

Type Approval Certificate



This is to certify that the undernoted product(s) has/have been tested in accordance with the relevant requirements of the GL Type Approval System.

Certificate No. 61 687 - 14 HH

Company ABB Oy
Medium Voltage Products
P.O. Box 699
65101 Vaasa, FINLAND

Product Description Digital Protection Relays

Type 615 series: REF615, REM615, RET615, REU615, RED615

Environmental Category C, EMC2

Technical Data /
Range of Application REF615 : Feeder Protection and Control
for the protecting, monitoring and controlling of feeder lines.

REM615 : Motor Protection and Control
for the protection, monitoring and controlling of asynchronous motors

RET615 : Transformer Protection and Control
for the protection, monitoring and controlling of two-winding power transformers

REU615 : Voltage Protection and Control
for voltage and frequency based protection and controlling in power systems.

RED615 : Line Differential Protection and Control
for differential protection and controlling of feeder lines

Protection relays are not approved for synchronizing

Test Standard Guidelines for the Performance of Type Approvals, Chapter 2- Test Requirements
for Electrical / Electronic Equipment and Systems (VI-7-2), Edition 2012
IEC 60255-1:2009

Documents Type Test summary 1MRS082133 date: 02.10.2013

Remarks None

Valid until 2019-01-23

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File No. I.L.01

Hamburg, 2014-01-24

Type Approval Symbol



Germanischer Lloyd

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This certificate is issued on the basis of "Guidelines for the Performance of Type Approvals Part 1, Procedure".

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Basic Protection Functions:

REF615: Feeder Protection and Control

- Three-phase non-directional/directional overcurrent protection
- Non-directional/directional earth-fault protection
- Three-phase overvoltage/undervoltage protection
- Frequency protection
- Three-phase inrush current detection

REM615 : Motor Protection and Control

- Three-phase non-directional overcurrent protection
- Non-directional/directional earth-fault protection
- Three-phase undervoltage protection
- Motor load jam protection
- Motor startup supervision

RET615 : Transformer Protection and Control

- Three-phase non-directional overcurrent protection
- Non-directional earth-fault protection
- Three-phase overvoltage/undervoltage protection
- Transformer differential protection for two-winding transformers

REU615 : Voltage Protection and Control

- Three-phase non-directional overcurrent protection
- Three-phase overvoltage/undervoltage protection
- Frequency protection
- Residual overvoltage protection

RED615 : Line Differential Protection and Control

- Three-phase non-directional overcurrent protection
- Non-directional/directional earth-fault protection
- Line differential protection
- Phase discontinuity protection

Further supported protection functions according manufacturer documentation

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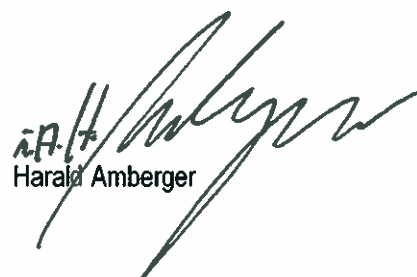
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Power Supply

U_{aux} nominal: 100, 110, 120, 220, 240 V AC 50 and 60 Hz
24, 30, 48, 60, 110, 125, 220, 250 V DC

U_{aux} variation: 38...110% of U_n (38...264 V AC)
50...120% of U_n (12...300 V DC)

Energizing Inputs

Rated frequency:	50/60 Hz	
Rated current In:	0.2/1 A	1/5A
Thermal withstand capability		
• Continuously	4 A	20 A
• For 1 s	100 A	500 A
Input impedance	<100mOhm	<20mOhm

Rated voltage	60...210 V AC
Voltage withstand:	
• Continuously	240 V AC
• For 10 s	360V AC
Burden at rated voltage	<0,05VA

Current sensor input	75mV...2812,5 mV
Voltage sensor input	6 kV...30kV

Binary inputs:	
Operating range	±20% of the rated voltage
Rated voltage	24...250 V DC

Signal output:	
Rated voltage	250 V AC/DC
Continuous contact carry	5A
Make and carry for 3.0 s / 0.5 s	15A / 30A

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