# Energy meter installation and COMMISSIONING REPORT

After the report has been filled in, save the file with the vehicle number and Train Company name. Send it by email to emu@banenor.no.

**Vehicle and Installation Details**

|  |  |  |  |
| --- | --- | --- | --- |
| Vehicle No. |  | Date: |  |
| EVN+1 No. |  | Installation Location |  |
| Train Company |  | Installation Company |  |

**Installation Sign Off**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Ref Chapter | Name | Company | Signature | Date |
| 3 |  |  |  |  |
| 4 |  |  |  |  |
| 5 |  |  |  |  |
| 6 |  |  |  |  |

**Supporting personnel**

|  |  |
| --- | --- |
| Name | Company |
|  |  |
|  |  |
|  |  |
|  |  |

**Metering Equipment Configuration**

Details for Current Transducer(s), Voltage Transformer(s) or antenna are to be filled in only if the component is changed.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **SERIAL NUMBER** | **SAIRA code** | **RATIO** | **Accuracy class** |
| **Energy Meter** |  |  |  |  |
| **Current Transformer CHA**(If present) |  |  |  |  |
| **Voltage Transformer CHA**(If present) |  |  |  |  |
| **Current Transformer CHB** |  |  |  |  |
| **Voltage Transformer CHB** |  |  |  |  |
| **Antenna** |  |  |  |  |

**Mechanical installation results (Ref Chapter 3)**

|  |  |  |
| --- | --- | --- |
| **Ref Chapter** | **Securing operations** | Check the box |
|  |
| 3.1 | Installation procedure with Mounting Plate | **🞎** |
| 3.2 | Installation procedure without Mounting Plate | **🞎** |
| 3.3 | Installation procedure with Cable Cover | **🞎** |
| 3.4 | Ground connection of the REM | **🞎** |
| 3.5 | Mating connector connection | **🞎** |

|  |  |
| --- | --- |
| *Insert Picture* | *Insert Picture* |
| **Old Energy meter**(If present) | **New Energy Meter installed** |

**Unpowered testing results (Ref Chapter 4)**

|  |
| --- |
| **Insulation Resistance Test Results** |
| Last date of the instrument calibration |  |
| Next date of instrument calibration |  |
|  |  |
| Where present | **(>2MΩ)**Write the value |  |  |
| Test point A1T |  |  |  |
| Test point A2T |  |  |  |
| Test point B1T |  |  |  |
| Test point B2T |  |  |  |
|  |  |  |  |
| **Antenna cable test** |  |  |
|  | Check the box | Write the test value |  |
| MOBILE cable | **🞎** |  |  |
| GPS cable | **🞎** |  |  |
|  |  |  |  |
| **SIM card installation** |
|  | Write the Name/number |
| SIM card Company |  |
| SIM card reference (No.) |  |
|  |  |
|  | Check the box |  |
| Completed SIM card installation | **🞎** |  |
|  |  |  |  |
|  |  |  |  |

**Powered testing results (Ref Chapter 5)**

|  |
| --- |
| **Energy Meter switch on** |
|  | Check the box |
| Check the power mating connector polarity | **🞎** |
| Check the power supply voltage value(write the value) |  |
| Check the Energy Meter starting | **🞎** |
| “GPS” led on (on the display) | **🞎** |
| “LINK ON” led on (on the display) | **🞎** |
| Check the voltage threshold of the REM102 Battery(in the web page) *( ≥ 2.1Volt ) / write the value* |  |
| Reboot the Energy Meter | **🞎** |

|  |
| --- |
| **Data transfer test** |
|  | Check the box |
| Check the communication between REM102 and DCS (test FTP)  | **🞎** |

|  |
| --- |
| **Voltage Transducer output value** |
|  | write the value |
| Output value measured of the Voltage Transducer  |  |

|  |
| --- |
| **Check the Energy Consumption** |
|  | write the value |
| Total Active (kW/h) |  |
| Total Reactive (kVar/h) |  |

|  |
| --- |
| **CONCLUDING OPERATION (Ref Chapter 6)** |
|  |  |
|  | Check the box |
| Completed the Cable Cover installation (if present) | **🞎** |
| Turn off the Energy Meter  | **🞎** |

**In case of old energy meter remounted:**

|  |  |
| --- | --- |
| Manufacturer  | Serial number |
|  |  |
| Old Sim Card Number:(if replaced by another) |  |

Observations

|  |
| --- |
|  |