ZMD ON LOAD TAP CHANGER

◎ Product Introduction

ZMD on-load tap-changer is a high-quality, high-tech product designed by Guizhou Long March through digestion, absorbing and introducing technology, combined with years of on-load tap-changer production and management. It is suitable for voltages below 252kV and a maximum rated current of three-phase 300A. , 500A, 600A, 1000A, single-phase 300A, 500A, 600A, 800A, 1200A, 1500A, power transformer or industrial transformer with rated frequency of 50 or 60Hz. Suitable for three-phase Y-connection neutral point voltage regulation, single-phase voltage regulation at any part.

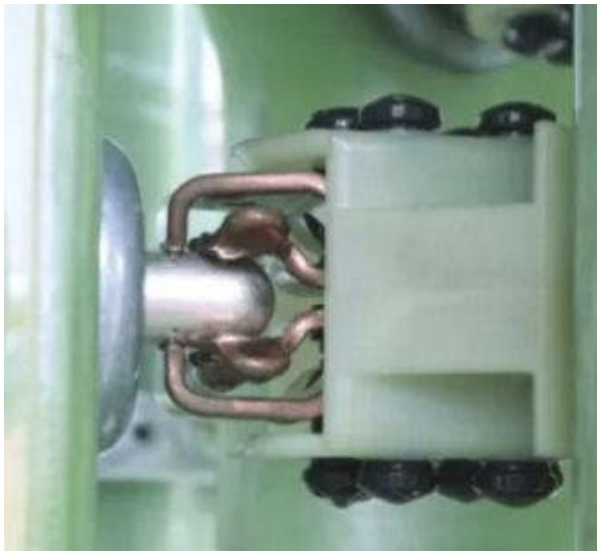
◎ Model Description

ZMD III 600 □ -126 / C - 10193W R

- R potential resistance
- Basic wiring diagram
- OLTC insulation level
- Max.working voltage (kV)
- Connection method (Y/D)
- Max.rated through current (A)
- OLTC phase (Ⅰ,Ⅲ)
- OLTC model

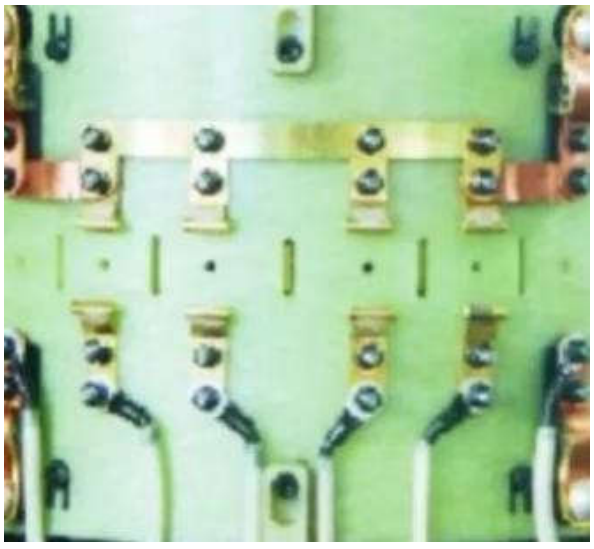
◎ Product features

The diverter switch of the ZMDIII100A on-load tap changer adopts a four-resistance excessive tail push compensation switching mechanism, which generates three arcs during switching (double-resistor type generates two arcs), and the switching capacity allocated to each arc is low, which improves the switching capacity. In addition, the recovery voltage at the fracture of the arc contact is low, which is beneficial to extinguishing the arc and improves the level voltage.



The lead wire of the tap selector adopts a mature outer sheath lead method. The central insulating column and the contact ring are not only simple in structure, but also have a large insulation margin. Compared with the external lead method, each phase reduces two lead-out rings and lead-out contacts, and shortens the axial size of the tap selector.

Conversion selector: Compared with the existing cylindrical tap selector structure, its moving contact system reduces movement conversion links, reduces the transposition connection of conductors, and improves the contact and positioning reliability of the conversion selector. Design according to the coarse and fine adjustment of the insulation level. It can be used for both positive and negative adjustment transformers and coarse and fine adjustment transformers.



The moving contact of the tap selector of the ZMDIII1000A OLTC adopts double-layer multi point contact, with reliable contact, low resistance, low temperature rise, large current carrying and strong short-circuit resistance.

The tap selector structure adopts a semi-closed cylindrical structure composed of an insulating cylinder and an arc-shaped insulating plate. Strong anti-traction ability. It is not easy to be deformed or damaged during installation and transportation; the structure is compact, the radial installation size is small, and the space is small.

◎ ZMD Technical Data

Item	Specifications		III300	III500	III600	I301	I501	I601	I800	I1200	I1500	III1000
1	Max.rated through current (A)		300	500	600	300	500	600	800	1200	1500	1000
2	Rated frequency (Hz)		50 or 60									
3	Phase & connection method		3 phase neutral point of Y connection Single phase for any connection model									
4	Max.rated step voltage (V)		3300									4000
5	Rated step capacity(kVA)		1000	1400	1500	1000	1400	1500	2640	3100	3500	2500
6	Withstand short circuit capacity (kA)	Thermal (3s)	6	8	8	6	8	8	16	24	24	12
		Dynamic (peak)	15	20	20	15	20	20	40	60	60	30
7	Operating positions		Linear regulating: 7,10,12,14,16,18,22,34 Reversing regulating: ±3~±17									
8	Insulation level of tap changer (kV)	Rated voltage	35	66		110		150		220		
		Max. service voltage	40.5	72.5		126		170		252		
		Power frequency withstand voltage (50Hz, 1min)	48	140		230		325		460		
		Rated lightning impulse withstand voltage (1.2/50μs)	200	350		550		750		1050		
9	Tap selector		3 Grades of B,C,D according to insulation level									
10	Mechanical life		≥1000000 times									
11	Electrical life		≥200000 times									
12	Diverter switch Oil chamber	Work pressure	3×10^4Pa									
		Sealing performance	No leakage under 6×10^4Pa for 24 hours									
		Overpressure protection	Blasting cap blast at (4～5) $\times10^5$Pa									
		Protection relay	QJ4-25 oil flow speed set at 1.0m/s±10%									
13	Oil displacement (L)		About 191~350									
14	Oil filling capacity (L)		About 130~220									
15	Weight (KG)		About 250~330									
16	With motor driver mechanism		ZD/MAE/MA7B									

Note:

1. The stage capacity is equal to the product of the stage voltage and the load current, and the rated stage capacity is the maximum stage capacity allowed continuously.
2. When selecting the single-phase switch formed by the parallel connection of the three-phase tap switch contacts, the transformer coil shunt should be considered, ZMDI800 two-way shunt, ZMDI1200, I1500 three-way shunt.
3. The single-phase linear regulating OLTC with 34 working positions has only: I500A, I800A, I1500A.