

# ISM25\_SHELL\_2 Series

Three-Phase  
Vacuum Circuit Breakers

**5 YEAR  
WARRANTY**



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



- 27kV systems
- up to 2000 A continuous rated current
- 25 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 600,000 units worldwide continuing to resolve most ambitious customer problems.

## ISM25\_SHELL\_2 Series



The ISM25\_Shell\_2 Series Circuit Breaker Module has superior characteristics for fast trip applications as well as high-duty switching. The interrupters are driven by three (3) separate magnetic actuators (one per pole) and the module is capable of 30,000 close-open operations at full load.

The ISM\_Shell can handle as much as 2000A continuous with 25kA interrupting. The exceptionally compact, solid dielectric design insulates the phases from each other while the direct, linear connection from the actuator to the interrupter delivers a break time of less than 3 cycles as a standard. A 1 cycle break time is available for special applications.

An integrated trip lever at the rear of the module blocks the unit operation electrically as well as mechanically. Six NO and six NC contacts are built-in and a visual position indicator is also provided.

This simple design results in the highest reliability available today. Tavrída delivers a maintenance free breaker with a life expectancy of up to 30 years.

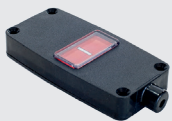
The CM\_16 Control Module serves as the interface between the ISM and a host of third party relays and controls.

## 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 (included in the package):

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 (included in the package):

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.

<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	15kV	27kV	27kV
Phase centre distance (PCD)	150mm 5.91inch	210mm 8.27inch	275mm 10.83inch
Rated continuous current ( $I_r$ )	2000A		
Rated power frequency withstand voltage ( $U_d$ )	60kV		
Rated lightning impulse withstand voltage (peak) ( $U_p$ )	95kV	125kV	125kV
Rated short-circuit breaking current ( $I_{sc}$ )	25kA		
Rated peak withstand current ( $I_p$ , close and latch)	65kA		
Rated short-time withstand current, 4s ( $I_k$ )	25kA		
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)	25
Closing time	35ms <sup>1</sup>
Opening time	8ms <sup>1</sup>

### Standards

Design class with regard to severity of service conditions in accordance with IEC 60932	Class 1
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 $\mu$ Ohm		
Type of driving mechanism	Monostable magnetic actuator		
Weight	52kg 114.64lbs	56kg 123.50lbs	58kg 127.87lbs

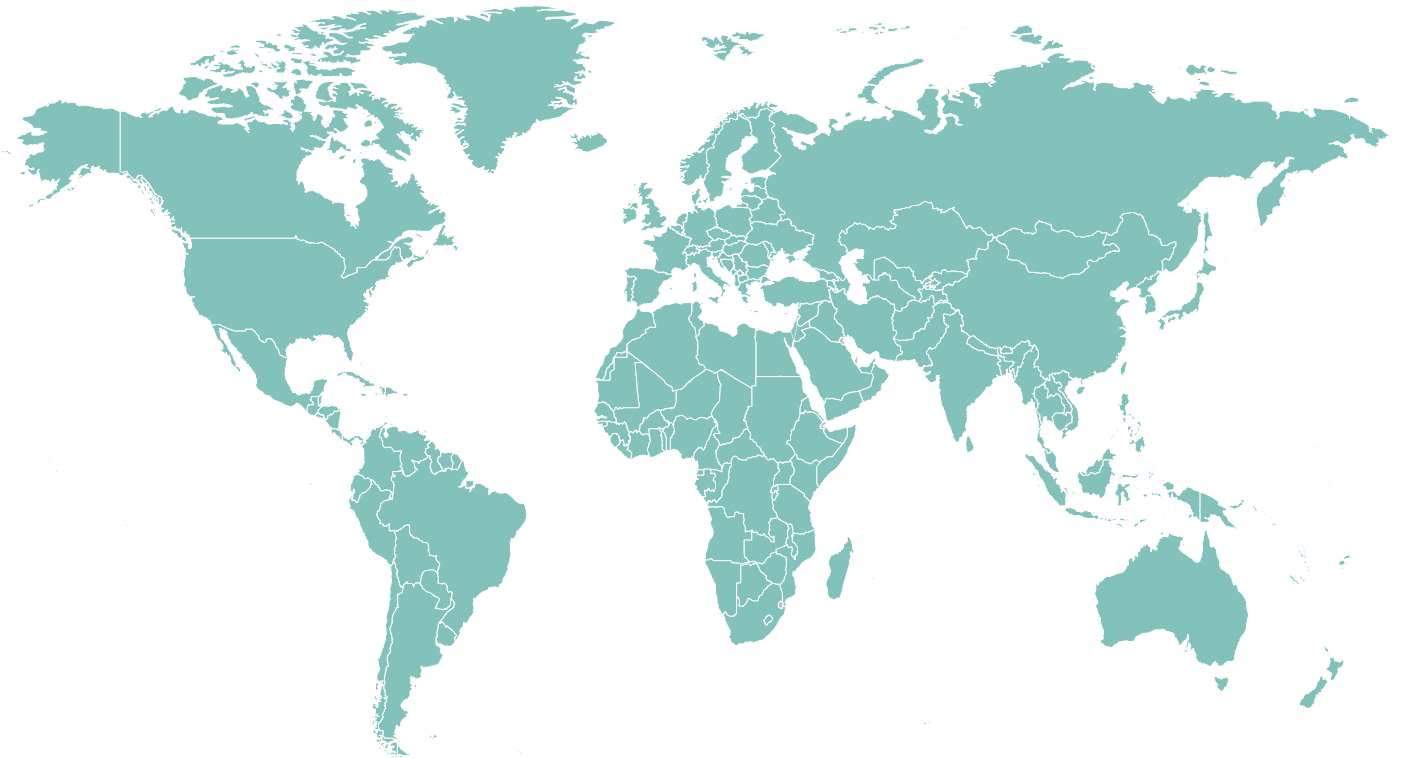
### Auxiliary contacts

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

<sup>1</sup>Closing and opening times of the ISM 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



#### NORTH AMERICA (USA)

**Tavrida Electric North America (US) Inc.**  
2000 Tall Pines Dr. Suite 200  
Largo, FL 33771  
USA  
Phone: +1 (604) 540-6604  
Fax: +1 (604) 540-6604  
E-Mail: [info@tavrida-na.com](mailto:info@tavrida-na.com)

#### NORTH AMERICA (CANADA)

**Tavrida 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)

#### BRAZIL

**Tavrida 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)

#### EUROPE

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

#### SOUTH AFRICA

**Tavrida 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)

#### CHINA

**Tavrida Electric Qindao Co. Ltd.**  
No. 336, Songling Road, Laoshan District  
266104 Qingdao  
China  
Phone: +86 (532)-55552366  
Fax: +86 (532)-55552377  
E-Mail: [info@tavrida.cn](mailto:info@tavrida.cn)

