

ISM15_MD Series

Three-Phase and single-phase
vacuum circuit breakers

**5 YEAR
WARRANTY**



Tavrida Electric solutions ensure reliable power system operation in more than 80 countries.



- 15kV systems
- 1250A continuous rated current
- 31.5 kA short circuit breaking current
- Magnetically actuated vacuum interrupters
- Tested to 30,000-50,000 CO operations at full load
- Maintenance free and light weight
- 5-year warranty

Tavrida Electric is a world-class manufacturer of medium voltage switchgear such as Vacuum Circuit Breakers & Automatic Circuit Reclosers. The ISM series circuit breaker is the result of extensive R&D efforts to provide outstanding performance for compact switchgear designs, retrofit programs, and special applications.

After 27 years on the market, the ISM series install base has reached over 500,000 units worldwide continuing to resolve most ambitious customer problems.

ISM15 MD Series



The Tavrída MD Series Circuit Breaker Modules contain the most unique design elements of any MV breaker on the market. At a height of only 35 cm, and as narrow as the LD type, the MD circuit breaker handles currents as high as 1250 A continuous and 31.5 kA short-time and interrupting.

All components are assembled along a single axis, with three mono-stable magnetic actuators (one per pole). The actuators are mounted in a steel frame and are mechanically linked by a synchronizing shaft. The actuators drive a pulling insulator that, in turn, connects to the advanced Tavrída vacuum interrupters at the top of the breaker.

This simple design results in the highest reliability available today. Tavrída delivers a maintenance free breaker with a life expectancy of up to 30,000 close-open operations for three phase circuit breakers and 50,000 close-open operations for single pole breakers.

The CM_16 Control Module serves as the interface between the ISM_MD Circuit Breaker Module and a host of third party relays and controls.

ISM Accessories and Spare Parts



Control module (CM):

Control module (the CM is a microprocessor based controller that provides ISM operation, protection and data logging functions) can be ordered separately as a spare part. One control module is required per breaker.



Position indicator:

The position indicator is used together with indication cable to indicate the ISM main contacts state.



Interlocking kits:

The kit attaches to the ISM shaft and serves as a manual trip / lockout accessory (the push button kit serves only as a manual trip accessory).



Manual generator:

The manual generator is used to charge the control module in cases where the main auxiliary power supply is not available.



Insulation kit:

The insulation kit provides the necessary phase-to-phase and phase to-ground insulation for most compact designs when standard clearance requirements cannot be met. For 40x10 mm and 80x10 mm busbars.

Basic Operating Parameters

Rated Data

Rated voltage (U_r), up to	15kV
Rated continuous current (I_r)	1250A
Rated power frequency withstand voltage (U_d)	36kV
Rated lightning impulse withstand voltage (peak) (U_p)	95kV
Rated short-circuit breaking current (I_{SC})	31.5kA
Rated peak withstand current (I_p , close and latch)	82kA
Rated short-time withstand current, 4s (I_k)	31.5kA
Rated frequency	50/60Hz

Switching Performance

Mechanical life (CO cycles)	30,000 (50,000 for single phase breaker)
Operating cycles, rated current (CO cycles)	30,000 (50,000 for single phase breaker)
Electrical endurance, breaking current (O-CO cycles)	50
Closing time ¹	20ms ¹
Opening time ¹	8ms ¹
Rated operating sequence at rated normal current	O-0.3s-CO-10s-CO-10s-CO
Rated operating sequence at rated short-circuit breaking current	O-0.3s-CO-15s-CO

Standards

Design class with regard to severity of service conditions in accordance with IEC 60932	Class 0
International testing standards	IEC 62271-100, GB 1984-2003, IEEE C 37.09
Mechanical vibration withstand capability according to IEC 60271, IEC 60068	Class 4M4

Other Data

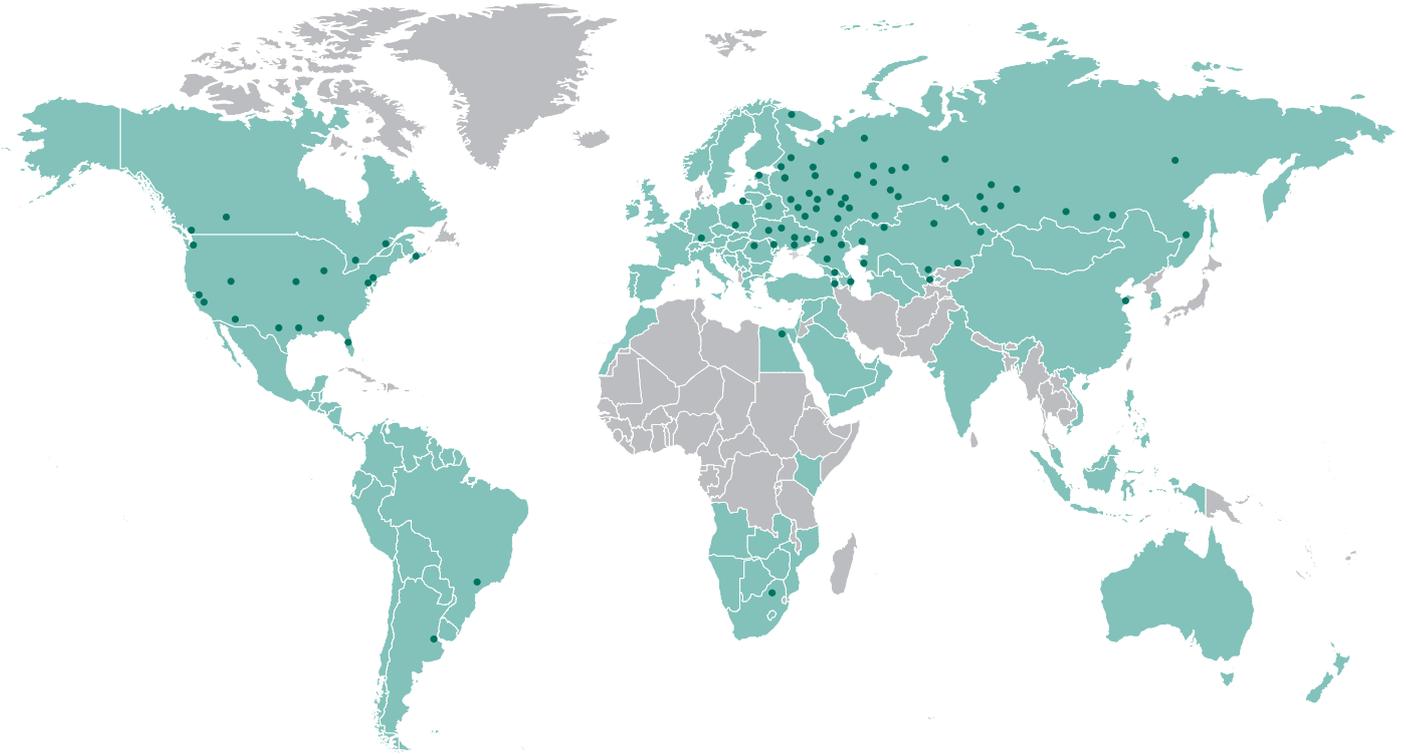
Resistance of main circuit	<17 μ Ohm
Available pole center distances	150mm, 210mm (5.91inch, 8.27 inch)
Type of driving mechanism	Monostable magnetic actuator
Weight	33-35kg (13kg for single pole breaker) (72.75lbs-77.16lbs) (28.66lbs for single pole breaker)

Auxiliary contacts

Number of available auxiliary contacts	6NO + 6NC
Rated power frequency test voltage	2kV

¹Closing and opening times without control module standard recognition times.

If you would like to obtain more detailed information about our solutions or become one of our local partners, please feel free to contact us



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