

TRANSFORMER

S11-M.ZT

Type intelligent load adjustable-capacity transformer



Brief introduction to products

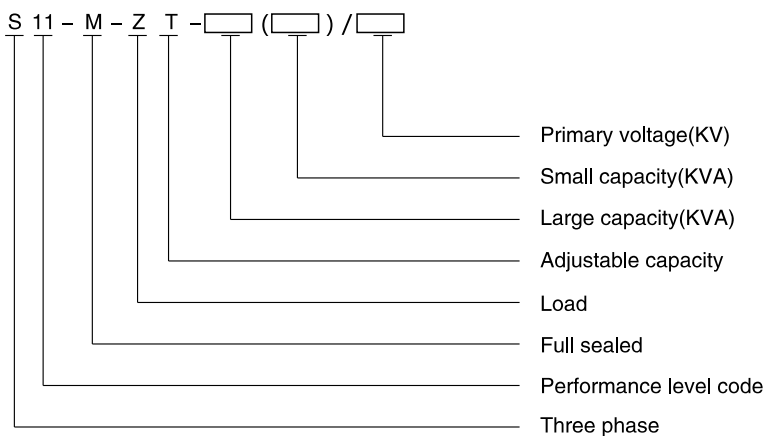
The intelligent load justable-capacity transformer has two large or small capacity tap positions, and can automatically adjust capacity operation without power failure according to the change of load. When the load is lighter and closest on on-load, the transformer adjusts the large capacity to small capacity to work. Both greatly reduce the no-load loss and avoid manual operation without power failure, and save the energy. The product is suitable to the rural power grids with load greatly changed in season, to residential area, street lamps, business district, part-time industrial zone and sucker rod pumping variable with greatly changed in day and night, and also suitable to greatly load change of 35Kv electric transformer.

Intelligent load adjustable-capacity transformer developed by our company has many patents, mainly made up of transformer, adjustable-capacity switch, control box installed load adjustable-capacity control. The data saving, remote communication, remote control, remote regulating, telemetry, intelligent network, reactive power compensation control, guard against the function, and greatly difference with the traditional roll core, amorphous transformer.

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Model designation



Specification

Form1 10kV S11-M-ZT type intelligent load adjustable-capacity transformer Specification

Type	Voltage	Vector Group	Non-load loss	Load loss	Short circuit impedance	Non-load current
S11-M-ZT-160(50)	10/0.4>	Dyn11 Yyn0	280(130)	2310(870)	4.0	0.8 (1.6)
S11-M-ZT-200(63)			340(150)	2730(1040)	4.0	0.7 (1.5)
S11-M-ZT-250(80)			400(180)	3200(1250)	4.0	0.7 (1.4)
S11-M-ZT-315(100)			480(200)	3830(1500)	4.0	0.7 (1.4)
S11-M-ZT-400(125)			570(240)	4520(1800)	4.0	0.6 (1.3)
S11-M-ZT-500(160)			680(280)	5410(2200)	4.0	0.6 (1.2)
S11-M-ZT-630(200)			810(340)	6200(2600)	4.5	0.5 (1.1)

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Energy Saving analysis

The annual operation cost and investment recovery period

$$C_y = [8600 \times (P_o + 0.05 \times I_o \times SN / 100) + 2200 \times (P_k + 0.05 \times UK \times SN / 100)] \times 0.5$$

C_y : transformer annual operation cost, RMB

P_o : Non-load loss, kW

P_k : Load loss, Kw

SN : Rated capacity kVA

UK : Short circuit impedance percent, %

I_o : Non-load current, Percent%

$T_{0.5}$ is electricity prices, RMB/(Kwh); 8600, 2200 Respectively are transformer non-load all year, equivalent load (load factor 0.5) Number of hours.

According to the related performance indicator, to calculate the annual operation cost of the S11-M-ZT type intelligent load adjustable-capacity transformer and S11 Ordinary three-phase oil type distribution transformer. Assume that load capacitor transformer works in large capacitor within 3 months of one year, in small capacitor within 9 months. According to distribution transformer related specification to calculate, detail data as form 3

The load adjustable-capacity transformer is adapted to the Substation field development towards energy saving, intelligence, high efficient, reliable power supply quality. It can automatically change terminal distribution transformer rated output capacity by following the load change. Timely and proper keep the power supply, to greatly reduce the transformer non-load loss 40%~50%, to improve the grid power factor, reduce reactive component in distribution net and network loss and electricity capacitor, open a new way to develop energy saving distribution network, to the society to bring good economic benefit.

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Form2 Compared operation cost between S11-M-ZT type intelligent load adjustable-
capacity transformer and S11 type distribution transformer

capcaity	Annual cost of load adjustable capacity transformer (Yuan)	annual cost of ordinary transformer(Yuan)	annual decreased cost (Yuan)	annual decreased rate (%)
160(50)	2289	4647	2358	51
200(63)	2710	5550	2840	51
250(80)	3227	6543	3316	51
315(100)	3816	7918	4102	52
400(125)	4588	9531	4943	52
500(160)	5497	11265	5768	51
630(200)	6608	13352	6744	51

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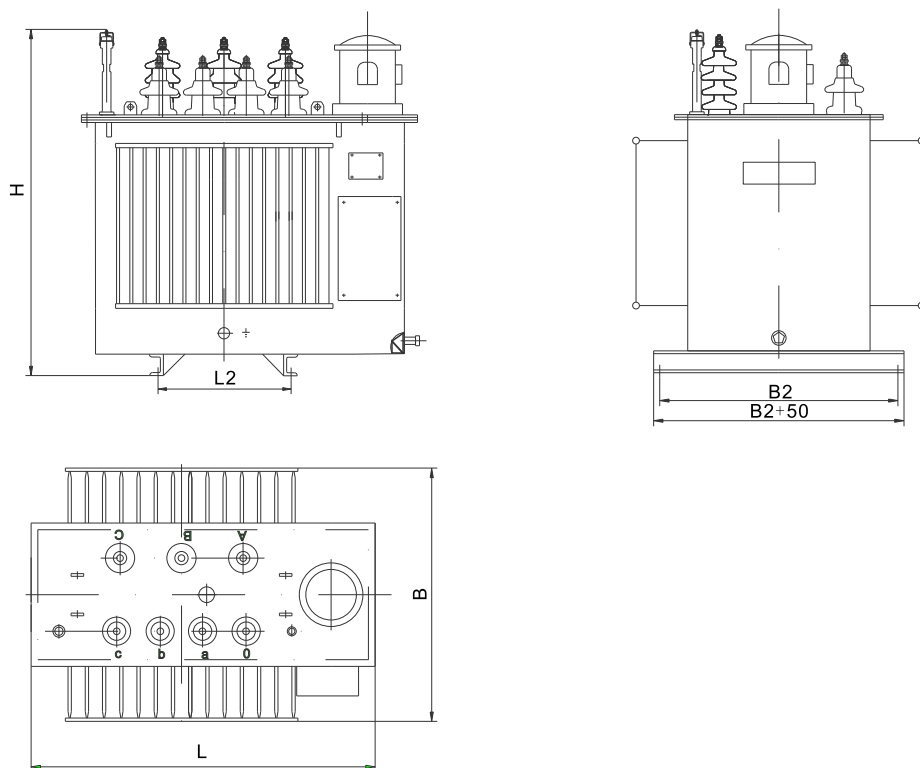
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Compared operation cost between S11-M-ZT type intelligent load adjustable-capacity transformer and S11 type distribution transformer, Annual operation cost average reduce 51%, cut down the installation fee than last transformer. The more investment of S11-M-ZT type intelligent load adjustable-capacity transformer can recycle in three years.

Appearance Picture and installation dimension

10KV intelligent load adjustable-capacity transformer Appearance Drawing



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Form 3 intelligent load adjustable-capacity transformer installation dimension and weight
Installation dimension(mm)

Capacity(kVA)	Shape dimension(mm)					Weight(kg)
	L	B(width)	H	L2	(width)B2	
160(50)	1380	990	1230	820	820	1100
200(63)	1400	1070	1230	820	820	1220
250(80)	1440	1120	1250	820	820	1370
315(100)	1480	1170	1350	820	820	1620
400(125)	1620	1190	1330	820	820	1910
500(160)	1710	1240	1350	820	820	2200
630(200)	1850	1270	1450	820	820	2660