



AB 074

**Laboratories of Electrotechnical Institute  
High Voltage & Short-Circuit Testing Laboratory  
Laboratorium Badawcze Aparatury Rozdzielczej**

**INSTYTUT ELEKTROTECHNIKI – ELECTROTECHNICAL INSTITUTE**

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Notified body No. 1460

**TYPE TEST**

Tested apparatus

**MV Metal-enclosed Switchgear**

Type

**Smart Ring-12**

Rated voltage:

12 kV

Rated current:

630A

Frequency:

50/60 Hz

Manufacturer

**HM POWER**

*Glödgargränd 14, SE 721 30 VÄSTERÄS, Sweden*

**HM Power (Guangdong) Co., Ltd.**

*No. 30 Xinyue Road, Shunde Science & Technology Industrial Park,  
Foshan City, Guangdong Province, 538300, P.R.C.*

Orderer

**HM POWER**

*Glödgargränd 14, SE 721 30 VÄSTERÄS, Sweden*

Date of the test

**21<sup>th</sup> of June – 08<sup>th</sup> of July 2010**

Tested by

**High Voltage & Short-Circuit Testing Laboratory**

04-703 Warsaw, Pożaryskiego 28

Accreditation Certificate PCA No AB 074

The apparatus, constructed in accordance with the description, drawings and photographs incorporated in this report has been subjected to the series of proving tests in accordance with the standards  
**IEC 62271-200 : 2003; IEC 62271-1 : 2007 and related standards**

The results are shown in the record of Proving Tests. The values obtained and the general performance are considered to comply with the above Standards and to justify the ratings assigned by the manufacturer

The Test Report applies only to the apparatus tested. The responsibility for conformity of any apparatus having the same designators with that tested rests with the Manufacturer.

*This Test Report comprises 76 sheets in total, 8 photographs and 28 oscillograms included.*

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Test Manager

Michał Babiuch

Head of Laboratories of the  
Electrotechnical Institute

Robert Franaszek

Warsaw 27.07.2010

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Tests were also observed by 2 external persons ; one test inspector Kari Luoma and one representative from HM Power AB

**1. LIST OF APPLICABLE STANDARDS*****Basic:***

1. IEC Publication **62271-200: 2003** “High voltage switchgear and controlgear.  
Part 200: AC metal-enclosed switchgear and controlgear for rated voltages above 1 kV and up to and including 52 KV”
2. IEC Publication **62271-1: 2007** “High voltage switchgear and controlgear.  
Part 1: Common specifications”

***Related:***

3. IEC Publication **62271-100**
4. IEC Publication **62271-102**
5. IEC Publication **60265 -1**
6. IEC Publication **60060 -1**
7. IEC Publication **60529**

**2. RATINGS ASSIGNED BY THE MANUFACTURER AND PROVED BY TESTS**

Rated voltage	<b>12kV</b>
Rated normal current	<b>630A</b>
Number of phases	<b>3</b>
Rated frequency	<b>50/60 Hz</b>
Testing voltages	
Power frequency withstand voltage ( 1min )	<b>28/32/42 kV</b>
Lightning impulse withstand voltage ( 1.2/50 $\mu$ s )	<b>75/85/95 kV</b>
Short-time withstand current	<b>20 kA</b>
Peak withstand current	<b>50 kA</b>
Duration of short-circuit	<b>2 s</b>
Short-circuit making current	<b>50 kA</b>
Mechanical operations class	<b>M1</b>
Degree of protection	<b>IP 4X</b>
Supply voltages	
-closing devices, opening devices	<b>24 VDC</b>

**Used main components:**

Vacuum Circuit-Breakers

Disconnecter

Earthing switch

Details and other components specified in RMU Documentation 2010-06-15