

CATALOG

WavePro-D

Rack Busway



- Unparalleled safety and protection measures
- Wide range of designs meeting customer's stringent requirements
- Lower installation and maintenance costs

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ABB Busway provides a safe, reliable and cost-effective means of distributing electrical power in commercial and industrial applications.

As an alternative to cable, ABB's busway solutions offer a range of products to ensure safe, flexible, and reliable cost-effective distribution of electrical power.



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Technical Data

Standards	GB 7251.1: LV switchgear and control gear assemblies – Part 1: General rules GB 7251.6: LV switchgear and control gear assemblies – Part 6: Busbar trunking systems (busways)
Test certificates	China CQC
Electrical data	
Rated frequency (fn)	50Hz
Rated current (InA)	160A - 1000A*
Rated short-time withstand current (Icw)	20kA / 1s - 30kA / 1s
Rated peak withstand current (Ipk)	40kA - 60kA
Rated operational voltage (Ue)	690V (without tap-off unit), 400V (with tap-off unit)
Rated insulation voltage (Ui)	1000V (without tap-off unit), 500V (with tap-off unit)
Rated impulse withstand voltage (Uimp)	8kV (with tap-off unit), 4kV (with tap-off unit)
Construction	
Construction	Air insulated busway
Degree of protection - Busway	IP54
Degree of protection - Tap-off unit	IP44 / IP54
Housing	Aluminium alloy
Busbars	Cathode copper Tin plating over full length, silver plating as an option
Service conditions	
Ambient air temperature – Lower limit	Indoor: -5 °C
Ambient air temperature – Upper limit	40 °C
Ambient air temperature – Daily average maximum	35 °C
Maximum relative humidity	Indoor: 50 % at 40 °C
Pollution degree	III
Altitude	≤ 2000m

* 1000A type test report pending



Electrical Data

PE resistance (DC)

(10⁻⁶Ω/m) @ ambient temperature of 20 °C)

No.	Rated Current (A)	DC Resistance
1	160	148.3
2	250	148.3
3	400	111.3
4	500	70.6
5	630	52.4
6	800	44.5
7	1000	34.3

Voltage drop

[Data source: calculation]

Rated Current ¹ A	Rated short-time withstand (I _{cw}) kA/s	Rated peak current (I _{pk}) kA	100% Rated Load/steady state (50Hz), 20°C Amb.									
			20°C DC Resistance (10 ⁻⁶ Ω/m, phase-to-neutral)	Resistance	Reactance	Impedance	Line-to-line voltage drop (V/m) - Concentrated load ²					
								cosφ=0.6	cosφ=0.7	cosφ=0.8	cosφ=0.9	cosφ=1.0
160	20	40	148.1	188.2	85.9	206.9	0.050	0.053	0.056	0.057	0.052	
250			148.1	192.3	85.9	210.6	0.080	0.085	0.089	0.091	0.083	
400			111.1	143.9	64.5	157.7	0.096	0.102	0.107	0.109	0.100	
500	30	63	70.5	96.9	45.8	107.2	0.082	0.087	0.091	0.093	0.084	
630			55.5	77.0	36.1	85.1	0.082	0.087	0.091	0.093	0.084	
800			44.4	64.1	28.9	70.3	0.085	0.091	0.095	0.098	0.089	
1000			34.2	35.7	23.3	42.6	0.069	0.072	0.074	0.073	0.062	

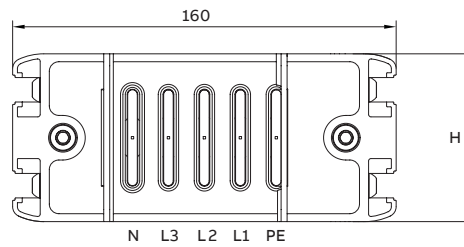
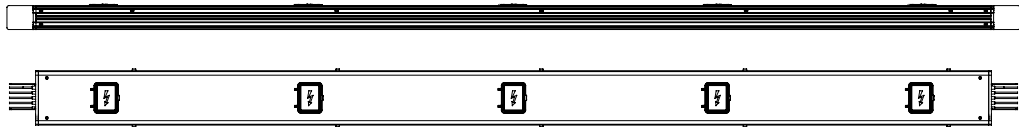
Note:

- With an average ambient temperature of 35°C, the busway can continuously operate at rated current. If the busway is continuously operated at higher ambient temperature, please contact with local ABB office.
- Concentrated load: Voltage drop= $\sqrt{3} I (R\cos\phi + X\sin\phi)$ Distributed load: voltage drop= $[\sqrt{3} I (R\cos\phi + X\sin\phi)]/2$
To determine Actual voltage drop = Voltage Drop from Table x actual load/rated load

Physical Data

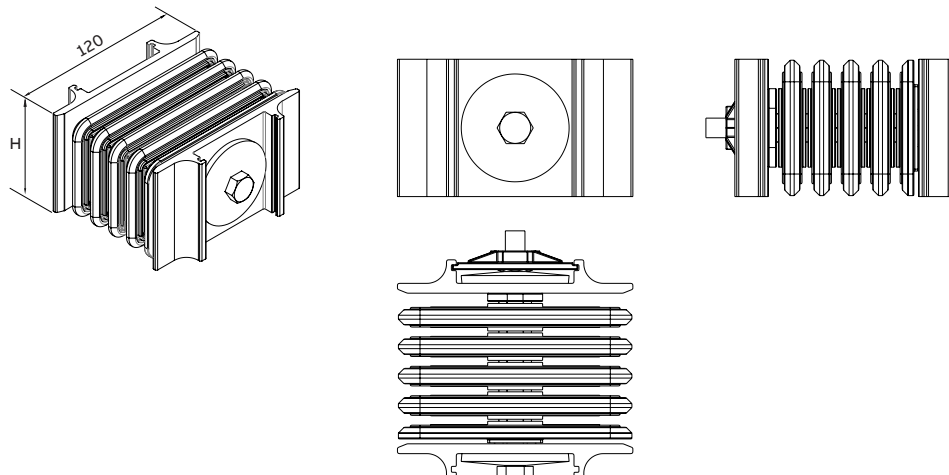
Straight Lengths

Rated Current (A)	W (mm)	H (mm)	Weight (kg/m)
160	160	70	12.1
250			12.1
400			14.0
500		93	20.2
630		130	27.3
800			29.2
1000		160	33.9



Joint

Rated Current (A)	W (mm)	H (mm)
160	120	70
250		
400		
500		93
630		130
800		
1000		160

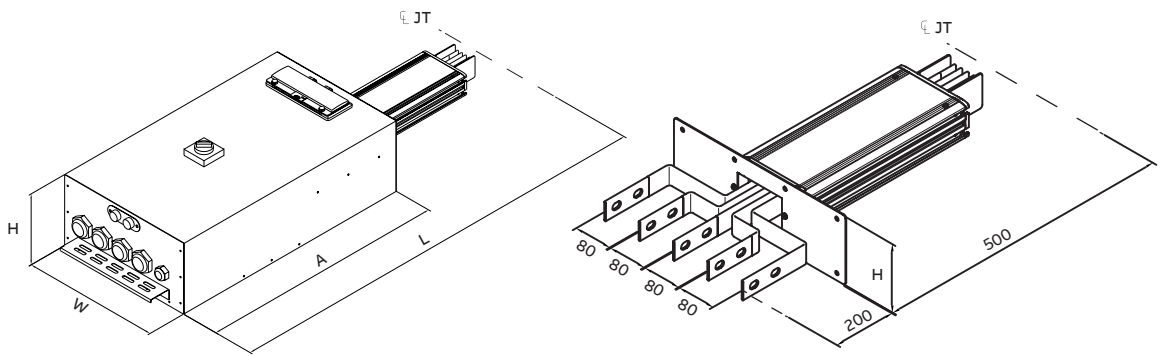


Physical Data

Busway Fittings

Feeder Unit (standard)

Rated Current (A)	L (mm)	W (mm)	H (mm)	A (mm)
160	1100	450	350	800
250				
400				
500	1200	460	400	900
630	1300	500	450	1000
800				
1000	1500	550	500	1200



Feeder Unit without monitoring

Rated Current (A)	L (mm)	W (mm)	H (mm)	A (mm)
160	1100	450	350	800
250				
400				
500	1200	460	350	900
630	1300	500	400	1000
800				
1000	1500	550	500	1200

Feeder Unit without MCCB and Monitoring

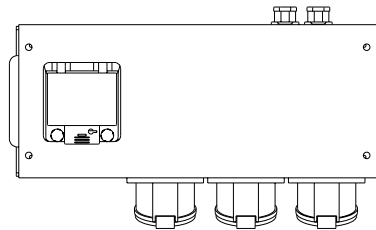
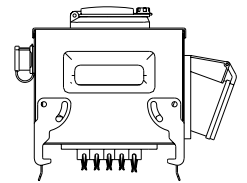
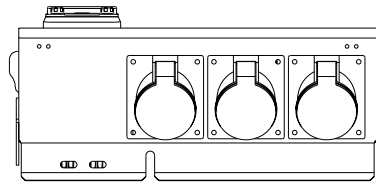
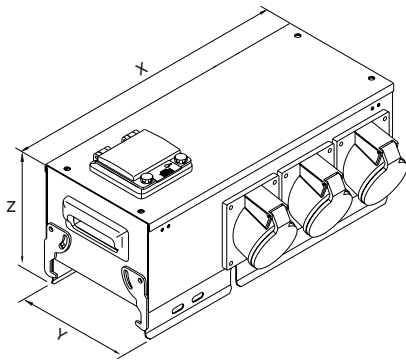
Rated Current (A)	L (mm)	W (mm)	H (mm)	A (mm)
160	700	450	200	400
250				
400				
500	800	460	250	500
630	900	500	300	600
800				
1000				

Physical Data

Tap-off unit

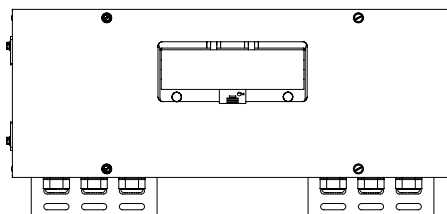
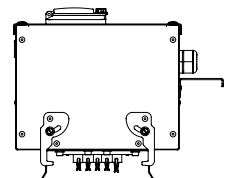
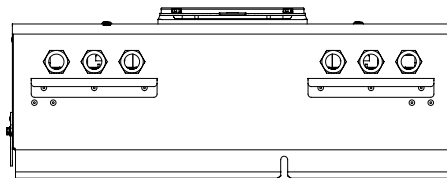
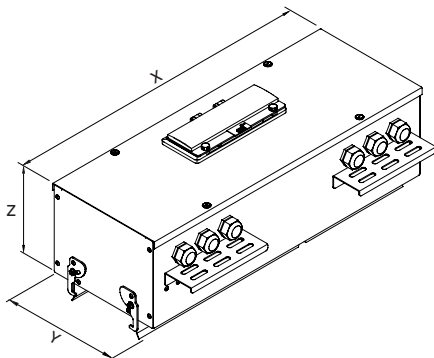
Tap-off unit with socket-outlets

Rated Current (A)	X (mm)	Y (mm)	Z (mm)
10~16	400	220	150
20~32	430	230	160
40~63	500	260	180
80~100	600	350	230

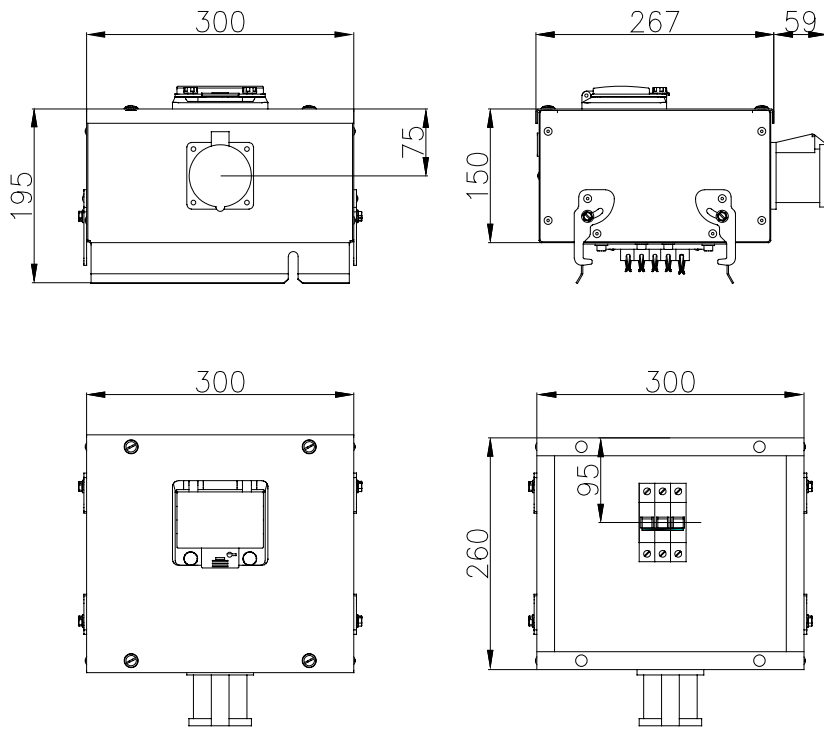


Tap-off unit with cable outgoing

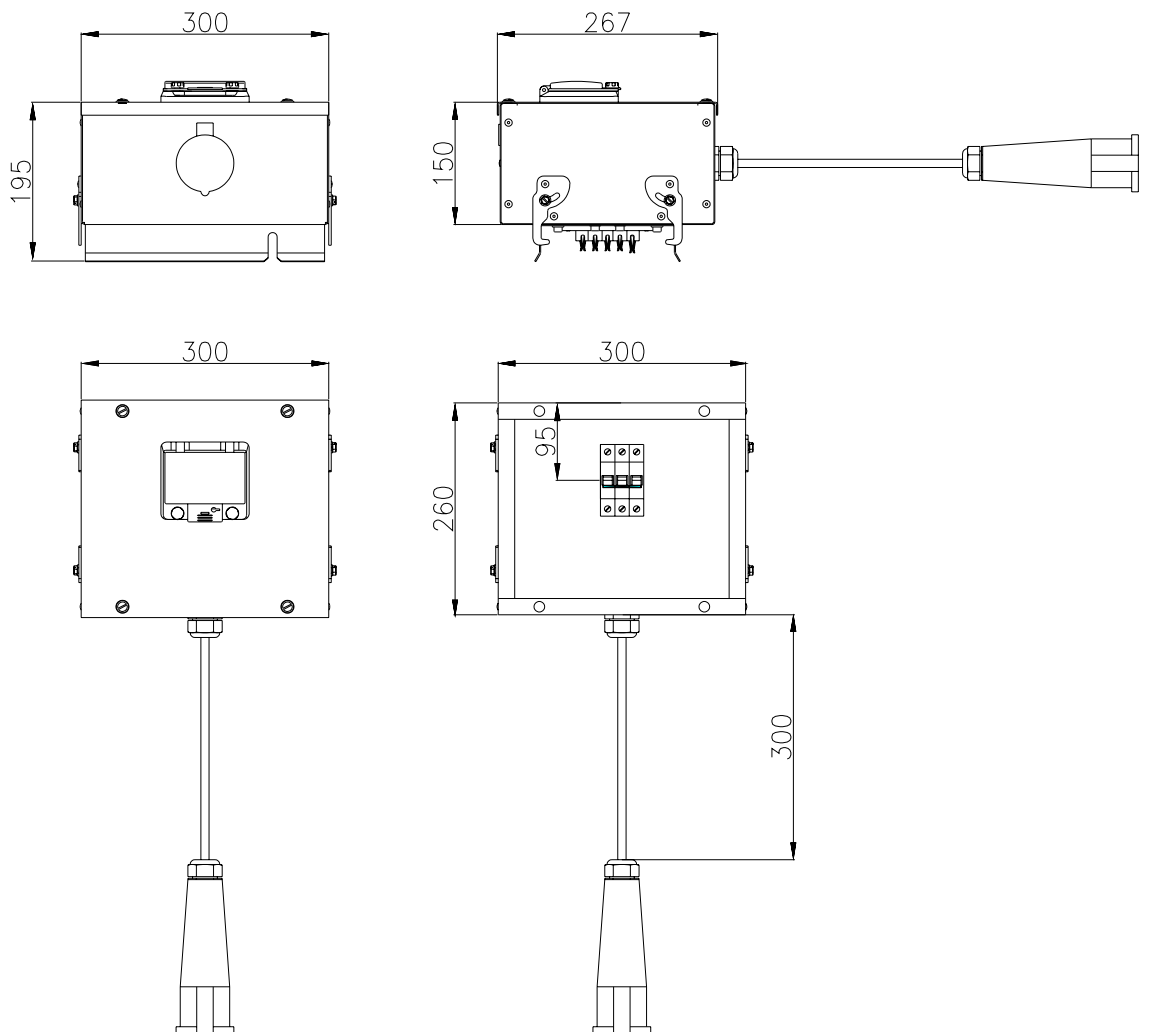
Rated Current (A)	X (mm)	Y (mm)	Z (mm)
10~16	700	260	200
20~32	700	260	200
40~63	700	260	200



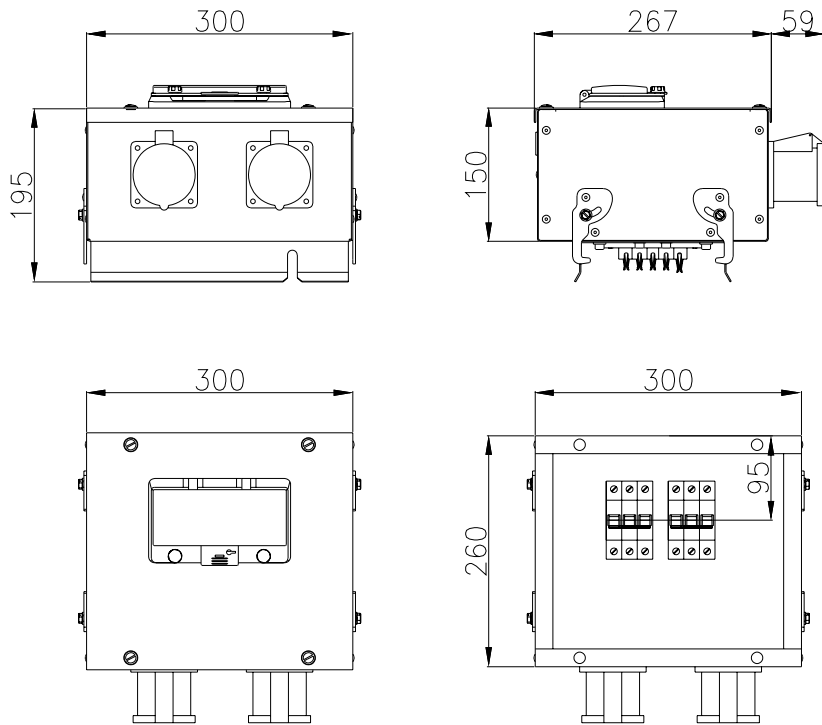
Tap-off unit with 1*32A socket-outlet



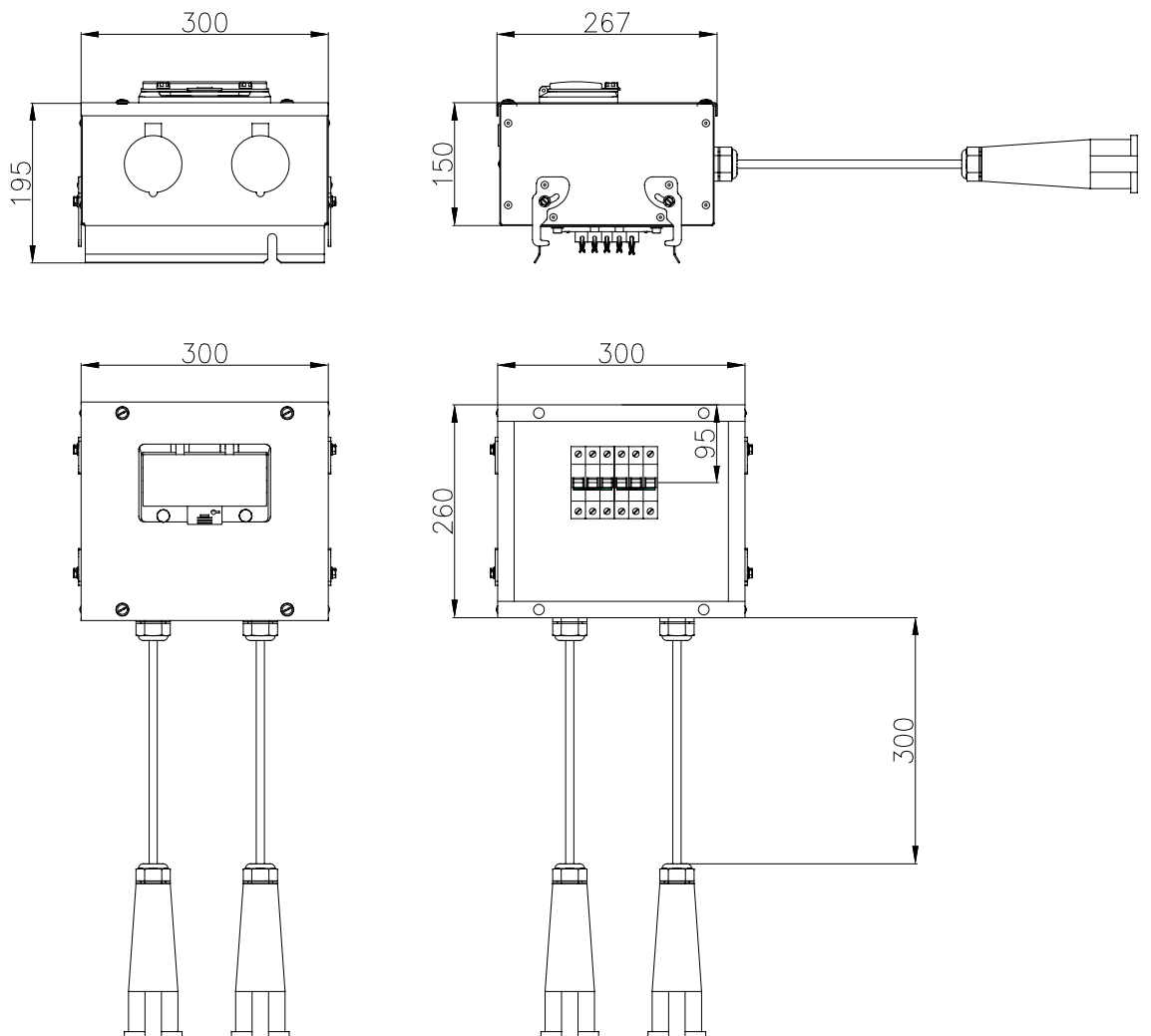
Tap-off unit with 1*32A cable connector



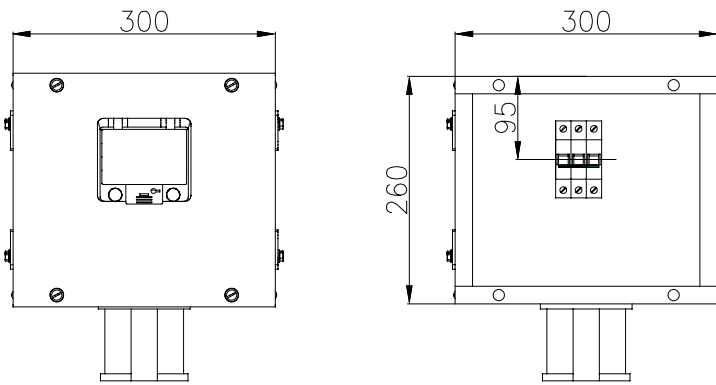
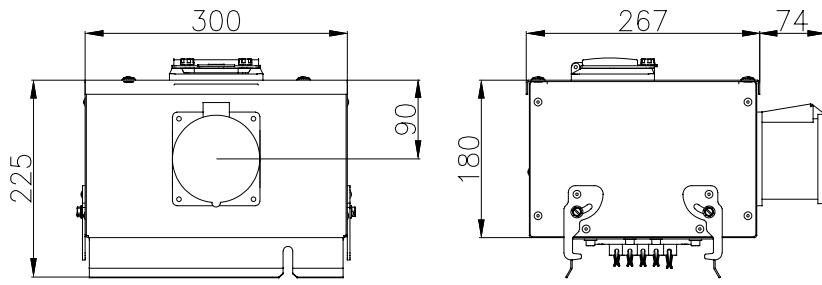
Tap-off unit with 2*32A socket-outlets



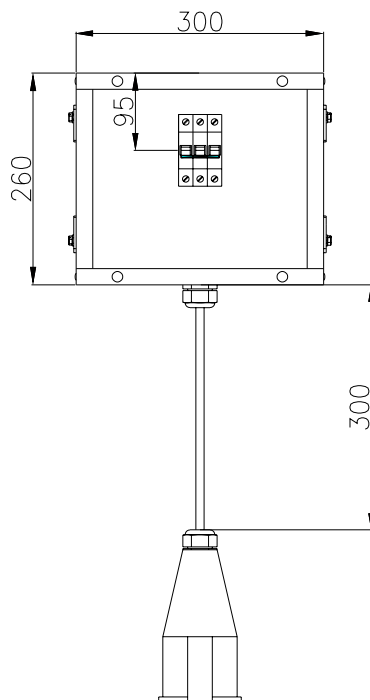
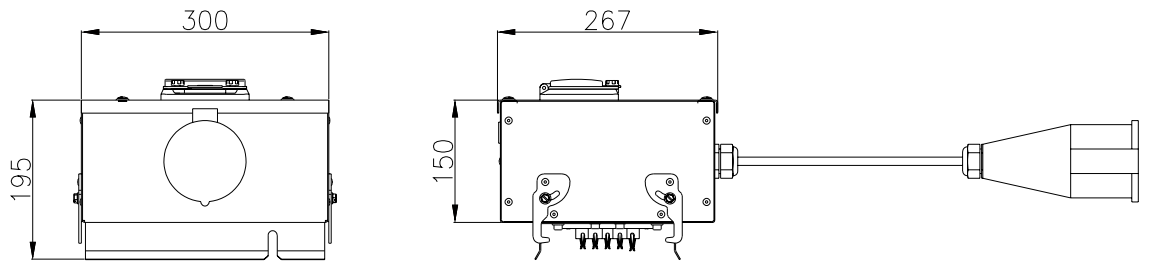
Tap-off unit with 2*32A cable connectors



Tap-off unit with 1*63A socket-outlet



Tap-off unit with 1*63A cable connector



Numbering System

Straight Length & Fittings

NAAA NN N NN NF

Product	Code
WavePro-D	W762

IP degree	Code
IP54	54
NA	00

Part Name	Code
Straight length	SL
Feeder Unit	FU
Elbow	EL
Joint	JT
Plug outlet	OL
Terminal cover	TC

Neutral	PE	Code
100%	100% Internal	53
NA	NA	00

Rated Current	Code
160A	16
250A	25
400A	40
500A	50
630A	63
800A	80
1000A	1K
NA	00

Tap-off Unit

NAAA NN N NNN N F

Product	Code
WavePro-D	W762

Material	Value	Code
Monitoring	Y	M
	N	0

MCB Type	Code
S200	S2

Outgoing Qty.	Code
1	1
2	2
3	3
6	6

Poles	Code
1P	1
3P	3

Rated Current	Code	Rated Current	Code
10A	10	40A	40
16A	16	50A	50
20A	20	63A	63
25A	25	80A	80
32A	32	100A	1H

Outgoing Type	Code
Socket-outlet	S
Cable outgoing	C
Cable connector	I

Feeder Unit

NAAA NN

NN F

Product	Code
WavePro-D	W762

Specifications	Code
MCCB	MC
MCCB & SPD	MS
MCCB & Monitoring	MM
MCCB & SPD & Monitoring	M3
No Requirement	M0
Special Requirements	M1

Material	Value	Code
Rotatory Handle	Y	R
	N	0

Rated Current	Code
160A	16
250A	25
400A	40
500A	50
630A	63
800A	80
1000A	1K

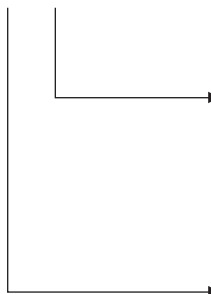
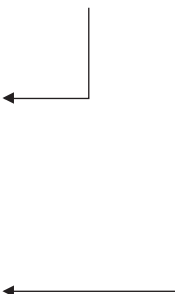




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