Autolog® Street Light Control and Monitoring (SLCM) System

FF-AUTOMATION Oy
Street Light Control & Monitoring System

- together we have it under control!
FF-Automation Oy General Information

- Company founded in 1976. Long term experience from SCADA, Remote Terminal Units and projects where is needed advanced Remote Controlling.
- Offers State of Art and most cost effective solutions for Automation and Customized Control Systems
- Has expertise in monitoring and control systems from RTUs, PLCs and HMIs to Distributed Controllers and SCADA
- Registered trade mark “AutoLog”. HQ and Production in Finland.
- Specializes in remote operating products (RTU= Remote Terminal Unit) using the latest advanced communication solutions like Internet, GSM/GPRS, Radio, Microwave, Tetra.
FF-Automation Oy General Information

- FF-Automation delivers systems in Russia, Middle East, Europe, South East Asia, China and India.
- Company has a 8% share of automation control business (PLC, RTU Hardware sector) in domestic markets.
- Number 1. Producer in Finland what is coming for Remote Terminal Units.
- Company has over 30 years background and members are considered to be some of the best specialists in the field in Finland.
Street Light Control and Monitoring System

- AutoLog ControlMan is Multi-featured Graphical Web Portal for Street Light System.

- AutoLog GSM-RTUs are intelligent programmable controllers installed in street light central cabinets.

- Communicates wirelessly using GSM/GPRS network.

- Automatic alarming and work force management using trouble ticket system.
Street light control and monitoring SLCM

Scheduled ON/OFF control, Light break detection

Light dimming can be made with voltage drop (e.g. 230VAC ->195VAC) OR switching one or more voltage phases off in turns.
Street Light Control and Monitoring in Brief

Light control unit has different usage modes. Lights are switched ON/OFF according to light sensors, time tables or manual commands. The light control unit sends alarms if failures occurs and reports the measured data to web control room. The light control unit has an adaptive algorithm for detecting burned lamps. The algorithm is based on currency and voltage measurements. All transformers for sensors can be assembled without cutting any wires. Thus the assembly is fast and easy even where older light control system exist.

Intelligence is distributed to independent light control units in the system. This enables control units to work independently in different usage modes without external controls. This increases fail tolerancy.

All parameters, settings and usage modes can be changed remotely via Web interface or using GSM-SMS message.
Street Light Control and Monitoring System

Substantial economical savings using intelligent street light control system:
- System provides several methods to cut unnecessary energy costs.
- User defined time schedules for lights dimming at low traffic times and switching lights off over deepest night.
- High quality light sensors and definable time offset enables high accuracy for street light controlling.
- All the schedules and controlling intelligence is distributed also to RTUs, what increases the fail tolerance of the system.
- With intelligent light control user can save up to 50% in electricity costs compared to traditional system.
User case - electricity savings

BEFORE:
- The light were switched on / off according to the typical light sensor with long delays (up to 20 minutes too late). Traditional system needs to use very long light hysteresis to prevent the *switching effect* (On/Off/On/Off...)
- Light were simply switched on at afternoon and off in the morning

AFTER:
- With intelligent light switching system the switching effect is eliminated and the light can be set more accurately and no long hysteresis is needed.
- The street lights are now dimmed to 50% power at early night and early morning.
- Light are kept off over the deepest night.
- Total saving in electricity costs are 32% with the defined parameters.
Remote Maintenance of SLCM

Maintenance of SLCM through ControlMan:
- All software maintenance tasks can be made remotely and on-line using Web interface: Adding new RTUs, measurements, controls, graphics, trends, map objects, alarm limit, schedules, users, user groups etc.
- AutoLog GSM-RTUs are remotely programmable - Easily customizable operation for special cases.

Maintenance of control unit when failures occurs
- Alarms are automatically send Trouble ticket system which forwards the alarm to the right repairman or group using SMS alarms and/or e-mail alarms
- Automatic and manual history of maintenance works
Maintenance, alarms and supervising

Features:
- notifications and alarms straight to TROUBLE TICKET-software
- user profiles
- failure/maintenance history
- forward alarms to the right repairmen and advisors
- ideal for subcontracting
- costs can be task based instead of the periods
- small investment costs and short payback time
- total costs are known in advance
- current information to supervisors from the field
Street light monitor and control unit in a nut shell

- wall assembly enclosure
- power supply 12–24VDC tai 230VAC
- battery-buffered with charger

- 8-24 DI, potential free contact
- 8-2 DO, 24VDC/1A
- 1-8/32 analog inputs, 4-20mA, PT100, RMS U/I, mV
- 2/8 analog outputs, 0-5V
- 8 PID-controls
- MODBUS RTU for optional connections
- ETHERNET, TCP/IP
- GSM - SMS/GPRS
- memory for data logging
- RS232/485
Training, documents, manuals etc.

FF-Automation gives training and education to customers to use our systems,

All kinds of images, manuals and other relevant documents can be stored to Controlman databases. Authorized user can access to right documents whenever and wherever. All relevant information is always at hand.

Devices are incased with suitable enclosures according to weather and other environment circumstances.
FF-Automation has a worldwide network of AutoLog system integrators and distributors. We are also constantly seeking more new co-operation partners, representatives and software partners.
For more information about FF-Automation and products please open www.ff-automation.com

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