

Meter and protect
with the confidence
of safer,
maintenance-free
HV components

High
Voltage
Dry
Insulation

- Current Transformers
- Bushings
- Cable Terminals

RHM International

*Reliable
high-voltage
insulation
technology
that eliminates
the risk of
explosions and
toxic leaks.*



Innovative AND Mature

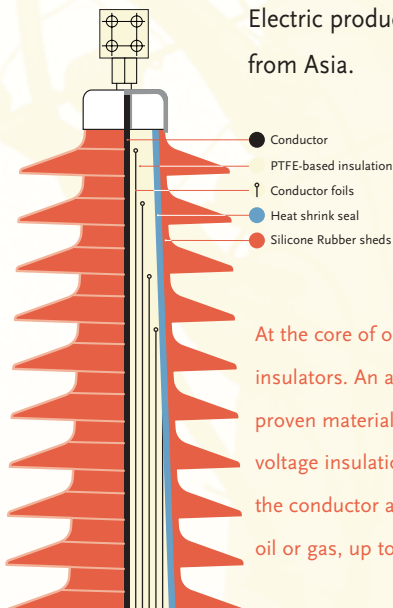
While traditional HV equipment is relatively safe, T&D operators fear the one-time event that could damage a whole substation, disrupt the network or worse, injure personnel. RHM International technology eliminates all accident risk, by design. From their inception, both RHM International and technology partner TR Electric Company (TRE) have strived to develop safer equipment for high-voltage T&D users while providing a superior return on investment. The drive to provide industry-leading safety and value continues today.

RHM provides robust and flexible designs for Current Transformers (CTs) from 40.5 to 550 kV, Transformer Bushings and Wall Bushings from 40.5 to 252 kV, and Cable Terminals from 66 to 110 kV. All feature our HV DryShield™ proprietary insulation and allow our customers to reliably and safely insulate, meter and protect their HV systems. HV DryShield™ technology provides unmatched durability and performance with no maintenance.

Created by researchers at the Electrical Power Research Institute in China, all our HV products are manufactured by TR Electric Company. RHM International is the exclusive sales and licensing source of TR Electric products outside China — your Western interface to innovation from Asia.



LRGBJ 252 kV
Current Transformers



At the core of our original product designs are very fine capacitance graded bushing-type insulators. An advancement of accepted principles, our proprietary HV DryShield™ insulation uses proven materials like PTFE (Polytetrafluoroethylene) and Silicone Rubber. HV DryShield™ high-voltage insulation provides unmatched control of electric field distribution homogeneity between the conductor and the outside structure in a genuine stress-free design that requires no insulating oil or gas, up to 550 kV.

Quality production with a low cost of

HIGH VOLTAGE DRY TYPE
DESIGNS YOU CAN RELY ON
FOR YOUR T&D NETWORK:
ALL OUR PRODUCTS COMPLY
WITH IEC, IEEE AND GB STANDARDS

CURRENT TRANSFORMER

- 40.5 to 550 kV rated voltage
5 ~ 8000/1 A or
5 ~ 8000/5 A rated ratio
- Totally maintenance-free
- 2 to 3 times lighter than
traditional oil or gas designs

BUSHINGS

- For Power Transformer and
through wall applications
- 40.5 to 252 kV rated voltage
- Rated current: 100 ~ 3150 A

CABLE TERMINALS

- 66 to 110 kV



As of today, more than 20,000 units using RHM technology have been in operation in the Chinese HV T&D network over the past 15 years. All of those units are still in use without a single failure to report.

ownership

Our Current Transformers are based on a U-shaped bushing design that incorporates HV DryShield™ insulation on the primary winding (Fig. 1). Its rugged, straightforward design provides top-notch metering and protection up to 550 kV and 8000A without any risk of explosion or toxic leakage. Our CT performance matches or exceeds international standards. (All products conform to IEC 60044-1 (1996), IEEE STD C57.13 (1993) and GB1208 (1997) standards.)

The maturity of our designs is established with more than 15 years of field experience for HV DryShield™ technology, and over 20,000 units installed in all product categories without a single failure.

Simplicity pays at all levels. The simple design of RHM International's products allows very short manufacturing lead time (no drying or vacuuming time is ever needed). All components are easily configurable to meet a range of customer-specific design needs, and are totally maintenance-free.

Our manufacturing know-how was developed in an ISO 9001 certified facility with a team having more than 40 years of experience in HV T&D technologies and field problem solving. All TR Electric employees receive extensive and ongoing training in electrical design, high-tech manufacturing and testing. RHM International has established an enviable customer satisfaction rating by delivering top-quality products for critical applications.

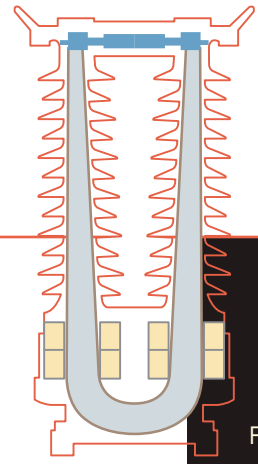


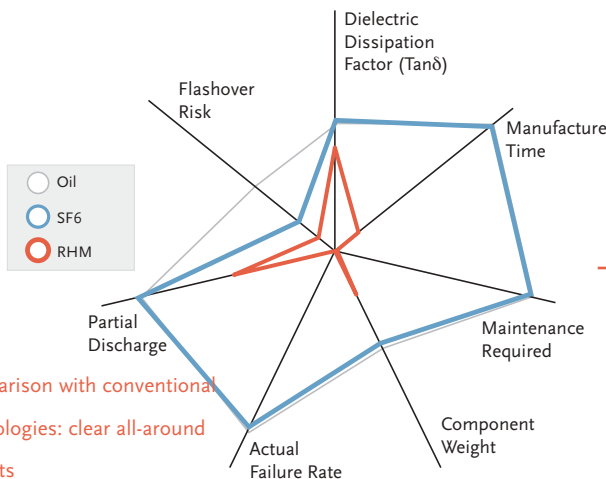
Fig. 1

ITEM	Our Products	Conventional Products
145 kV Bushing	<100 kg	300-400 kg
145 kV Current Transformer	<250 kg	599-800 kg
252 kV Current Transformer	<450 kg	1100-1300 kg

HV DryShield™ technology allows development of lighter-weight components.

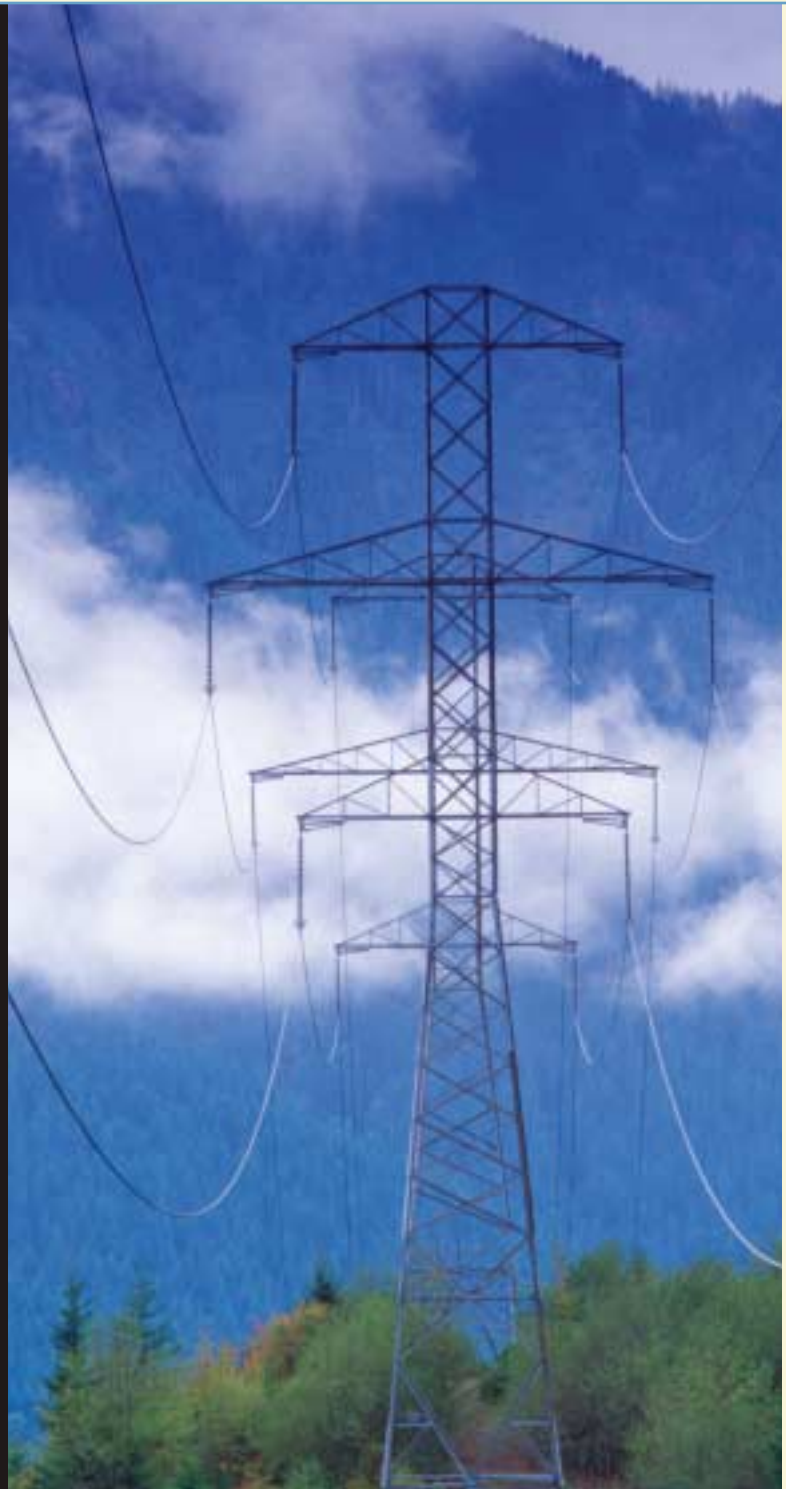
LRGBJ SERIES CURRENT TRANSFORMER	
Accuracy Class	0.2S, 0.2, 0.5S, 0.5 or 5P, 10P, TPY (for more specific need, please contact us)
Rated Current	5-5000 A (for application up to 8000 A, please contact us)
Ambient Temperature	+45°C (113F) to -45°C (-49F)
Creepage Distances	25 to 31 mm/kV
Insulation Level (kV)	550 kV rated: 680/1175/1550 252 kV rated: 460/1050/1200 145 kV rated: 230/550/630
Thermal Stability (Ith)	550 kV rated: 50 kA, 3s 252 kV rated: 50 kA, 3 s 145 kV rated: 31.5 kA, 4 s
Dynamic Stability (Idyn)	550 kV rated: 125 kA 252 kV rated: 125 kA 145 kV rated: 31.80 kA
Partial Discharge Level	<5pC 550 kV rated: <10 pC
Static Withstand Test Loads	550 kV rated: 4000 N 252 kV rated: 4000 N 145 kV rated: 2000 N

Excellent electrical and mechanical properties: improved anti-flashover capabilities and thermal stability, low partial discharge, low tanδ, high mechanical static withstand test loads in any pollution level.
See detailed specification sheet.



Comparison with conventional technologies: clear all-around benefits

*“...it won’t explode,
nor catch on fire under
any circumstances.
Failures of oil- and
gas-filled equipment
can be hazardous to
both personnel and
equipment.
(HV DryShield™ CT
technology) completely
eliminates these risks
while providing a
true maintenance-free
ownership”*



Extraordinary field record

“After observing the product in the field for several years and passing type tests and several dissection analyses, I am now convinced (TRE’s Current Transformer) has superior qualities”

—*Wang Xiao Qi – Head of Wuhan High Voltage Research Institute –
International HV testing laboratory which performed rigorous type tests on TRE’s CTs.*

“We consider it as a leap-frog technology taking us in a new area of HV equipment. What attracted us initially was the fact that it won’t explode or catch fire under any circumstances. In substations there are regular incidents with oil- or gas-filled equipment. The biggest advantage of TRE’s dry-type CTs is that they don’t have any of those problems.

Furthermore, oil-filled equipment has been around for many years and we can use them pretty efficiently, but the maintenance workload is very important; for a place like Shenzhen it is too much work. TRE’s CTs are truly maintenance-free.

TRE’s CTs are still pretty recent compared with oil-based devices but we are very excited to use them. There are more than 400 units of TRE’s 145 kV CTs in Shenzhen now.”

—*Li Han Min – CTO Shenzhen T&D Utility Company*

“Visiting the facility, looking at the process, the specific manufacturing equipment, and quality standards used, I see an advanced operation. All these conditions guarantee the sustained quality of the products. Combined with the perfect field track record of all the products and being an expert in the field, I can say that TRE’s products are already very mature and have achieved world-class performance.”

—*Zhang Jun Feng – Fujian Province Electric Power Company –
National expert in Current Transformers.*



LRGBJ 252 kV Current Transformers



Indoor/outdoor STB
252 kV Wall Bushings



ISO 9001 Certified Operations

RHM International and TR Electric believe in superior products, strong strategic partners, satisfied customers, highly trained employees and strong management.

Guided by these traditional corporate values, we continuously innovate, producing a vibrant R&D culture.

The future holds many exciting opportunities, including the deregulation of energy markets and remarkable growth in Asia.

To capitalize on these opportunities, RHM International and TR Electric are carefully mapping out a strategy for the future. Plans include expanding the product line, pursuing synergistic acquisitions and partnerships, enhancing international operations and building new production facilities. We welcome the future with confidence, focused on customer service, creativity and growth.

RHM International

RHM International LLC
81 Glen Road
Brookline, MA USA
+1 978 761 7289

www.rhmintl.com

A TR Electric Partner