

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                         |                                                                                      |                    |                                  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|--------------------|----------------------------------|
| <b>Prüfbericht-Nr.:</b><br>Test Report No.:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | <b>IN228316 001</b><br>ULR-TC568822200000036F                                                                                                                                                                                                           | <b>Auftrags-Nr.:</b><br>Order No.:                                                   | <b>146613836</b>   | Seite 1 von 119<br>Page 1 of 119 |
| <b>Kunden-Referenz-Nr.:</b><br>Client Reference No.:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 2143179                                                                                                                                                                                                                                                 | <b>Auftragsdatum:</b><br>Order date:                                                 | 13-Oct-2021        |                                  |
| <b>Auftraggeber:</b><br>Client:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | <b>Schneider Electric Pvt. Ltd.</b><br>Beary's Global Research Triangle, Sy. No 63/3B, Gorvigere Village, Whitefield<br>Ashram Road, Bidarahalli Hobli, Bangalore 560067 India                                                                          |                                                                                      |                    |                                  |
| <b>Prüfgegenstand:</b><br>Test item:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | <b>Online UPS</b>                                                                                                                                                                                                                                       |                                                                                      |                    |                                  |
| <b>Bezeichnung / Typ-Nr.:</b><br>Identification / Type No.:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | <b>UPS+Internal Battery:</b><br><b>SRTL5KRM2UI</b><br><b>External battery pack:</b><br><b>SRTL180RM2UBP</b>                                                                                                                                             | <b>Serien-Nr.:</b><br>Serial No.:                                                    | <b>AS213717853</b> |                                  |
| <b>Auftrags-Inhalt:</b><br>Order content:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | EMI/EMC testing and issue of test report                                                                                                                                                                                                                |                                                                                      |                    |                                  |
| <b>Prüfgrundlage:</b><br>Test specification:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | IEC 62040-2:2016 / EN IEC 62040-2:2018<br>IEC 61000-3-12:2011, IEC 61000-3-11:2017<br>IEC 61000-4-2:2008, IEC 61000-4-3:2020<br>IEC 61000-4-4:2012, IEC 61000-4-5:2014+A1:2017<br>IEC 61000-4-6:2013, IEC 61000-4-8:2009<br>IEC 61000-4-34:2005+A1:2009 |                                                                                      |                    |                                  |
| <b>Wareneingangsdatum:</b><br>Date of receipt:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 15-Nov-2021                                                                                                                                                                                                                                             |  |                    |                                  |
| <b>Prüfmuster-Nr.:</b><br>Test sample No.:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | A003165030-001                                                                                                                                                                                                                                          |                                                                                      |                    |                                  |
| <b>Prüfzeitraum:</b><br>Testing period:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 16-Nov-2021 to 07-Dec-2021                                                                                                                                                                                                                              |                                                                                      |                    |                                  |
| <b>Ort der Prüfung:</b><br>Place of testing:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <b>EMI/EMC Laboratory</b><br><b>TÜV Rheinland (India) Pvt. Ltd</b><br>Bangalore.                                                                                                                                                                        |                                                                                      |                    |                                  |
| <b>Prüflaboratorium:</b><br>Testing laboratory:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | <b>TÜV Rheinland (India) Pvt. Ltd.,</b><br>Plot No.108,West Wing,<br>Electronic City Phase1, Hosur<br>Road, Bangalore-560 100, India.                                                                                                                   |                                                                                      |                    |                                  |
| <b>Prüfergebnis*:</b><br>Test result*:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Pass                                                                                                                                                                                                                                                    |                                                                                      |                    |                                  |
| <b>zusammengestellt von: Avinash K</b><br>compiled by:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                         | <b>genehmigt von: M Abdul Rahman</b><br>authorized by:                               |                    |                                  |
| <b>Datum:</b><br>Date 09-Jun-2022                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                         | <b>Ausstellungsdatum:</b><br>Issue date:09-Jun-2022                                  |                    |                                  |
| <b>Stellung / Position: Engineer</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                         | <b>Stellung / Position: Asst. Gen. Manager</b>                                       |                    |                                  |
| <b>Sonstiges/ Other Aspects: Decision Rule: The laboratory employs simple acceptance rule in making pass or fail decisions on test results with no guard band.</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                         |                                                                                      |                    |                                  |
| <b>Zustand des Prüfgegenstandes bei Anlieferung:</b><br>Condition of the test item at delivery:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                         | Prüfmuster vollständig und unbeschädigt<br>Test item complete and undamaged          |                    |                                  |
| <p>* Legende: 1 = sehr gut 2 = gut 3 = befriedigend 4 = ausreichend 5 = mangelhaft<br/>P(ass) = entspricht o.g. Prüfgrundlage(n) F(ail) = entspricht nicht o.g. Prüfgrundlage(n) N/A = nicht anwendbar N/T = nicht getestet<br/>Legend: 1 = very good 2 = good 3 = satisfactory 4 = sufficient 5 = poor<br/>P(ass) = passed a.m. test specification(s) F(ail) = failed a.m. test specification(s) N/A = not applicable N/T = not tested</p> <p><b>Dieser Prüfbericht bezieht sich nur auf das o.g. Prüfmuster und darf ohne Genehmigung der Prüfstelle nicht auszugsweise vervielfältigt werden. Dieser Bericht berechtigt nicht zur Verwendung eines Prüfzeichens.</b></p> <p><i>This test report only relates to the a. m. test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any test mark.</i></p> |                                                                                                                                                                                                                                                         |                                                                                      |                    |                                  |



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## TEST SUMMARY

### **5.1.1 HARMONICS ON AC MAINS**

*RESULT: PASS*

### **5.1.2 VOLTAGE FLUCTUATIONS ON AC MAINS**

*RESULT: PASS*

### **5.1.3 MAINS TERMINAL DISTURBANCE VOLTAGE (CONDUCTED EMISSION)**

*RESULT: PASS*

### **5.1.4 MAINS TERMINAL OUTPUT INTERFERENCE VOLTAGE**

*RESULT: PASS*

### **5.1.5 COMMON MODE DISTURBANCE, AT COMMUNICATION PORTS**

*RESULT: PASS*

### **5.2.1 RADIATED EMISSION**

*RESULT: PASS*

### **6.1.1 RADIATED RADIO-FREQUENCY ELECTROMAGNETIC FIELDS (RADIATED SUSCEPTIBILITY)**

*RESULT: PASS*

### **6.1.2 CONDUCTED DISTURBANCES INDUCED BY RADIO-FREQUENCY FIELDS (CONDUCTED SUSCEPTIBILITY)**

*RESULT: PASS*

### **6.1.3 POWER FREQUENCY MAGNETIC FIELDS**

*RESULT: PASS*

### **6.1.4 CONDUCTED IMMUNITY TO LOW FREQUENCY SIGNALS**

*RESULT: PASS*

### **6.2.1 ELECTRICAL FAST TRANSIENTS AND BURSTS**

*RESULT: PASS*

### **6.2.2 SURGES**

*RESULT: PASS*

### **6.2.3 ELECTROSTATIC DISCHARGES**

*RESULT: PASS*

### **6.3.1 VOLTAGE DIPS**

*RESULT: PASS*

### **6.3.2 VOLTAGE INTERRUPTIONS**

*RESULT: PASS*



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## 1. General Remarks

### Test standards and specifications:

#### Emission

IEC 62040-2:2016 / EN IEC 62040-2:2018

IEC 61000-3-12:2011

IEC 61000-3-11:2017

#### Immunity

IEC 62040-2:2016 / EN IEC 62040-2:2018

IEC 61000-4-2:2008 (contact: level 4 ( $\pm 8$ kV), air: level X ( $\pm 12$ kV))

IEC 61000-4-3:2020 (80-6000MHz: level 3 (10V/m))

IEC 61000-4-4:2012 (AC power ports: level 4 ( $\pm 4$ kV), signal ports: level 4 ( $\pm 2$ kV))

IEC 61000-4-5:2014+A1:2017 (Input AC power port: level X ( $\pm 6$ kV),  
Input AC power port ECO mode): level 4 ( $\pm 4$ kV),  
Output AC power port : level 3 ( $\pm 2$ kV),  
signal ports: level 2 ( $\pm 1$ kV))

IEC 61000-4-6:2013 (AC power ports: level 3 (10V), signal ports: level 3 (10V))

IEC 61000-4-8:2009 (level 4 (30A/m), continuous field)

IEC 61000-4-34:2005+A1:2009

All Emission tests and all immunity test levels, limits and performance criteria to the Product (EUT) are considered according to customer specifications.

The testing is been performed with the latest IEC 62040-2:2016 / EN IEC 62040 2:2018, it also complies to IEC 62040-2:2005 & EN 62040-2:2006

The maximum internal frequency of the product is 400MHz and as per customer specifications, Radiated Emission test was performed up to 6GHz.

### Interface cable in EUT

| Interfaces                  | Max. cable length | Cable Type<br>(Shielded/Un shielded) |
|-----------------------------|-------------------|--------------------------------------|
| AC Input power cord         | 3 m               | Unshielded                           |
| AC Output power cord        | 3 m               | Unshielded                           |
| EPO cable with Ferrite Bead | 5 m               | Unshielded                           |
| Network 1(10/100) cable     | 15 m              | Unshielded                           |
| Universal I/O cable         | 4 m               | Unshielded                           |
| Micro-link cable            | 2 m               | Shielded                             |

### Spare PDU

|         |                                                                     |
|---------|---------------------------------------------------------------------|
| SRTL002 | APC SMART-UPS SRTL 5KVA OUTPUT HW KIT                               |
| SRTL003 | APC SMART-UPS SRTL 5KVA OUTPUT IEC KIT                              |
| SRTL004 | APC SMART-UPS SRTL 5KVA PDU 208V (4) L6-20                          |
| SRTL005 | APC Smart-UPS Ultra On-Line 5KVA PDU 208V (2)L6-30 (2)L6-20 Pigtail |