

The
AutoLog®
Family
presents



We've got it under control
Sophisticated Control Technology

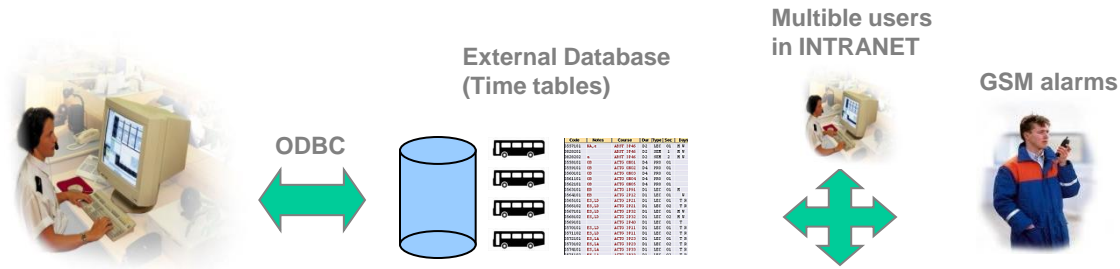
AutoLog® Application Note 101: Wireless Bus Depot



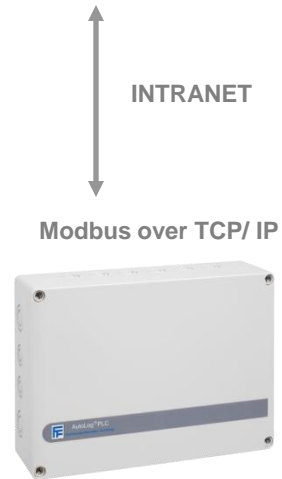
FF-AUTOMATION



Application Note 101: Wireless Bus Depot



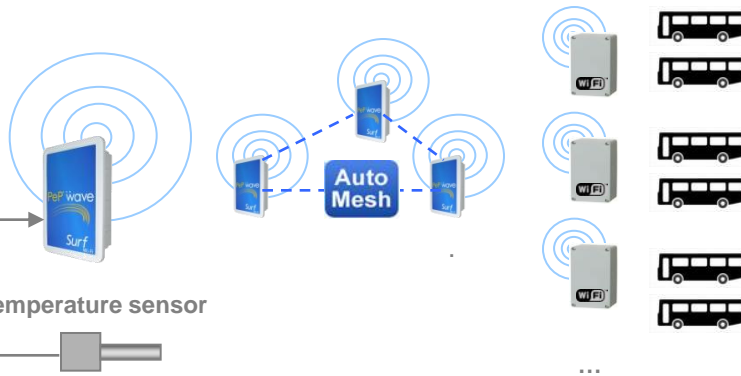
Web Studio SCADA



AutoLog® PLC

- Modbus interface to WSN master unit
- Measures temperature
- Modbus TCP slave

Wireless 868 MHz Sensor Network



CONTROLS:
Heaters ON/OFF
Accumulator loader ON/OFF

System is controlling 80 bus heaters in the area which has over 400m diameter.

OPERATION:

Controls bus heaters according to bus route start times and outside temperature.

- Web Studio SCADA reads bus route start times from the BUS TIMETABLE database using ODBC interface.
- AutoLog PLC measures outside temperature. This information is read to Web Studio SCADA through Ethernet.
- According to these informations Web Studio calculates the needed bus heating time and sends this information to PLC.
- PLC controls Heater contacts in Wireless sensor modules according to this information and its own clock. (PLC can operate independently from SCADA so it will increase systems fail tolerancy).

MAIN BENEFITS:

SAVES HEATING ENERGY



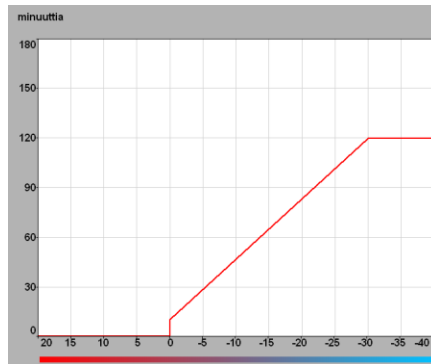
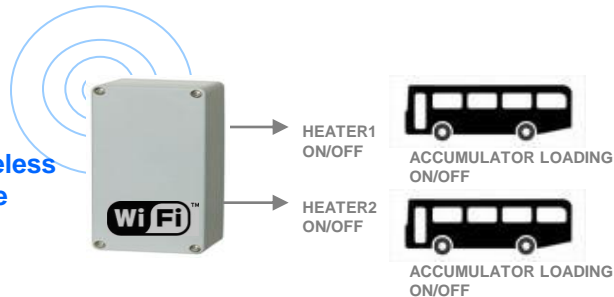


Application Note 101: Wireless Bus Depot



AutoLog® Wireless Sensor Module

- (3 Analog inputs)
- 2 Digital outputs
- (2 Digital inputs)



Heating curve can be set in Web Studio SCADA

Heating time (y) / temperature (x)

EQUIPMENT:

- AutoLog Wireless (868MHz) Sensor Modules
- AutoLog 8 PLC + WSN master + Temperature sensor
- AutoLog WSN routers
- Indusoft Web Studio SCADA software

INSTALLATION:

- Wireless sensor modules can be installed in weather proof enclosures with power and relays. One sensor module can control two heaters.
- System can be expanded easily with wireless I/O modules.
- Network coverage can be expanded easily. Just adding new WSN routers. (Auto Mesh)
- System can be expanded also by adding new PLCs in the company's INTRANET.

BENEFITS:

- In old system, the heaters were always ON, so energy consumption was enormous. New intelligent heater control system saves more than 80% of energy.
- Allows remote controls of heaters / accumulator loading. Accumulators can be loaded automatically e.g. after weekend.
- Installation cost savings. Wireless sensors doesn't need communication wirings.
- Old heating system can be easily replaced.

