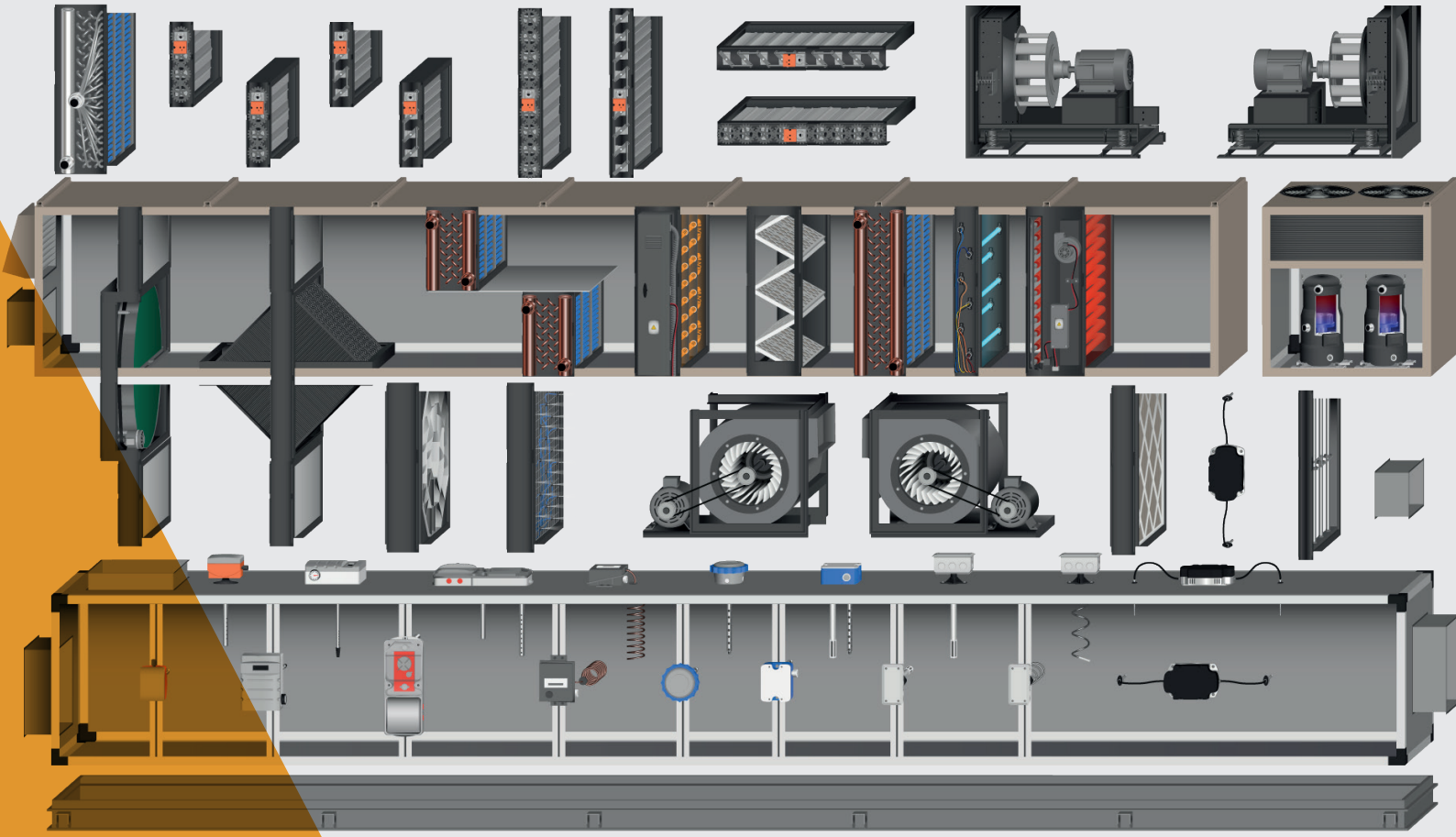


ERCAN TEKNİK - RTU

Roof Top Unit Management

Contemporary Roof Top Automation



ERCAN TEKNIK - RTU

Advanced RTU Functions



Heating / Cooling Management

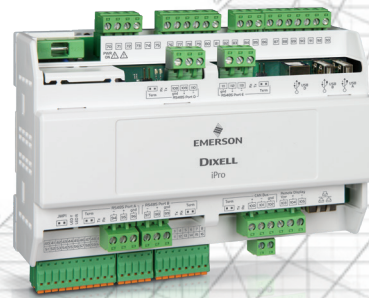
Heating

- Proportional, step, floating or On/Off control,
- Hot water resource,
- Steam resource,
- Gas firing resource,
- Electrical heater resource,
- DX resource (HP),
- Secondary heating resource with same options.

Cooling

- DX resource,
- Evaporator load optimization,
- Automatic superheating management,
- Auto-update of the SuperHeating Set according to the cooling performance,

DOKUMATIK



Condensing Unit

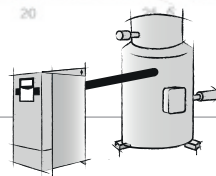
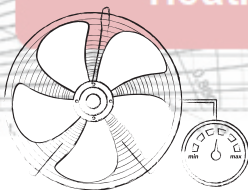
- 2 independent cooling circuit,
- Common or independent condensation circuit,
- 3 compressors available per each circuit,
- AC / DC inverter option for compressors,
- Step condenser fan management,
- Proportional condenser fan speed management,
- Compressor rotation,
- Mechanical & electrical safeties of compressors,
- Advanced EEV management.

Humidification

Cooling

Heating

Humidification



Humidity Management

Humidification

- Proportional, step or On/Off control,
- Adiabatic Panel,
- Adiabatic Panel + Pump,
- Adiabatic Nozzle,
- Isothermal steam option.

Dehumidification

- Independent or internal cooling resource management option
- Proportional, step, floating or On/Off control,
- DX resource,
- Ice water resource,
- Desiccant Rotor resource
- Secondary Heating Resource Management.

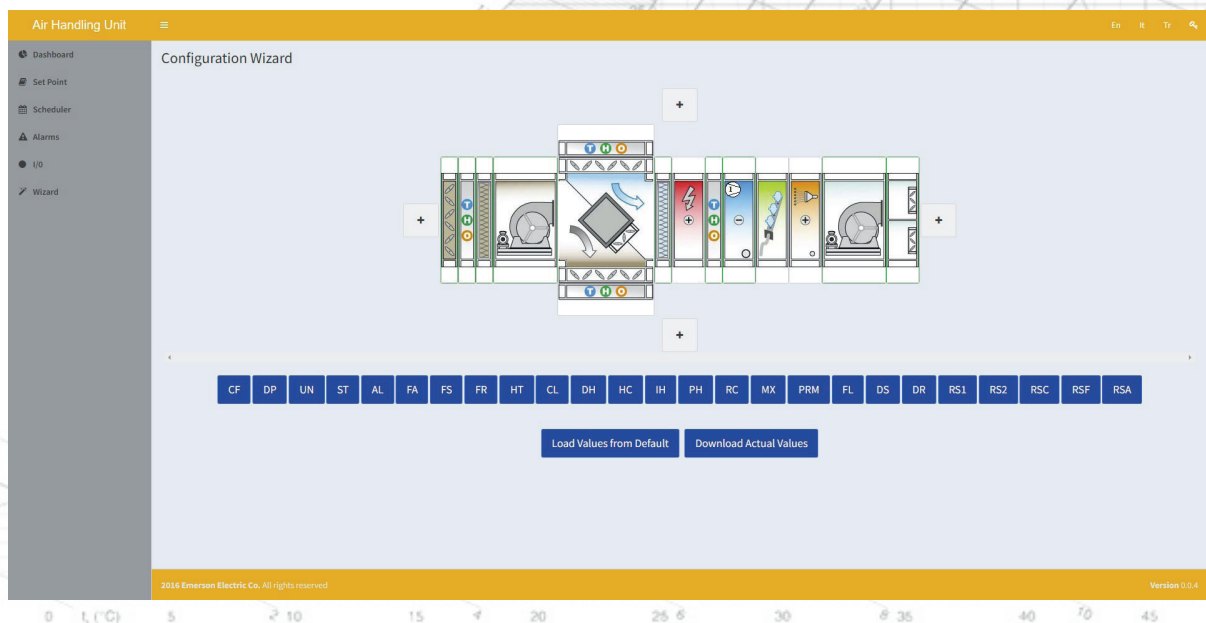
Mixing Chamber Managenet

Air Quality / Filters

- VOC measurement,
- CO2 measurement,
- Proportional, floating or On/Off control,
- %100 fresh air mode,
- Automatik damper management,
- Fire mode management,
- Return air Filter,
- Supply air Filter,
- Fresh air Filter,
- Expulsion air Filter,
- 2 additional filter management.

Heat Recovery / Dampers

- Fixed Plate Heat Exchanger management,
- Rotary Thermal Wheel management,
- Management of Mixing Chambers with 2-3-4 dampers,
- Return air Damper,
- Supply air Damper,
- HR Damper,
- Expulsion air Damper,
- Fresh air Damper,
- Mixing Damper.



Return / Supply Fan Management

Return Fan

- Proportional, step, floating or On/Off control,
- Single, Double & Double Relief Fan management,
- Relief Fan rotation,
- Automatic Relief Fan damper management,
- Differential Pressure Switch based management,
- Differential Pressure Transmitter based management,
- Flow Rate based proportional management,
- Return Fan management based on function to the Supply Fan.

Supply Fan

- Proportional, step, floating or On/Off control,
- Single, Double & Double Relief Fan management,
- Relief Fan rotation,
- Automatic Relief Fan damper management,
- Differential Pressure Switch based management,
- Differential Pressure Transmitter based management,
- Flow Rate based proportional management.



ERCAN TEKNIK - RTU

Contemporary Communication Technologies



Embedded Web Server

Configuration Wizard

- Embedded Web Server,
- 3 login levels,
- Multiple language support,
- Easy setup via Icons & Widgets,
- Auto parameter concealment,
- Online quick Set-Up.

Live Alarm Management

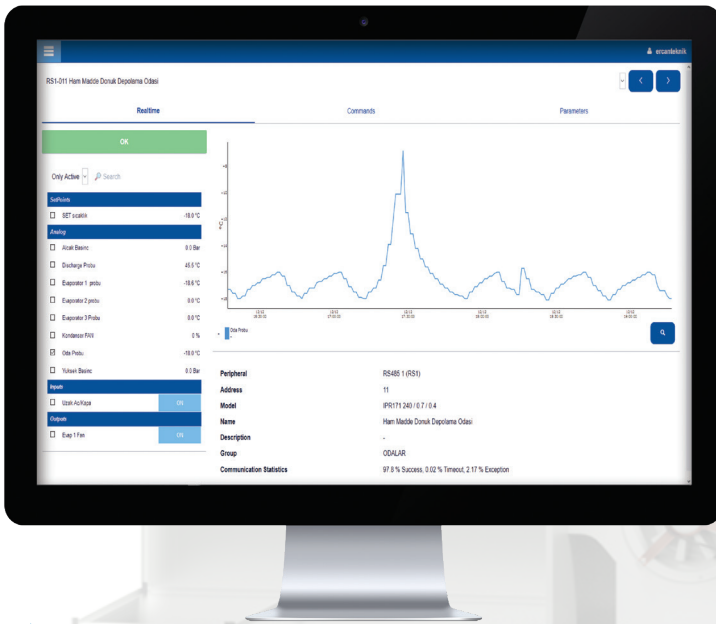
- Live monitoring of all Alarms,
- Alarm deletion through authorization,
- Alarm logging,
- Exporting of Alarm logs,
- Remote parameter loading.

Online Scheduler

- Unique CALENDER creation,
- Defining of 7 programs,
- Scheduler based Unit functions programming,
- Scheduler based Operation MOD selection,
- Creation of time bands,

I/O List

- Auto I/O list creation via Configuration Wizard,
- I/O overlapping notifications,
- Online visualization of the I/O List,
- Auto update of I/O list, following the changes made,
- Exporting of the I/O List.



Live Dashboard

Live Monitoring Page

- Monitoring of all SET values,
- Ability to modify the SET values,
- Monitoring of Working MODE,
- Ability to modify the Working MODE,
- Live Monitoring of sensor values,
- Live Monitoring of all resources,
- Live Monitoring of Regulation MODE,
- Ability to modify the Regulation MODE,
- Monitoring of I/O overlaps.

Additional Functions for Factory Level

- Full access to all Menus,
- Ability to modify every single Parameters remotely,
- Ability to send Parameter files remotely,
- Access to all alarms and ability to reset them if resettable,
- Access to all LOG files,
- LOG files management,
- Creation of new User / deletion of existing User.



Multiple Communication Support



Connection Technologies

- RS485 Serial port (Slave),
- RS485 Serial port (Master),
- Ethernet port,
- USB port (Log),
- USB port (configurable),
- Display port,
- CANBUS port,
- LAN port.

Supported Communication Technologies

- ModBus over Serial,
- ModBus over TCP-IP,
- TCP-IP,
- BACNET,
- FTP.

Air Handling Unit I/O			
Analog Input			
Number	Description	Value	Unit
Phu Air 002	Supply Pressure Transducer Input (Constant)	892	%/s
Phu Air 003	Return Pressure Transducer Input (Constant)	951	%/s
Phu Air 004	Return Temperature Probe Input	29.6	°C
Phu Air 005	Supply Temperature Probe Input	30.9	°C
Phu Air 006	Discharge Pressure Refrigeration Circuit 1	17.3	Bar
Phu Air 008	Discharge Pressure Refrigeration Circuit 2	7.0	Bar
Analog Output			
Number	Description	Value	
Phu Air 001	Supply Fan Modulation Output	0	
Phu Air 002	Return Fan Modulation Output	0	
Digital Input			
Number	Description	Value	
Phu Air 001	Supply Ventilation Alarm Input by Heater Fault	False	
Phu Air 002	Return Ventilation Alarm Input by Heater Fault	False	
Phu Air 004	Cooling Pressure Alarm Input	False	
Phu Air 007	High Pressure C1 Alarm (DI)	False	
Phu Air 008	Low Pressure C2 Alarm (DI)	False	
Phu Air 009	Circuit 1 Manual Pump Break	False	
Phu Air 010	Supply Flow Switch Input	False	
Phu Air 011	Return Flow Switch Input	False	
Digital Output			
Number	Description	Value	
Phu Air 001	Supply Fan ON/OFF Output (100% Speed)	True	
Phu Air 002	Return Fan ON/OFF Output (100% Speed)	True	
Phu Air 003	Internal Condenser Damper	False	
Phu Air 007	Compressor 1 Refrigeration Circuit 1	False	
Phu Air 008	Compressor 2 Refrigeration Circuit 2	True	
Phu Air 009	200 Supply Fan ON/OFF Output (100% Speed)	False	

Air Handling Unit Dashboard			
<div> <div>State Emergency</div> <div>Command Temperature Only</div> <div>Mode Cooling</div> <div>Process ON/OFF</div> </div>			
Set Point		Probes	
Name	Value	Unit	
Temperature	24.0	°C	
Relative Humidity	60	%	
Name	Value	Unit	
Supply Temperature	31.2	°C	
Return Temperature	30.0	°C	
Supply Pressure	890	%/s	
Return Pressure	920	%/s	
Discharge Pressure C1	17.5	Bar	
Discharge Pressure C2			

Energy Analysis & Monitoring (Separate Module)

Consumption Monitoring

- Monitoring of Electrical datas & logging
- Defining of the Max. thresholds
- Possibility to monitor all consumptions of individual devices,
- Threshold overrun notifications,
- Safety measures applied on high consumption
- Active-Reactive Energy, Cosφ, Current, Voltage, Frequency, Power etc. read-outs.



Evaluation & Reporting

- Creation of comparative graphics based on daily, weekly, monthly or yearly data,
- Analysing the Network & reporting
- Analysis & Reporting of historical data (roughly around 1 year)
- Ability to grant investigation via multi-axis graphs,
- Detailed data filtering tools,
- Detection of high consumption periods & optimisation.





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