

# CTF Certificate

## Customer Testing Facility

### Acceptance of manufacturer's test results Anerkennung von Prüfungen aus Herstellerlabor

Certificate no. 17-EL-0185.A01  
Zertifikat Nr.

Manufacturer no. 104626  
Hersteller Nr.

Based upon our agreement with Manufacturer  
Beruhend auf der Vereinbarung mit Hersteller

**ABB Power Protection SA  
Via Luserte Sud 9, 6572 Quartino, SWITZERLAND**

and the assessment (audit) of Laboratory  
und der Begutachtung (Auditierung) des Labors

**ABB Power Protection SA  
Via Luserte Sud 9, 6572 Quartino, SWITZERLAND**

Eurofins is pleased to state that the requirements of relevant operational documents IEC EE OD-2048 and OD ECS 037 are fulfilled for the acceptance of test reports according to the CTF/MTL procedures. The laboratory complies with the applicable requirements of ISO/IEC 17025:2005.

hat Electrosuisse festgestellt, dass die relevanten Anforderungen nach IEC EE OD-2048 und OD ECS 037 für die Anerkennung von Prüfberichten im CTF/MTL Verfahren erfüllt sind. Das Labor entspricht den anwendbaren Anforderungen aus der ISO/IEC 17025:2005.

Customer Testing Facility Stage  
Status des Hersteller Labors

**1**

Eurofins guarantees the certification of test results which are done in the assessed manufacturer laboratory.  
Eurofins garantiert die Zertifizierungen von Prüfberichten aus dem auditierten Herstellerlabor

against following standards  
nach folgenden Normen

**IEC/EN 62040-1:2008+AMD1:2013  
IEC/EN 62040-1:2017  
IEC/EN 60950-1:2005+AMD1:2009+AMD2:2013  
IEC/EN 62040-3:2011  
IEC/EN 62040-3:2011**

and according following schemes  
und gemäss folgendem Verfahren

**IECEE**

This certificate is valid until  
Dieses Zertifikat ist gültig bis

**2019-12-31**

Change of standards, operational documents and procedure documents could have an influence to the validity of this certificate.

Änderungen der Normen, normativen Dokumente und/oder Verfahrensanforderungen bleiben vorbehalten.

**Eurofins Electrosuisse Product Testing AG  
Swiss Certification Body**

Jürg Rellstab  
Product Certification



Measurement with five modules\_XVFI in the frame: results in double conversion mod with the XVFI modality active mode. XVFI modality is a strategy that targets at maximizing the efficiency with low loads.

| Load (%) | Total Input power (W) | Total Output power (W) | Efficiency (%) | Expected value due to the specification of the manufacturer | Verdict |
|----------|-----------------------|------------------------|----------------|-------------------------------------------------------------|---------|
| 0        | 383.03                | 0.00                   | --             | --                                                          | --      |
| 10       | 25943.20              | 25145.86               | 96.9           | --                                                          | P       |
| 20       | 51685.00              | 50267.95               | 97.3           | --                                                          | P       |
| 25       | 64167.80              | 62442.45               | 97.3           | 96.9                                                        | P       |
| 30       | 77338.40              | 75277.55               | 97.3           | --                                                          | P       |
| 35       | 89801.80              | 87425.15               | 97.4           | --                                                          | P       |
| 40       | 102631.55             | 99926.65               | 97.4           | --                                                          | P       |
| 50       | 128112.00             | 124719.15              | 97.4           | 97.1                                                        | P       |
| 60       | 153937.80             | 149799.15              | 97.3           | --                                                          | P       |
| 70       | 179785.10             | 174806.40              | 97.2           | --                                                          | P       |
| 75       | 192958.90             | 187513.90              | 97.2           | 96.9                                                        | P       |
| 80       | 206008.15             | 200080.05              | 97.1           | --                                                          | P       |
| 90       | 231967.15             | 225057.65              | 97.0           | --                                                          | P       |
| 100      | 258007.45             | 250071.40              | 96.9           | 96.6                                                        | P       |

Graph of efficiency:

