

Medium Voltage Fuses

Definition

The current limiter fuses are the protecting components ensuring that the higher short circuit currents flowing through the faulty circuit after melting due to the thermal energy caused by the fault current are broken, and preventing re-arcing by disconnecting simultaneously. The function of fuses is to protect the medium voltage switch gears from the dynamic and thermal effects which are caused by short circuit current higher than the minimum breaking current of the fuse.

It is an ideal application to protect the medium voltage switchgears from the short circuit and fault currents with fuses because they do not need any maintenance and they lead to minimum costs.

This protection can be much more effective when they coordinated with low voltage or over current protection systems.

According to the range in which they can be used, the fuses are defined as general purpose, rear and full range fuses.

MV Fuses Reference Table	
Rated Voltage Un / kV	Rated Current In / A
7,2	2-125
12	2-125
17,5	2-125
24	2-125
36	2-125



Structure and Features

Outer Body

The isolated pipe forming the outer body is manufactured by the alumina porcelain material which is resistance to the thermal stresses and mechanical stress, is not flammable nor combustible. Their surfaces are glazed and bright and free of dust and contaminants, are not affected by the atmospheric conditions, and are durable against salts, acids and steam.

Contact Heads

The contacts providing the electrical contact on the ends of the body are manufactured with copper materials having suitable sections. The contacts have been designed so as to resist to the mechanical and sealing stresses caused by the pressure, and they are coated with nickel or silver.

Carrier

It is manufactured by the ceramic material. The melting element is wrapped thereon and the control wire of the indicator element is passed through inside it. It absorbs the mechanical stresses resulted from the control wire during short circuit and prevents them to reach the body.

Melting Line

It is the main material of the fuses. As melting line the pure silver wires having sections changing according to the nominal current are used.

Extinguishing Sand

An extinguishing element of ~%99,8 purity, free of metal parts and humidity, having arc distinguishing capacity is used and it is ensured that the current line is fully embraced by filling with a special machine so as not to remain any air gap.

Striker

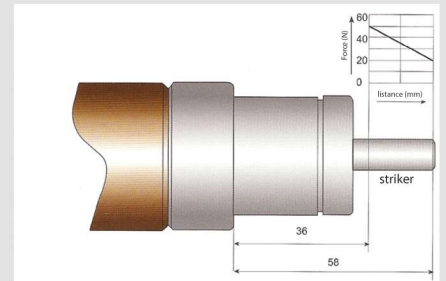
It indicates that the fuse is blown and provides the energy needed to activate the relevant tripping mechanism by striker. The striker is released after melting the silver wire.



The energy of fuses striker is of middle type according to the IEC 60282-1 standard. Fuses having a broad high current breaking capacity are manufactured in rear type and as regards structure they are suitable to use in both indoor and outdoor environments.

Standards

- TS EN 60282-1
- IEC 60282-1



Technical Specifications

Rated Voltage (kV)	Transformer Rated Power (kVA)									
	25	50	100	160	250	400	630	1000	1250	1600
	Fuse Nominal Currents (A)									
12	6	10	16	20-25	25-30	40-50	63	80-100	100-125	150
17,5	2-4	4-6	10-16	16-20	20-25	25-30	40-50	63-80	80-100	100-125
36	2	4	4-6	6-10	10-16	16-20	25	25-30	30-40	50-63

* Frequency: 50/60 Hz



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