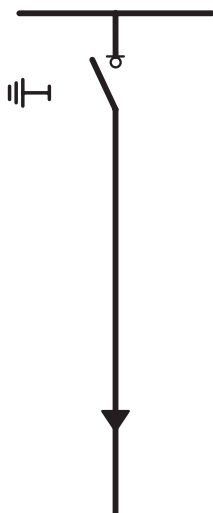
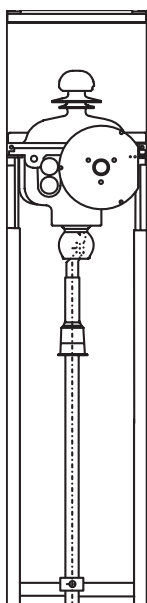
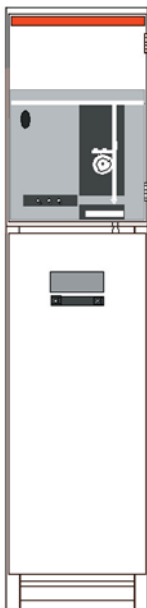


4.1 Uniswitch

Cubicle Types



Switch Disconnecter Cubicle, type SDC

Switch disconnecter cubicle type SDC, is mainly used as an incoming, ring or branch cubicle. The basic unit is equipped with an SF6-insulated, 3-position switch disconnecter type SFG with its operation mechanism. The 3-position switch disconnecter may be in one of three positions, "closed", "open" or "earthed", therefore preventing incorrect operation. Access to the cable compartment is possible in earthed position. "Open" and "earthed" positions are "visible" through the inspection windows placed behind the low voltage compartment door. Inspection of cable connections and fault indicators, when used, is easily carried out through the front-door window.

For safe cable testing a unique interlocking mechanism is included as standard feature.

Basic equipment

- Top unit, including
- 3-position switch disconnecter
 - operating mechanism with mechanical position indication
 - enclosure of busbar compartment
 - integrated low voltage compartment
 - interlocking unit
 - busbars
 - earthing bar

- Bottom unit, including
- enclosure of cable compartment
 - cable entry with cable support

Cubicle Accessories

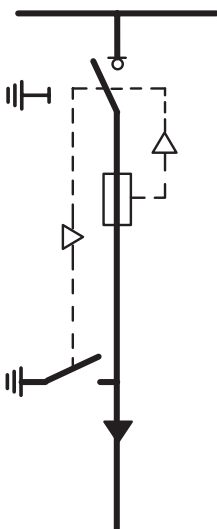
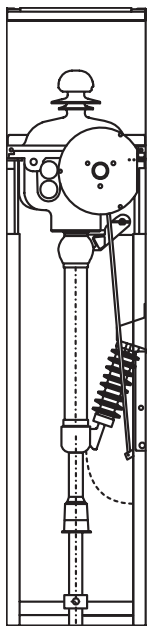
- integrated voltage indicators or socket interface for portable indicators
- auxiliary contacts for close (2NO+2NC) and earth (2NO+2NC) position
- gas density indication with alarm contact
- motor operation device
- current transformers
- arc-gas channel
- channel for control cables
- surge arresters
- anti condensation heater
- through-going earthing bar
- apparatus earthing bar
- short-circuit indicator

Technical Data SDC

Rated voltage	[kV]	12	17,5	24
Rated current	[A]	630/800	630/800	630
Rated short-time withstand current	[kA]	25	20	20
Max. rated duration of short circuit	[s]	1	1	1
Cubicle dimensions				
- width	[mm]	375/500	375/500	375/500
- depth	[mm]	1000	1000	1000
- height	[mm]	1635/1885	1635/1885	1635/1885

4.2 Uniswitch Cubicle Types

Switch Disconnecter cubicle with Fuse, type SDF



Fused switch disconnector cubicle type SDF, is primarily used for transformer protection voltage metering. The cubicle is equipped with a SF6-insulated, 3-position switch disconnector and with earthing switch. For fuse earthing, the integrated earthing switch operates on the upstream side and separate earthing switch operates on the downstream side of the fuses. The mechanism used is a double spring mechanism with automatic fuse-tripping. Access to cable compartment is possible in earthed-position. "Open" and "earthed" positions are "visible" through inspection windows placed behind the low voltage compartment door. Inspection of cable connections and fault indicators when used, is easily carried out through the front-door window.

Basic equipment

- Top unit, including
- 3-position switch disconnector
 - operating mechanism with mechanical position indication
 - enclosure of busbar compartment
 - integrated low voltage compartment
 - interlocking unit
 - fuse tripping with indication
 - busbars
 - earthing bar
- Bottom unit, including
- earthing switch type EF
 - fuse base
 - enclosure of cable compartment
 - cable entry with cable support

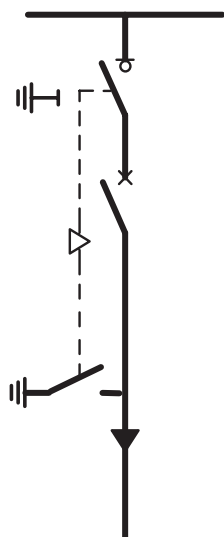
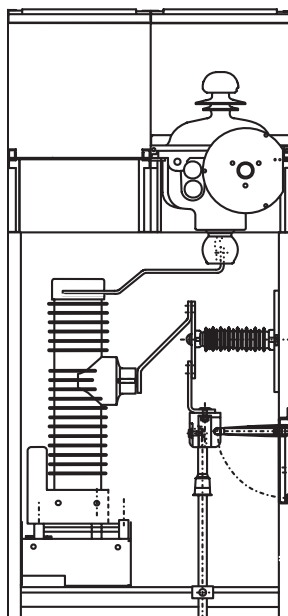
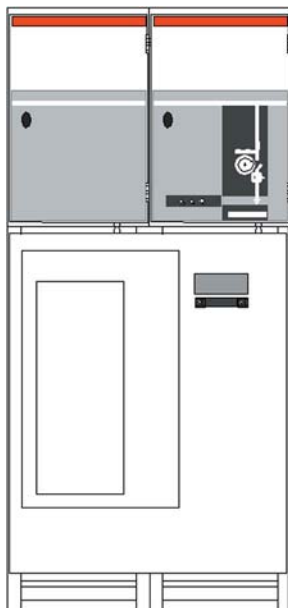
Cubicle Accessories

- integrated voltage indicators or socket interface for portable indicators
- auxiliary contacts for close (2NO+2NC) and earth (2NO+2NC) position
- auxiliary contacts for fuse tripped, 1NO+1NC
- gas density indication with alarm contact
- emergency tripping
- tripping coil
- motor operation device
- voltage transformers
- arc-gas channel
- channel for control cables
- anti condensation heater
- through-going earthing bar
- apparatus earthing bar

Technical Data SDF

Rated voltage	[kV]	12	17,5	24
Rated current (max. fuse)	[A]	125	100	80
Rated short-time withstand current	[kA]	25	20	20
Max. rated duration of short circuit	[s]	1	1	1
Fuse length	[mm]	292/442	292/442	442
Cubicle dimensions				
- width	[mm]	375/500	375/500	375/500
- depth	[mm]	1000	1000	1000
- height	[mm]	1635/1885	1635/1885	1635/1885
Cable shoe, max. width	[mm]	30	30	30

4.3 Uniswitch Cubicle Types



Circuit Breaker Cubicle, type CBC

The circuit breaker cubicle, type CBC is designed for control and protection of distribution lines, networks, motors, transformers, capacitor banks, etc. The cubicle can be equipped with a vacuum or a SF6-gas circuit breaker. The breaker is rail mounted and fixed to the busbars. To achieve the disconnecting function a 3-position switch disconnector with an earthing switch is mounted between the breaker and busbars.

The door is mechanically interlocked with the switch disconnector's earthing position to provide personal safety. The cubicle is designed to be equipped with CTs and VTs (Standard DIN size, see item 5.10).

Basic equipment

- Top unit on right hand side, including
- 3-position switch disconnector
 - operating mechanism with mechanical position indication
 - enclosure of busbar compartment
 - interlocking unit
 - busbars
 - earthing bar

- Top unit on left hand side, including
- integrated low voltage compartment for secondary components
 - enclosure of busbar compartment

- Bottom unit, including
- earthing switch type EM
 - enclosure of cable compartment
 - cable entry with cable support

Cubicle Accessories

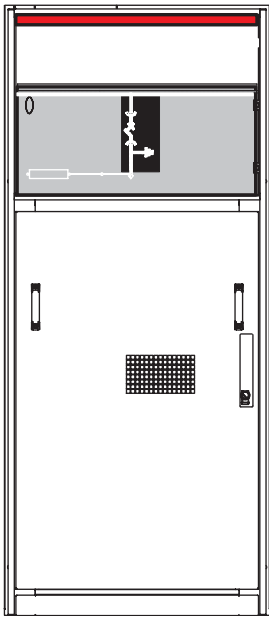
- circuit breaker, vacuum- or SF6-type
- integrated voltage indicators or socket interface for portable indicators
- current transformers
- voltage transformers
- cable core transformer
- auxiliary contacts for close (2NO+2NC) and earth (2NO+2NC) position
- gas density indication with alarm contact for switch disconnector
- motor operation device
- arc-gas channel
- channel for control cables
- anti condensation heater
- through-going earthing bar
- apparatus earthing bar

Technical Data CBC

Rated voltage	[kV]	12	17,5	24
Rated current	[A]	630/800	630/800	630
Rated short-time withstand current	[kA]	25	20	20
Max. rated duration of short circuit	[s]	1	1	1
Cubicle dimensions				
- width	[mm]	750	750	750
- depth	[mm]	940+215	940+215	940+215
- height	[mm]	1635/1885	1635/1885	1635/1885

4.4 Uniswitch

Cubicle Types

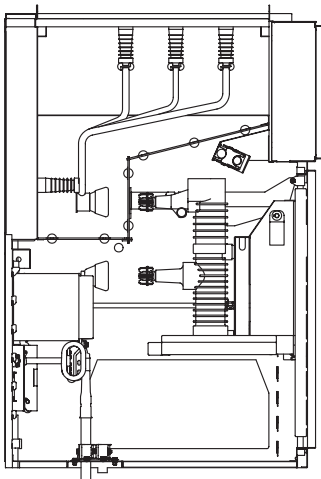


Withdrawable Circuit Breaker cubicle, type CBW

The CBW panel is a circuit breaker panel with a withdrawable circuit breaker. The circuit breaker cubicle is designed for control and protection of distribution lines, networks, motors, transformers, capacitor banks, etc. The cubicle is available with either vacuum or SF6-gas circuit breaker. The CB truck handles the disconnecting function of the circuit breaker. A separate earthing switch enables earthing of the cables.

The door is mechanically interlocked with the circuit breaker and the earthing switch to provide personnel safety.

A wide range of secondary control & protection equipment is available for the cubicle, from the simplest self-powered protection relays to complicated protection, monitoring and controlling devices.

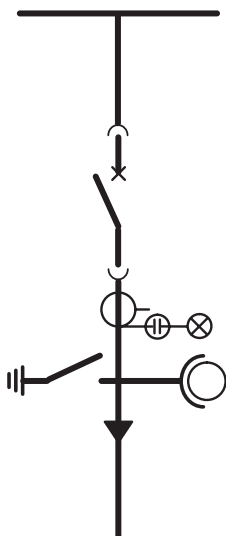


Basic equipment

- Basic cubicle, including
- metal enclosed Alu-zinc steel cubicle enclosure with integrated rear-mounted arc gas channel
 - busbars
 - non-metallic partitioning and shutter
 - low voltage compartment for secondary components
 - withdrawable circuit breaker, vacuum- or SF6-type, including interlocked LV cable plug
 - earthing switch, including interlocked operation device
 - cable entry with cable support

Cubicle Accessories

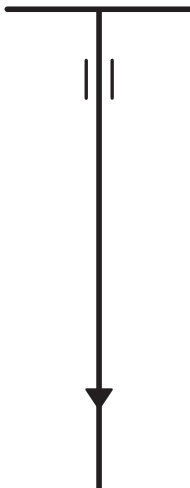
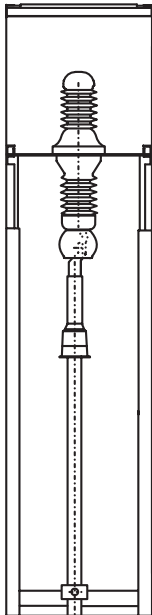
- integrated voltage indicators or socket interface for portable indicators
- current transformers
- voltage transformers or surge arresters
- cable core transformer
- additional auxiliary contacts
- channel for control cables
- anti condensation heater
- through-going earthing bar
- apparatus earthing bar
- electrical position indication
- electrical interlocking of earthing switch
- electrical interlocking of truck



Technical Data CBW

Rated voltage	[kV]	12	17,5	24
Rated current, busbars	[A]	1250	1250	1250
Rated current, circuit breaker	[A]	630 / 1250	630 / 1250	630 / 1250
Rated short-time withstand current	[kA]	25	20	20
Max. rated duration of short circuit	[s]	1	1	1
Cubicle dimensions				
- width	[mm]	800	800	800
- depth	[mm]	1335	1335	1335
- height	[mm]	1885	1885	1885

4.5 Uniswitch Cubicle Types



Direct Busbar connection Cubicle, type DBC

To connect cables to the busbars, a busbar connection cubicle is available. This cubicle is equipped with connection lugs for fixing the cables. CT's can be installed in the 500 mm cubicle.

The lower front door is fixed and can only be opened with a tool when earthing switch is not included. The door has a window for inspection.

Basic equipment

Top unit, including

- bushings
- enclosure of busbar compartment
- interlocking unit, but only when using earthing switch (EM)
- integrated low voltage compartment
- busbars
- earthing bar

Bottom unit, including

- enclosure of cable compartment
- parallel cable connection possibility
- cable entry with cable support or VT mounting bracket

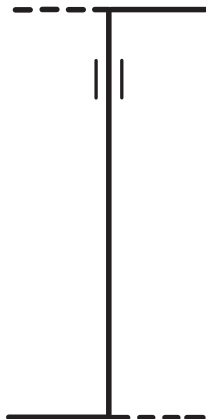
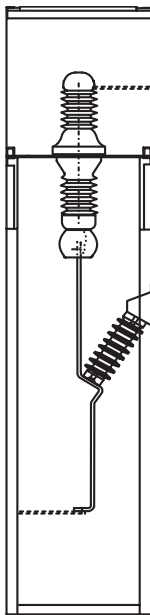
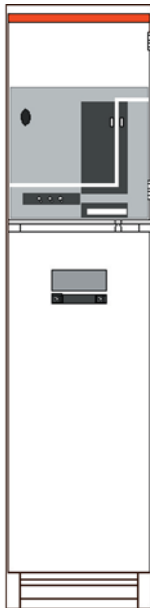
Cubicle Accessories

- integrated voltage indicators or socket interface for portable indicators
- current transformers
- earthing switch for CT's (EM)
- arc-gas channel
- channel for control cables
- surge arresters
- anti condensation heater
- through-going earthing bar

Technical Data DBC

Rated voltage	[kV]	12	17,5	24
Rated current	[A]	630/1250	630/1250	630/1250
Rated short-time withstand current	[kA]	25	20	20
Max. rated duration of short circuit	[s]	1	1	1
Cubicle dimensions				
- width	[mm]	375/500	375/500	375/500
- depth	[mm]	1000	1000	1000
- height	[mm]	1635/1885	1635/1885	1635/1885

4.6 Uniswitch Cubicle Types



Bus Riser Cubicle, type BRC

Bus riser cubicle, type BRC, connects the busbar to the bottom of a sectionalising cubicle with circuit breaker or switch disconnector. This 500 mm width cubicle can be used as a metering cubicle with space for 3 CTs and 3 VTs.

The lower front door is fixed to the cubicle and has to be released with a tool. The door has a window for inspection.

Basic equipment

- Top unit, including
- bushings
 - enclosure of busbar compartment
 - integrated low voltage compartment
 - busbars
 - earthing bar

- Bottom unit, including
- enclosure with bus riser bars
 - bottom cover

Cubicle Accessories

- integrated voltage indicators or socket interface for portable indicators
- current transformers
- voltage transformers
- earthing switch with position indication
- auxiliary contacts for earthing switch, 2NO+2NC
- arc-gas channel
- channel for control cables
- anti condensation heater
- through-going earthing bar

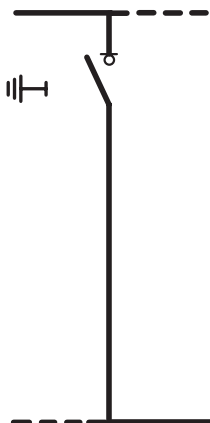
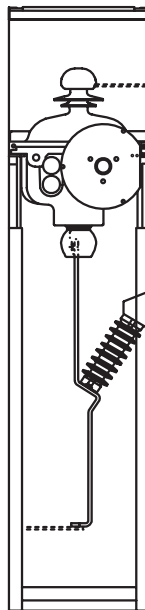
Technical Data BRC

Rated voltage	[kV]	12	17,5	24
Rated current	[A]	630/1250	630/1250	630/1250
Rated short-time withstand current	[kA]	25	20	20
Max. rated duration of short circuit	[s]	1	1	1
Cubicle dimensions				
- width	[mm]	375/500	375/500	375/500
- depth	[mm]	1000	1000	1000
- height	[mm]	1635/1885	1635/1885	1635/1885

4.7 Uniswitch Cubicle Types

Sectionalising Cubicle, type SEC

The sectionalising cubicle is always used together with the bus riser cubicle. The standard version with 375 mm width is equipped with a SF6-insulated, 3-position switch disconnecter for sectionalising the busbars. Earthing facility is provided always as a standard.



Basic equipment

Top unit, including

- 3-position switch disconnecter
- operating mechanism with mechanical position indication
- enclosure of busbar compartment
- integrated low voltage compartment
- interlocking unit
- busbars
- earthing bar

Bottom unit, including

- enclosure with sectionalising busbars
- bottom cover

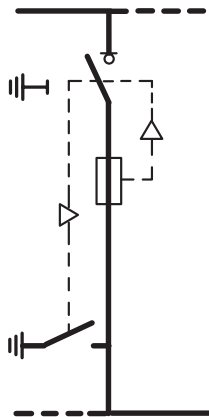
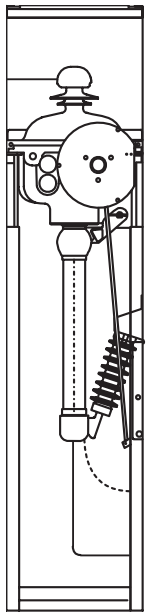
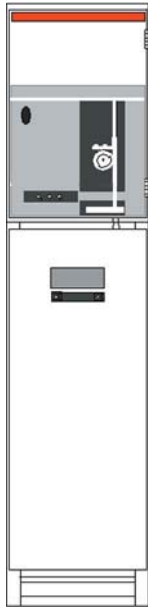
Cubicle Accessories

- integrated voltage indicators or socket interface for portable indicators
- auxiliary contacts for close (2NO+2NC) and earth (2NO+2NC) position
- gas density indication with alarm contact
- motor operation device
- current transformers
- arc-gas channel
- channel for control cables
- anti condensation heater
- through-going earthing bar
- apparatus earthing bar
- voltage transformers

Technical Data SEC

Rated voltage	[kV]	12	17,5	24
Rated current	[A]	630/800	630/800	630
Rated short-time withstand current	[kA]	25	20	20
Max. rated duration of short circuit	[s]	1	1	1
Cubicle dimensions				
- width	[mm]	375/500/750	375/500/750	375/500/750
- depth	[mm]	1000	1000	1000
- height	[mm]	1635/1885	1635/1885	1635/1885

4.8 Uniswitch Cubicle Types



Sectionalisng cubicle with Fuse, type SEF

The cubicle type SEF is used when a sectionalisng cubicle with fuse protection is needed, or if there is a requirement for measuring on the transformer feeder. For fuse earthing, the integrated earthing switch operates on the upstream side and separate earthing switch operates on the downstream side of the fuses.

The mechanism used is a double spring mechanism with automatic fuse tripping. Access to cable compartment is only possible in earthed-position. A visible check of the "open" and "earthed" positions is available through inspection windows placed in the low voltage compartment. Busbar connections to both left and right are possible.

Basic equipment

- Top unit, including
- 3-position switch disconnecter
 - operating mechanism with mechanical position indication
 - enclosure of busbar compartment
 - integrated low voltage compartment
 - interlocking unit
 - fuse tripping with indication
 - busbars
 - earthing bar
- Bottom unit, including
- earthing switch type EF
 - fuse base

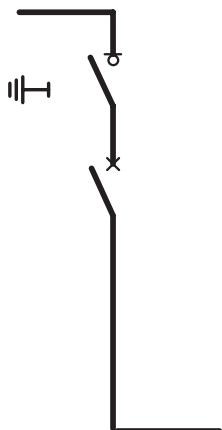
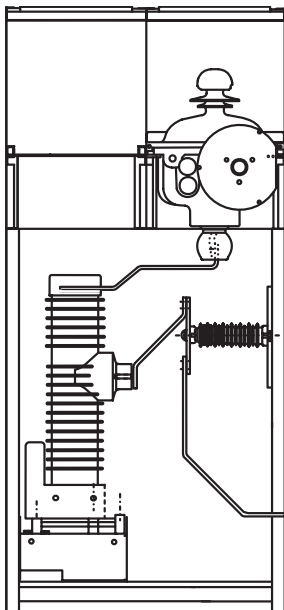
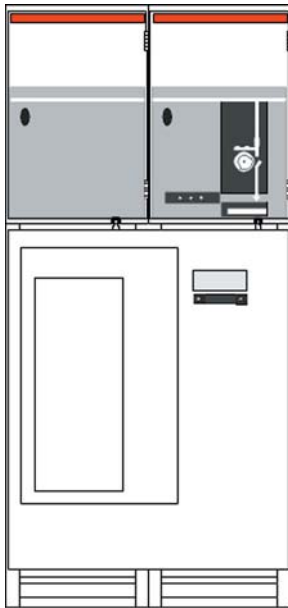
Cubicle Accessories

- integrated voltage indicators or socket interface for portable indicators
- auxiliary contacts for close (2NO+2NC) and earth (2NO+2NC) position
- auxiliary contacts for fuse tripped, 1NO+1NC
- gas density indication with alarm contact
- emergency tripping
- tripping coil
- motor operation device
- arc-gas channel
- channel for control cables
- anti condensation heater
- through-going earthing bar
- apparatus earthing bar

Technical Data SEF

Rated voltage	[kV]	12	17,5	24
Rated current (max. fuse)	[A]	125	100	80
Rated short-time withstand current	[kA]	25	20	20
Max. rated duration of short circuit	[s]	1	1	1
Fuse length	[mm]	292/442	292/442	442
Cubicle dimensions				
- width	[mm]	375/500	375/500	375/500
- depth	[mm]	1000	1000	1000
- height	[mm]	1635/1885	1635/1885	1635/1885

4.9 Uniswitch Cubicle Types



Sectionalising Breaker Cubicle, type SBC

Sectionalising breaker cubicle is used together with the bus riser cubicle. The standard cubicles are equipped with a SF6 insulated 3-position switch disconnector in series with a circuit breaker for sectionalising the busbar. The cubicle is equipped with a vacuum or a SF6-gas circuit breaker. The breaker is rail mounted and fixed to the busbars. Earthing facility on the switch disconnector is always included.

The door is mechanically interlocked with the switch disconnector's earthing position to give personal safety. The cubicle is designed to be equipped with CTs and VTs (Standard DIN size, see item 5.9).

Basic equipment

- Top unit on right hand side, including
- 3-position switch disconnector
 - operation mechanism with mechanical position indication
 - enclosure of busbar compartment
 - interlocking unit
 - busbars
 - earthing bar

- Top unit on left hand side, including
- integrated low voltage compartment for secondary components
 - enclosure of busbar compartment

Cubicle Accessories

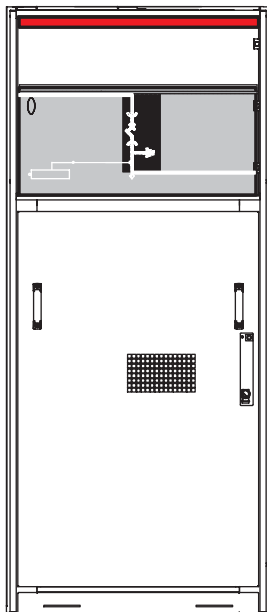
- circuit breaker, vacuum- or SF6-type
- integrated voltage indicators or socket interface for portable indicators
- current transformers
- voltage transformers
- auxiliary contacts for close (2NO+2NC) and earth (2NO+2NC) position
- gas density indication with alarm contact for switch disconnector
- motor operation device
- arc-gas channel
- channel for control cables
- earthing switch type EM
- anti condensation heater
- through-going earthing bar
- apparatus earthing bar

Technical Data SBC

Rated voltage	[kV]	12	17,5	24
Rated current	[A]	630/800	630/800	630
Rated short-time withstand current	[kA]	25	20	20
Max. rated duration of short circuit	[s]	1	1	1
Cubicle dimensions				
- width	[mm]	750	750	750
- depth	[mm]	1155	1155	1155
- height	[mm]	1635/1885	1635/1885	1635/1885

4.10 Uniswitch

Cubicle Types

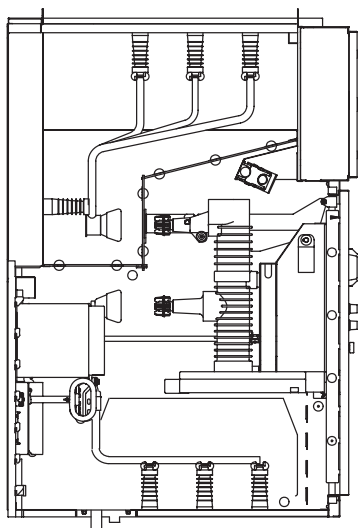


Sectionalising Withdrawable Breaker cubicle, type SBW

The SBW panel is a sectionalising circuit breaker panel with a withdrawable circuit breaker. The SBW is used together with the bus riser cubicle (BRC). The cubicle is designed for sectionalising the busbar in the switchgear. It is available with either vacuum or SF6-gas circuit breaker. The CB truck handles the disconnecting function of the circuit breaker. A separate earthing switch enables earthing of the busbar.

The door is mechanically interlocked with the circuit breaker and the earthing switch to provide personnel safety.

A wide range of secondary control & protection equipment is available for the cubicle, from the simplest self-powered protection relays to complicated protection, monitoring and controlling devices.

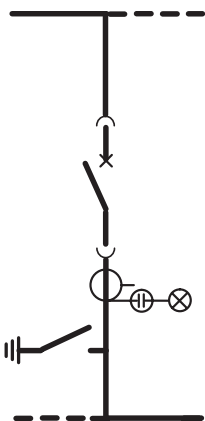


Basic equipment

- Basic cubicle, including
- metal enclosed Alu-zinc steel cubicle enclosure with integrated rear-mounted arc gas channel
 - busbars
 - non-metallic partitioning and shutter
 - low voltage compartment for secondary components
 - withdrawable circuit breaker, vacuum- or SF6-type, including interlocked LV cable plug
 - earthing switch, including interlocked operation device

Cubicle Accessories

- integrated voltage indicators or socket interface for portable indicators
- current transformers
- additional auxiliary contacts
- channel for control cables
- anti condensation heater
- through-going earthing bar
- apparatus earthing bar



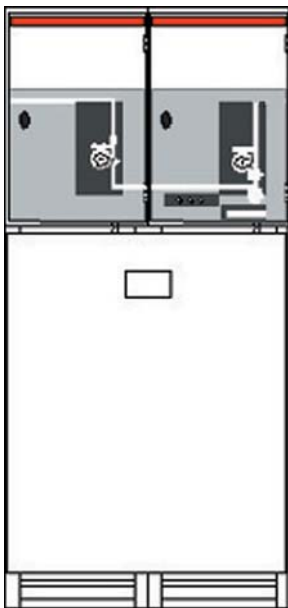
Technical Data SBW

Rated voltage	[kV]	12	17,5	24
Rated current, busbars	[A]	1250	1250	1250
Rated current, circuit breaker	[A]	630 / 1250	630 / 1250	630 / 1250
Rated short-time withstand current	[kA]	25	20	20
Max. rated duration of short circuit	[s]	1	1	1
Cubicle dimensions				
- width	[mm]	800	800	800
- depth	[mm]	1335	1335	1335
- height	[mm]	1885 1)	1885 1)	1885 1)

1) 1905 with cable channel

4.11 Uniswitch

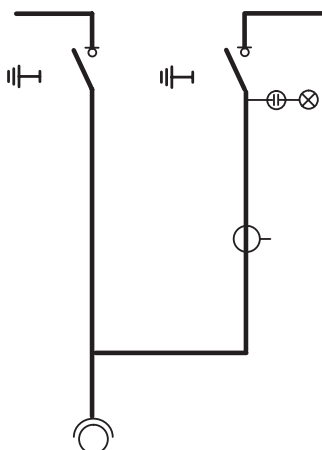
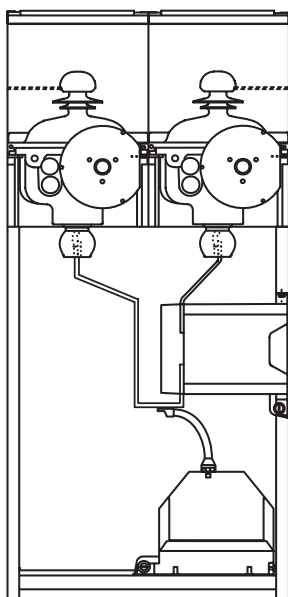
Cubicle Types



Sectionalising Metering cubicle with Disconnecter, type SMD

Sectionalising metering cubicle, type SMD, is mainly used when medium voltage metering is required and/or when there is a requirement to sectionalise the switchgear. Cubicle is based on operation of two separately operated 3-position, SFG type switch disconnectors. Switch disconnectors are located at both ends of the sectionalised busbar. DIN size VT's and CT's are available on right hand side of the switchgear.

3-position switch disconnectors are interlocked with cubicle front door and access into cable compartment is possible only when both switch disconnectors are in earthed-position.



Basic equipment

- Top unit on left hand side, including
- 3-position switch disconnector or bushing
 - operation mechanism with mechanical position indication
 - integrated low voltage compartment
 - interlocking unit
 - busbars
 - earthing bar

- Top unit on right hand side, including
- 3-position switch disconnector or bushing
 - operation mechanism with mechanical position indication
 - integrated low voltage compartment
 - interlocking unit
 - busbars
 - earthing bar

- Bottom unit, including
- enclosure of busbar compartment

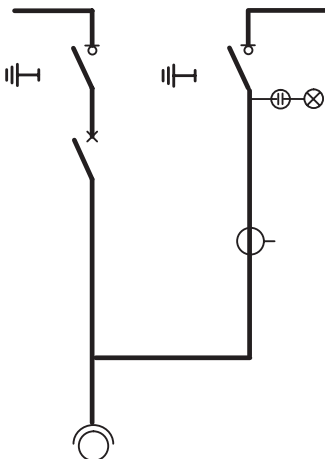
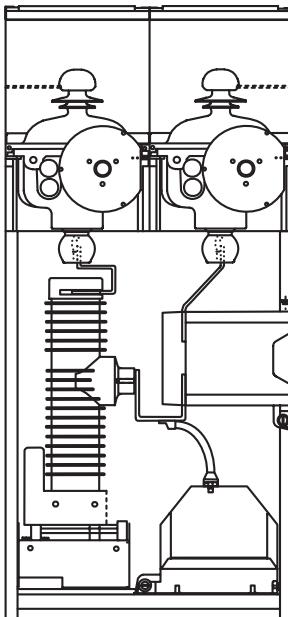
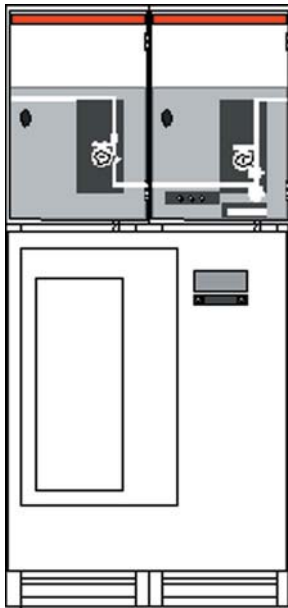
Cubicle Accessories

- integrated voltage indicators or socket interface for portable indicators
- auxiliary contacts for close (2NO-2NC) and earth (2NO+2NC) position
- gas density indication with alarm contact for switch disconnector
- current transformers
- voltage transformers
- channel for control cables
- anti-gas channel
- anti condensation heater
- through-going earthing bar
- apparatus earthing bar

Technical Data SMD

Rated voltage	[kV]	12	17,5	24
Rated current	[A]	630/800	630/800	630
Rated short-time withstand current	[kA]	25	20	20
Max. rated duration of short circuit	[s]	1	1	1
Cubicle dimensions				
- width	[mm]	750	750	750
- depth	[mm]	940+60	940+60	940+60
- height	[mm]	1635/1885	1635/1885	1635/1885

4.12 Uniswitch Cubicle Types



Sectionalising Metering Cubicle, type SMC

Sectionalising metering cubicle, type SMC, is mainly used when medium voltage metering is required and/or when there is a requirement to sectionalise the switchgear. Cubicle is based on operation of one rail mounted circuit breaker and two separately operated 3-position, SFG type switch disconnectors. Switch disconnectors are located at both ends of the sectionalised busbar with the circuit breaker in between, after left hand side switch disconnector. DIN size VT's and CT's are available on right hand side of circuit breaker, in previously mentioned order.

3-position switch disconnectors are interlocked with cubicle front door and access into cable compartment is possible only when both switch disconnectors are in earthed-position.

Basic equipment

- Top unit on left hand side, including
- 3-position switch disconnector or bushing
 - operation mechanism with mechanical position indication
 - integrated low voltage compartment
 - interlocking unit
 - busbars
 - earthing bar

- Top unit on right hand side, including
- 3-position switch disconnector or bushing
 - operation mechanism with mechanical position indication
 - integrated low voltage compartment
 - interlocking unit
 - busbars
 - earthing bar

- Bottom unit, including
- enclosure of busbar compartment

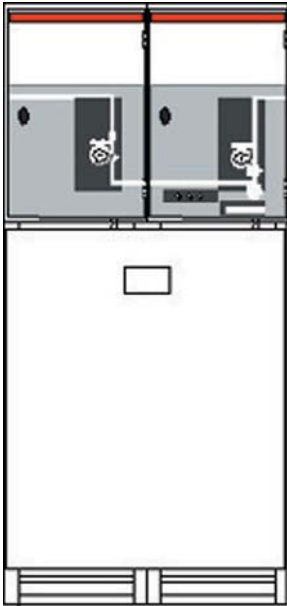
Cubicle Accessories

- circuit breaker, vacuum- or SF6-type
- integrated voltage indicators or socket interface for portable indicators
- auxiliary contacts for close (2NO-2NC) and earth (2NO+2NC) position
- gas density indication with alarm contact for switch disconnector
- current transformers
- voltage transformers
- channel for control cables
- arc-gas channel
- anti condensation heater
- through-going earthing bar
- apparatus earthing bar

Technical Data SMC

Rated voltage	[kV]	12	17,5	24
Rated current	[A]	630/800	630/800	630
Rated short-time withstand current	[kA]	25	20	20
Max. rated duration of short circuit	[s]	1	1	1
Cubicle dimensions				
- width	[mm]	750	750	750
- depth	[mm]	940+215	940+215	940+215
- height	[mm]	1635/1885	1635/1885	1635/1885

4.13 Uniswitch Cubicle Types



Bus Metering Cubicle, type BMC

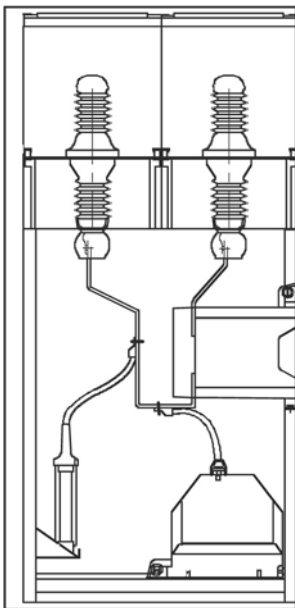
Metering cubicle, type BMC, is mainly used when medium voltage metering is required. DIN size VT's and CT's are available on right hand side of cubicle. Access into cable compartment is possible only when the interlocking unit is in the door open position.

Basic equipment

- Top unit on left hand side, including
- integrated low voltage compartment
 - interlocking unit
 - busbars
 - earthing bar
 - bushings

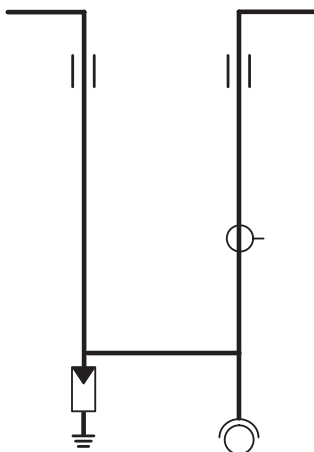
- Top unit on right hand side, including
- integrated low voltage compartment
 - interlocking unit
 - busbars
 - bushings

- Bottom unit, including
- enclosure of busbar compartment



Cubicle Accessories

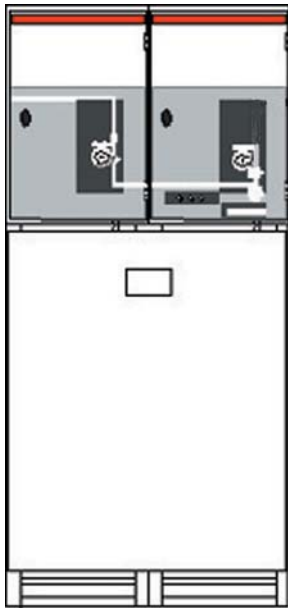
- integrated voltage indicators or socket interface for portable indicators
- current transformers
- voltage transformers
- channel for control cables
- arc-gas channel
- anti condensation heater
- through-going earthing bar



Technical Data BMC

Rated voltage	[kV]	12	17,5	24
Rated current	[A]	630/1250	630/1250	630/1250
Rated short-time withstand current	[kA]	25	20	20
Max. rated duration of short circuit	[s]	1	1	1
Cubicle dimensions				
- width	[mm]	750	750	750
- depth	[mm]	1000	1000	1000
- height	[mm]	1635/1885	1635/1885	1635/1885

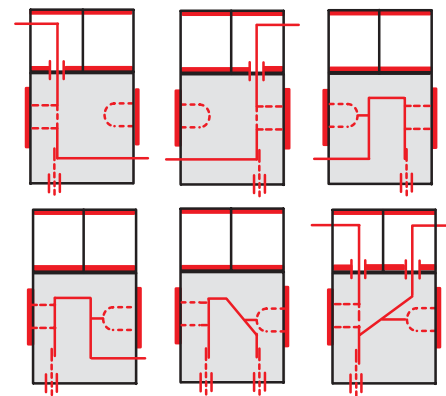
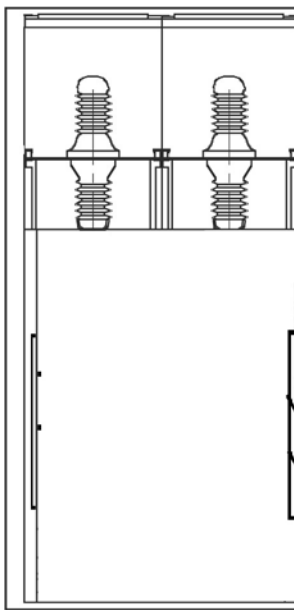
4.14 Uniswitch Cubicle Types



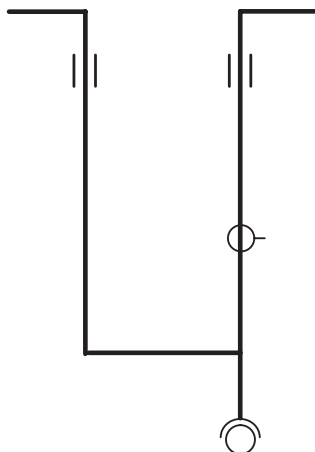
Universal Metering Cubicle, type UMC

The Universal metering cubicle, type UMC, is used when special arrangements with medium voltage metering are required. The cubicle is very flexible and fulfils most customer requirements of metering and cable arrangements. Please see the available busbar configurations in the sketch below.

Thanks to a universal instrument transformer assembly device, different types of VT's and CT's are possible to install in the cubicle. To provide full flexibility, the busbars in the cubicle will be made to order, or by the customer. Access into the cable compartment is only possible when the interlocking unit is in the door open position.



6 main configurations



Basic equipment

- Top unit on left hand side, including
- integrated low voltage compartment
 - interlocking unit
 - earthing bar
 - bushings

- Top unit on right hand side, including
- integrated low voltage compartment
 - interlocking unit
 - bushings

- Bottom unit, including
- enclosure of busbar compartment
 - instrument transformer assembly device

Cubicle Accessories

- integrated voltage indicators or socket interface for portable indicators
- current transformers
- voltage transformers
- channel for control cables
- arc-gas channel
- anti condensation heater
- through-going earthing bar

Technical Data UMC

Rated voltage	[kV]	12	17,5	24
Rated current	[A]	630/1250	630/1250	630/1250
Rated short-time withstand current	[kA]	25	20	20
Max. rated duration of short circuit	[s]	1	1	1
Cubicle dimensions				
- width	[mm]	750	750	750
- depth	[mm]	1000	1000	1000
- height	[mm]	1885	1885	1885