Contents **Page**

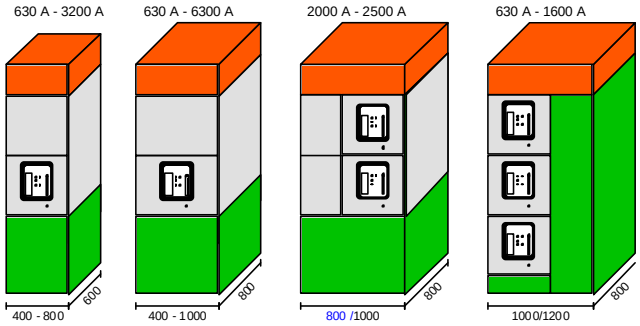
General

The circuit-breaker systems comprise cubicle types that are used exclusively for the incoming feeder into the switchboard and for outgoing feeders and couplings.

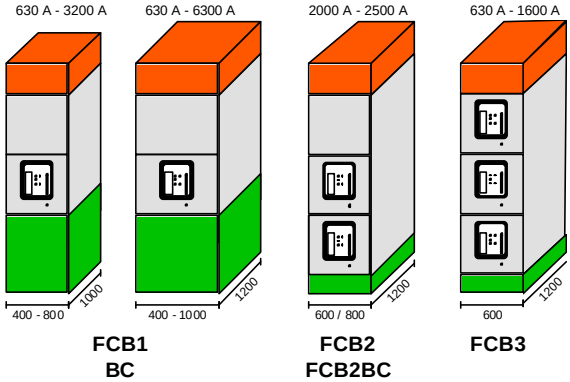
Structure and Functions

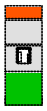
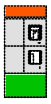
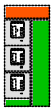
The following cubicle types are available depending on function, switchgear rated currents and required short-circuit strength:

Cable connection front (minimum cubicle depths)



Cable connection rear

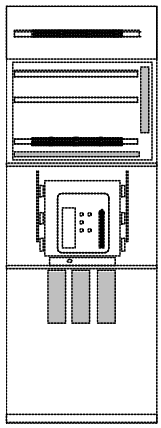


Cubicle type	Function	Installation type	Size / Rated current
	optional: • Incoming feeder • coupling • outgoing feeder	optional: • withdraw-able • fixed-mounted	3WN size I - IV 630 – 6300 A 3WL size I - size III 630 – 6300 A
	optional: • incoming feeder **and** coupling • 2 x incoming feeder/ outgoing feeder	optional: • withdraw-able • fixed-mounted	size II 2000 – 2500 A
	• incoming feeder • outgoing feeder	optional: • withdraw-able • fixed-mounted	size I 630 - 1600 A

Auxiliary Compartment

There are available type-specific auxiliary compartments to integrate additional devices, e.g. for interlocking devices.

Cubicle type with 1 circuit-breaker/cubicle:



← cross wiring compartment (optional)

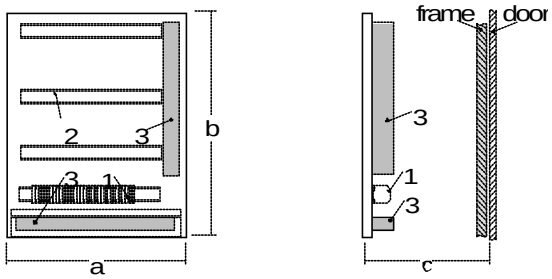
← auxiliary compartment

← switching device compartment

← cable connection compartment

The auxiliary compartment is installed separately from the switching device compartment, independent of the form of internal separation.

Switching device panel structure and dimensions:

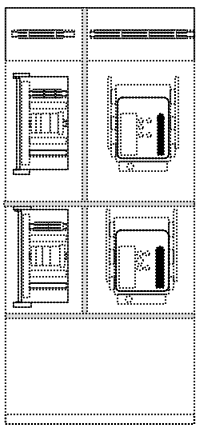


1 Terminal blocks
2 Mounting rail
3 Wiring duct

Cubicle width [mm]	a	b	c
400	338	541	300 + 20
600	538		
800	738		
1000	938		

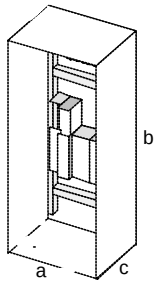
Cubicle type with 2 circuit-breakers/cubicle:

Cable connection front



← cross-wiring compartment (optional)

auxiliary compartment →



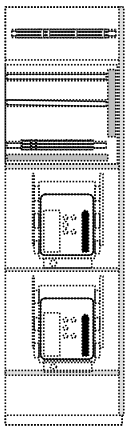
← cable connection compartment

1000 mm

Dimensions [mm]

3WN	a	b	c	3WL	a	b	c
3-pol.	450	550	300 + 20	3-pol.	430	500	275 + 20
4-pol.	330	550	300 + 20	4-pol.	300	500	275 + 20

Cable connection rear

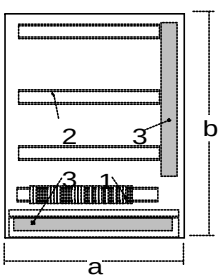


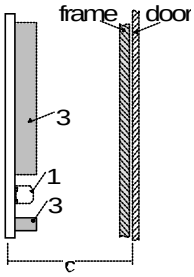
← cross-wiring compartment (optional)

← auxiliary compartment

← switching device compartment

Switching device panel structure and dimensions:





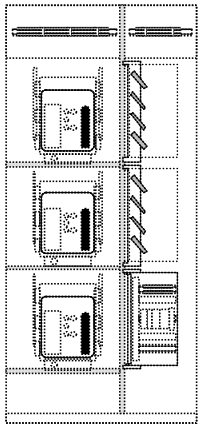
1 Terminal blocks
2 Mounting rail
3 Wiring duct

Cubicle width [mm]	a	b	c
600	538	500	250 + 20
800	738	500	250 + 20

Cubicle type with 3 circuit-breakers/cubicle:

Cable connection front

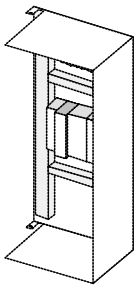
A swing-out type compartment for auxiliary devices located in front of the cable termination busbars is added to every circuit-breaker compartment.



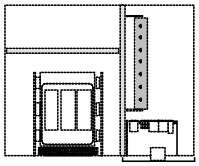
← cross wiring compartment (optional)

← cable connection compartment

← auxiliary → compartment

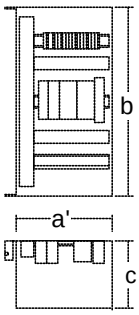


View from top:



← cable connection compartment

← auxiliary compartment



Dimensions [mm]

a'	b	c
256	490	175

Cable connection rear

There is available a L-type auxiliary compartment for the integration of terminal blocks.

Installation of Instruments

The instruments are located in the door in front of the belonging auxiliary device unit.

ATTENTION: With cubicle type 3 ACB/cubicle installation of multiple or big size devices is restricted and may influence dimension "C" of the auxiliary devices. If necessary apply cubicle type 1 ACB/ cubicle.

With cubicle type 1 ACB/cubicle and function bus coupling the standard location of the auxiliary device unit is below the ACB compartment. Instruments with little depth can be located above the ACB as before.

Cable/Bar Connection Compartment

Possibilities of connecting cables to 3W. circuit-breakers:

Cross-section 3½-conductor [mm²]	Number of connectable cable cross-sections depending on rated current				
	630 A	800 A	1000 A	1250 A	1600 A
up to 240	4	4	4	6[1)]	6[1)]
3½-conductor [mm²]	2000 A	2500 A	3200 A	4000 A	5000 A
up to 300	9	9	11	14	18[2)]
3½-conductor [mm²]	6300A[2)]				
up to 300	18				

1) 3 ACB/cubicle restrictedly with cable from below, there max. amount of cables per cubicle is 14 pieces

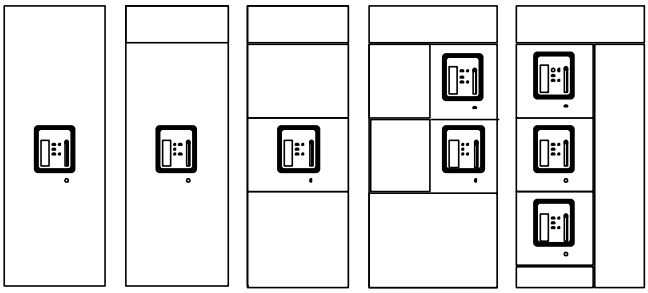
2) Incoming feeders/outgoing feeders of circuit-breakers > 4000 A are always effected with bar connection According to the standards, only busbar connection from top can be project-planned.

Forms of Internal Separation/Doors

With SIVACON there exist various executions of the forms of internal separation according to the requirements (detailed description see chapter "General", page 11).

The following door designs can be used depending on the form of internal separation:

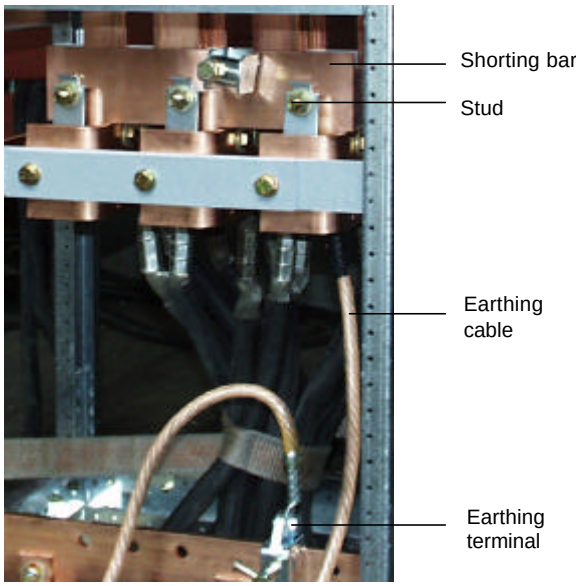
	Form 1	Form 2b	Form 3a Form 4b (not at BC)	Form 1 Form 3a	Form 1 Form 3a
unventilated ≤ IP54	(A 150 mm deep plexiglass cover is necessary when using 3WL circuit-breaker).				
ventilated	≤ IP42				



Short-Circuit and Earthing Facilities

The following possibilities of short-circuiting and earthing are available depending on cubicle type:

- **Short-circuiting and earthing accessories** on the connection end (*with type 1 ACB/cubicle*):
  Short-circuit strength max. 100 kA
  Studs (see figure above) are required at the point to be earthed. The studs are secured in the front of the connection compartment on the connection bars.
- **Withdrawable shorting and earthing unit** on the connection or busbar end (*with withdrawable type*):
  The withdrawable shorting and earthing unit consists of the 3W.- circuit-breaker housing and features contact blades that are connected to the shorting jumper. Depending on the version, the shorting jumpers are located at the top and/or bottom.
  The earthing and short-circuit connections are already established on insertion of the withdrawable unit.
  It is imperative to verify dead state before cranking in the withdrawable unit!



Shorting and earthing accessories

Selecting Connection Bars for PE, N, PE/N and PEN

Depending on the type of led-in cable used, it must be connected to the individual bars in the cabinet via connection bars:

Type of led-in cable	Type of bar in the cabinet
PE	PE
PEN	PEN
PE + N	PE + N
PEN	PE/N*

*) One N conductor is branched off from the led-in PEN conductor to create the PE/N function. Busbars are connected to the relevant horizontal PE and N bars via bars. At the same time, the PE and N bars are connected in the cubicle via an isolating lug.

Rated Currents for 1 Circuit-Breaker/Cubicle with 3WN

Rated currents I_n as a function of ambient temperature **Incoming feeder or outgoing feeder function**														3WN	
Non-ventilated							Ventilated								
20° [A]	25° [A]	30° [A]	**35° [A]**	40° [A]	45° [A]	50° [A]	20° [A]	25° [A]	30° [A]	**35° [A]**	40° [A]	45° [A]	50° [A]	Type	Rated current [A]
630	630	630	**630**	630	630	630	630	630	630	**630**	630	630	630	3WN60	630
800	800	800	**800**	800	800	800	800	800	800	**800**	800	800	800	3WN61	800
1000	1000	1000	**1000**	1000	1000	1000	1000	1000	1000	**1000**	1000	1000	1000	3WN62	1000
1250	1250	1250	**1250**	1250	1220	1180	1250	1250	1250	**1250**	1250	1250	1250	3WN63	1250
1600	1600	1580	**1540**	1500	1450	1410	1600	1600	1600	**1600**	1600	1600	1590	3WN64	1600
2000	2000	2000	**2000**	2000	1950	1890	2000	2000	2000	**2000**	2000	2000	2000	3WN65	2000
2500	2500	2450	**2390**	2330	2260	2190	2500	2500	2500	**2500**	2500	2500	2490	3WN66	2500
2750	2690	2620	**2560**	2490	2420	2340	3150	3070	3000	**2920**	2850	2770	2680	3WN67	3200
2570	2510	2450	**2390**	2320	2260	2190	3200	3200	3200	**3140**	3060	2970	2880	3WN17	3200
2930	2870	2800	**2730**	2650	2580	2500	3850	3760	3670	**3570**	3480	3380	3280	3WN18	4000
3770	3690	3600	**3510**	3410	3320	3220	4850	4740	4620	**4510**	4390	4260	4140	3WN19	5000
														3WN19	6300

Rated currents I_n as a function of ambient temperature **Coupling function**														3WN	
Non-ventilated							Ventilated								
20° [A]	25° [A]	30° [A]	**35° [A]**	40° [A]	45° [A]	50° [A]	20° [A]	25° [A]	30° [A]	**35° [A]**	40° [A]	45° [A]	50° [A]	Type	Rated current [A]
630	630	630	**630**	630	630	630	630	630	630	**630**	630	630	630	3WN60	630
800	800	800	**800**	800	800	800	800	800	800	**800**	800	800	800	3WN61	800
1000	1000	1000	**1000**	1000	1000	1000	1000	1000	1000	**1000**	1000	1000	1000	3WN62	1000
1250	1250	1250	**1250**	1220	1190	1150	1250	1250	1250	**1250**	1250	1250	1250	3WN63	1250
1590	1540	1490	**1440**	1390	1340	1280	1600	1600	1600	**1600**	1600	1580	1520	3WN64	1600
2000	2000	2000	**2000**	2000	1950	1890	2000	2000	2000	**2000**	2000	2000	2000	3WN65	2000
2500	2500	2480	**2420**	2350	2290	2220	2500	2500	2500	**2500**	2500	2500	2460	3WN66	2500
2590	2530	2470	**2400**	2340	2270	2210	3000	2930	2860	**2790**	2710	2640	2560	3WN67	3200
3010	2940	2870	**2800**	2720	2650	2570	3200	3200	3200	**3120**	3030	2950	2860	3WN17	3200
3310	3230	3160	**3080**	2990	2910	2820	3890	3800	3710	**3620**	3520	3420	3320	3WN18	4000
3840	3750	3660	**3570**	3470	3370	3270	5170	5050	4930	**4810**	4680	4550	4410	3WN19	5000

Rated Currents for 2 Circuit-Breakers/Cubicle with 3WN

With cubicle type 2 ACB/cubicle the rated currents are specified according the installation position of the circuit-breaker.

Rated currents I_n as a function of ambient temperature **Incoming feeder or outgoing feeder or coupling function**														3WN	
Non-ventilated							Ventilated								
20° [A]	25° [A]	30° [A]	**35° [A]**	40° [A]	45° [A]	50° [A]	20° [A]	25° [A]	30° [A]	**35° [A]**	40° [A]	45° [A]	50° [A]	Type	Rated current [A]
Installation position top															
1790	1750	1710	**1660**	1620	1570	1530	2000	2000	2000	**2000**	1990	1940	1880	3WN65	2000
2060	2010	1960	**1910**	1860	1810	1750	2470	2410	2350	**2290**	2230	2170	2100	3WN66	2500
Installation position below															
1910	1870	1820	**1770**	1730	1680	1630	2000	2000	2000	**2000**	1970	1920	1860	3WN65	2000
2280	2220	2170	**2120**	2060	2000	1940	2500	2500	2500	**2500**	2490	2420	2350	3WN66	2500

Rated Currents for 3 Circuit-Breakers/Cubicle with 3WN

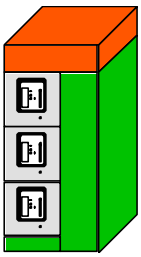
With cubicle type 3 ACB/cubicle the rated currents are specified according the installation position of the circuit-breaker.

ATTENTION: Consider the rated current of the vertical busbars while projecting the cubicle!

Rated currents I_n with **vertical busbars** as a functions of ambient temperature and installation position														Installation position
non-ventilated							ventilated							
20° [A]	25° [A]	30° [A]	**35°** [A]	40° [A]	45° [A]	50° [A]	20° [A]	25° [A]	30° [A]	**35°** [A]	40° [A]	45° [A]	50° [A]	
3175	3100	3025	**2950**	2870	2790	2705	4090	3995	3900	**3800**	3700	3595	3485	S below, middle, top
2260	2210	2155	**2100**	2045	1985	1925	2905	2840	2770	**2700**	2630	2555	2480	S below, middle

Rated currents I_n as a function of ambient temperature														**3WN**	
Installation position optional															
non-ventilated							ventilated								
20° [A]	25° [A]	30° [A]	**35°** [A]	40° [A]	45° [A]	50° [A]	20° [A]	25° [A]	30° [A]	**35°** [A]	40° [A]	45° [A]	50° [A]	Type	Rated current [A]
630	630	630	**630**	630	630	600	630	630	630	**630**	630	630	630	3WN60	630
800	800	800	**800**	800	780	750	800	800	800	**800**	800	795	765	3WN61	800
1000	1000	1000	**1000**	1000	1000	1000	1000	1000	1000	**1000**	1000	1000	1000	3WN62	1000
Installation position top															
1160	1135	1110	**1080**	1050	1020	990	1250	1250	1250	**1250**	1215	1180	1145	3WN63	1250
1160	1135	1110	**1080**	1050	1020	990	1345	1315	1280	**1250**	1215	1180	1145	3WN64	1600
Installation position middle															
1185	1155	1130	**1100**	1070	1040	1010	1250	1250	1250	**1250**	1250	1250	1250	3WN63	1250
1185	1155	1130	**1100**	1070	1040	1010	1455	1420	1385	**1350**	1315	1275	1240	3WN64	1600
Installation position below															
1345	1315	1280	**1250**	1215	1180	1145	1345	1315	1280	**1250**	1215	1180	1145	3WN63	1250
1505	1470	1435	**1400**	1365	1325	1285	1600	1600	1600	**1600**	1555	1515	1470	3WN64	1600

EXAMPLE 1:



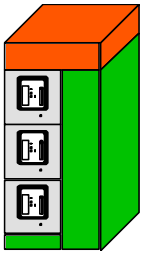
- Ventilated cubicle
- 35°C ambient temperature
- Rated diversity factor **= 1** (according to IEC 60439-1, item 4.7)

ACB type	**Cubicle rated current**
3WN64	1100 A
3WN64	1100 A
3WN64	1600 A

2700 A (S below, middle **max. 2700 A**)

3800 A (Σ below, middle, top **max. 3800 A**)

EXAMPLE 2:



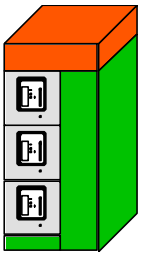
- Ventilated cubicle
- 35°C ambient temperature
- Rated diversity factor **= 1** (according to IEC 60439-1, item 4.7)

ACB type	**Cubicle rated current**
3WN63	1250 A
3WN63	1250 A
3WN63	1250 A

2500 A (S below, middle **max. 2700 A**)

3750 A (Σ below, middle, top **max. 3800 A**)

EXAMPLE 3:



- Ventilated cubicle
- 35°C ambient temperature
- Rated diversity factor **= 0,9** (according to IEC 60439-1, item 4.7)

ACB type	**Cubicle rated current**
3WN64	1250 A
3WN64	1350 A
3WN64	1600 A

2950 A x 0,9= 2655 A (S below, middle **max. 2700 A**)

4200 A x 0,9 = 3780 A (Σ below, middle, top **max. 3800 A**)

Space Requirement for 3 and 4 pole 3WN Circuit-Breakers

Type	3WN60	3WN61	3WN62	3WN63	3WN64	3WN65	3WN66	3WN67	3WN17 3-pol.	3WN18 3-pol.	3WN18 4-pol.	3WN19	3WN19 3-pol.
Rated current [A]	630	800	1000	1250	1600	2000	2500	3200	3200	4000	4000	5000	6300
1 circuit-breaker / cubicle with 3WN Cable connection front													
Cubicle width [mm]	600					800			800		1000 (coupling 1000 + 400)		
Cubicle depth [mm]	up to 2 x ... x 10 600 (800/1000)* up to 3 x ... x 10 800 (1000/1200)*								- 800 (1000/1200)*				
Cable connection rear													
Cubicle width [mm]	600					800			800		1000 (coupling 1000 + 400)		
Cubicle depth [mm]	up to 2 x ... x 10 1000 up to 3 x ... x 10 1200								- 1200				
2 circuit-breakers / cubicle with 3WN Cable connection front													
Cubicle width [mm]	-					1000			-				
Cubicle depth [mm]	up to 3 x ... x 10 -					800 (1000/1200)*			-				
Cable connection rear													
Cubicle width [mm]	-					800			-				
Cubicle depth [mm]	up to 3 x ... x 10 -					1200			-				
3 circuit-breakers / cubicle with 3WN Cable connection front													
Cubicle width [mm]	1000/1200					-			-				
Cubicle depth [mm]	up to 3 x ... x 10 800 (1000/1200)*					-			-				
Cable connection rear													
Cubicle width [mm]	600					-			-				
Cubicle depth [mm]	up to 3 x ... x 10 1200					-			-				

*) Values in brackets are valid for cable incoming feeder from top

Rated Currents for 1 Circuit-Breaker/Cubicle with 3WL

Rated currents I_n depending on ambient temperature **Function incoming supply or outgoing feeder**														3WL	
unventilated							ventilated								
20° [A]	25° [A]	30° [A]	**35° [A]**	40° [A]	45° [A]	50° [A]	20° [A]	25° [A]	30° [A]	**35° [A]**	40° [A]	45° [A]	50° [A]	Type	Rated current [A]
630	630	630	**630**	630	630	630	630	630	630	**630**	630	630	630	3WL1106	630
800	800	800	**800**	800	800	800	800	800	800	**800**	800	800	800	3WL1108	800
1000	1000	980	**955**	930	900	875	1000	1000	1000	**1000**	1000	1000	1000	3WL1110	1000
1250	1220	1190	**1160**	1130	1100	1060	1250	1250	1250	**1250**	1250	1250	1240	3WL1112	1250
1580	1550	1510	**1470**	1430	1390	1350	1600	1600	1600	**1600**	1600	1600	1600	3WL1116	1600
1910	1870	1830	**1780**	1730	1680	1630	2000	2000	2000	**2000**	2000	1950	1890	3WL1220	2000
2210	2160	2100	**2050**	2000	1940	1880	2500	2500	2500	**2440**	2380	2310	2240	3WL1225	2500
2530	2470	2410	**2350**	2290	2220	2160	3010	2940	2870	**2800**	2720	2650	2570	3WL1232	3200
3760	3680	3590	**3500**	3400	3310	3210	4000	4000	4000	**4000**	4000	3930	3810	3WL1340	4000
3860	3770	3680	**3590**	3490	3400	3290	4740	4630	4520	**4400**	4280	4160	4040	3WL1350	5000
4860	4750	4630	**4520**	4390	4270	4140	5720	5610	5500	**5390**	5280	5160	5040	3WL1363	6300

Rated currents I_n depending on ambient temperature **Function longitudinal coupler**														3WL	
unventilated							ventilated								
20° [A]	25° [A]	30° [A]	**35° [A]**	40° [A]	45° [A]	50° [A]	20° [A]	25° [A]	30° [A]	**35° [A]**	40° [A]	45° [A]	50° [A]	Type	Rated current [A]
630	630	630	**630**	630	630	630	630	630	630	**630**	630	630	630	3WL1106	630
800	800	800	**800**	800	785	760	800	800	800	**800**	800	800	800	3WL1108	800
895	875	850	**830**	810	785	760	1000	1000	1000	**1000**	1000	1000	995	3WL1110	1000
1180	1160	1130	**1100**	1070	1040	1010	1250	1250	1250	**1250**	1250	1250	1250	3WL1112	1250
1540	1510	1470	**1430**	1390	1360	1310	1600	1600	1600	**1600**	1600	1600	1590	3WL1116	1600
2000	1980	1920	**1850**	1780	1710	1640	2000	2000	2000	**2000**	2000	2000	1970	3WL1220	2000
2280	2210	2140	**2070**	1990	1910	1830	2500	2500	2500	**2480**	2390	2300	2200	3WL1225	2500
2470	2400	2320	**2240**	2160	2080	1990	3140	3050	2950	**2850**	2750	2640	2530	3WL1232	3200
3510	3430	3350	**3270**	3180	3090	3000	4200	4100	4000	**3900**	3800	3690	3580	3WL1340	4000
3790	3700	3610	**3520**	3430	3330	3230	4980	4870	4750	**4630**	4510	4380	4250	3WL1350	5000
4570	4460	4350	**4240**	4130	4010	3890	5570	5440	5310	**5180**	5040	4900	4750	3WL1363	6300

Rated currents for 2 circuit-breakers/cubicle with 3WL

With cubicle type 2 ACB/cubicle the rated currents are specified according to the installation position of the circuit-breaker.
Attention: max. Icw = 65 kA,1s at cable connection rear

Rated currents I_n depending on ambient temperature **Function incoming feeder or outgoing feeder**														3WL	
Unventilated							ventilated								
20° [A]	25° [A]	30° [A]	**35° [A]**	40° [A]	45° [A]	50° [A]	20° [A]	25° [A]	30° [A]	**35° [A]**	40° [A]	45° [A]	50° [A]	Type	Rated current [A]
Installation position at top															
1870	1830	1790	**1740**	1690	1650	1600	1960	1910	1870	**1820**	1770	1720	1670	3WL1220	2000
1930	1870	1810	**1750**	1690	1620	1550	2270	2200	2130	**2060**	1990	1910	1830	3WL1225	2500
Installation position below															
1760	1760	1760	**1760**	1710	1660	1620	1840	1840	1840	**1840**	1790	1740	1690	3WL1220	2000
2200	2200	2200	**2200**	2140	2080	2020	2310	2310	2310	**2310**	2250	2190	2120	3WL1225	2500

Rated currents I_n depending on ambient temperature **Function incoming feeder or outgoing feeder and coupler**														3WL	
Not ventilated							ventilated								
20° [A]	25° [A]	30° [A]	**35° [A]**	40° [A]	45° [A]	50° [A]	20° [A]	25° [A]	30° [A]	**35° [A]**	40° [A]	45° [A]	50° [A]	Type	Rated current [A]
Installation position at top (coupler)															
1780	1740	1700	**1650**	1610	1570	1520	1860	1810	1780	**1730**	1680	1630	1590	3WL1220	2000
1830	1780	1720	**1660**	1610	1540	1470	2160	2090	2020	**1960**	1890	1810	1740	3WL1225	2500
Installation position below (incoming feeder or outgoing feeder)															
1670	1670	1670	**1670**	1620	1580	1540	1750	1750	1750	**1750**	1700	1650	1610	3WL1220	2000
2090	2090	2090	**2090**	2030	1980	1920	2190	2190	2190	**2190**	2140	2080	2010	3WL1225	2500

Rated currents for 3 circuit-breakers/cubicle with 3WL

No test results are available for 3WL yet; The rated currents were taken over from 3WN

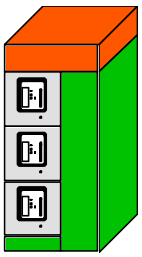
With cubicle type 3 ACB/cubicle the rated currents are specified according the installation position of the circuit-breaker.

ATTENTION: Consider the rated current of the vertical busbars while projecting the cubicle!

Rated currents I_n with **vertical busbars** as a functions of ambient temperature and installation position														Installation position
unventilated							ventilated							
20° [A]	25° [A]	30° [A]	**35° [A]**	40° [A]	45° [A]	50° [A]	20° [A]	25° [A]	30° [A]	**35° [A]**	40° [A]	45° [A]	50° [A]	
3175	3100	3025	**2950**	2870	2790	2705	4090	3995	3900	**3800**	3700	3595	3485	S below, middle, top
2260	2210	2155	**2100**	2045	1985	1925	2905	2840	2770	**2700**	2630	2555	2480	S below, middle

Rated currents I_n depending on ambient temperature **Installation position optional**														**3WL**	
unventilated							ventilated								
20° [A]	25° [A]	30° [A]	**35° [A]**	40° [A]	45° [A]	50° [A]	20° [A]	25° [A]	30° [A]	**35° [A]**	40° [A]	45° [A]	50° [A]	Type	Rated current [A]
630	630	630	**630**	630	630	600	630	630	630	**630**	630	630	630	3WL1106	630
800	800	800	**800**	800	780	750	800	800	800	**800**	800	795	765	3WL1108	800
1000	1000	1000	**1000**	1000	1000	1000	1000	1000	1000	**1000**	1000	1000	1000	3WL1110	1000
Installation position top															
1160	1135	1110	**1080**	1050	1020	990	1250	1250	1250	**1250**	1215	1180	1145	3WL1112	1250
1160	1135	1110	**1080**	1050	1020	990	1345	1315	1280	**1250**	1215	1180	1145	3WL1116	1600
Installation position middle															
1185	1155	1130	**1100**	1070	1040	1010	1250	1250	1250	**1250**	1250	1250	1250	3WL1112	1250
1185	1155	1130	**1100**	1070	1040	1010	1455	1420	1385	**1350**	1315	1275	1240	3WN1116	1600
Installation position below															
1345	1315	1280	**1250**	1215	1180	1145	1345	1315	1280	**1250**	1215	1180	1145	3WL1112	1250
1505	1470	1435	**1400**	1365	1325	1285	1600	1600	1600	**1600**	1555	1515	1470	3WL1116	1600

EXAMPLE 1:



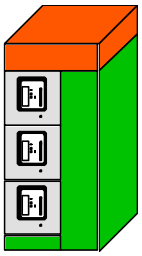
- ventilated cubicle
- 35°C ambient temperature
- Rated diversity factor **= 1** (IEC 60439-1 item 4.7)

ACB type	**Rated current in cubicle**
3WL1116	1100 A
3WL1116	1100 A
3WL1116	1600 A

2700 A (S below, middle **max. 2700 A**)

3800 A (Σ below, middle, top **max. 3800 A**)

EXAMPLE 2:



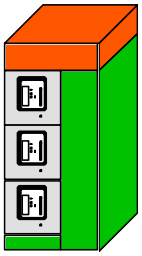
- ventilated cubicle
- 35°C ambient temperature
- Rated diversity factor **= 1** (according to IEC 60439-1 item 4.7)

ACB type	**Rated current in cubicle**
3WL1112	1250 A
3WL1112	1250 A
3WL1112	1250 A

2500 A (S below, middle **max. 2700 A**)

3750 A (S below, middle, top **max. 3800 A**)

EXAMPLE 3:



- ventilated cubicle
- 35°C Ambient temperature
- Rated diversity factor **= 0,9** (according to IEC 60439-1 item 4.7)

ACB type	**Rated current in cubicle**
3WL1116	1250 A
3WL1116	1350 A
3WL1116	1600 A

2950 A x 0,9= 2655 A (S below, middle **max. 2700 A**)

4200 A x 0,9 = 3780 A (S below, middle, top **max. 3800 A**)

Space Requirement for 3 and 4 pole 3WL Circuit-Breakers

Type	3WL 1106	3WL 1108	3WL 1110	3WL 1112	3WL 1116	3WL 1220	3WL 1225	3WL 1232	3WL 1340	3WL 1350	3WL 1363
Rated current [A]	630	800	1000	1250	1600	2000	2500	3200	4000	5000	6300
1 circuit-breaker cubicle with 3WL Cable connection front											
Cubicle width [mm]	400[1) 2)] / 600					600[1) 2)] / 800			800[1) 2)] / 1000[2)]	1000[2)]	1000[2)] (BC = 1000 + 400)
Cubicle depth [mm]	up to 2 x ... x 10 up to 3 x ... x 10	600 (800/1000)* 800 (1000/1200)*							- 800 (1000/1200)*		- 800 (1000/1200)**
Cable connection rear											
Cubicle width [mm]	400[1) 2)] / 600					600[1) 2)] / 800			800[1) 2)] / 1000[2)]	1000[2)]	1000[2)] (BC = 1000 + 400)
Cubicle width [mm]	up to 2 x ... x 10 up to 3 x ... x 10	1000 1200							- 1200		
2 circuit-breakers / cubicle with 3WL Cable connection front											
Cubicle width [mm]	-					800 / 1000 in planning			-		
Cubicle depth [mm]	up to 3 x ... x 10	-				800 (1000/1200)*			-		
Cable connection rear											
Cubicle width [mm]	-					600[1)] / 800			-		
Cubicle depth [mm]	up to 3 x ... x 10	-				1200			-		
3 circuit-breakers / cubicle with 3WL Cable connection front											
Cubicle width [mm]	1000/1200					-			-		
Cubicle depth [mm]	up to 3 x ... x 10	800 (1000/1200)*				-			-		
Cable connection rear											
Cubicle width [mm]	600					-			-		
Cubicle depth [mm]	up to 3 x ... x 10	1200				-			-		

*) Values in brackets are valid for cable incoming feeder from top

**) Values in brackets are valid for cable incoming feeder from top; busbar connection from top in cubicle depth of 1000 mm available on request

[1]) only for 3 pole circuit-breaker

[2]) Mutual mechanical interlocking devices from circuit-breakers is not possible

Caution: The change of fixed-mounted circuit breakers is difficult for the following cubicle width, when the cubicle access is not possible side or rear.

Type	Cubicle width mm
3WL11	400
3WL12	600
3WL13	800 / 1000

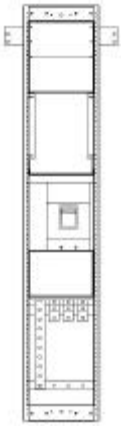
General

The circuit-breaker systems with Sentron VL is exclusive deployed for feeding the switch-gear as well as for outgoing feeders of 630 - 1600 A.

Structure and Functions

The circuit-breaker/cubicle with Sentron VL is built analog the circuit-breaker/cubicle 3W., i.e. it is partitioned in Cross connecting Segment, Accessory Section, Central Compartment and Cable connecting Segment.

Cable connection front- and back
630 A - 1600 A



400 mm
FCB1

ψ Cross-wiring compartment (optional)

ψ Auxiliary compartment

ψ Switching device Compartment

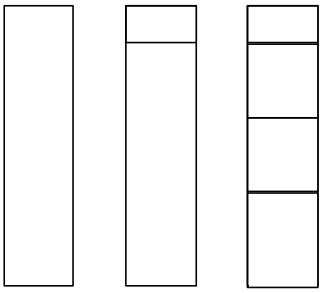
ψ Cable connecting Compartment

Forms of internal separation / Doors

Depending on form of partition inside, the following door-types are available:

Form 1 Form 2 Form 4b

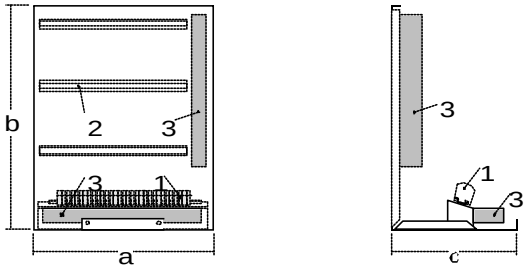
unventilated ≤ IP54
ventilated ≤ IP42



Auxiliary Compartment

There is a L-vee auxiliary gearbox integrated above the accessory Section.

Structure and Dimensions of the equipment compartment:



1 Terminal blocks
2 Mounting rail
3 Wiring duct

Cubicle width [mm]	a	b	c
400	332	431	355

Central Compartment

The equipment is fixed on a backside equipment support. The following versions are possible:

- 3VL hand drive behind the door (standard)
  * door coupling (insert door cutout)
- fixed motor drive

Cable/Bar Connection Compartment

Width 3½-Leiter [mm²]	Number of lockable cable widths depending on the device type		
	up to 630 A	up to 800 A	up to1600A
up to 240	2	4	6

Rated Currents

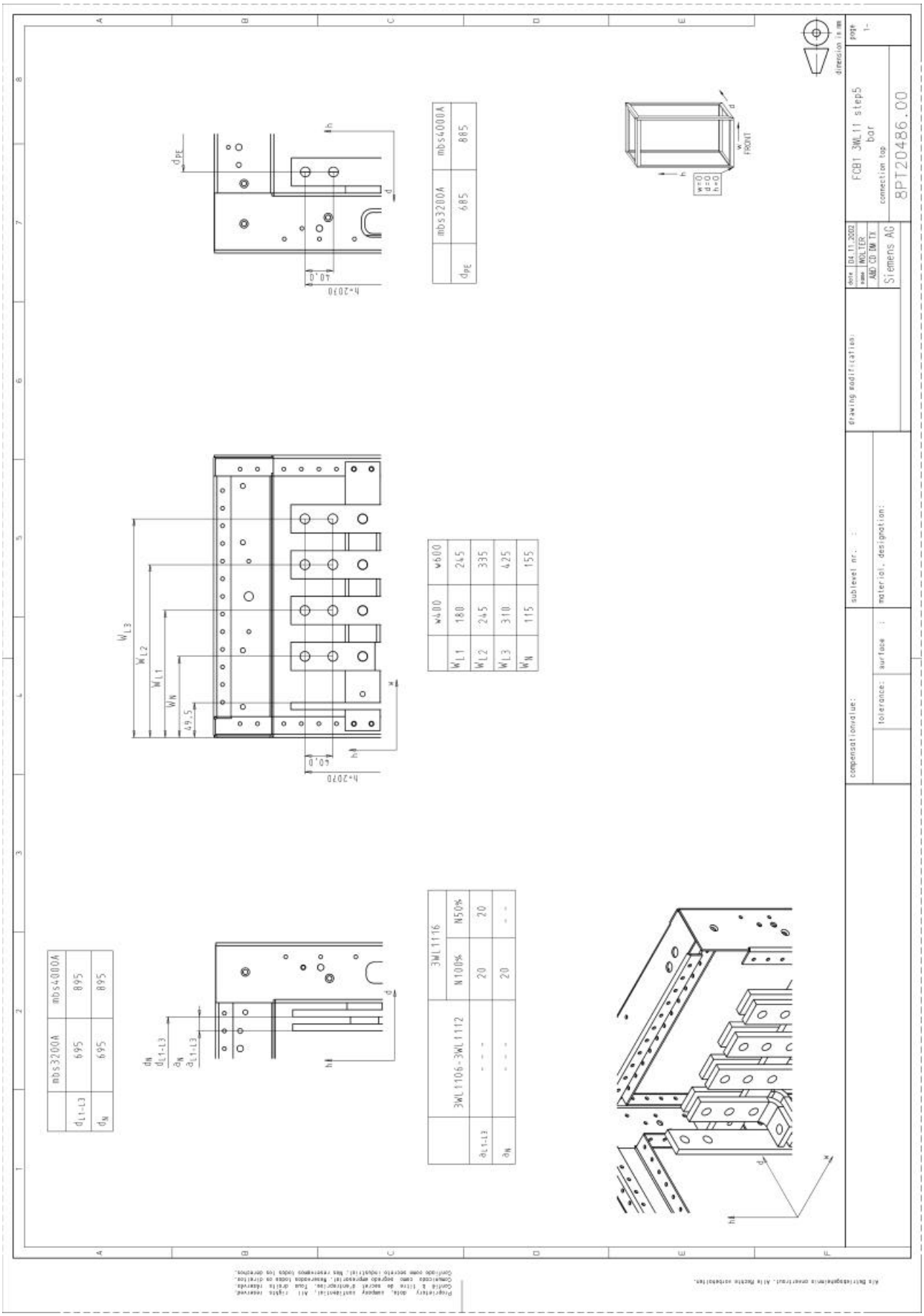
Rated Currents I_n depending on ambient temperature **Function Incoming Feeder or Outgoing Feeder**														**3VL**	
unventilated							ventilated								
20° [A]	25° [A]	30° [A]	**35° [A]**	40° [A]	45° [A]	50° [A]	20° [A]	25° [A]	30° [A]	**35° [A]**	40° [A]	45° [A]	50° [A]	Type	Rated Current [A]
560	545	525	**510**	490	470	450	630	630	610	**590**	570	545	525	3VL5763	630
690	670	650	**630**	605	580	555	800	800	780	**755**	730	700	670	3VL6780	800
1190	1150	1120	**1080**	1040	1000	955	1220	1180	1140	**1100**	1060	1020	980	3VL7712	1250
1260	1220	1180	**1140**	1100	1060	1010	1380	1340	1300	**1260**	1210	1160	1110	3VL8716	1600

Space Requirement for 3 and 4 pole 3 VL Circuit Breakers

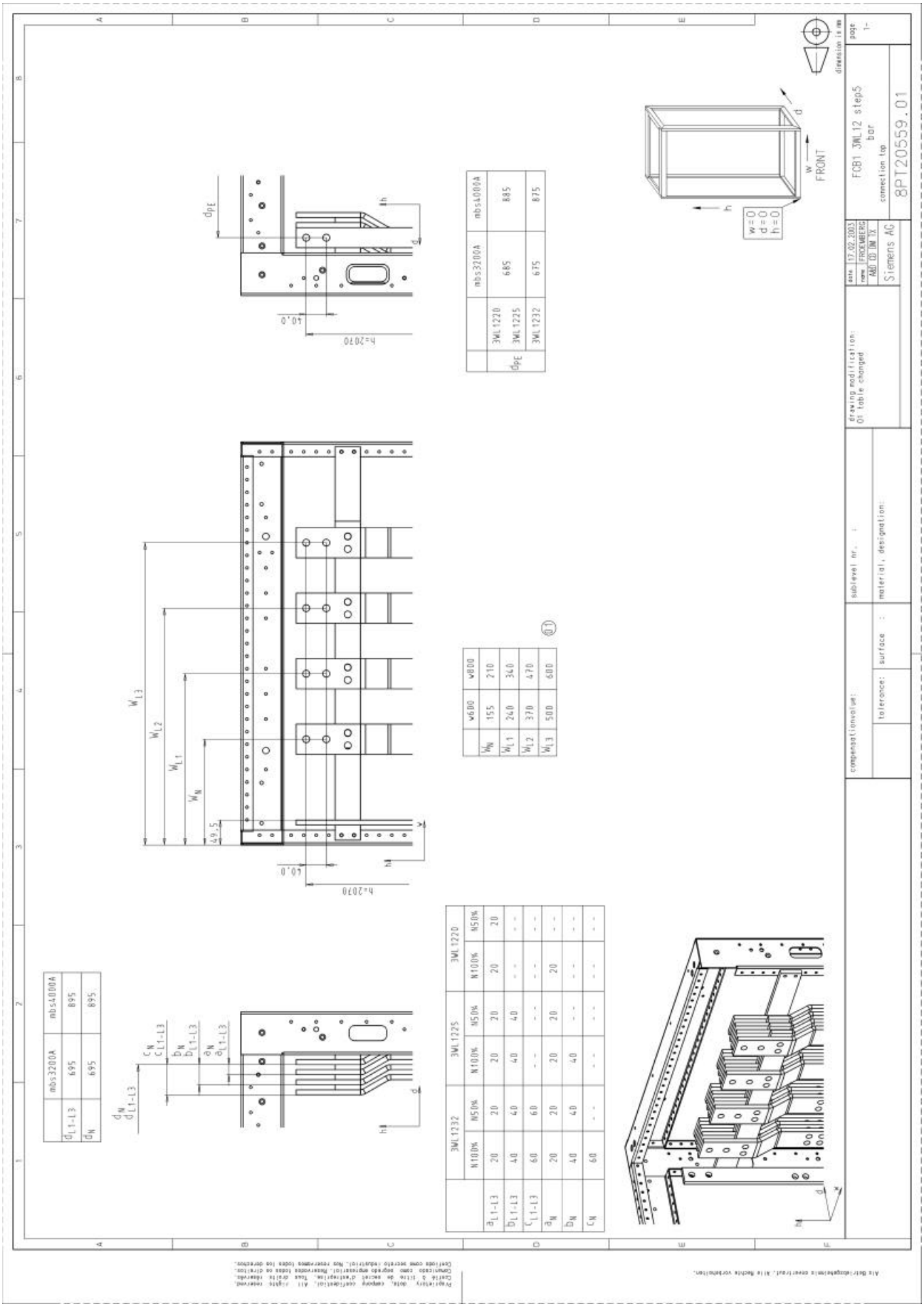
Type	3VL 5763	3VL 6780	3VL 7712	3VL 8716
Rated Current [A]	630	800	1250	1600
1 Circuit Breaker / Cubicle with 3VL **Cable connection front**				
Cubicle width [mm]	400			
Cubicle depth [mm]	up to 2 x ... x 10 up to 3 x ... x 10	600 (800/1000)* 800 (1000/1200)*		
Cable connection back				
Cubicle width [mm]	400			
Cubicle depth [mm]	up to 2 x ... x 10 up to 3 x ... x 10	1000 1200		

*) Values in brackets are valid for cable incoming feeder from top

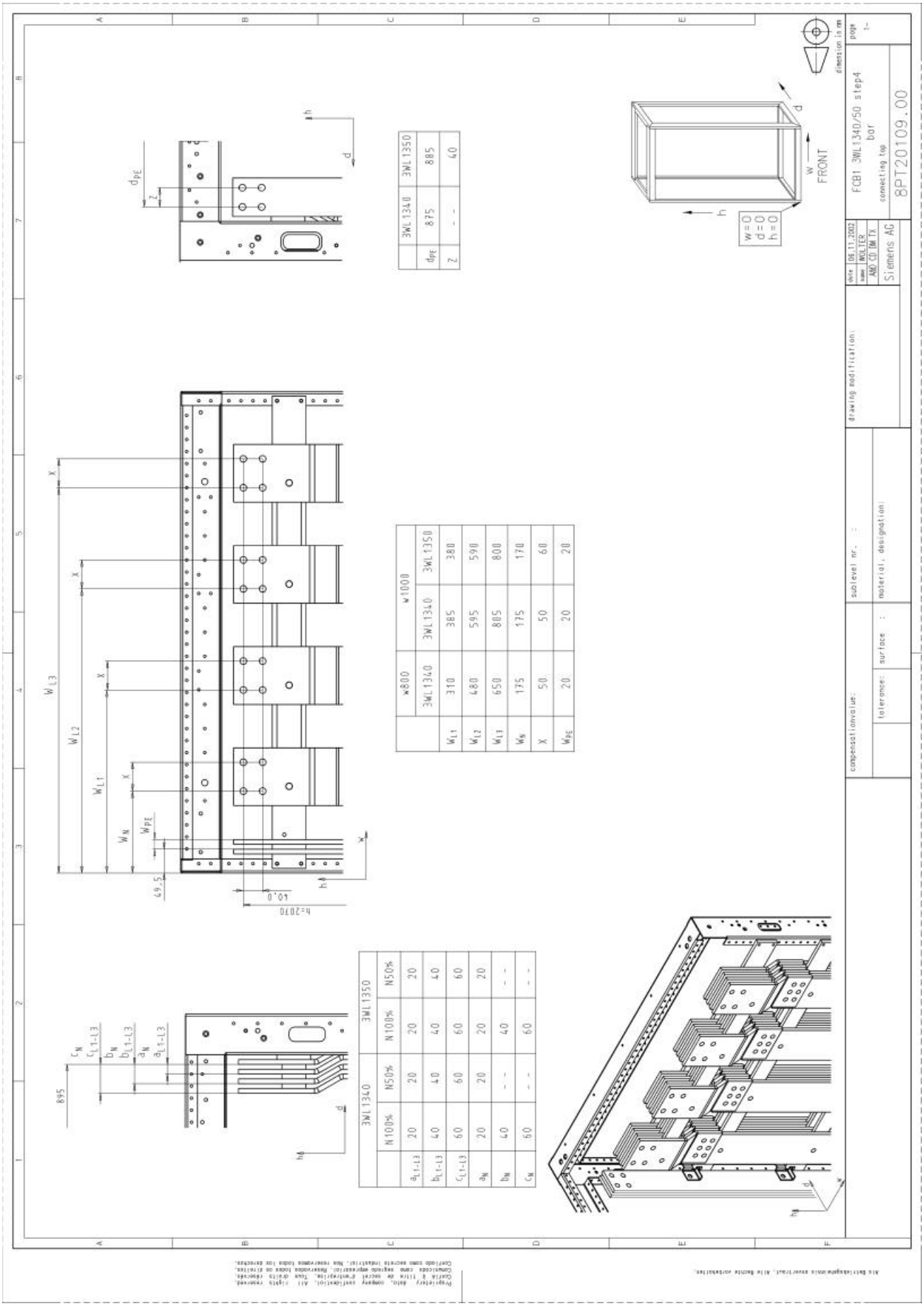
Dimension drawings for bar connection 3WL up to 1600 A



Dimension drawings for bar connection 3WL 2000 A up to 3200 A



Dimension drawings for bar connection 3WL 4000 A and 5000 A



	3WL1340	3WL1350
d_{PE}	875	885
Z	- -	40

	w800	w1000	
	3WL1340	3WL1340	3WL1350
W_{L1}	310	385	380
W_{L2}	480	595	590
W_{L3}	650	805	800
W_N	175	175	170
X	50	50	60
W_{PE}	20	20	20

	3WL1340		3WL1350	
	N100%	N50%	N100%	N50%
a_{L1-L3}	20	20	20	20
b_{L1-L3}	40	40	40	40
c_{L1-L3}	60	60	60	60
a_N	20	20	20	20
b_N	40	- -	40	- -
c_N	60	- -	60	- -

Dimension drawings for bar connection 3WL 6300 A