus communication via Modbus RTU / RS485
- With integrated Motor operator, it is possible to configure automatically when a fuse is blown.
- ITS2.1 can be extended with the Ekip Display later to ITS2.D.
- ITS2.D has the Ekip Display factory fitted

Applications of SlimLine XR ITS2.1/2.D

- In Energy Management systems for analyzing and optimizing the energy consumption in commercial and industrial buildings
- Datacenters
- Hospitals
- Solar

SlimLine XR ITS2.D display menues



Start menu



Top menu

Available in a wide range of variant:

The new ITS2.1/2.D modules are delivered fully integrated in the SlimLine XR apparatus for DIN NH Fuses or BS Fuses.

- XR-M 3 pole Manually operated/ Motor operated
- XR-E 4 pole Manually operated/ Motor operated

Detailed user manual:

A detailed user manual as a PDF-file can be downloaded at:
<http://new.abb.com/low-voltage/products/fusegear/slimline-xr>
(under Download a document > Manual).

Connection data at the ITS2.1/2.D multiplug

1	24 VDC
2	24 V GND (0V)
3	RS-485 0V
4	RS-485 + (A)
5	RS-485 - (B)

Conductor cross section

Stranded min.	0,25 mm ²
Stranded max.	1,5 mm ²
Stranded, with ferrule without plastic sleeve max.	1,5 mm ²
Stranded, with ferrule with plastic sleeve max.	0,75 mm ²

Apparatus overview

Motor operation (MOT)

SlimLine XR offers an integrated motor for remote and local operation. The motor operation unit is 100% integrated without any changes of external dimensions. The front operated ON/OFF buttons are shrouded by a transparent cover with padlocking facility.

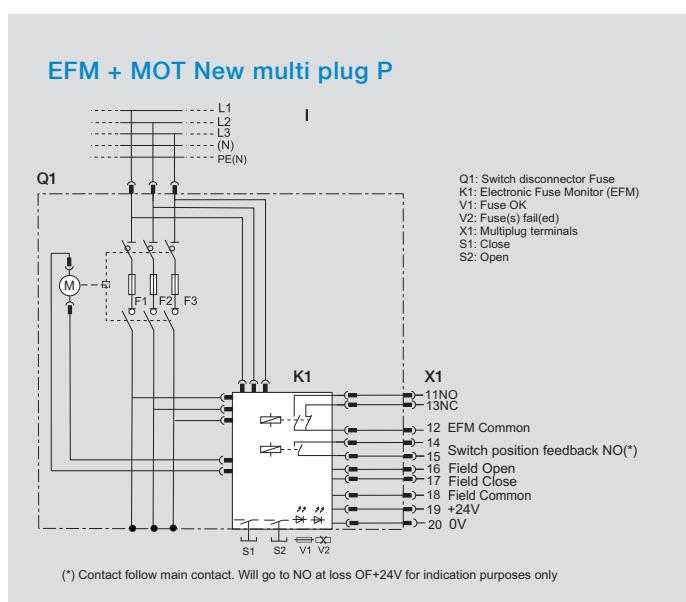
3



- The XR MOT is factory fitted for all XR sizes
- The motor unit is 100% integrated in the XR
- The front operated buttons are protected by a transparent front cover with padlock facility
- Local or remote operation
- Prepared for manual emergency operation from the front in case of lost power supply.
- One auxiliary switch NO is included (14-15)
- External wiring with the Multiplug P16 for XR00/1 and P20 for XR2/3, which is factory fitted.

EFM: 11 - 13

MOT: 14 - 20



Technical data	XR00 MOT	XR1 MOT	XR2/3 MOT
Operational voltage	24 V DC ± 2 Volt		
Operational consumption peak value *	1,1 A	1,3 A	2,8 A
Signal duration	Min. 0,5 sec. or permanent		
Minimum number of operations	According to IEC / EN 60947-3		

* Recommended power supply 10A

Accessories

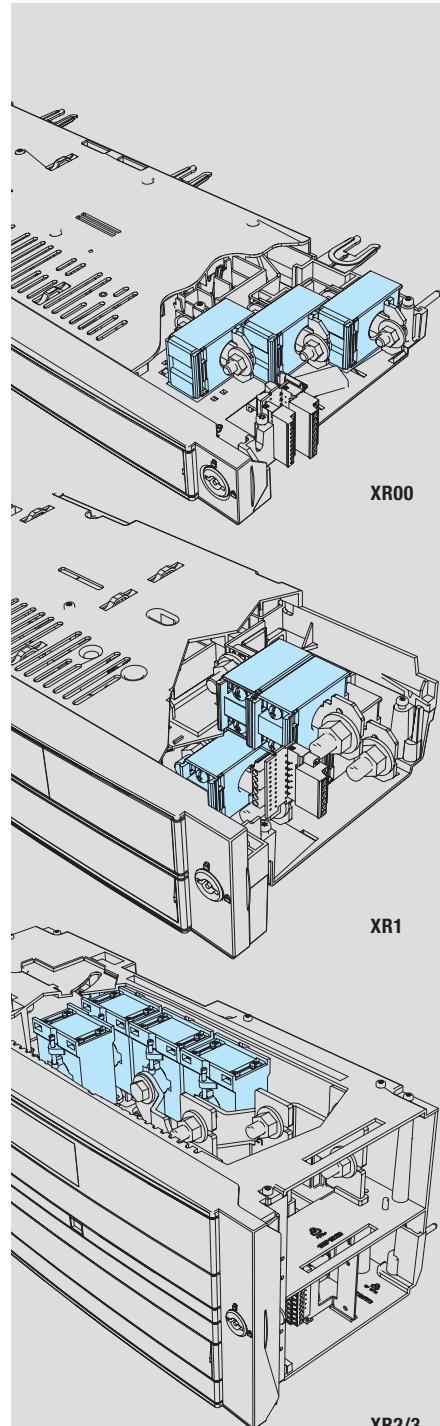
Current metering 1 phase or 3 phase

Current transformer

In all the SlimLine XR it is possible to install current transformers for 1 or 3 phases. By using 3 CT's integrated in the XR apparatus body, it is possible to monitor kW and kWh by connection to a remote kWh meter. It is also possible to install even a 4'th CT, still totally integrated within the body of the XR.

As an option, the CT's can also be installed in the contact extension. Please study the complete overview on page 43 and 44.

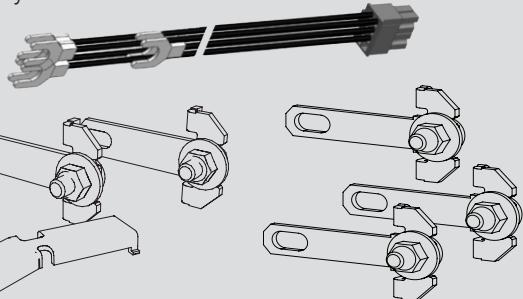
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XR00

Terminal ext./wires for CT's has to be ordered separately

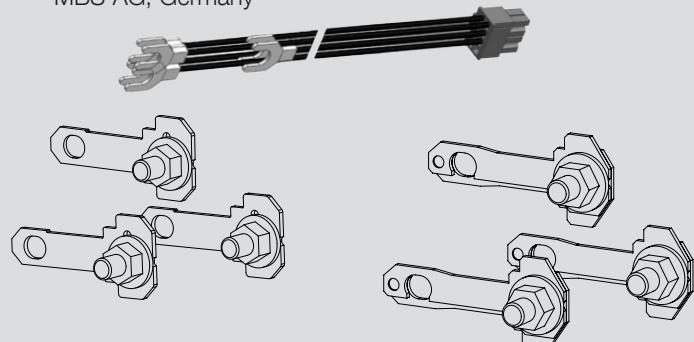
- For CT, type ASR 20.3 ($\varnothing=21\text{mm}$)
- For CT tariff application, type EASR 14.3 ($\varnothing=14\text{mm}$) from MBS AG, Germany



XR1

Terminal ext./wires for CT's has to be ordered separately

- For CT, type ASR 20.3 ($\varnothing=21\text{mm}$)
- For CT tariff application, type EAS 176.3 ($\varnothing=17\text{mm}$) from MBS AG, Germany



XR2/3

Has integrated ext. from the factory prepared for the CT's

- For CT, type ASK 41.4 ($\varnothing=32\text{mm}$)
- For CT tariff application, type EASK 41.4 ($\varnothing=32\text{mm}$) from MBS AG, Germany

Accessories

Ammeter, ventilated blind cover and guide rails



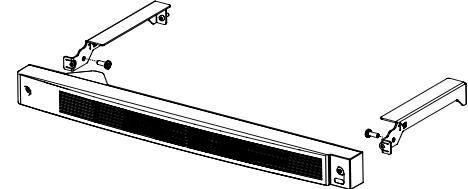
Ammeter

Ammeter DIN 48x48 with maximum indication may be fitted into each XR. An additional ammeter bracket 1SEP408519R0001 is required for all XR sizes.



Guide rails

The guide rails can be integrated in the switchboard to support the installation of the XR apparatus first installed at the bottom side of the switchboard. The ventilated blind cover can be fixed directly to the front fixing brackets. (To be ordered separately).



Ventilated blind cover

The blind cover is 50 mm high. The ventilation ribs give an IP41 protection degree. The kit include fixing brackets and screws.

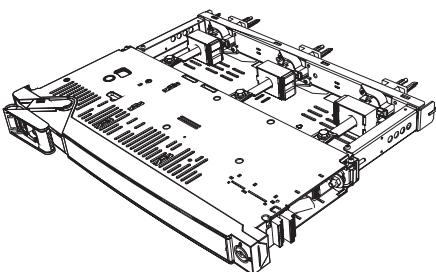
Accessories

Auxiliary contacts, contact extension and service module



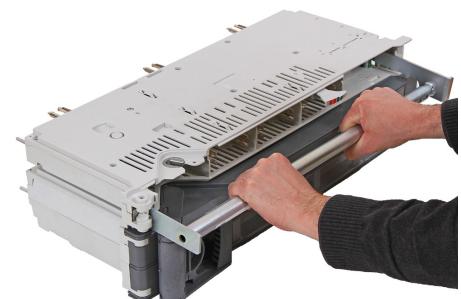
Auxiliary contacts

Up to 3 auxiliary contacts can be installed in the XR. The first NO or NC auxiliary switch can be ordered as a kit including screws, cables and protection cover. Multiplug P is not included. Auxiliary no 2 and 3 can be ordered as single auxiliary switches including extra cable to the Multiplug P.



Contact extension

The contact extension is an adapter to be used in special applications when the total depth from the front of the switchboard to the busbars is 400 mm. For example in combination with Motor Control Centres. Standard depth of an XR apparatus is 200 mm. The contact extensions are available for 50 mm and 185 mm busbar distances, 3 pole, 4 pole and 2 pole DC.



Replacement tool

The replacement tool can be hooked on the hinges at both sides of the SlimLine XR when the front cover is removed. Universal for all the XR sizes.

Accessories

Multiplug P (plugable)



New pluggable concept for SlimLine XR

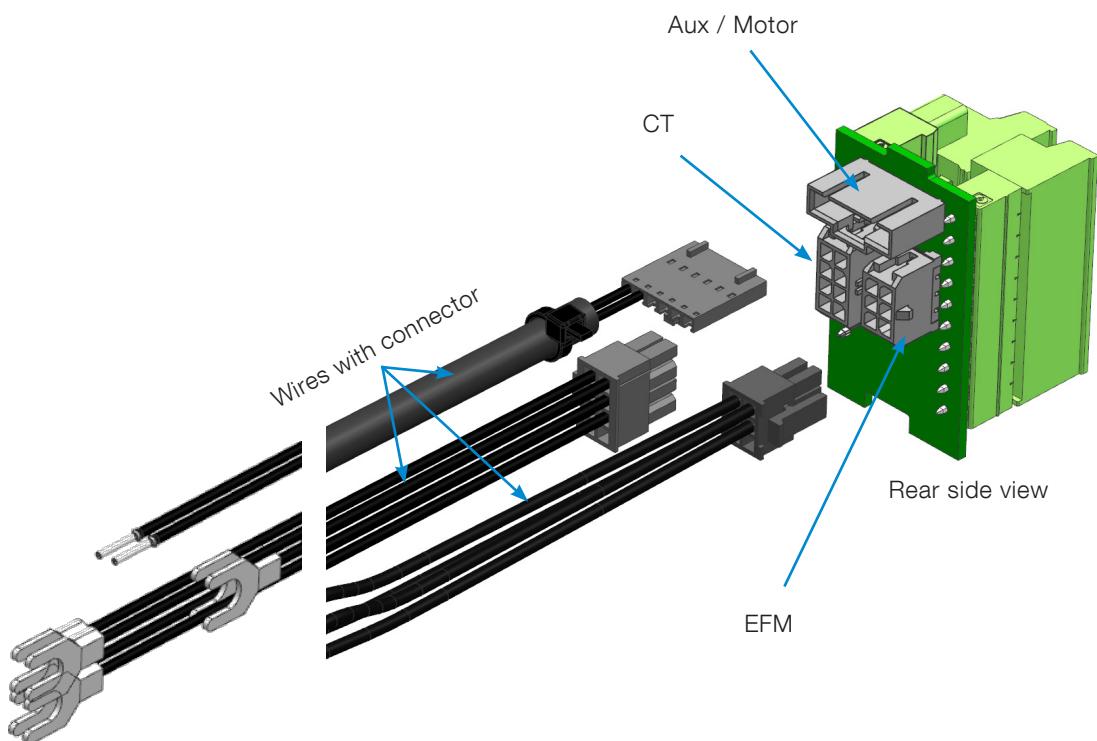
- XR Multiplug for all external connection.
- Easy access for commissioning at site.
- Multiplug P for XR00/1 with plug system at the rear side for all internal wires inside the apparatus.
- Multiplug P for XR2/3 with screw terminals at the rear side for all internal wires inside the apparatus.

Multiplug P (plugable) for all external wiring

3 main group of cable kits:

- CT's
- Aux / Motor
- EFM

with connector for internal wiring inside XR



Multiplug P for XR00/1

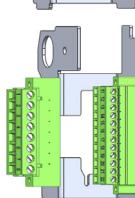
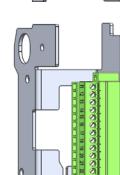
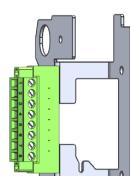
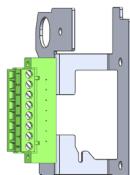
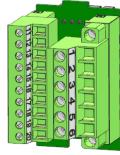
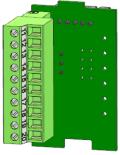
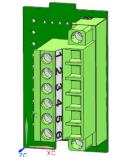
Accessories

Multiplug P (plugable)

4

The multiplug P availability

Multiplugs are available for all external wiring for CT's, auxiliary contacts (AUX), electronic fuse monitoring (EFM) and motor (MOT). This ensures easy plug-in and plug-out of the XR without having to redo the wiring. The multiplugs with screws are for extra safety especially when using CT's. The multiplugs can be ordered as accessories for easy assembly. XR with integrated EFM and/or Motor are delivered from the factory with the Multiplug P10 for XR00/1 and P12 for XR2/3.

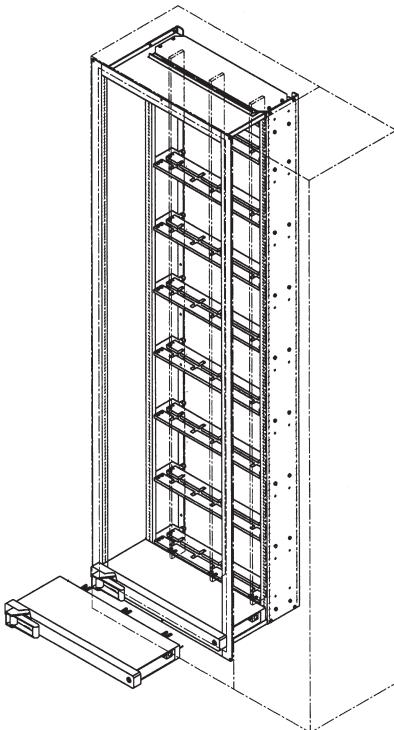


Description	External cable size	Order code
XR00/1 Multiplug P6 for CT's	1-6: 0,2 - 2,5mm ²	1SEP619532R0506
XR00/1 Multiplug P10 for AUX	11-20: 0,14 - 1,5mm ²	1SEP619532R0510
XR00/1 Multiplug P16 for CT's - AUX - EFM - MOT (included when ordering EFM or MOT)	1-6: 0,2 - 2,5mm ² 11-20: 0,14 - 1,5mm ²	1SEP619532R0516
Description	Internal - External cable size	Order code
XR2/3 Multiplug P8 for CT's	1-8: 0,2 - 2,5mm ²	1SEP408513R0001
XR2/3 Multiplug P8 with screws for CT's	1-8: 0,14 - 1,5mm ²	1SEP408515R0001
XR2/3 Multiplug P12 for AUX	11-22: 0,14 - 1,5mm ²	1SEP619637R0001
XR2/3 Multiplug P20 for CT's - AUX - EFM - MOT (included when ordering EFM or MOT)	1-8: 0,2 - 2,5mm ² 11-22: 0,14 - 1,5mm ²	1SEP408514R0001

Accessories

Cassette and busbar cover kit

4



SlimLine Cassette

The SlimLine cassette is a complete steel framework with busbar supports. It is used as a framework for easy installation of the SlimLine product range into switchgear systems which do not accept the SlimLine directly.

Facts about the SlimLine cassette:

Available in 4 sizes:

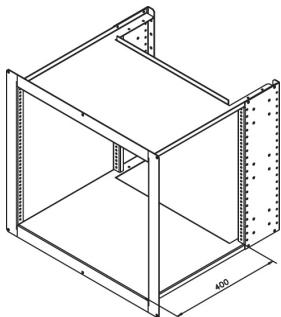
Height = 500 mm, max 10 pcs. 00-devices

Height = 1000 mm, max 20 pcs. 00-devices

Height = 1500 mm, max 30 pcs. 00-devices

Height = 2000 mm, max 40 pcs. 00-devices

- Supplied as a flat package without busbars
- Easy and fast assembly using self tapping screws
- For vertical or horizontal installation
- Aluzink coated profiles
- Front profiles as well as top- and bottom plates are black
- Extendable in the busbar direction
- Type tested busbar system
- 65 kA 10 x 40 -> 100 mm cu-busbars
- 3- and 4-pole solutions
- Available for 185 mm busbar distance



IP 20 busbar cover kit

Kit with busbar covers for IP 20 degree of protection.

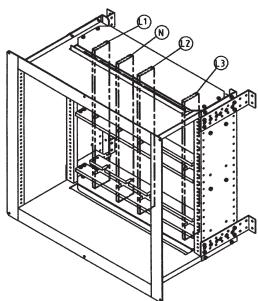
These can be snapped directly into the cassette.

Kit for 400 mm depth

In order to extend the normal depth of 200 mm in a standard cassette to 400 mm, a special 400 mm extra top and bottom unit is available for replacing the standard top and bottom units.

Two (2) units are required as replacements in one cassette.

Order code 1SEP102079P0001 for 1 unit.



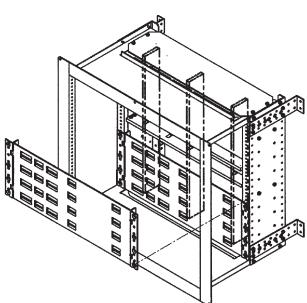
Cassette for 185 mm busbar distance 3- and 4-pole

H = 500 mm

H = 1000 mm

H = 1500 mm

H = 2000 mm



IP20 busbar cover kit Universal 3- and 4-pole, 185 mm

Kit for:

H = 500 mm

H = 1000 mm

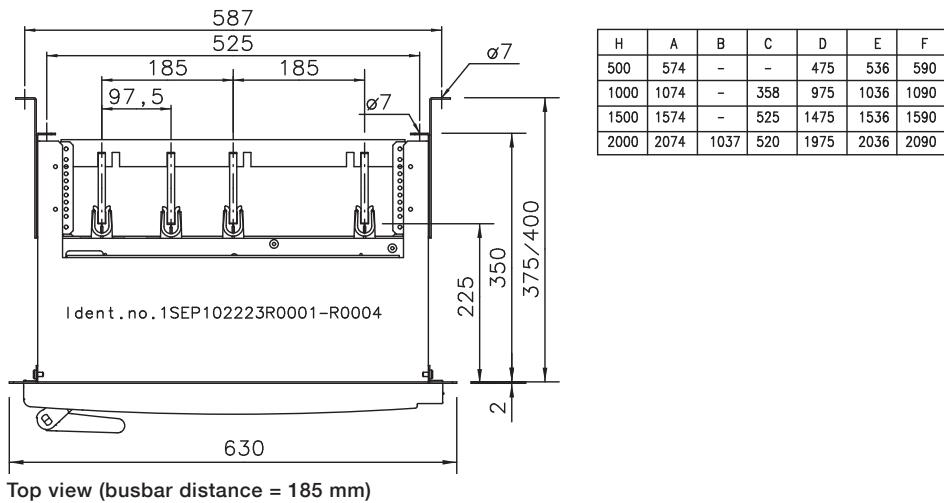
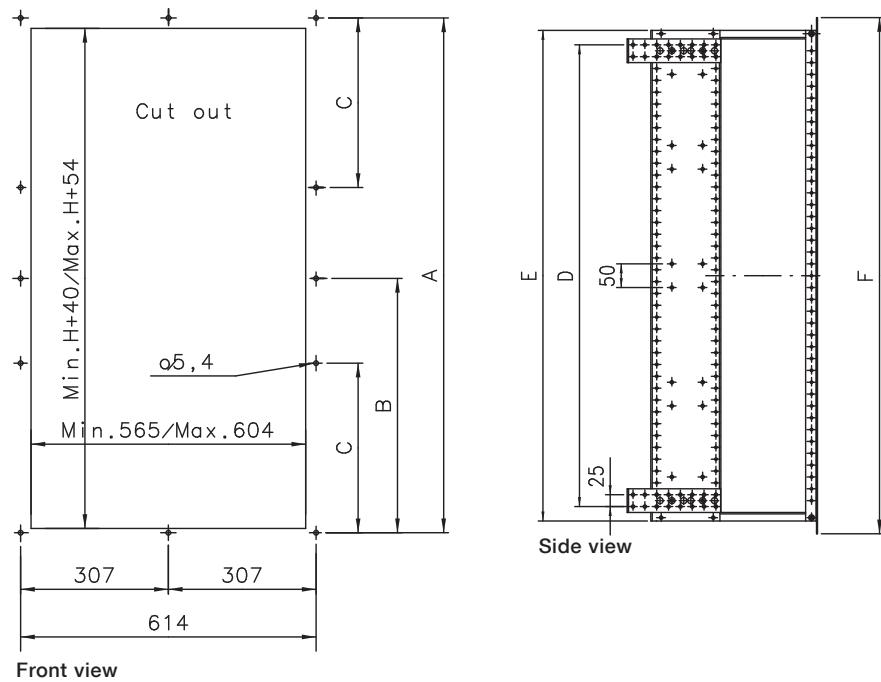
H = 1500 mm

H = 2000 mm

Accessories

Cassette

SlimLine Cassette



Rated current for the busbars

CU-profile (mm)	Max current* (A)	Short circuit current (kA) rms 1 sec.	Rated Voltage (V)
10 x 40	715	65	690
10 x 50	852	65	690
10 x 60	985	65	690
10 x 80	1240	65	690
10 x 100	1490	65	690

* All values at 35°C ambient temperature and busbar temperature of 65°C.

Technical Data

SlimLine XR - Switch Disconnector Fuse

Type	Size	XRE		XRE-4P		XRM		XRM-DC		XRM-BS		XRE-BS-4P		XRM-BS-DC	
Rated operational voltage Ue (V)		500	690	500		500	690	230	500	500	690	500		230	500
	00	160	125	160		160	125	125	160	63,100, 160	125	160		125	160
Rated operational current Ie (A)	1	250	250	250		250	250	250	250	250	250	250		250	250
	2	400	400	400		400	400	400	315	400	400	400		400	315
	3	630	500	630		630	500	630	400	630	500	630		630	400
Rated insulation voltage Ui (V)		1000		1000		1000		1000		1000		1000		1000	
Rated impulse withstand voltage Uimp (v)		8000		8000		8000		8000		8000		8000		8000	
Fuse protected short circuit making (kArms)		55		55		66		66 ¹⁾		66		55		66 ¹⁾	
Fuse protected short circuit making (kArms)		100		100		100		100 ¹⁾		100		100		100 ¹⁾	
Personal safe															
Fuse protected short circuit withstand (kArms)		100		100		100		100 ¹⁾		100		100		100 ¹⁾	
Rated making and breaking capacity		AC22B		AC22B		AC23B		DC23B	DC21B	AC23B		AC22B		DC23B	DC21B
Rated frequency (Hz)		50/60		50/60		50/60		-		50/60		50/60		-	
	00 / 1	1600 / 200		1600 / 200		1600 / 200		1600 / 200		1600 / 200		1600 / 200		1600 / 200	
	2 / 3	1000 / 200		1000 / 200		1000 / 200		1000 / 200		1000 / 200		1000 / 200		1000 / 200	
Durability: Total / With current															
BS63/ BS100															
Degree of protection from the frontacc. to IEC / EN 60529		IP 41		IP 41		IP 41		IP 41		IP 41		IP 41		IP 41	

Type tested according to IEC 60947-3

1) Tests run at AC

Power losses in SlimLine XR

Size	00	1	2	3
Rated current (A)	160	250	400	630
XRE/M (W)	43	78	158	357

The values given include all three phases, but without fuses.

Type of Fuses for XRM BS versions

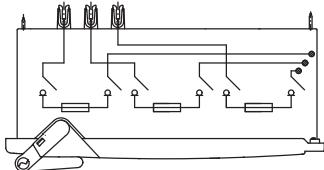
Current	Fuse Type	Current	Fuse Type	Current	Fuse Type
63 A	A3	250 A	B2	400 A	B4
100 A	A3			630 A	3T Lawson
160 A	00T Lawson				



Ordering tables

50mm busbar distance

SlimLine XR Switch Disconnector Fuse - 50 mm busbar distance



3 - pole

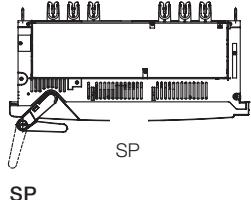
6

Number of poles	Rated operation current (A)	Type Designation	Order code	Weight (Kg)
3	160	XRE00-50-3P	1SEP102240R1100	3,63
3	250	XRE1-50-3P	1SEP102241R1100	6,75
3	400	XRE2-50-3P	1SEP102242R1100	15,00
3	630	XRE3-50-3P	1SEP102243R1100	15,36
3	160	XRM00-50-3P	1SEP102240R1300	3,63
3	250	XRM1-50-3P	1SEP102241R1300	6,75
3	400	XRM2-50-3P	1SEP102242R1300	15,00
3	630	XRM3-50-3P	1SEP102243R1300	15,36
3	160	XRE00-50-3P-EFM	1SEP102240R1101	3,63
3	250	XRE1-50-3P-EFM	1SEP102241R1101	6,75
3	400	XRE2-50-3P-EFM	1SEP102242R1101	15,00
3	630	XRE3-50-3P-EFM	1SEP102243R1101	15,36
3	160	XRM00-50-3P-EFM	1SEP102240R1301	3,63
3	250	XRM1-50-3P-EFM	1SEP102241R1301	6,75
3	400	XRM2-50-3P-EFM	1SEP102242R1301	15,00
3	630	XRM3-50-3P-EFM	1SEP102243R1301	15,36
3	160	XRM00-50-3P-MOT	1SEP102240R1302	3,94
3	250	XRM1-50-3P-MOT	1SEP102241R1302	7,06
3	400	XRM2-50-3P-MOT	1SEP102242R1302	15,31
3	630	XRM3-50-3P-MOT	1SEP102243R1302	15,67
3	160	XRM00-50-3P-MOT-EFM	1SEP102240R1303	4,10
3	250	XRM1-50-3P-MOT-EFM	1SEP102241R1303	7,18
3	400	XRM2-50-3P-MOT-EFM	1SEP102242R1303	15,43
3	630	XRM3-50-3P-MOT-EFM	1SEP102243R1303	45,79
3	160	XRM00-50-3P-ITS2.1	1SEP102240R1316	4,73
3	250	XRM1-50-3P-ITS2.1	1SEP102241R1316	7,90
3	400	XRM2-50-3P-ITS2.1	1SEP102242R1316	16,50
3	630	XRM3-50-3P-ITS2.1	1SEP102243R1316	17,10
3	160	XRM00-50-3P-ITS2.1-MOT	1SEP102240R1317	5,04
3	250	XRM1-50-3P-ITS2.1-MOT	1SEP102241R1317	8,20
3	400	XRM2-50-3P-ITS2.1-MOT	1SEP102242R1317	16,10
3	630	XRM3-50-3P-ITS2.1-MOT	1SEP102243R1317	17,37

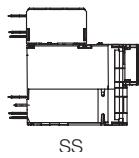
Ordering tables

50mm busbar distance

SlimLine XR Busbar Section Switch - 50 mm busbar distance

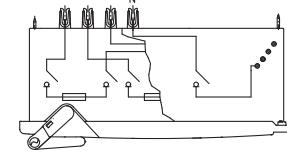


Number of poles	Rated operation current (A)	Type Designation	Order code	Weight (Kg)
3	630	XRM3-50-3P-SP	1SEP102243R1360	16,6
3	630	XRM3-50-3P-SS	1SEP102243R1370	16,6



ss

SlimLine XR Switch Disconnector Fuse - 50 mm busbar distance

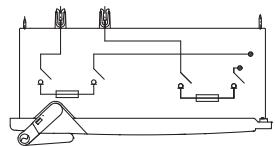


Number of poles	Rated operation current (A)	Type Designation	Order code	Weight (Kg)
4	160	XRE00-50-4P	1SEP102240R1400	4,16
4	250	XRE1-50-4P	1SEP102241R1400	7,15
4	400	XRE2-50-4P	1SEP102242R1400	16,19
4	630	XRE3-50-4P	1SEP102243R1400	16,78
4	160	XRE00-50-4P-EFM	1SEP102240R1401	4,27
4	250	XRE1-50-4P-EFM	1SEP102241R1401	7,27
4	400	XRE2-50-4P-EFM	1SEP102242R1401	16,30
4	630	XRE3-50-4P-EFM	1SEP102243R1401	16,89
4	160	XRE00-50-4P-MOT	1SEP102240R1402	4,47
4	250	XRE1-50-4P-MOT	1SEP102241R1402	7,46
4	400	XRE2-50-4P-MOT	1SEP102242R1402	16,50
4	630	XRE3-50-4P-MOT	1SEP102243R1402	16,50
4	160	XRE00-50-4P-MOT-EFM	1SEP102240R1403	4,60
4	250	XRE1-50-4P-MOT-EFM	1SEP102241R1403	7,58
4	400	XRE2-50-4P-MOT-EFM	1SEP102242R1403	16,61
4	630	XRE3-50-4P-MOT-EFM	1SEP102243R1403	16,62
4	160	XRE00-50-4P-ITS2.1	1SEP102240R1416	5,26
4	250	XRE1-50-4P-ITS2.1	1SEP102241R1416	8,30
4	400	XRE2-50-4P-ITS2.1	1SEP102242R1416	17,69
4	630	XRE3-50-4P-ITS2.1	1SEP102243R1416	18,48
4	160	XRE00-50-4P-ITS2.1-MOT	1SEP102240R1417	5,56
4	250	XRE1-50-4P-ITS2.1-MOT	1SEP102241R1417	8,60
4	400	XRE2-50-4P-ITS2.1-MOT	1SEP102242R1417	18,00
4	630	XRE3-50-4P-ITS2.1-MOT	1SEP102243R1417	18,79

Ordering tables

50mm busbar distance

SlimLine XR DC Switch Disconnector Fuse - 50 mm busbar distance



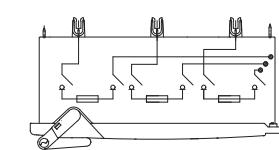
2 - pole DC

Number of poles	Rated operation current (A) DC23B (230V) DC21B (500V)	Type Designation	Order code	Weight (Kg)
2	160	XRM00-50-DC	1SEP102240R1200	3,33
2	250	XRM1-50-DC	1SEP102241R1200	6,25
2	400	XRM2-50-DC	1SEP102242R1200	13,10
2	630	XRM3-50-DC	1SEP102243R1200	13,46

Ordering tables

185mm busbar distance

SlimLine XR Switch Disconnector Fuse - 185 mm busbar distance



3 - pole

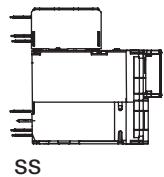
6

Number of poles	Rated operation current (A)	Type Designation	Order code	Weight (Kg)
3	160	XRE00-185-3P	1SEP102240R3100	3,63
3	250	XRE1-185-3P	1SEP102241R3100	6,75
3	400	XRE2-185-3P	1SEP102242R3100	15,00
3	630	XRE3-185-3P	1SEP102243R3100	15,36
3	160	XRM00-185-3P	1SEP102240R3300	3,63
3	250	XRM1-185-3P	1SEP102241R3300	6,75
3	400	XRM2-185-3P	1SEP102242R3300	15,00
3	630	XRM3-185-3P	1SEP102243R3300	15,36
3	160	XRE00-185-3P-EFM	1SEP102240R3101	3,63
3	250	XRE1-185-3P-EFM	1SEP102241R3101	6,75
3	400	XRE2-185-3P-EFM	1SEP102242R3101	15,00
3	630	XRE3-185-3P-EFM	1SEP102243R3101	15,36
3	160	XRM00-185-3P-EFM	1SEP102240R3301	3,63
3	250	XRM1-185-3P-EFM	1SEP102241R3301	6,75
3	400	XRM2-185-3P-EFM	1SEP102242R3301	15,00
3	630	XRM3-185-3P-EFM	1SEP102243R3301	15,36
3	160	XRM00-185-3P-MOT	1SEP102240R3302	3,94
3	250	XRM1-185-3P-MOT	1SEP102241R3302	7,06
3	400	XRM2-185-3P-MOT	1SEP102242R3302	15,31
3	630	XRM3-185-3P-MOT	1SEP102243R3302	15,67
3	160	XRM00-185-3P-MOT-EFM	1SEP102240R3303	4,10
3	250	XRM1-185-3P-MOT-EFM	1SEP102241R3303	7,18
3	400	XRM2-185-3P-MOT-EFM	1SEP102242R3303	15,43
3	630	XRM3-185-3P-MOT-EFM	1SEP102243R3303	45,79
3	160	XRM00-185-3P-ITS2.1	1SEP102240R3316	4,73
3	250	XRM1-185-3P-ITS2.1	1SEP102241R3316	7,90
3	400	XRM2-185-3P-ITS2.1	1SEP102242R3316	16,50
3	630	XRM3-185-3P-ITS2.1	1SEP102243R3316	17,10
3	160	XRM00-185-3P-ITS2.1-MOT	1SEP102240R3317	5,04
3	250	XRM1-185-3P-ITS2.1-MOT	1SEP102241R3317	8,20
3	400	XRM2-185-3P-ITS2.1-MOT	1SEP102242R3317	16,10
3	630	XRM3-185-3P-ITS2.1-MOT	1SEP102243R3317	17,37
3	160	XRM00-185-3P-ITS2.D	1SEP102240R3318	4,83
3	250	XRM1-185-3P-ITS2.D	1SEP102241R3318	8,00
3	400	XRM2-185-3P-ITS2.D	1SEP102242R3318	16,60
3	630	XRM3-185-3P-ITS2.D	1SEP102243R3318	17,20
3	160	XRM00-185-3P-ITS2.D-MOT	1SEP102240R3319	5,14
3	250	XRM1-185-3P-ITS2.D-MOT	1SEP102241R3319	8,30
3	400	XRM2-185-3P-ITS2.D-MOT	1SEP102242R3319	16,20
3	630	XRM3-185-3P-ITS2.D-MOT	1SEP102243R3319	17,47

Ordering tables

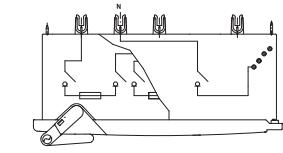
185mm busbar distance

SlimLine XR Busbar Section Switch - 185 mm busbar distance



Number of poles	Rated operation current (A)	Type Designation	Order code	Weight (Kg)
3	630	XRM3-185-3P-SS	1SEP102243R3370	16,6

SlimLine XR Switch Disconnector Fuse - 185 mm busbar distance



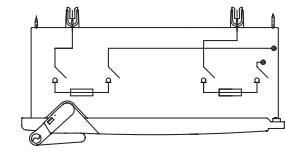
4 - pole

Number of poles	Rated operation current (A)	Type Designation	Order code	Weight (Kg)
4	160	XRE00-185-4P	1SEP102240R3400	4,10
4	250	XRE1-185-4P	1SEP102241R3400	7,15
4	400	XRE2-185-4P	1SEP102242R3400	16,19
4	630	XRE3-185-4P	1SEP102243R3400	16,78
4	160	XRE00-185-4P-EFM	1SEP102240R3401	4,27
4	250	XRE1-185-4P-EFM	1SEP102241R3401	7,27
4	400	XRE2-185-4P-EFM	1SEP102242R3401	16,30
4	630	XRE3-185-4P-EFM	1SEP102243R3401	16,89
4	160	XRE00-185-4P-MOT	1SEP102240R3402	4,47
4	250	XRE1-185-4P-MOT	1SEP102241R3402	7,46
4	400	XRE2-185-4P-MOT	1SEP102242R3402	16,50
4	630	XRE3-185-4P-MOT	1SEP102243R3402	16,50
4	160	XRE00-185-4P-MOT-EFM	1SEP102240R3403	4,60
4	250	XRE1-185-4P-MOT-EFM	1SEP102241R3403	7,58
4	400	XRE2-185-4P-MOT-EFM	1SEP102242R3403	16,61
4	630	XRE3-185-4P-MOT-EFM	1SEP102243R3403	16,62

Ordering tables

185mm busbar distance

SlimLine XR DC Switch Disconnector Fuse - 185 mm busbar distance



2 - pole DC

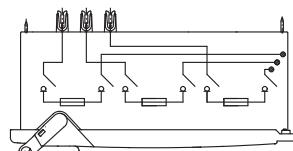
Number of poles	Rated operation current (A) DC23B (230V) DC21B (500V)	Type Designation	Order code	Weight (Kg)
2	160	XRM00-185-DC	1SEP102240R3200	3,33
2	250	XRM1-185-DC	1SEP102241R3200	6,25
2	400	XRM2-185-DC	1SEP102242R3200	13,10
2	630	XRM3-185-DC	1SEP102243R3200	13,46
2	160	XRM00-185-DC-EFM-110	1SEP102240R3206	3,64
2	250	XRM1-185-DC-EFM-110	1SEP102241R3206	6,56
2	400	XRM2-185-DC-EFM-110	1SEP102242R3206	13,41
2	630	XRM3-185-DC-EFM-110	1SEP102243R3206	13,77
2	160	XRM00-185-DC-EFM-500	1SEP102240R3208	3,64
2	250	XRM1-185-DC-EFM-500	1SEP102241R3208	6,56
2	400	XRM2-185-DC-EFM-500	1SEP102242R3208	13,41
2	630	XRM3-185-DC-EFM-500	1SEP102243R3208	13,77

6

Ordering tables

50mm busbar distance (BS)

SlimLine XR Switch Disconnector Fuse - 50 mm busbar distance, British standard version (BS)



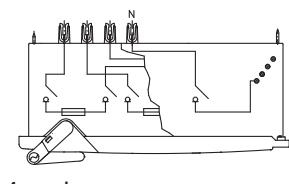
3 - pole

Number of poles	Rated operation current (A)	Type Designation	Order code	Weight (Kg)
3	63	XRM63BS-50-3P	1SEP102244R1300	3,60
3	100	XRM100BS-50-3P	1SEP102245R1300	3,60
3	160	XRM160BS-50-3P	1SEP102246R1300	3,60
3	250	XRM250BS-50-3P	1SEP102247R1300	6,80
3	400	XRM400BS-50-3P	1SEP102248R1300	14,80
3	630	XRM630BS-50-3P	1SEP102249R1300	15,00
3	160	XRM160BS-50-3P-EFM	1SEP102246R1301	3,60
3	250	XRM250BS-50-3P-EFM	1SEP102247R1301	6,80
3	400	XRM400BS-50-3P-EFM	1SEP102248R1301	14,80
3	630	XRM630BS-50-3P-EFM	1SEP102249R1301	15,00
3	160	XRM160BS-50-3P-MOT	1SEP102246R1302	3,60
3	250	XRM250BS-50-3P-MOT	1SEP102247R1302	7,10
3	400	XRM400BS-50-3P-MOT	1SEP102248R1302	15,40
3	630	XRM630BS-50-3P-MOT	1SEP102249R1302	15,70

Ordering tables

50mm busbar distance (BS)

SlimLine XR Switch Disconnector Fuse - 50 mm busbar distance, British standard version (BS)



4 - pole

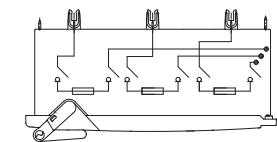
Number of poles	Rated operation current (A)	Type Designation	Order code	Weight (Kg)
4	160	XRE160BS-50-4P	1SEP102246R1400	4,15
4	250	XRE250BS-50-4P	1SEP102247R1400	7,15
4	400	XRE400BS-50-4P	1SEP102248R1400	16,30
4	630	XRE630BS-50-4P	1SEP102249R1400	16,80
4	160	XRE160BS-50-4P-EFM	1SEP102246R1401	4,15
4	250	XRE250BS-50-4P-EFM	1SEP102247R1401	7,15
4	400	XRE400BS-50-4P-EFM	1SEP102248R1401	16,30
4	630	XRE630BS-50-4P-EFM	1SEP102249R1401	16,80
4	160	XRE160BS-50-4P-MOT	1SEP102246R1402	4,50
4	250	XRE250BS-50-4P-MOT	1SEP102247R1402	7,50
4	400	XRE400BS-50-4P-MOT	1SEP102248R1402	16,50
4	630	XRE630BS-50-4P-MOT	1SEP102249R1402	17,10

6

Ordering tables

185mm busbar distance (BS)

SlimLine XR Switch Disconnector Fuse - 185 mm busbar distance, British standard version (BS)



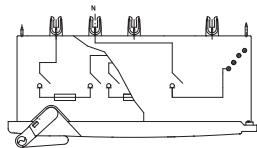
3 - pole

Number of poles	Rated operation current (A)	Type Designation	Order code	Weight (Kg)
3	63	XRM63BS-185-3P	1SEP102244R3300	3,60
3	100	XRM100BS-185-3P	1SEP102245R3300	3,60
3	160	XRM160BS-185-3P	1SEP102246R3300	3,60
3	250	XRM250BS-185-3P	1SEP102247R3300	6,80
3	400	XRM400BS-185-3P	1SEP102248R3300	14,80
3	630	XRM630BS-185-3P	1SEP102249R3300	15,00
3	160	XRM160BS-185-3P-EFM	1SEP102246R3301	3,60
3	250	XRM250BS-185-3P-EFM	1SEP102247R3301	6,80
3	400	XRM400BS-185-3P-EFM	1SEP102248R3301	14,80
3	630	XRM630BS-185-3P-EFM	1SEP102249R3301	15,00
3	160	XRM160BS-185-3P-MOT	1SEP102246R3302	3,60
3	250	XRM250BS-185-3P-MOT	1SEP102247R3302	7,10
3	400	XRM400BS-185-3P-MOT	1SEP102248R3302	15,40
3	630	XRM630BS-185-3P-MOT	1SEP102249R3302	15,70
3	160	XRM160BS-185-3P-ITS2.1	1SEP102246R3316	4,40
3	250	XRM250BS-185-3P-ITS2.1	1SEP102247R3316	7,90
3	400	XRM400BS-185-3P-ITS2.1	1SEP102248R3316	16,50
3	630	XRM630BS-185-3P-ITS2.1	1SEP102249R3316	17,60

Ordering tables

185mm busbar distance (BS)

SlimLine XR Switch Disconnector Fuse - 185 mm busbar distance, British standard version (BS)

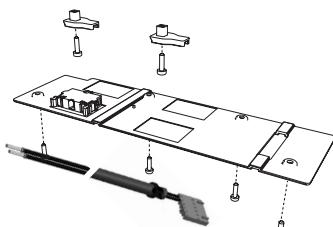


4 - pole

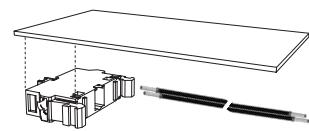
Number of poles	Rated operation current (A)	Type Designation	Order code	Weight (Kg)
4	160	XRE160BS-185-4P	1SEP102246R3400	4,15
4	250	XRE250BS-185-4P	1SEP102247R3400	7,15
4	400	XRE400BS-185-4P	1SEP102248R3400	16,30
4	630	XRE630BS-185-4P	1SEP102249R3400	16,80
4	160	XRE160BS-185-4P-EFM	1SEP102246R3401	4,15
4	250	XRE250BS-185-4P-EFM	1SEP102247R3401	7,15
4	400	XRE400BS-185-4P-EFM	1SEP102248R3401	16,30
4	630	XRE630BS-185-4P-EFM	1SEP102249R3401	16,80
4	160	XRE160BS-185-4P-MOT	1SEP102246R3402	4,50
4	250	XRE250BS-185-4P-MOT	1SEP102247R3402	7,50
4	400	XRE400BS-185-4P-MOT	1SEP102248R3402	16,50
4	630	XRE630BS-185-4P-MOT	1SEP102249R3402	17,10

Ordering tables

Auxiliary switches, Multiplug P, Ammeter and EFM bracket



XR00 Aux. switch 1NO/NC kit,
with wires and connector



XR2/3 Aux. switch 1NO/NC kit,
with wires



Auxiliary switch with wires



Multiplug P



Ammeter and EFM bracket

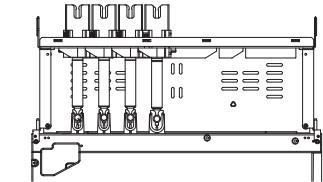
Type designation	Order code
Auxiliary switches	
XR00 Auxiliary switch P 1NO kit with 2 wires, connector, protection cover and screws	1SEP619081R0001
XR00 Auxiliary switch P 1NC kit with 2 wires, connector, protection cover and screws	1SEP619083R0001
XR1 Auxiliary switch P 1NO kit with 2 wires, connector, protection cover and screws	1SEP619084R0001
XR1 Auxiliary switch P 1NC kit with 2 wires, connector, protection cover and screws	1SEP619089R0001
XR2/3 Auxiliary switch P 1NO kit with 2 wires	1SEP619097R0001
XR2/3 Auxiliary switch P 1NC kit with 2 wires	1SEP619096R0001
XR00/1 Additional auxiliary switch P 1NO kit with 2 wires	1SEP619094R0001
XR00/1 Additional auxiliary switch P 1NC kit with 2 wires	1SEP619095R0001
XR2/3 Additional auxiliary switch P 1NO kit with 2 wires	1SEP619092R0001
XR2/3 Additional auxiliary switch P 1NC kit with 2 wires	1SEP619093R0001

Type designation	Order code
Multiplug P	
XR00/1 Multiplug P6 for CT's	1SEP619532R0506
XR00/1 Multiplug P10 for AUX - EFM - MOT	1SEP619532R0510
XR00/1 Multiplug P16 for CT's - AUX - EFM - MOT	1SEP619532R0516
XR2/3 Multiplug P8 for CT's	1SEP408513R0001
XR2/3 Multiplug P8 with screws for CT's	1SEP408515R0001
XR2/3 Multiplug P12 for AUX - EFM - MOT	1SEP619637R0001
XR2/3 Multiplug P20 for CT's - AUX - EFM - MOT	1SEP408514R0001

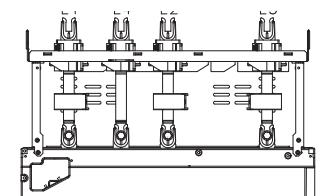
Type designation	Order code
Ammeter	
XR Ammeter 0-150-180/1A	NHSN714003P0150
XR Ammeter 0-150-180/5A	NHSN714003P1150
XR Ammeter 0-250-300/1A	NHSN714003P0250
XR Ammeter 0-250-300/5A	NHSN714003P1250
XR Ammeter 0-400-480/1A	NHSN714003P0400
XR Ammeter 0-400-480/5A	NHSN714003P1400
XR Ammeter 0-600-720/1A	NHSN714003P0600
XR Ammeter 0-600-720/5A	NHSN714003P1600
Ammeter and EFM Bracket	
XR Ammeter and EFM bracket	1SEP408519R0001

Ordering tables

Contact extension and front covers



50 mm

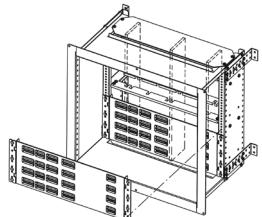


185 mm

Type designation	Order code
Contact extensions for 50 mm 2 pole	
XR00 Contact ext. 50 mm 2 pole	1SEP102127R0002
XR1 Contact ext. 50 mm 2 pole	1SEP102128R0002
XR2/3 Contact ext. 50 mm 2 pole	NHP 100495R0003
Contact extensions for 50 mm 3 pole	
XR00 Contact ext. for 50 mm	1SEP102127R0001
XR1 Contact ext. for 50 mm	1SEP102128R0001
XR/SR-2/3 Contact ext. for 50 mm	NHP 100495R0001
XRM3-50-3P-SP Contact extension	NHP 100495R0006
Contact extensions for 50 mm 4 pole	
XR00 Contact ext. for 50 mm 4 pole	1SEP102137R0001
XR1 Contact ext. for 50 mm 4 pole	1SEP102138R0001
XR/SR-2/3 Contact ext. for 50 mm 4 pole	1SEP101861R0001
Contact extensions for 185 mm 2 pole	
XR00 Contact ext. 185 mm 2 pole	1SEP408541R0001
XR1 Contact ext. 185 mm 2 pole	1SEP408542R0001
XR2/3 Contact ext. for 185 mm 2 pole	1SEP408543R0001
Contact extensions for 185 mm 3 pole	
XR00 Contact ext. for 185 mm	1SEP102135R0001
XR1 Contact ext. for 185 mm	1SEP102136R0001
XR/SR2/3 Contact ext. for 185 mm	NHP 100886R0001
Contact extensions for 185 mm 4 pole	
XR00 Contact ext. for 185 mm 4 pole	1SEP102208R0001
XR1 Contact ext. for 185 mm 4 pole	1SEP102209R0001
XR/SR-2/3 Contact ext. for 185 mm 4 pole	1SEP102198R0001
Front covers with operating handle for NH (spare parts)	
XR00 Front cover w/operating handle for NH Incl. "E" and "M"	1SEP102219R0002
XR00 Red Front cover w/operating handle for NH Incl. "E" and "M"	1SEP102219R0005
XR1 Front cover w/operating handle for NH Incl. "E" and "M"	1SEP102222R0002
XR2 Front cover w/operating handle for NH Incl. "E" and "M"	1SEP408521R0001
XR3 Front cover w/operating handle for NH Incl. "E" and "M"	1SEP408521R0003
Front covers with operating handle for BS (spare parts)	
XR00 Front cover w/operating handle for BS Incl. "E" and "M" (M for 63, 100, 160A)	1SEP102219R0012
XR1 Front cover w/operating handle for BS Incl. "E" and "M"	1SEP102222R0012
XR2 Front cover w/operating handle for BS Incl. "E" and "M"	1SEP408521R0011
XR3 Front cover w/operating handle for BS Incl. "E" and "M"	1SEP408521R0013

Ordering tables

Cassettes, service modules and common accessories



SlimLine cassettes



XR2/3 Double handle kit



Replacement tool



Cable terminal key



Front cover key



Padlock extension

Type designation	Order code	Gross Weight, [kg]
SlimLine cassettes		
XR/SR - SlimLine cassette 185 mm/500 mm	1SEP102223R0001	12,7
XR/SR - SlimLine cassette 185 mm/1000 mm	1SEP102223R0002	21,2
XR/SR - SlimLine cassette 185 mm/1500 mm	1SEP102223R0003	30,0
XR/SR - SlimLine cassette 185 mm/2000 mm	1SEP102223R0004	38,0
XR/SR - IP20 busbar cover 500 mm	NHP 407062R0001	1,5
XR/SR - IP20 busbar cover 1000 mm	NHP 407062R0002	2,8
XR/SR - IP20 busbar cover 1500 mm	NHP 407062R0003	4,1
XR/SR - IP20 busbar cover 2000 mm	NHP 407062R0004	5,4
XR/SR - Single IP20 busbar cover 200 mm	NHP 101474P0001	0,5
Common accessories		
XR Ventilated blind cover 50 mm IP41	1SEP408528R0001	0,8
XR/SR Module guide rails 200 mm	NHP 200947R0002	1,3
XR/SR Module guide rails 400 mm	NHP 200947R0003	1,8
XR2/3 Double handle kit	1SEP601098R0001	0,6
XR Replacement tool	1SEP601118R0001	0,95
Cable terminal key (tool)	NHSN950001P0006	0,6
Front cover key	GMN 436770P0022	0,1
XR Padlock Extension up to 3 padlocks	1SEP408753R0001	0,1
XR ITS2.1 Control unit for XR 00, 1, 2, 3	1SEP621859R0001	
XR ITS2.D Control unit with Display for XR	1SEP621860R0001	
Ekip Display to add at the ITS2.1 incl. window	1SEP621862R0001	
ITS2 / ITS2.1 / ITS2.D Multiplug (spare part)	1SEP619403P0001	

Ordering tables

Cable termination and Cable shrouds

The XR is delivered with bolts as standard for connection of cables with lugs.

Cable clamps for Al/Cu-cables are available as accessories.

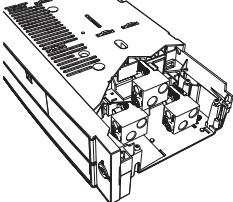
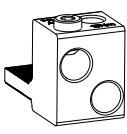
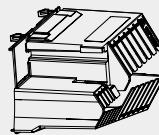
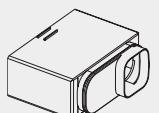
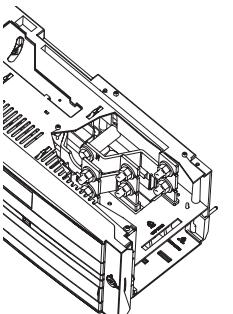
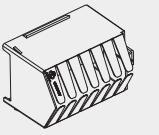
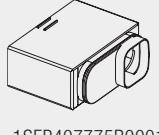
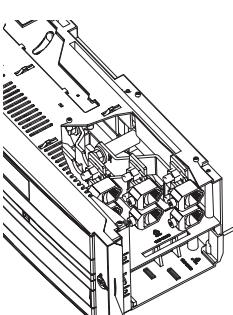
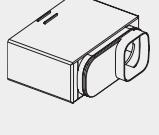
Size	Type of clamp/bolt w/order code	Cable (Al/Cu) size (mm ²)	Torque (Nm)	Number of poles	Cable shroud w/order code
XR00 160 A					
	M8 (Standard)	- 95 - 120 ¹⁾	15 Nm	2 / 3 N / 4th	 1SEP408496R0001 1SEP407775R0001
	Single clamp 3 pole: 1SEP408499R0001	 Re: 10 - 50 Rm: 10 - 50	 15 Nm	2 / 3	 1SEP408496R0001
	4 pole: 1SEP408501R0001	Se: 50 - 70 95 Sm: 35 - 50 70 - 95	 18 Nm	N / 4th	 1SEP407775R0001
XR1 250A					
	M12 (Standard)	- 240	30 Nm	2 / 3 N / 4th	 1SEP618211R0001 1SEP407775R0001
	Single clamp 3 pole: 1SEP408500R0001	 Re: 16 - 70 70 - 150 Rm: 16 - 35 50 - 185	 20 Nm	2 / 3	 1SEP618211R0001
	4 pole: 1SEP408502R0001	Se: 35 - 70 95 - 300 Sm: 35 - 50 70 - 240	 23 Nm	N / 4th	 1SEP407775R0001

Ordering tables

Cable termination and Cable shrouds

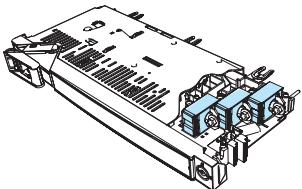
The XR is delivered with bolts as standard for connection of cables with lugs.

Cable clamps for Al/Cu-cables are available as accessories.

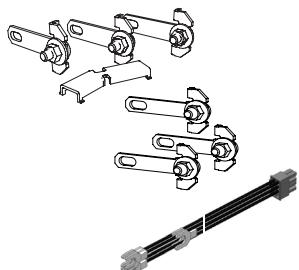
Size	Type of clamp/bolt w/order code	Cable (Al/Cu) size (mm ²)	Torque (Nm)	Number of poles	Cable shroud w/order code
XR1 250 A					
	Double clamp				 1SEP618211R0001
	3 pole: 1SEP408205R00031		15 Nm	2 / 3	
	4 pole: 1SEP408205R0004	Re: 10 - 150 Rm: 10 - 95 Se: 10 - 120 Sm: 10 - 95		N / 4th	 1SEP407775R0001
XR2/3 400/630 A					
	M12 (Standard)	2 x 240	30 Nm	2 / 3	 1SEP408498R0001
				N / 4th	 1SEP407775R0001
	Double clamp			2 / 3	 1SEP408498R0001
	3 pole: 1SEP304446R0002	Re: 16 - 70 70 - 150	20 Nm		
	4 pole: 1SEP408503R0001	Rm: 16 - 35 50 - 185 Se: 35 - 70 95 - 300 Sm: 35 - 50 70 - 240		N / 4th	 1SEP407775R0001

Ordering tables

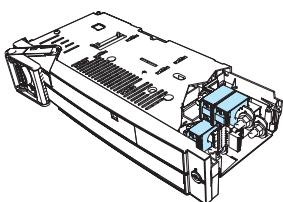
Current metering in XR Standard apparatus 1 and 3 phase



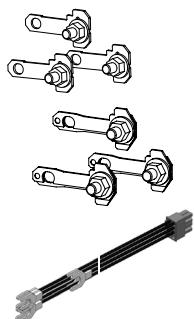
XR00 Apparatus



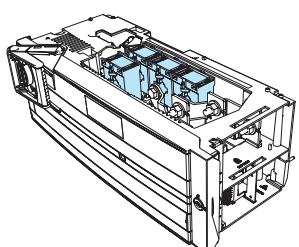
XR00 Cu Terminal extension/
wires P



XR1 Apparatus



XR1 Cu Terminal extension/
wires P



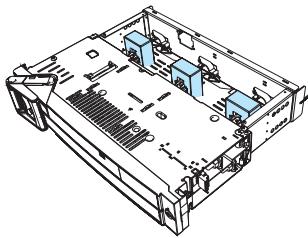
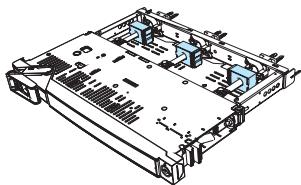
XR2/3 Apparatus

Type	No of CT's pr XR	MBS-type	Ratio	Power	Class	Order code
XR00/1 Apparatus	1,2,3,4	ASR 20.3	150/1	3,75	1	NHSN718054P1015
XR00/1 Apparatus	1,2,3,4	ASR 20.3	150/5	3,75	1	NHSN718054P5015
XR00/1 Apparatus	1,2,3,4	ASR 20,3	150/1	2,5	0,5	NHSN718055P1015
XR00/1 Apparatus	1,2,3,4	ASR 20,3	150/5	2,5	0,5	NHSN718055P5015
XR00 Cu Terminal extension for 1 CT or 4th CT Ø21mm						1SEP621867R0001
XR00 Cu Terminal extension/wires P for 3 CT's Ø21mm						1SEP619446R0001
XR00 Terminal extension for 1 CT or 4th CT Ø14mm						1SEP408630R0001
XR00 Terminal extension/wires P for 3 CT's Ø14mm						1SEP619447R0001
XR1 Apparatus	1,2,3,4	ASR 20.3	250/1	5	1	NHSN718054P1025
XR1 Apparatus	1,2,3,4	ASR 20.3	250/5	5	1	NHSN718054P5025
XR1 Apparatus	1,2,3,4	ASR 20.3	250/1	5	0,5	NHSN718055P1025
XR1 Cu Terminal extension for 1 CT Ø21mm						1SEP621868R0001
XR1 Cu Terminal extension/wires P for 3 CT's Ø21mm						1SEP619448R0001
XR1 Cu Terminal extension kit for 4 CT's Ø21mm						1SEP408526R0001
XR1 Cu Terminal extension/wires P for 3 CT Ø17mm						1SEP619449R0001
XR2/3 Apparatus	1,2,3,4	ASK 41.4	250/1	10	1	NHSN718047P1025
XR2/3 Apparatus	1,2,3,4	ASK 41.4	250/5	10	1	NHSN718047P5025
XR2/3 Apparatus	1,2,3,4	ASK 41.4	300/1	10	1	NHSN718047P1030
XR2/3 Apparatus	1,2,3,4	ASK 41.4	300/5	10	1	NHSN718047P5030
XR2/3 Apparatus	1,2,3,4	ASK 41.4	400/1	10	1	NHSN718047P1040
XR2/3 Apparatus	1,2,3,4	ASK 41.4	400/5	10	1	NHSN718047P5040
XR2/3 Apparatus	1,2,3,4	ASK 41.4	500/1	10	1	NHSN718047P1050
XR2/3 Apparatus	1,2,3,4	ASK 41.4	500/5	10	1	NHSN718047P5050
XR2/3 Apparatus	1,2,3,4	ASK 41.4	600/1	10	1	NHSN718047P1060
XR2/3 Apparatus	1,2,3,4	ASK 41.4	600/5	10	1	NHSN718047P5060
XR2/3 Apparatus	1,2,3,4	ASK 41.4	300/1	10	0,5	NHSN718056P1030
XR2/3 Apparatus	1,2,3,4	ASK 41.4	300/5	10	0,5	NHSN718056P5030
XR2/3 Apparatus	1,2,3,4	ASK 41.4	400/1	10	0,5	NHSN718056P1040
XR2/3 Apparatus	1,2,3,4	ASK 41.4	400/5	10	0,5	NHSN718056P5040
XR2/3 Apparatus	1,2,3,4	ASK 41.4	500/1	10	0,5	NHSN718056P1050
XR2/3 Apparatus	1,2,3,4	ASK 41.4	500/5	10	0,5	NHSN718056P5050
XR2/3 Apparatus	1,2,3,4	ASK 41.4	600/1	10	0,5	NHSN718056P1060
XR2/3 Apparatus	1,2,3,4	ASK 41.4	600/5	10	0,5	NHSN718056P5060
XR2/3 Apparatus	1,2,3,4	ASK 41.4	250/5	5	0,2 s	NHSN718053P5025
XR2/3 Apparatus	1,2,3,4	ASK 41.4	300/5	5	0,2 s	NHSN718053P5030
XR2/3 Apparatus	1,2,3,4	ASK 41.4	400/5	5	0,2 s	NHSN718053P5040
XR2/3 Apparatus	1,2,3,4	ASK 41.4	500/5	5	0,2 s	NHSN718053P5050
XR2/3 Apparatus	1,2,3,4	ASK 41.4	600/5	5	0,2 s	NHSN718053P5060

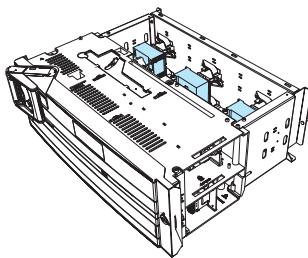
NOTE! All CTs are delivered as a single unit. For 3 phase measuring 3 units have to be ordered.
The CT's can also be ordered directly from MBS or local MBS agent or equivalent CT's can be used.

Ordering tables

Current metering in XR with contact extension 1 and 3 phase



6



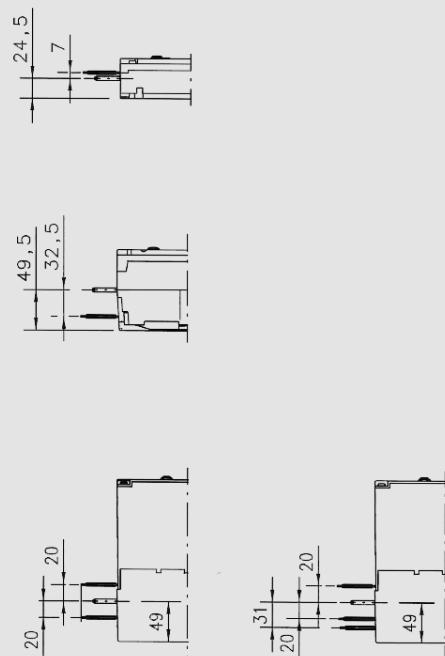
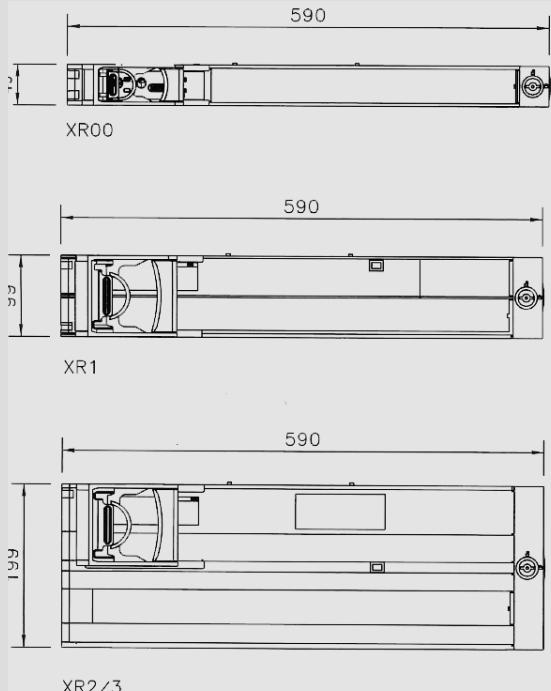
Type	No of CT's pr XR	MBS-type	Ratio	Power	Class	Order code
XR00 Cont. ext.	1,2,3	ASR 20.3	150/1	3,75	1	NHSN718054P1015
XR00 Cont. ext.	1,2,3	ASR 20.3	150/5	3,75	1	NHSN718054P5015
XR00 Cont. ext.	1,2,3,	ASR 20.3	150/1	2,5	0,5	NHSN718055P1015
XR00 Cont. ext.	1,2,3,	ASR 20.3	150/5	2,5	0,5	NHSN718055P5015
XR1 Cont. ext.	1,2,3	ASK 31.3	250/1	5	1	NHSN718045P1025
XR1 Cont. ext.	1,2,3	ASK 31.3	250/5	5	1	NHSN718045P5025
XR1 Cont. ext.	1,2,3	ASK 41.4	250/1	10	1	NHSN718047P1025
XR1 Cont. ext.	1,2,3	ASK 41.4	250/5	10	1	NHSN718047P5025
XR1 Cont. ext.	1,2,3	ASK 31.3	250/1	5	0,5	NHSN718046P1025
XR1 Cont. ext.	1,2,3	ASK 31.3	250/5	5	0,5	NHSN718046P5025
XR1 Cont. ext.	1,2,3	ASK 41.4	250/1	5	0,5	NHSN718056P1025
XR1 Cont. ext.	1,2,3	ASK 41.4	250/5	5	0,5	NHSN718056P5025
XR1 Cont. ext.	1,2,3	ASK 41.4	250/5	5	0,2 s	NHSN718053P5025
XR2/3 Cont. ext.	1,2,3	ASK 41.4	250/1	10	1	NHSN718047P1025
XR2/3 Cont. ext.	1,2,3	ASK 41.4	250/5	10	1	NHSN718047P5025
XR2/3 Cont. ext.	1,2,3	ASK 41.4	300/1	10	1	NHSN718047P1030
XR2/3 Cont. ext.	1,2,3	ASK 41.4	300/5	10	1	NHSN718047P5030
XR2/3 Cont. ext.	1,2,3	ASK 41.4	400/1	10	1	NHSN718047P1040
XR2/3 Cont. ext.	1,2,3	ASK 41.4	400/5	10	1	NHSN718047P5040
XR2/3 Cont. ext.	1,2,3	ASK 41.4	500/1	10	1	NHSN718047P1050
XR2/3 Cont. ext.	1,2,3	ASK 41.4	500/5	10	1	NHSN718047P5050
XR2/3 Cont. ext.	1,2,3	ASK 41.4	600/1	10	1	NHSN718047P1060
XR2/3 Cont. ext.	1,2,3	ASK 41.4	600/5	10	1	NHSN718047P5060
XR2/3 Cont. ext.	1,2,3	ASK 41.4	300/1	10	0,5	NHSN718056P1030
XR2/3 Cont. ext.	1,2,3	ASK 41.4	300/5	10	0,5	NHSN718056P5030
XR2/3 Cont. ext.	1,2,3	ASK 41.4	400/1	10	0,5	NHSN718056P1040
XR2/3 Cont. ext.	1,2,3	ASK 41.4	400/5	10	0,5	NHSN718056P5040
XR2/3 Cont. ext.	1,2,3	ASK 41.4	500/1	10	0,5	NHSN718056P1050
XR2/3 Cont. ext.	1,2,3	ASK 41.4	500/5	10	0,5	NHSN718056P5050
XR2/3 Cont. ext.	1,2,3	ASK 41.4	600/1	10	0,5	NHSN718056P1060
XR2/3 Cont. ext.	1,2,3	ASK 41.4	600/5	10	0,5	NHSN718056P5060
XR2/3 Cont. ext.	1,2,3	ASK 41.4	250/5	5	0,2 s	NHSN718053P5025
XR2/3 Cont. ext.	1,2,3	ASK 41.4	300/5	5	0,2 s	NHSN718053P5030
XR2/3 Cont. ext.	1,2,3	ASK 41.4	400/5	5	0,2 s	NHSN718053P5040
XR2/3 Cont. ext.	1,2,3	ASK 41.4	500/5	5	0,2 s	NHSN718053P5050
XR2/3 Cont. ext.	1,2,3	ASK 41.4	600/5	5	0,2 s	NHSN718053P5060

NOTE! All CTs are delivered as a single unit. For 3 phase measuring 3 units have to be ordered.
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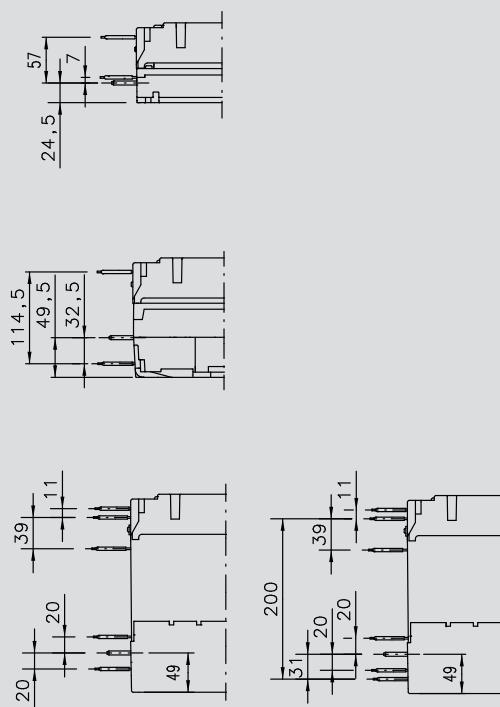
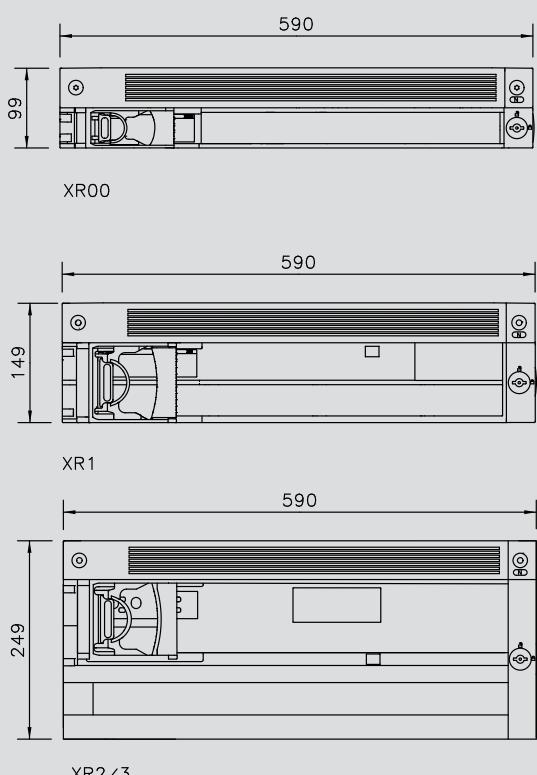
Dimensional drawings

Front and side view

2 pole / 3 pole



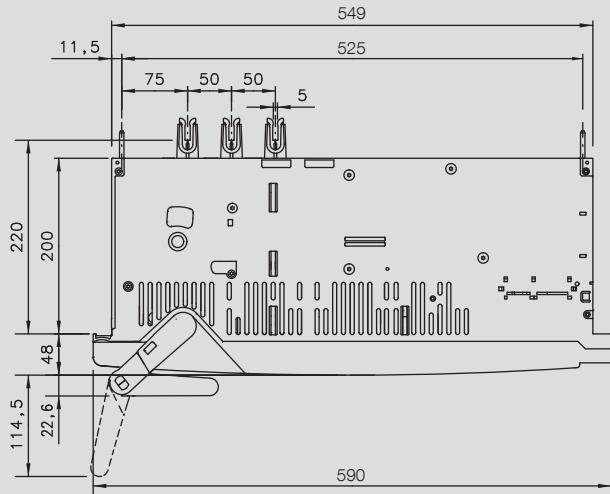
4 pole



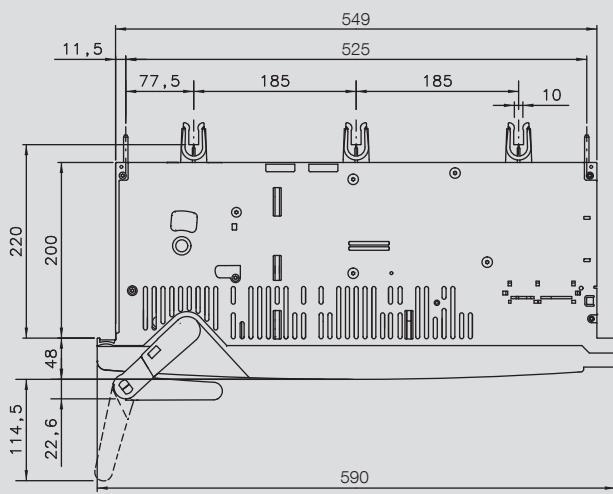
Dimensional drawings

Distance between busbars (top view)

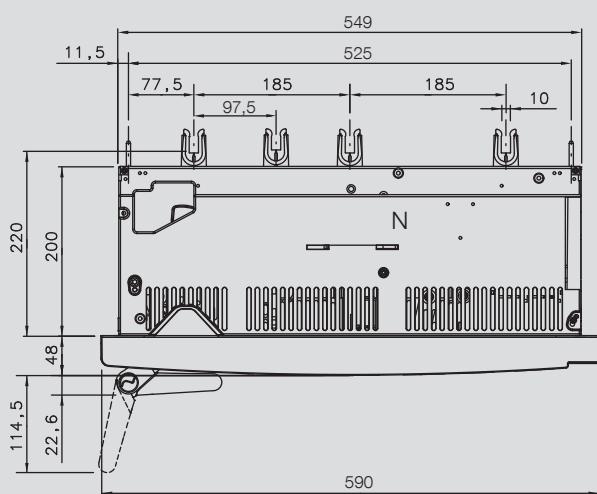
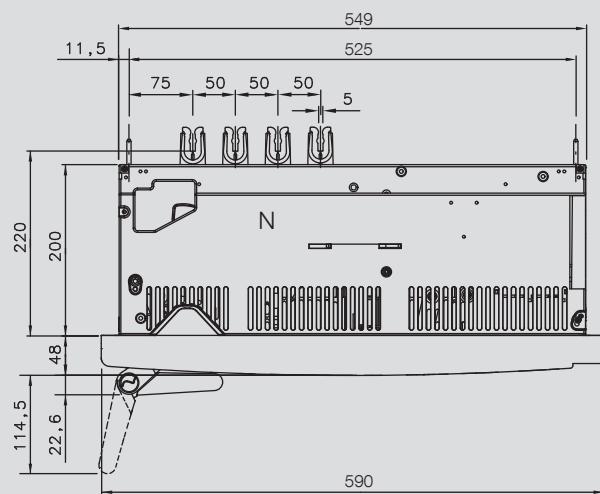
50 mm distance between phases



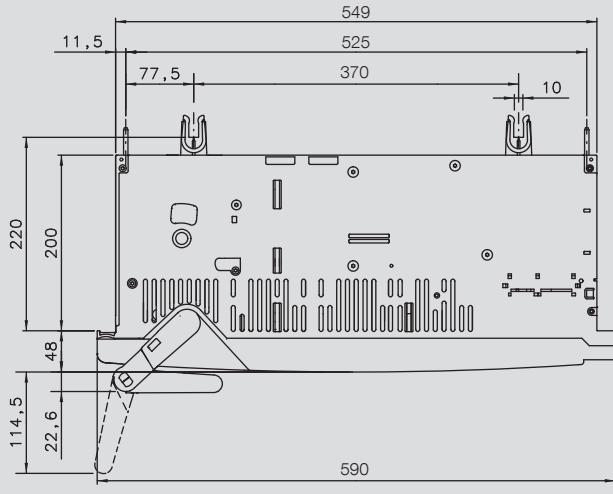
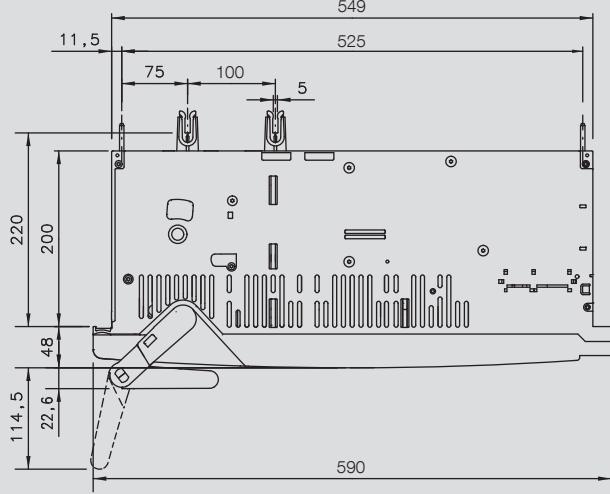
185 mm distance between phases



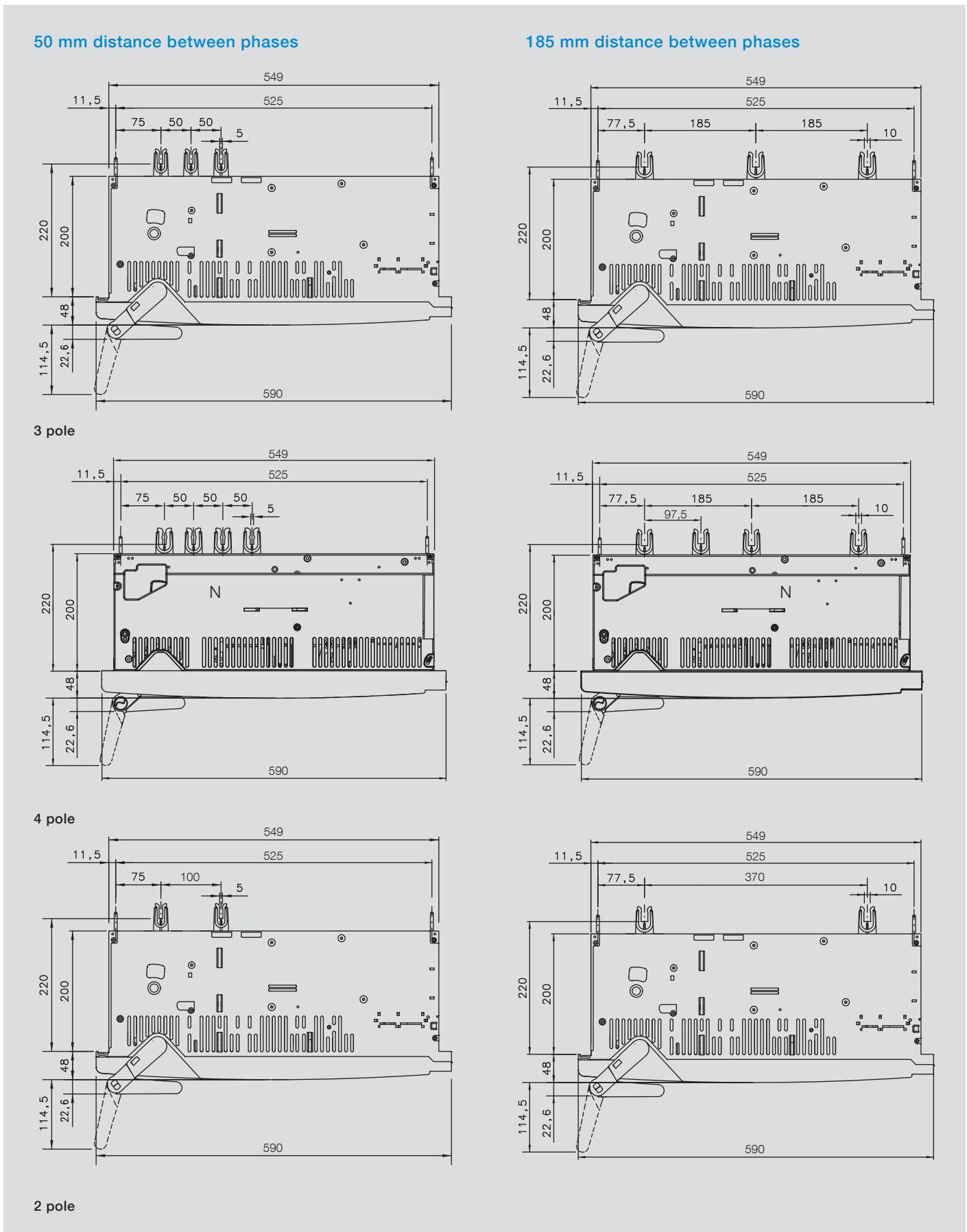
3 pole



4 pole



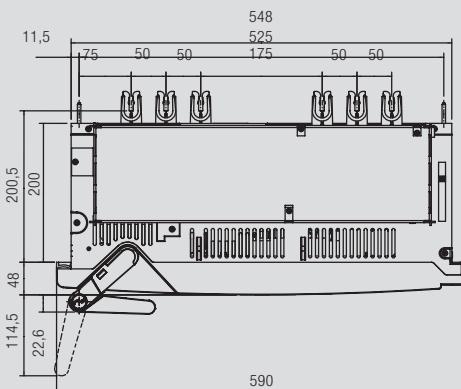
2 pole



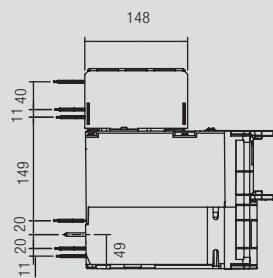
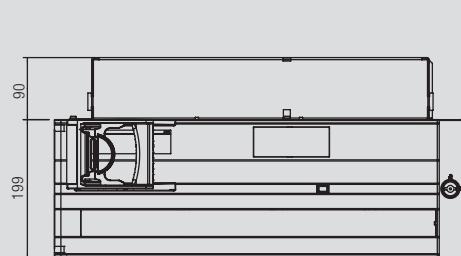
Dimensional drawings

Section Switch

50mm phase distance

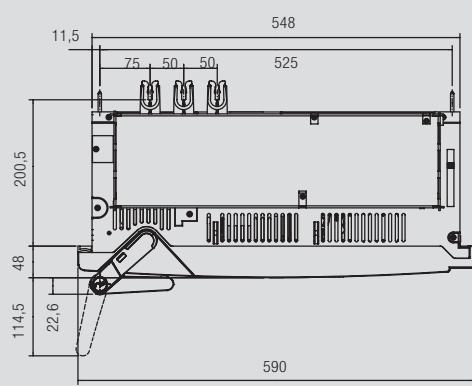


XRM3-50-3P-SP

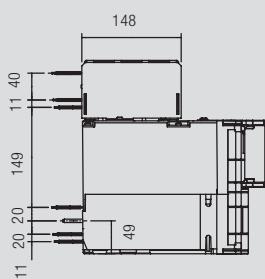
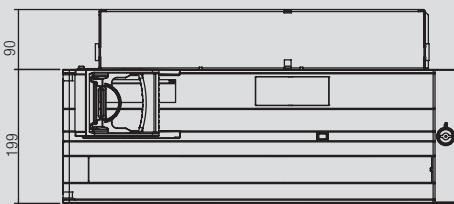


1SEB000288

50mm phase distance

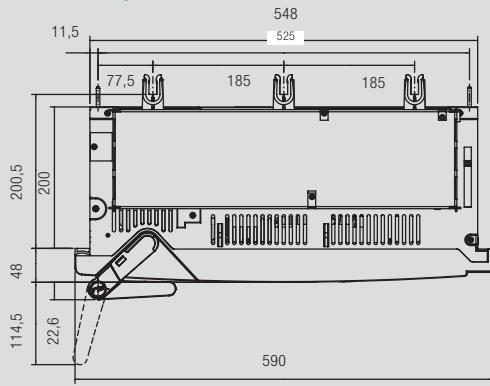


XRM3-50-3P-SS

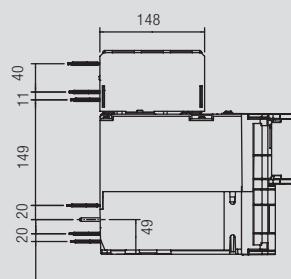
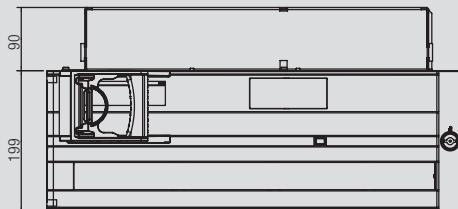


1SEB000289

185mm phase distance



XRM3-185-3P-SS

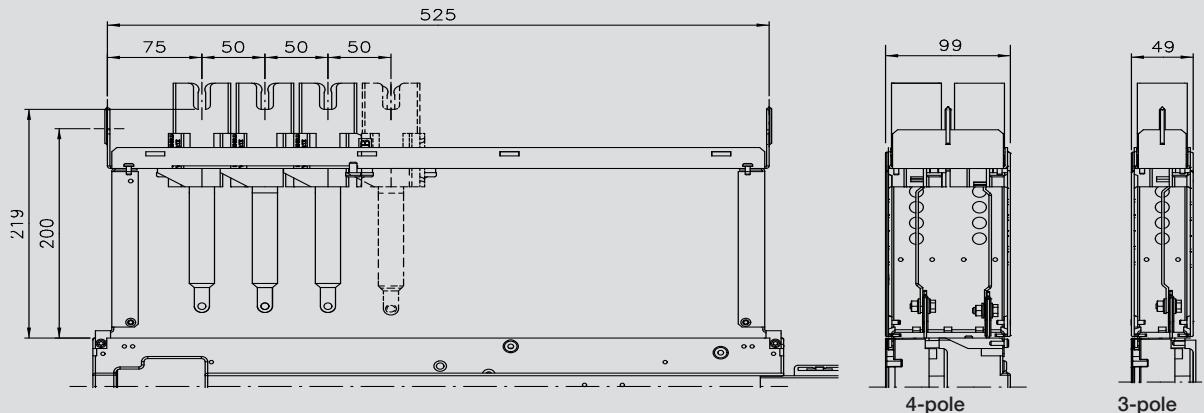


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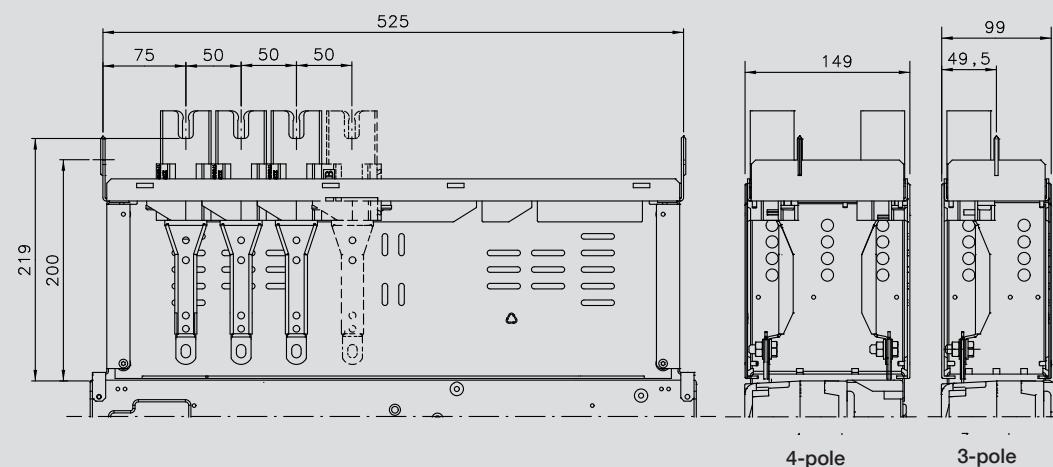
Dimensional drawings

Contact extension, 50mm distance between phases

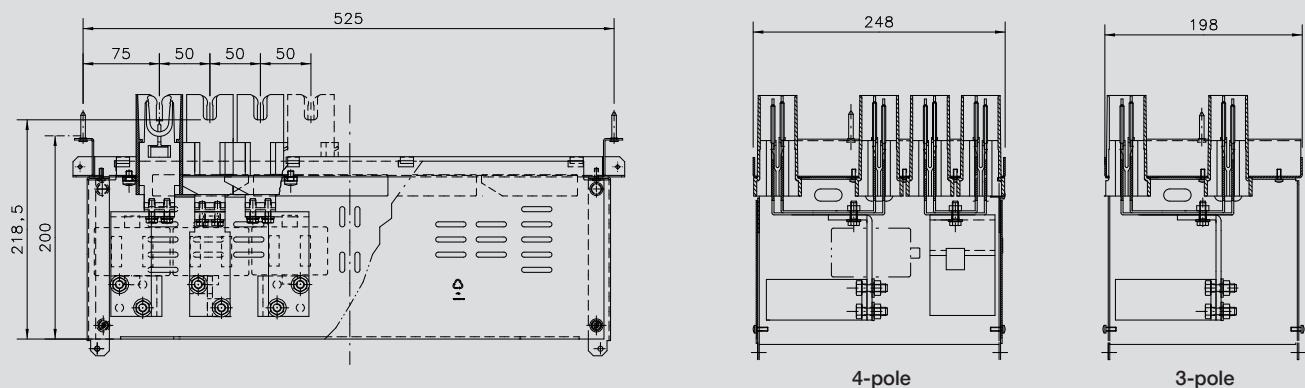
XR00



XR1



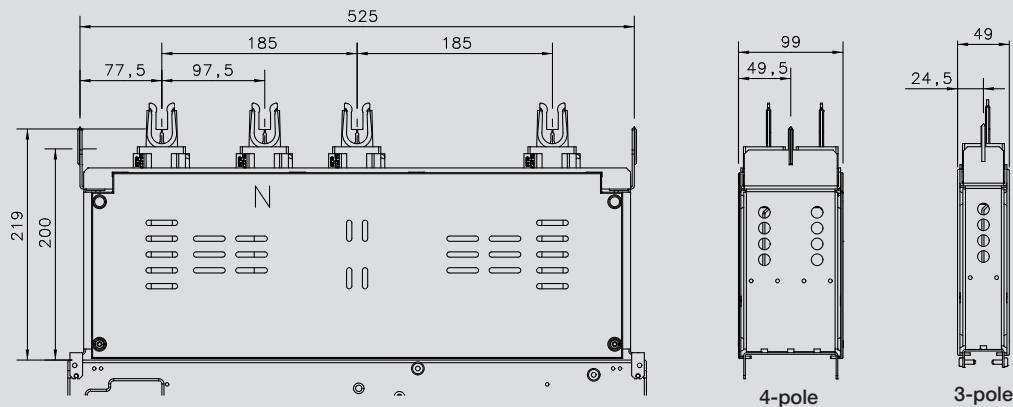
XR2/3



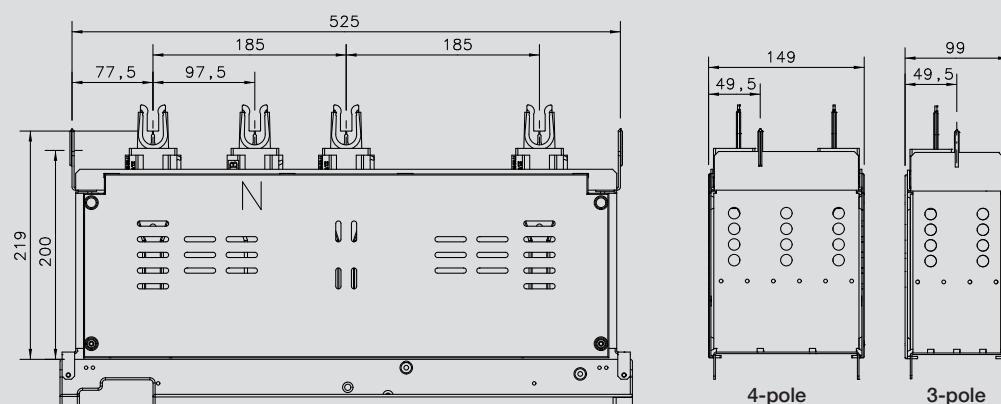
Dimensional drawings

Contact extension, 185mm distance between phases

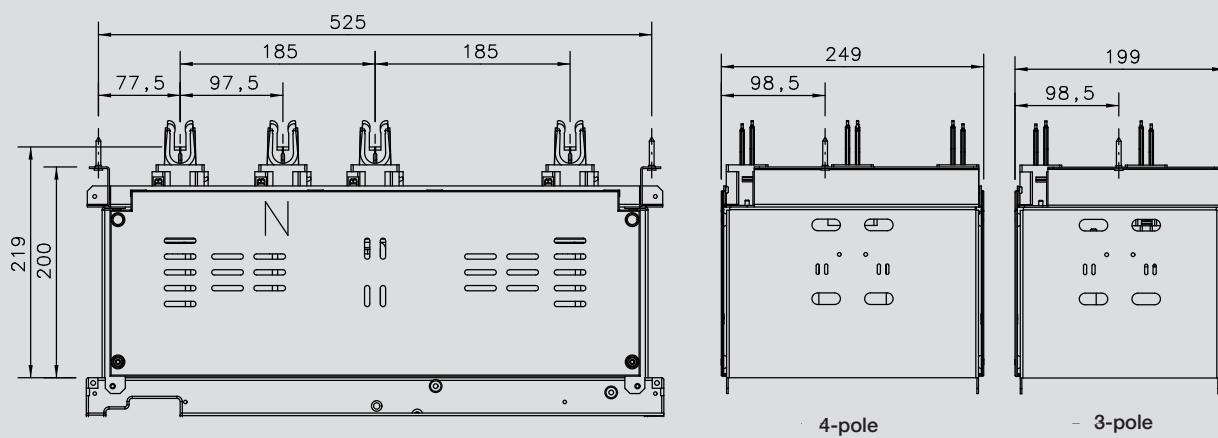
XR00



XR1



XR2/3

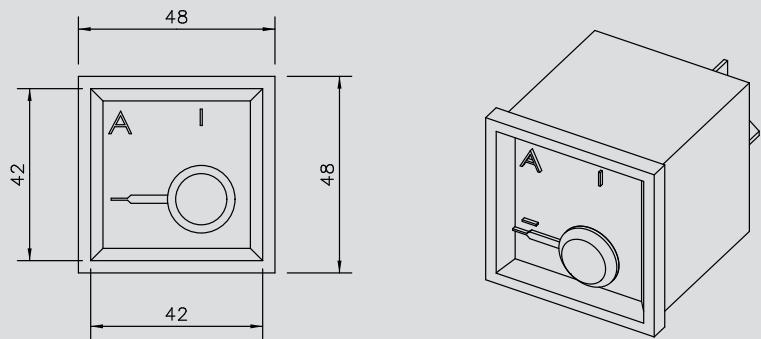


Dimensional drawings

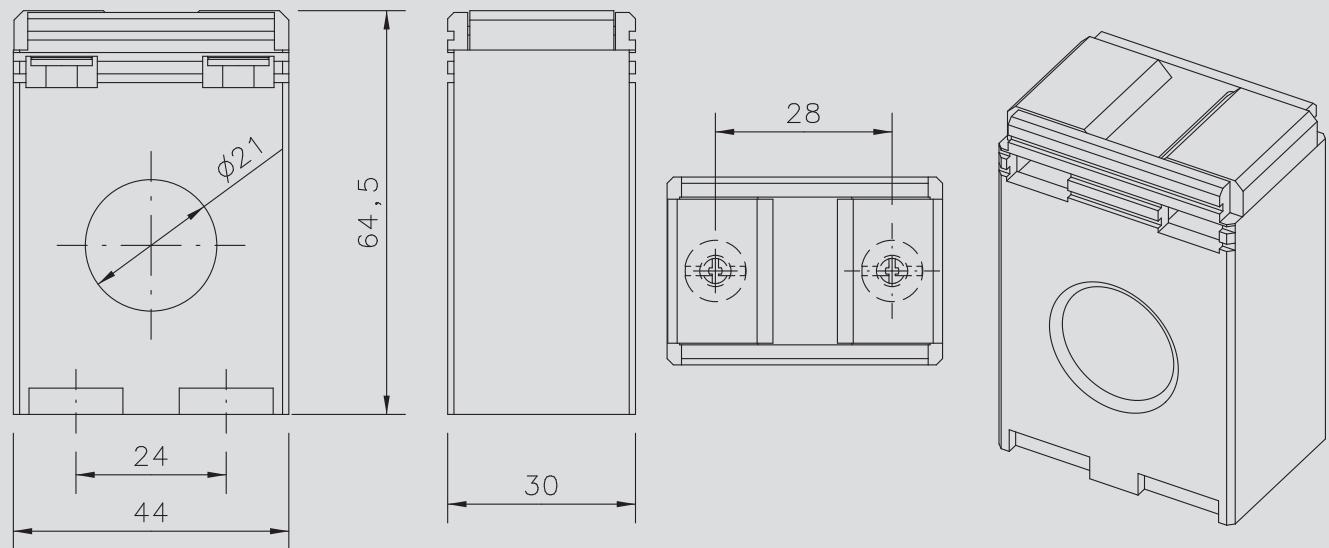
Ammeters and Current transformers

Ammeters

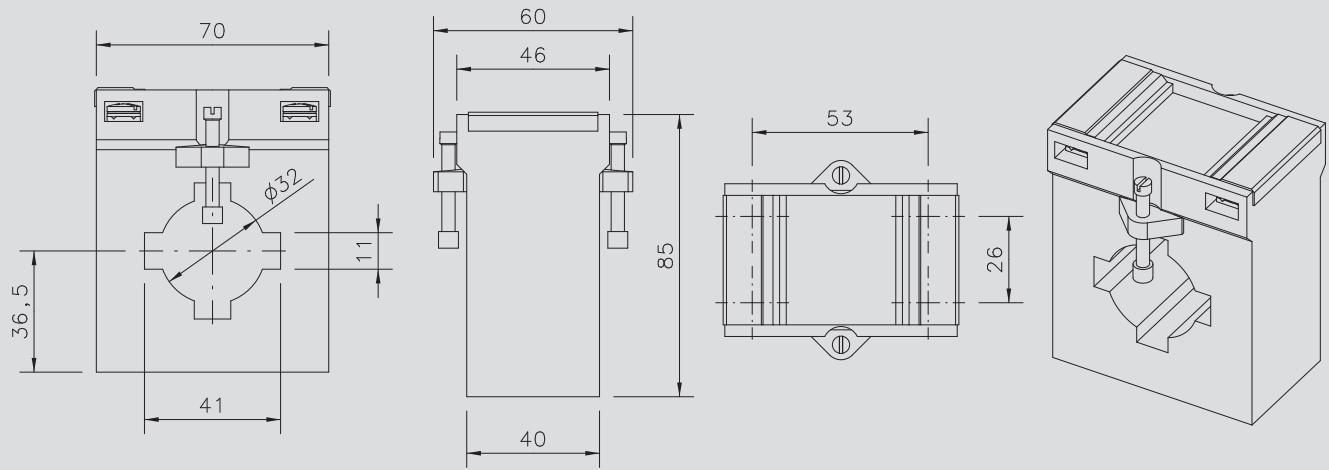
CEWE QB 48 maximum demand A-meters



Current transformer XR 00/1



Current transformer XR 2/3



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