

# ISM15\_HD Series

Three-Phase  
vacuum circuit breakers

**5 YEAR  
WARRANTY**



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



- 15kV systems
- 3150A continuous rated current
- 31.5 kA short circuit breaking current
- Magnetically actuated vacuum interrupters
- Tested to 30,000 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 30 years on the market, the ISM series install base has reached over 500,000 units worldwide continuing to resolve most ambitious customer problems.

## ISM15 HD Series



Heavy Duty series breakers are the most enduring across our product range and designed for rated continuous currents up to 3150 A. HD finally brings all advantages of the best secondary distribution circuit breakers by Tavrída Electric to a primary distribution class. Never before VCBs with such high ratings were so compact and applicable for the most confined panels.

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.

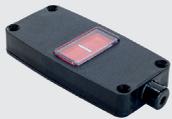
The CM\_16 Control Module serves as the interface between the ISM\_HD Circuit Breaker Module and a host of third party relays and controls.

## ISM Accessories and Spare Parts<sup>1</sup>



### 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.



### Mounting kit:

The kit (the set of studs) attaches to the ISM required mounting points to provide 95 kV BIL.

<sup>1</sup>Additional accessories are available. Contact Tavrída Electric North America Inc. for details.

## Basic Operating Parameters

### Rated Data

Rated voltage ( $U_r$ ), up to	15.5kV
Rated continuous current ( $I_r$ )	3150A
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
Operating cycles, rated current (CO cycles)	30,000
Electrical endurance, breaking current (O-CO cycles)	50
Closing time <sup>1</sup>	25ms <sup>1</sup>
Opening time <sup>1</sup>	8ms <sup>1</sup>
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	<15 $\mu$ Ohm
Available pole center distances	210mm, 275mm (8.27inch, 10.83inch)
Type of driving mechanism	Monostable magnetic actuator
Weight	70-72kg (154.32lbs-158.73lbs)

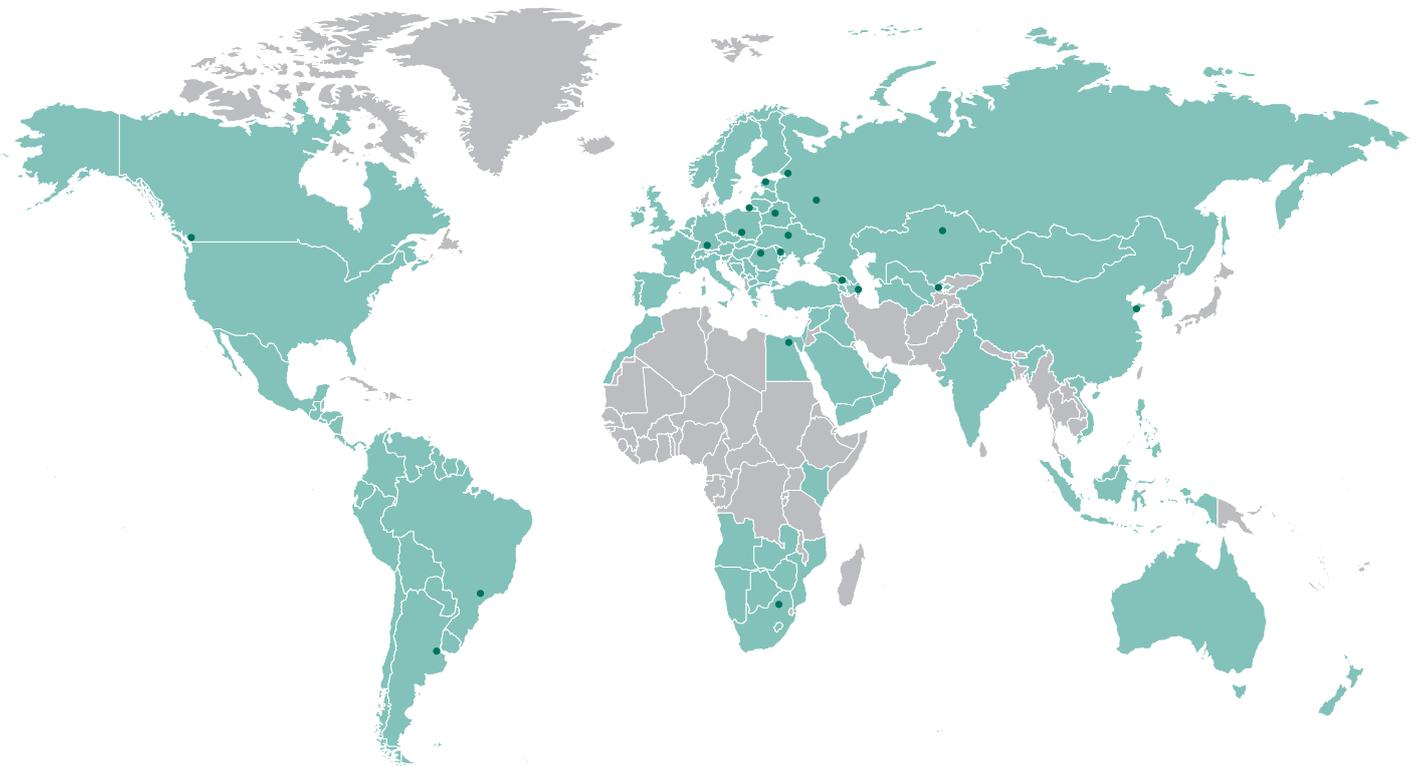
### Auxiliary contacts

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

<sup>1</sup> Closing 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



#### EUROPE

##### **Tavrída Electric GmbH**

Im Leimen 14, 88069  
88069 Tettngang,  
Germany  
Phone: +49 7542 94 678 51  
Fax: +49 7542 94 678 61  
E-mail: [info@tavrida.de](mailto:info@tavrida.de)

#### BRAZIL

##### **Tavrída Electric do Brasil**

Av. Ireno da Silva Venâncio, 199  
GP04A - Protestantes  
18111-100, Votorantim / SP, Brazil  
Phone: +55 (15) 3243-2555  
Fax: +55 (15) 3243-4233  
E-Mail: [info@tavrida.com.br](mailto:info@tavrida.com.br)

#### NORTH AMERICA

##### **Tavrída Electric North America Inc.**

1105 Cliveden Ave.  
Delta, BC V3M 6G9  
Canada  
Phone: +1 (866) 551-8362  
Fax: +1 (604) 540-6604  
E-Mail: [info@tavrida-na.com](mailto:info@tavrida-na.com)

#### SOUTH AMERICA

##### **Tavrída Electric Argentina**

Av. Hipólito Yrigoyen 9183/5, 9 piso dpto.  
B. Lomas de Zamora,  
1832, Provincia de Buenos Aires, Argentina  
Phone: +54 (11) 4243-9373  
Phone: +54 (9 11) 4026-8563  
E-Mail: [info@tavrida.com.ar](mailto:info@tavrida.com.ar)

#### SOUTH AFRICA

##### **Tavrída Electric Africa (Pty) Ltd.**

Unit 8, N12 Industrial Park,  
188 Dr Vosloo Road, Bartlett,  
Boksburg, 1459 South Africa  
Phone: +27 (11) 9142-199  
Fax: +27 (11) 9142-323  
E-Mail: [support@tavrida.co.za](mailto:support@tavrida.co.za)

#### REST OF THE WORLD

##### **Tavrída Electric AG**

Bahnhofstrasse 27, 6300  
Zug, Switzerland  
Phone: + 49 7542 9467851  
E-mail: [info@tavrida.ch](mailto:info@tavrida.ch)

