



# TYPE TEST CERTIFICATE

Certificate No.: 2017WT672-1

Laboratory Ref. No.: CCDT02012016V01

**APPARATUS:** Neutral Grounding Resistor(OR-TN-10.5kV/60Ω)  
**APPARATUS CODE:** 2017WT672  
**DESIGNATION:** Rated Voltage: 10.5kV; Rated Current: 100A; Rated Resistance: 60Ω; Protection Level: IP40  
**MANUFACTURE:** Orion Resistors Co.,Ltd.  
**ADDRESS:** No. 79, Fuchang Road, Zhongguancun Entrepreneurship Base, Baoding City, China  
**DATES OF TESTS:** 29<sup>th</sup> August to 5<sup>th</sup> September 2017

**TESTED BY:**  
1.China National Center for Quality Supervision and Test of Electrical Control and Distribution Equipment (CCDT)  
2.Tianjin Tianchuan Electric Control Equipment Test Co., Ltd.

The apparatus, constructed in accordance with the description, drawings, and photographs incorporated in this certificate, has been subjected to the series of proving tests in accordance with:

IEC 62271-1/IEC 62271-202 /IEC 60076-25 / IEEE 32 / IEEE C57.32a

- 1.Resistance Value Measurement
- 2.Ingress Protection (IP) Rating Inspection
- 3.Power-Frequency Withstand Voltage Test
- 4.Insulation Resistance Measurement

Temp.: 28 °C, RH: 51 %, Atmospheric Pressure: 101.3 kPa

Test Item	Standard Value	Measured Value	Test Point / Condition	Test Result
Resistor Resistance	60Ω ±3%	60.94Ω	Resistor	PASS
Insulation Resistance Test	≥2 MΩ	>2MΩ	Test Voltage 500V; Resistor to Ground	PASS
Power-Frequency Withstand Voltage	Test voltage 42 kV applied for 60 s without breakdown or flashover.		Resistor to Ground	PASS
Protection Level Test	Using a Φ1.0 mm needle-type push-pull gauge (SN-10), a force of 1 N was applied to check all gaps on the enclosure. The probe was unable to enter.			PASS

### Neutral Grounding Resistor Specimen



## Name Plate of NGR



### Generator Neutral Grounding Resistor

Product Model: OR-GN-10.5kV/600Ω      Rated Voltage: 10.6 kV  
Rated Frequency: 50Hz      Rated Current: 100 A  
IP Rating: IP40      Rated Resistance: 60 Ω  
Contactor Model: JCZ1-10/250      Time: 10 S  
CT Model: LJ-80 100/5      Weight: 500 kg  
date: 2017-8

[www.orionresistors.com](http://www.orionresistors.com)