

General:

A compartment-type switchgear is composed of a tank with a high-voltage cable compartment and its accessories. The switchgear compartment has an opening system with safety devices that must be removed before it can be opened.

Switchgears are used to divide and make branches in the underground primary feeders. MAGNETRON has the following types defined in its scope:

Sequential mesh type: They have an input, an output and a branch, connected through a four-position isolator, operating in sequence, under load and immersed in oil.

Selective mesh type: They have an input, an output and one or more branches depending on the needs of the customer; connected through the same number of ON-OFF isolators (under load and immersed in oil), which allows flexibility to isolate each circuit independently, in addition to connecting multiple transformers.

Technical fundamentals:



KELLY BUSHING: Bushing that has a cavity to introduce another component, such as a bushing insert. Its purpose is to serve as an interface with the accessories which will be used for making the connection to the system.

BUSHING INSERT: This connector is installed inside the kelly bushing and is coupled with elbow-type terminals or other accessories that comply with the ANSI / IEEE 386 standard. It allows to obtain a completely isolated connection for operation under load. In addition, its constructive shape makes it easy to install and replace in the field.

ELBOW TYPE CONNECTOR: It is a component to which the exposed cable of the high voltage line is connected, so that it can be subsequently connected to the insulator or bushing in the switching gear. It is designed in such a way that when this joint is made, the axes of the conductor and the bushing are perpendicular to each other.

ON-OFF ISOLATOR: It is a two-position switch that allows to electrically isolate an installation or electrical circuit from the power supply network, leaving the aforementioned installation or circuit without load or in a vacuum.

FOUR-POSITION ISOLATOR: It is a continuous operation switch. It allows isolating from the circuit whether it is the input, the output, the branch, or having all the circuits connected.

BASIC INSULATION LEVEL: Corresponds to a specific level of insulation expressed in kW of the peak value of a standard impulse, atmospheric discharge type.



Magnetron switchgears:

Magnetron designs and builds switchgears depending on the requirements of the customer, complying with the accessories and enclosure regulations established in the ANSI C57-12-27 and ANSI C57-12-28 standards, respectively.

The swichtgears are equipped with a front access cabinet that allows easy access and maneuverability for the connection and disconnection of elements.

The civil work group must provide adequate space to protect the exposed cables that are connected to the switchgear, when moved during assembling and disassembling.

Standard accessories:

<p><u>Información a considerar para la especificación de una caja de maniobra:</u></p> <ul style="list-style-type: none"> -Applicable standard -Cooling method -Type -Number of ways ¹ -Class (kW) - Rated current capacity of accessories <p>¹Applies only to the selective mesh type switchgear</p> <p><u>Standard accessories:</u></p> <ul style="list-style-type: none"> -Kelly bushing -ON-OFF tripolar isolator² -Four-position isolator³ -Fill nipple -Drain and sampling valve -Overpressure valve -Oil gauge -Tank grounding <p>²Applies only to the selective mesh type switchgear</p> <p>³Applies only to the sequential mesh type switchgear</p> <p><u>Optional accessories:</u></p> <ul style="list-style-type: none"> -Bay-o-net fuse holder - Bay-o-net fuse -Lightning arrester 	<p><u>Routine Tests:</u></p> <ul style="list-style-type: none"> -Applied voltage -Induced voltage -Electrical continuity <p><u>Type Tests:</u></p> <ul style="list-style-type: none"> -Impulse <p><u>Factors to consider during installation:</u></p> <ul style="list-style-type: none"> -Shipping -Hoisting and unloading -Switchgear reception at site -Storage -Installation at site - Connection of transformer terminals -Applicable torques -Grounding -Isolator operation <p><u>Documentation to be delivered by Magnetron:</u></p> <ul style="list-style-type: none"> -Schematics - Connection diagram -Factory acceptance test certification -Shipping documentation
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