



(Conformance) Testing a Product Family and Source Code

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How to test

- A product family
- Virtual relay (PC with Software)
- Source code libraries ?
- Common object code

Product family

- Definition = same hardware and firmware; different data model
- Two options
 - Complete test of each model in the family
 - Expensive!
 - Result = 1 certificate for each model
 - “Superset” test of multiple model in the family
 - Result = 1 certificate for the family

Superset Test Conditions

- Same ACSI services
- Same PICS and same PIXIT
- Data modelling and configuration may be different. The applicable (modelling – configuration) test cases have to be executed on each variant of the superset. Therefore the test lab needs a sample and ICD file of each variant in the superset
- The MICS document covers all the data models and outlines the modelling differences between the variants. Or each variant has a separate MICS document
- Same hardware and software version
- The physical differences, if any, should also be described (PICS)
- Each variant of the superset is specified on the back page of the certificate

Superset Certificate Example



IEC 61850 Certificate Level A¹

Page 1/2

No. 30920420-Consulting 09-1712

Issued to:
ABB Oy
Distribution Automation
Muottitie 2 A
FI-65101 Vaasa
Finland

For the product:
615 series
Software version: 2.0.3
Hardware revision: C

14: File transfer

Ft1, Ft2ab, FtN1ab, Ft4

Ft2c, FtN1c

The conformance test was executed with following 615 series IED variants using the same software version and hardware revision.

REF615, RED615, RET615 and REM615

Testing Source Code?

- Yes it can be tested
- Result = test report only, No certificate!
- Testing is executed on a product/PC using the source code or DLL

Thank you Questions?

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