

MA9B motor drive mechanism

MA9B is the improved product of MA9, it is mainly used for operating ZV on-load tap-changer, it also can be worked with other types of tap-changer according to its technical parameter, performance and structure.

Motor drive can work with CY40 series intelligent tap position monitor, the tap position can be displayed in the control chamber and perform the motor operation, connect with computer to achieve the automatic control in the system.



MA9B motor drive mechanism features

- The motor drive mechanism operation is designed according to the working principle of step by step control, tap-changer only receives an operation instruction during the process of transferring from one tap position to adjacent tap position.
- The tap-changer with three middle positions, motor drive mechanism can surpass position automatically.
- The motor operation can be performed by the button in the motor drive mechanism, also can be operated by handle, also can be manual operated by the handle, at the same time it has the interlock protection of hand operation and motor drive to achieve the no electrical operation of motor drive mechanism main circuit and control circuit, ensure the hand operation is safety.
- The remote electrical operation can be performed by the remote control button which is installed in the control room; it also can use the ZDT-60 automatic voltage regulator and CY40 series intelligent tap position monitor to control automatically and display.
- It has the position remember function, if the control power is interrupted because of some reason during the process of operation, the motor drive mechanism can remember the current position; when the power is recovery, the motor drive mechanism is continue to finish the tap change of that step.
- It has the protection return circuit of anti phase sequence disorder. The circuit breaker will trip automatically when the phase sequence of power inlet wire is wrong.

- It has the anti running gear set to prevent continuous action of tap–changer.
- It is designed with temperature control heating circuit so that the components in the case can work in the required temperature scope.
- The mechanism case is meeting to the using requirement of outdoor, it has the function of dust–proof, rain–proof and insect protection.
- The lubricant grease is filled in the reducer, which is unnecessary to replace.
- It equipped with mechanical and electrical limit protection in order to prevent the tap–changer is moving to out of the ultimate direction.

MA9B motor drive technical specifications

Item	Specification	Technical data	
1	Motor drive parameter	Rated power frequency	0.37kW
		Rated voltage	220V/380V three phase
		Rated current	1.94A/1.12A
		Rated frequency	50Hz
		Rated speed	1400r/min
2	Output torque on the drive shaft	No less than 45Nm	
3	Revolutions of drive shaft per each tap change	2	
4	Revolutions of handle operation per each tap change	30	
5	Tap change time of every step	Approx. 4.8s	
6	Max. tap position numbers of working with tap-changer	27	
7	Power supply of control and heating return circuit	AC220V	
8	Input power frequency of control circuit	60VA when start	
		17VA when operation	
9	Heating circuit power frequency	30W	
10	Insulation power frequency test to the ground of electric circuit (without motor, circuit breaker, cable socket and auxiliary contact)	2kV.1min	
11	Mechanical service life	More than 800,000 operations	
12	Weight	Approx. 63kg	
13	Gradient between mounting axis and vertical surface	No more than 5°	
14	Tap changer monitor	CY40 series	