COURSE DESCRIPTION

RU500RTU-20 и RU08MS-20
RTU 540 and MicroSCADA PRO

Course goal
The goal of this course is to acquire knowledge on the RTU5xx hardware components, configuration, setting and acquire basic knowledge from substation automation functions, IEC 61850 standard. Learn about optimized management and reliable operation of the facility due to maximum integration and communication between various devices and systems.

Main learning objectives
Upon completion of this course the participants will be able to:
— Create RTU configuration;
— Download configurations and firmware;
— Check the flow of signals from the RTU terminal to MicroSCada;
— Launch and operate MicroSCADA PRO;
— Create HMI in MicroSCADA PRO;
— Do basic commissioning;
— MicroSCADA troubleshooting, backup and restore, hardware troubleshooting, monitor IEC61850.

Participant profile
This training is targeted to technicians involved with Energy Management Systems (EMS) maintenance or engineering.

Prerequisites
Engineering degree, technical college qualifications or equivalent and have experience in the electrical industry. Basic knowledge of PC based data processing.

Topics
— Creation of RTU configuration;
— Toolkit software RTUtil56;
— Web browser RTU560;
— Overview of the system and main functions of MicroSCADA PRO;
— Basics of engineering. Creation of HMI in MicroSCADA PRO system;
— Application Configuration Tool;
— Object navigator tool;
— Process Display Editor tool;
— Basic commissioning.

Course type and methods
This is an instructor led classroom with lectures, demonstrations and hands on practice.

Duration
The duration is 5 days.
## Course map

<table>
<thead>
<tr>
<th>DAY 1</th>
<th>DAY 2</th>
<th>DAY 3</th>
<th>DAY 4</th>
<th>DAY 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Overview and functions of RTU;</td>
<td>• WEB-browser RTU560:</td>
<td>• Overview and functions of MicroSCADA PRO system startup, registration;</td>
<td>• Basics of engineering. Creation of HMI in MicroSCADA PRO system;</td>
<td>• Process Display Editor tool;</td>
</tr>
<tr>
<td>• Creation of RTU configurations;</td>
<td>• User management, role distribution, authorization;</td>
<td>• application settings;</td>
<td>• Application Configuration Tool;</td>
<td>• Basic commissioning:</td>
</tr>
<tr>
<td>• RTUUtil560 software tools.</td>
<td>• Uploading created project to RTU540;</td>
<td>• users dispatcher;</td>
<td>• Object navigator tool;</td>
<td>• Checking the developed process screen using RTU540 controller</td>
</tr>
<tr>
<td></td>
<td>• Validation of the created configuration.</td>
<td>• event list;</td>
<td></td>
<td>• RTU540 diagnostics using the integrated web server</td>
</tr>
</tbody>
</table>

### Topics

- Overview and functions of RTU;
- Creation of RTU configurations;
- RTUUtil560 software tools.

### Time

<table>
<thead>
<tr>
<th>Time</th>
<th>DAY 1</th>
<th>DAY 2</th>
<th>DAY 3</th>
<th>DAY 4</th>
<th>DAY 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>9:00 am</td>
<td>6:00 pm</td>
<td>9:00 am</td>
<td>6:00 pm</td>
<td>9:00 am</td>
<td>6:00 pm</td>
</tr>
<tr>
<td>9:00 am</td>
<td>6:00 pm</td>
<td>9:00 am</td>
<td>6:00 pm</td>
<td>9:00 am</td>
<td>6:00 pm</td>
</tr>
<tr>
<td>9:00 am</td>
<td>6:00 pm</td>
<td>9:00 am</td>
<td>6:00 pm</td>
<td>9:00 am</td>
<td>6:00 pm</td>
</tr>
<tr>
<td>9:00 am</td>
<td>6:00 pm</td>
<td>9:00 am</td>
<td>6:00 pm</td>
<td>9:00 am</td>
<td>6:00 pm</td>
</tr>
<tr>
<td>9:00 am</td>
<td>6:00 pm</td>
<td>9:00 am</td>
<td>6:00 pm</td>
<td>9:00 am</td>
<td>6:00 pm</td>
</tr>
</tbody>
</table>

Typical course layout (time or sequence may change)