



Technical Data Sheet

Compact Stations of Stainless Steel

▪ MCS 2331-28

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1 | Product overview

MCS 2331-28	
Application	Local network substation or customer substation
Metering	LV or MV measurement optional
Operating side	Front side
Internal arc fault qualification	IAC-AB 20kA 1s
Temperature class acc. to IEC 62271-202	15
IP Code	IP 34 D
	Optional: IP 44 D
IK Code	10
Wind load	Wind load zone IV [34 m/s]
Snow load S_k [kN/m ²]	2,0
Roof load q_k [kN/m ²]	2,5

Transformer / Nominal Data

Rated Power	Oil distribution transformer
	max. 1.600 kVA
Load factor Transformer at 30°C Ambient temperature	0,7
Max. dimensions D x L [mm] at optimum distance to the wall 50mm (min. distance to the wall 20 mm)	1.994 x 1.120
Nominal voltage	12/24 kV

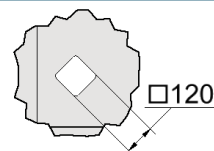
MV-compartment

Configuration MV-Switchgear	RRT RRL	RRRT RRRL	RRT+M(KK) RRL+M(KK)
Optional niche for remote control technology	✓	✓	✗
Max. Height H [mm]	1.896		
Metering on MV side	✓		
Max. number cable entry systems	HSI 150 DFK	4	

LV-compartment

Max. dimensions L x H x D [mm]	2089 x 1900 x 513		
max. number LV HRC strip fuseways	20 (size 1/2/3)		
Max. number cable entry system	HSI 150 DFK	8	
	HSI 90 DF	10	

Above ground cable entry for temporary use [mm] (optional)

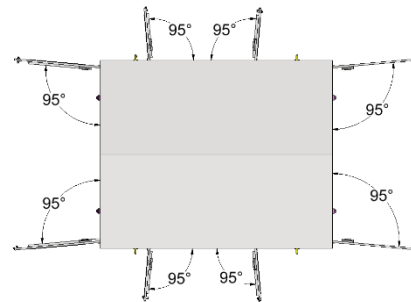




MCS 2331-28	
Options	
Lifting equipment (body)	Swivel ring bolts GK10 M30 x 45
Lifting equipemnt (roof)	Swivel ring bolts GK10 M12 x 23
Equipotential bonding bar	CU/SN 383 x 40 x 5 mounted on isolating supports
Mounting plate for accessories	1000 x 500 für MV-door (e.g. for operating levers)
Above ground cable entry for temporary use	Cable clamp D \varnothing 33-46

Dimensions	
Footprint [m ²]	6,72
Area with doors open [m ²]	18,83
W x L x H [mm]	2.301 x 3.103 x 2.799
W x L [mm] footprint	2.223 x 3.022
W x L with doors open [mm]	ca. 5.218 x 3.610

Floor plans with doors open



Weights		
Empty weight [kgs]	S / F	ca. 1.740
	H	ca. 5.200
max. permissible total weight [kgs]	S / F	10.000
	H	13.500

Product specification		
Enclosure	Stainless steel [1.4301], powder coated	
Partiton walls	Steel sheet [1.0038], galvanised	
Doors	MV: 1 double door LV: 1 double door with ventilation grille Transf.: 2 single doos with ventilations grille	
Basement / cable cellar	Stainless steel [1.4301], powder coated, Cable entries Hauff-Technik System HSI, integrated oil drip pan acc. to §19 WHG (German Water Resources Act): Volumen without transformer: 2.200 dm ³	
Colour	Standard colour:	RAL 7035 light grey
		RAL 6002 leaf green
		RAL 7016 anthracite grey

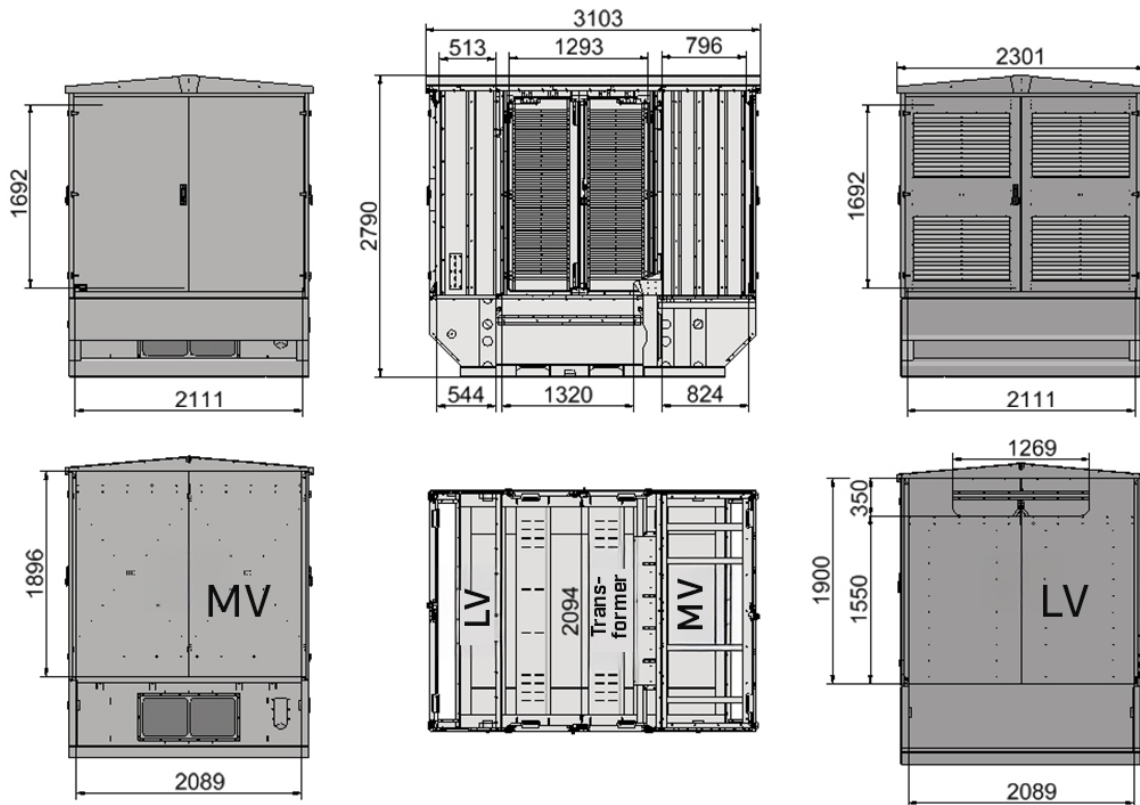




		MCS 2331-28
Basic types		
MCS 2330-24	S	Steel-type: Basement made of stainless steel (Standard)
	F	optional: For installation above ground with removable protection cover for incoming and outgoing cables
	H	Hybrid-type: Basement made of concrete

2 | Technical details

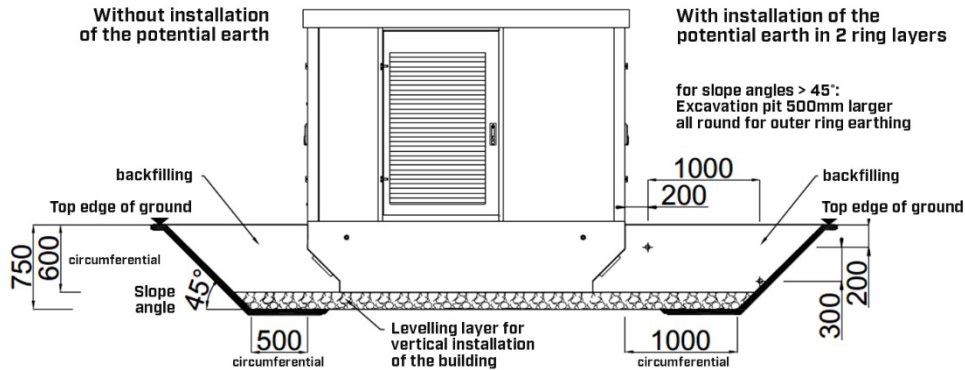
MCS 2331-28 Drawings



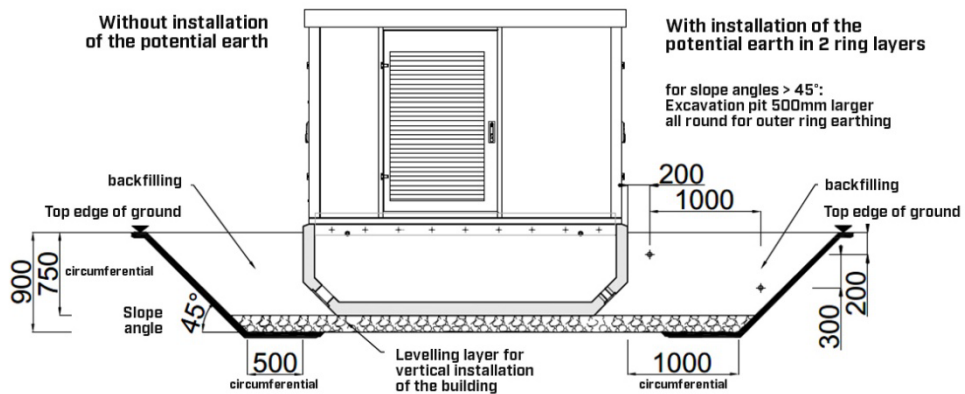


3 | Foundation

MCS 2331-28 S Installation of S-type (basement stainless steel)



MCS 2331-28 H Installation of H-type (basement concrete)



The following must be observed when constructing the excavation pit:

- design the slope angle 45-80° according to DIN 4124 and local soil conditions, plan pit shoring if necessary
- frost-free foundation
- Observe information on the building ground: Bedding modulus min. 20MN/m³
Soil compression ≥ 60 kN/m²
or: according to individual statics for the location
- Observe information on backfill material: Internal angle of friction ≥ 32,5°, Weights up to 20 kN/m³, Wall friction = 0°;
or: according to individual statics for the location
- Soil drainage required in accordance with DIN 4095:
Drainage of the subsoil must always be carried out in cohesive soils and on slopes, regardless of the type of soil; pressing water / seepage water must be prevented to protect the building structure

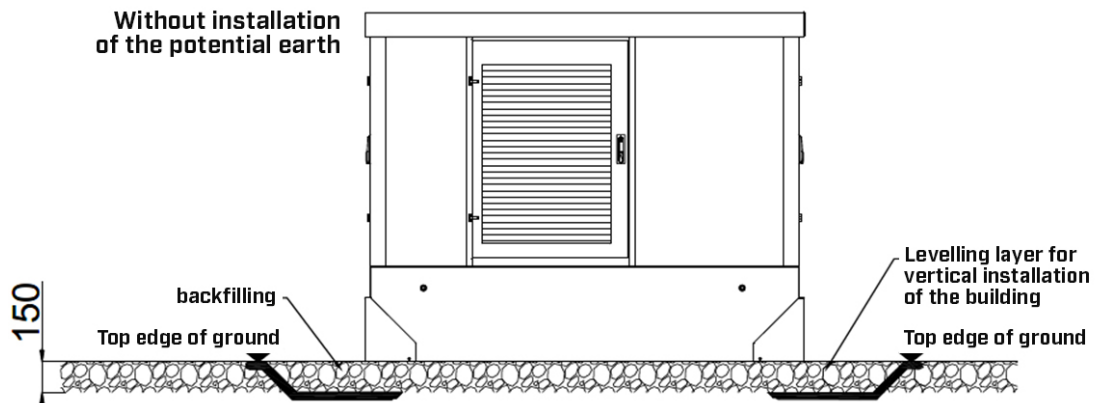
Execution of the levelling layer (Levelling layer level smoothly (!!!)):

- Layer thickness 15 cm:
 1. Gravel at bottom 0-16mm: Thickness 12cm
 2. on top grit 4-6 mm: Thickness 3 cm





MCS 2331-28 F Installation of F-Type (Above-ground installation)



The following must be observed when constructing the excavation pit:

- frost-free foundation
- Observe information on the building ground: Bedding modulus min. 20MN/m^3
Soil compression $\geq 60\text{ kN/m}^2$
- or: according to individual statics for the location
- Observe information on backfill material: Internal angle of friction $\geq 32,5^\circ$, Weights up to 20 kN/m^3 , Wall friction = 0° ;
or: according to individual statics for the location
- Soil drainage required in accordance with DIN 4095:
Drainage of the subsoil must always be carried out in cohesive soils and on slopes, regardless of the type of soil; pressing water / seepage water must be prevented to protect the structure building

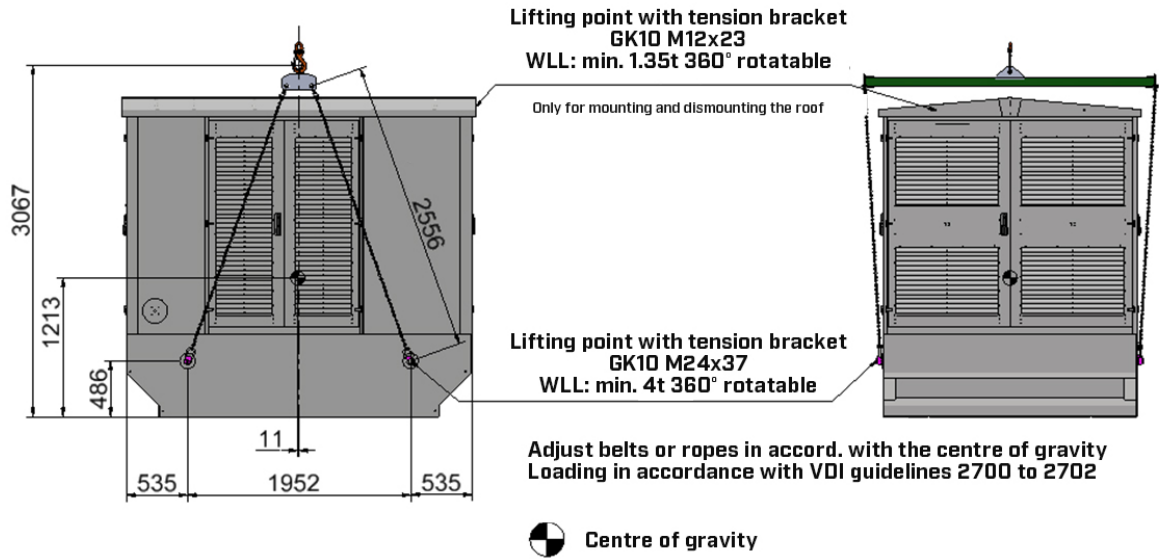
Execution of the levelling layer (Levelling layer level smoothly (!!!)):

- Layer thickness 15 cm:
 1. Gravel at bottom 0-16mm: Thickness 12cm
 2. On top grit 4-6 mm: Thickness 3 cm

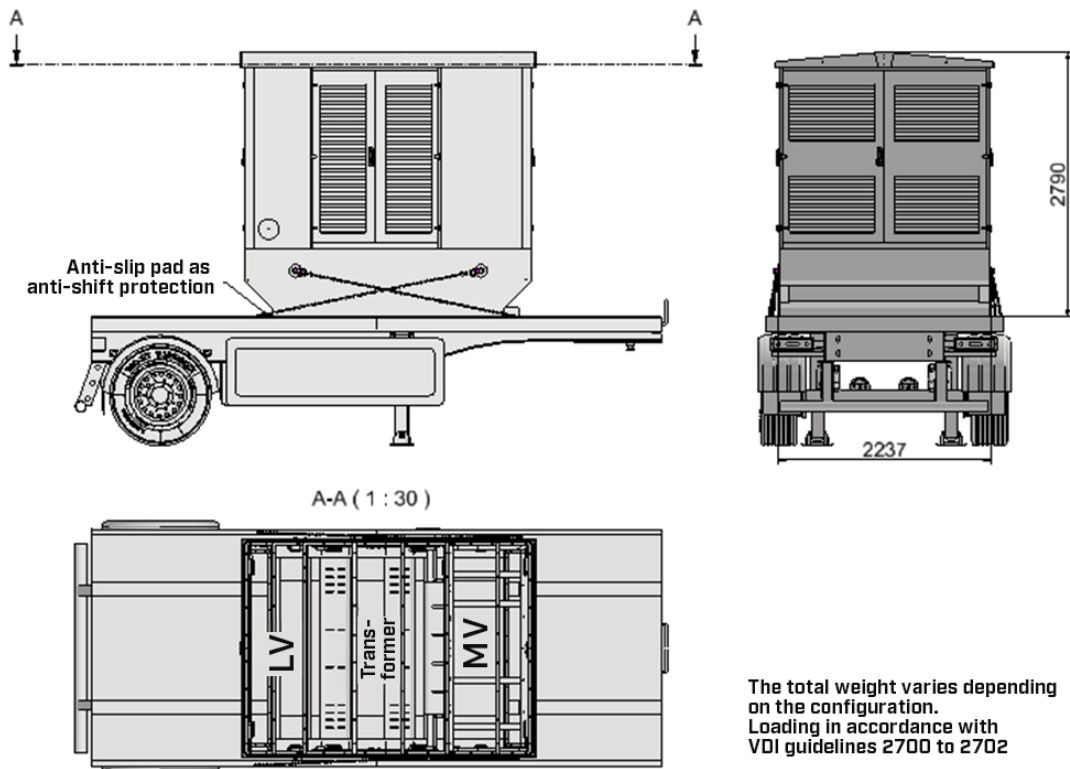




MCS 2331-28 Lifting plan



MCS 2331-28 Transport und loading plan



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