

## ZVMD vacuum On Load Tap Changer

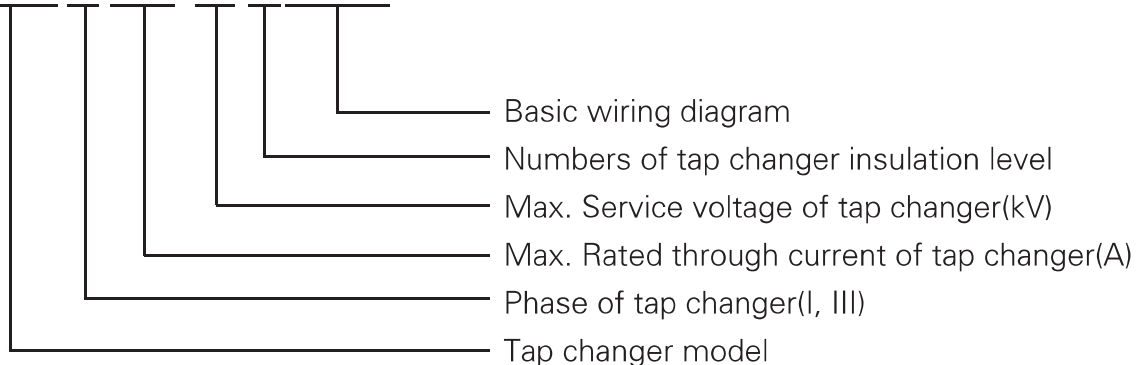
ZVMD vacuum on-load tap-changer is structure of combined type, its diverter switch is adopts the advanced design of symmetrical switching principle in the world, it makes the burning loss of vacuum arcing chamber at the different switching direction is the smallest and uniform, this design extends the service life of vacuum on-load tap-changer effectively.

Its tap selector and insulation materials use the glass fiber reinforced epoxy extensively so that its mechanical strength is high, reduce the deformation, fracture and etc. accidents caused by the improper operation, its insulation performance is good and is not easy to get damp.



### Model instruction

**ZVMD III 1000-126/C 10193W**



Note: The drawing in this manual may be different in details from the tap changer that we delivered. There drawing for reference only. we reserve the right to change without notice.



The transmission head cover of central gear box protected national patents in which the high definition tap position displaying plate is provided instead of the insulated supporting tube used as tap position rod in the internal if traditional diverter switch this completely avoid accidental breakdown fault caused by insulated supporting tube.



Spring mechanism adopts the round eccentric wheel gunlock releasing mechanism of double teeth locking with large initial torque, good positioning, reliable energy storage, compact structure and accurate action.



Laminated type contact structure  
bridge type moving contact



Laminated type contact structure  
fixed contact

Diverter switch main current carrying system adopts laminated type contact structure which can pass through the large current, the current carrying capacity of each group of contacts can reach to 1000A, the structure used a bridge moving contact skillfully, it switches on the contacts which connect to the tap selector and neutral point connection contact, it simplified the contacting structure of contacts, it is easy for lifting the insert to check and maintenance, and has high reliability.

## ZVMD vacuum on-load tap-changer technical parameters

Item	Specification		III1000			
1	Max. rated through current (A)		1000			
2	Rated frequency (Hz)		50 or 60			
3	Phase and connecting mode		Three phase for neutral point of Y connection			
4	Max. rated step voltage (V)		4000			
5	Rated step capacity (kVA)		3000			
6	Short circuit current (kA)	Thermal (3s)	15			
		Dynamic(peak)	37.5			
7	Number of service position		Not include change-over selector: max 18 Include change-over selector: max 35			
8	Insulation level of tap-changer (kV)	Rated voltage	66	110	150	220
		Max. service voltage	72.5	126	170	252
		Power frequency test voltage (50Hz, 1min)	140	230	325	460
		Impulse test voltage (1.2/50 $\mu$ s)	350	550	750	1050
9	Tap selector		3 Grades of B, C, D according to insulation level			
10	Mechanical service life		No less than 1,500,000 operations			
11	Electrical service life		No less than 350,000 operations			
12	Oil compartment for diverter switch	Service pressure	3 $\times$ 10 <sup>4</sup> Pa			
		Sealing performance	No leakage under 6 $\times$ 10 <sup>4</sup> Pa for 24 hours			
		Over-pressure protection	Blasting cap blast at (4-5) $\times$ 10 <sup>3</sup> Pa			
		Protective relay	QJ4-25 setting oil speed 1.0m/s $\pm$ 10%			
13	Motor drive mechanism		MA7B			

Note:

Step capacity= step voltage  $\times$  load current; Rated step capacity is continuous permissible max. step capacity.

For single phase tap-changer formed by parallel of three-phase tap-changer contacts, it is necessary to take coil shunting of transformer into consideration. For ZVMDI800, there are two shunts. For ZVMDI1200 and I1500, there are three shunts.

The single phase liner regulation tap-changer of 34 service positions only has: I500A, I800A and I1500A.