



1. H.V. DIN-Bushings 24kV, 250A
2. H.V. neutral Plug-in bushing 24kV, 250A
3. L.V. DIN-Bushings 1kV, 630A
4. Tap changer on reactor
5. Earthing terminal
6. Oil drain valve
7. Lifting lugs
8. Filling tube
9. Diagram plate
10. Rated plate
11. Neutral to earthing terminal
12. Oil level indicator
13. Tap changer on transformer

kVA	A	B	C	e	k		n		Mass(kg)		CNTRd 315-20,5
					H.V.	L.V.	H.V.	L.V.	Oil	Total	
315	1280	1050	1460	520	275	110	385	178	620	2200	



Three-phase oil-immersed hermetically sealed
distribution transformer with Petersen coil
315kVA, 20.5±2x2.5%/0.41kV/kV, ZNyn11+d

TECHNICAL DATA

1.	Manufacturer		KKM Power d.o.o, Serbia	
2.	Transformer type		Oil-immersed, hermetically sealed	
3.	Product kind		Distribution transformer with Petersen coil within the same tank	
4.	Standard		IEC 60076 (group of standards)	
5.	Product name		CNTRd 315 -20,5	
TRANSFORMER DATA				
6.	Rated power	[kVA]	315	
7.	Number of phases		3	
8.	Rated frequency	[Hz]	50	
9.	Highest voltage of equipment	[kV]	24	
10.	Insulation level	[kV]	LI125 AC50/LI0 AC10	
11.	Rated primary voltage	[kV]	20.5	
12.	Regulation on primary side	Yes/No	Yes	
13.	Rated secondary voltage	[kV]	0.41	
14.	Connection group		ZNyn11+d	
15.	No-load losses	[W]	520	
16.	Load losses at 75°C	[W]	5000	
17.	Impedance voltage at 75°C	[%]	4	
PETERSEN COIL DATA				
18.	Highest voltage of equipment	[kV]	24	
19.	Insulation level	[kV]	LI 125 AC 50	
20.	Rated voltage	[kV]	20.5/√3	
21.	Tap position	Rated Power [kVAr]	Rated Current [A]	Rated Impedance [Ω]
	1	60	5	2367
	2	89	7.5	1578
	3	119	10	1183
	4	148	12.5	947
	5	178	15	789



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CONNECTION OF TRANSFORMER AND PETERSEN COIL DATA

22.	Rated fault duration	[h]	≤ 2
23.	R ₀ /X ₀ ratio at 75°C	[%]	< 2.5
24.	Non-linearity up to 1.1xU _r	[%]	< 2.0
25.	Type of cooling		ONAN
26.	Installation altitude	[m]	<1000
27.	Winding material	Cu/Al	Copper
28.	Maximum temperature of ambient	[°C]	40
29.	Maximum temperature rise of winding	[K]	65
30.	Maximum temperature rise of oil	[K]	60
31.	Thermal class of insulation		A
32.	Installation conditions		Outdoor
33.	Approximate length of product	[mm]	1280
34.	Approximate width of product	[mm]	1050
35.	Approximate height of product	[mm]	1460
36.	Mass of oil in product	[kg]	620
37.	Total mass of product	[kg]	2200
ACCESSORIES			
38.	HV porcelain bushing		DIN 42531 24kV; 250A
39.	HV plug-in neutral bushing		EN 50180 24kV; 250A
40.	LV porcelain bushing		DIN 42530 1kV; 630A
41.	Transformer tap changer		Standard, offload
42.	Reactor tap changer		Standard, offload
43.	Oil level indicator		Standard, vertical for hermetically sealed tanks
44.	Oil drain valve		Standard