ZWL OFF CIRCUIT TAP CHANGER

◎ Product Introduction

ZWL OCTC (manual head, side operation) series products can be used for single-phase or 3-phase oil-immersed power transformers and industrial transformers to switch the tap position under the condition of off circuit. According to the different internal structure of the OCTC, the method can be divided into linear regulating, reversing regulating, single bridge, double bridge, Y-D conversion, series to parallel conversion, and Max. working voltage is 12kV, 40.5kV, 72.5kV, 126kV, The rated current is 300A, 600A, 800A, 1000A.

ZWL off circuit tap-changer (head electric) is suitable for tap change of oil-immersed transformers with rated frequency of 50Hz, 60Hz, maximum working voltage of 12~72.5kV, and maximum rated current of 300A, 600A under non-excitation operating.

This device is equipped with WK-5 non-excitation controller to realize electric operation.

◎ Product features

The OCTC is a cage structure and is installed vertically in the transformer tank. The tap changer operation mode is divided into head manual, side manual and side electric.

There are two kinds of structure of OCTC installation flange minute cover type and box top type.

The OCTC contact form adopts the clip structure, and the contact is reliable. The tap switch is equipped with a position indicator, and the hand wheel type with a manual head is equipped with a positioning device, which is convenient for accurate positioning of the movable and fixed contacts.

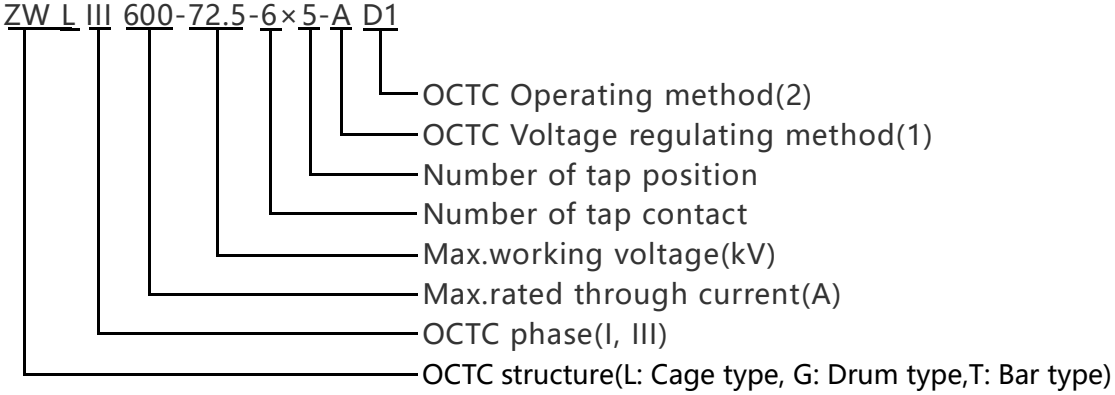
The OCTC has a cage structure and is installed vertically in the transformer tank.

The OCTC contact form adopts the clip structure, and the contact is reliable.

The OCTC is equipped with WK-5 controller, which can realize remote operation.

◎ Model Description

ZW L III 600-72.5-6×5-A D1



Note:

(1)OCTC voltage regulating method: A(Neutral point linear regulating); DA(Delta connection linear regulating); B(Single bridge); C(Doubel bridge); D(Series-parallel conversion); E(Star-Delta conversion); F(Neutral point reversing regulating); DF(Delta connection reversing regulating)

(2)OCTC operation method: Non(Head manual); D1(Side manual); D2(Side motor); EI-4(Head motor)

Circumference size of head motor OCTC: E1: φ382; E2: φ458; E3: φ484; E4: φ 576。

The head motor OCTC has the above four different circumference sizes, which makes the same number of voltage adjustment gears have different distances between poles to choose from, and users can choose according to their needs. There are only two ways to adjust the voltage of the head motor operation: A neutral point voltage regulation (no neutral point output); B single bridge

◎ ZWL Head Manual, Side Operating Technical Date

No.	Specifications		III300	III600	III800	III1000
1	Max.rated through current(A)		300	600	800	1000
2	Rated frequency(Hz)		50 or 60			
3	Withstand short circuit capacity (kA)	Thermal (3s)	6	12	10	12
		Dynamic (peak)	15	30	25	30
4	Number of tap positions		Max.5		Max.11	
5	Diameter of contact circle		350cm		550cm	
6	Connection method		A(Neutral point linear regulating); B(Single bridge); DA(Delta connection linear regulating); C(Double bridge); F(Neutral point reversing regulating); D(Series-parallel conversion); DF(Delta connection reversing regulating);E(Star-Delta conversion);			
7	Insulation level (kV)	Rated voltage	10	35	66	110
		Max. service voltage	12	40.5	72.5	126
		Power frequency withstand voltage (50Hz, 1min)	40	85	140	230
		Rated lightning impulse withstand voltage (1.2/50μs)	-	200	350	550
8	With operating device / Motor driver mechanism	Head manual	Disc handwheel			
		Side manual	SCX10 floor type manual operating mechanism			
		Side motor	ZD(W) off circuit dedicated operating mechanism			
9	Contact resistance between moving and fixed contacts		≤350μΩ			
10	Mechanical life		Manual operation ≥ 10,000 times Motor operation ≥ 100,000 times			
11	Dry		Vacuum dry: 110℃ , Air dry: 125℃			

◎ ZWL Head Motor Technical Date

<table>
<tr><th>No.</th><th colspan="3">Specifications</th><th colspan="4">III300</th><th colspan="4">III600</th></tr>
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<tr><td>2</td><td colspan="3">Rated frequency(Hz)</td><td colspan="4">6</td><td colspan="4">12</td></tr>
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<tr><td>Dynamic (peak)</td><td colspan="8">50/60</td></tr>
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<tr><td>5</td><td colspan="3">Max. number of tap positions</td><td colspan="2">E1:φ382mm</td><td colspan="2">E2:φ458mm</td><td colspan="2">E3:φ484mm</td><td colspan="2">E4:φ576</td></tr>
<tr><td>6</td><td colspan="3">Connection method</td><td colspan="8">A (neutral point linear adjustment, W/O neutral point output);
B (single bridge in the middle)</td></tr>
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<tr><td colspan="2">Max. service voltage</td><td colspan="2">12</td><td colspan="2">40.5</td><td colspan="2">72.5</td></tr>
<tr><td rowspan="2">To ground</td><td>Power frequency voltage(50Hz, 1min)</td><td colspan="2">42</td><td colspan="2">95</td><td colspan="2">140</td></tr>
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<tr><td rowspan="2">Between fixed & moving contact</td><td>Power frequency voltage(50Hz, 1min)</td><td colspan="2">30</td><td colspan="2">50</td><td colspan="2">90</td></tr>
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<tr><td>8</td><td colspan="3">Contact resistance between moving and fixed contacts</td><td colspan="8">≤350μΩ</td></tr>
<tr><td>9</td><td colspan="3">Sealing performance</td><td colspan="8">6×10^4Pa，24h No leakage</td></tr>
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<tr><td>11</td><td colspan="3">With controller</td><td colspan="8">WK-5 Off circuit voltage regulator controller</td></tr>
<tr><td>12</td><td colspan="3">dry</td><td colspan="8">Vacuum dry: 110℃ , Air dry: 125℃</td></tr>
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