



## C&I LUNA2000 SUPERVISION SERVICES

	BASIC	EXTENDED	ADVANCED
<b>BEFORE COMMISSIONING</b>	<p>ALL NECESSARY SUPPORT AND TECHNICAL CONSULTATIONS ABOUT:</p> <ul style="list-style-type: none"> <li>- installation site, EPC work;</li> <li>- electrical and communication line design;</li> <li>- compatibility of the products &amp; 3rd party devices</li> <li>- necessary 3rd party products (if needed);</li> <li>- obligatory permissions and agreements (local).</li> </ul>	<p>ALL NECESSARY SUPPORT AND TECHNICAL CONSULTATIONS ABOUT:</p> <ul style="list-style-type: none"> <li>- installation site, EPC work;</li> <li>- electrical and communication line design;</li> <li>- compatibility of the products &amp; 3rd party devices</li> <li>- necessary 3rd party products (if needed);</li> <li>- obligatory permissions and agreements (local);</li> <li>- safety precautions in on-grid &amp; off-grid mode;</li> <li>- electrical safety design;</li> <li>- automatic MCCB's</li> <li>- integration with existing BMS or Photomate EMS.</li> </ul> <p>ON-SITE:</p> <ul style="list-style-type: none"> <li>- one verification on-site visit before delivery/commissioning after EPC work.</li> </ul>	<p>ALL NECESSARY SUPPORT AND TECHNICAL CONSULTATIONS ABOUT:</p> <ul style="list-style-type: none"> <li>- installation site, EPC work;</li> <li>- electrical and communication line design;</li> <li>- compatibility of the products &amp; 3rd party devices</li> <li>- necessary 3rd party products (if needed);</li> <li>- obligatory permissions and agreements (local);</li> <li>- safety precautions in on-grid &amp; off-grid mode;</li> <li>- electrical safety design;</li> <li>- automatic MCCB's</li> <li>- integration with existing BMS or Photomate EMS.</li> </ul> <p>ON-SITE:</p> <ul style="list-style-type: none"> <li>- one verification on-site visit before delivery/ commissioning after EPC work.</li> </ul>
<b>DURATION</b>	<b>6 HOURS</b>	<b>6 HOURS</b>	<b>6 HOURS + 1 DAY VISIT</b>
<b>ON-SITE COMMISSIONING</b>	<ul style="list-style-type: none"> <li>- verification of components assembly;</li> <li>- basic electrical safety measurements*;</li> <li>- powering on system;</li> <li>- Smartlogger/SACU commissioning;</li> <li>- firmware upgrades;</li> <li>- connection to with FusionSolar PVMS</li> <li>- testing working modes and features;</li> <li>- defect elimination (if needed)**;</li> <li>- basic how to use training (2 hours);</li> </ul>	<ul style="list-style-type: none"> <li>- verification of components assembly;</li> <li>- basic electrical safety measurements*;</li> <li>- powering on system;</li> <li>- Smartlogger/SACU commissioning;</li> <li>- firmware upgrades;</li> <li>- connection to with FusionSolar PVMS</li> <li>- testing working modes and features;</li> <li>- defect elimination (if needed)**;</li> <li>- integration with PV (Huawei inverters only);</li> <li>- advanced off-grid mode tests;</li> <li>- advanced how to use &amp; basic maintenance training (2-3 hours).</li> </ul>	<p>INSTALLATION OF:</p> <ul style="list-style-type: none"> <li>- battery packs (forklift provided by customer);</li> <li>- AC and DC harness;</li> <li>- SACU, PCS, CMU, SmartMeter;</li> <li>- DC battery rods;</li> <li>- UPS (for off grid scenarios);</li> <li>- communication cables internal &amp; external.</li> <li>- verification of components assembly;</li> <li>- basic electrical safety measurements*;</li> <li>- powering on system;</li> <li>- Smartlogger/SACU commissioning;</li> <li>- firmware upgrades;</li> <li>- connection to with FusionSolar PVMS</li> <li>- testing working modes and features;</li> <li>- defect elimination (if needed)**;</li> <li>- integration with PV (Huawei inverters only);</li> <li>- integration with EMS (if provided by Photomate);</li> <li>- advanced off-grid mode tests;</li> <li>- complex on-site training 5-6 hours.</li> </ul>
<b>DURATION</b>	<b>1 DAY</b>	<b>1 DAY</b>	<b>2 DAYS</b>
<b>AFTER COMMISSIONING</b>	<ul style="list-style-type: none"> <li>- standard (real) remote technical support 8x5;</li> <li>- 12 online inspections every 6 months from installation with provided report*</li> </ul> <p>*FusionSolar Cloud connection needed</p>	<ul style="list-style-type: none"> <li>- standard (real) remote technical support 8x5;</li> <li>- 12 online inspections every 6 months from installation with provided report*</li> <li>- 1 on site visit inspection within 12 months of commissioning</li> </ul> <p>*FusionSolar Cloud connection needed</p>	<ul style="list-style-type: none"> <li>- standard (real) remote technical support 8x5;</li> <li>- 12 online inspections every 6 months from installation with provided report*</li> <li>- 1 on site visit inspection within 12 months of commissioning</li> <li>- 2 service visit on demand within 96h since service request.</li> </ul> <p>*FusionSolar Cloud connection needed</p>
<b>DURATION</b>	<b>6 HOURS</b>	<b>10 HOURS + 1 DAY VISIT</b>	<b>6 HOURS + 3 DAYS VISIT</b>

### ADDITIONAL ON-SITE VISIT

\*Basic electrical safety measurements contain: polarity check, earth bond check, insulation resistance check. Measurements does not end with official report. Provided measurements cannot substitute mandatory electrical safety measurements provided by qualified/ certified electricians according to local safety standards.

\*\*Defect elimination refers to: inappropriate or wrong connection, assembly of components. Any physical damage, loss of parts/ components caused by customer/installer are excluded from Photomate responsibility.

1. Photomate service reserves right to refrain from performing commissioning activities if:

- EPC & construction work does not meet local standards and manufacturer requirements;
- electrical installation & design work does not meet local standards and manufacturer requirements;
- customer will not ensure presence of qualified/certified electrician(s) responsible for O&M of electrical installation during all commissioning process;
- work environment does not meet local safety standards;
- environmental conditions does not allow to provide service safety.

