



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 |