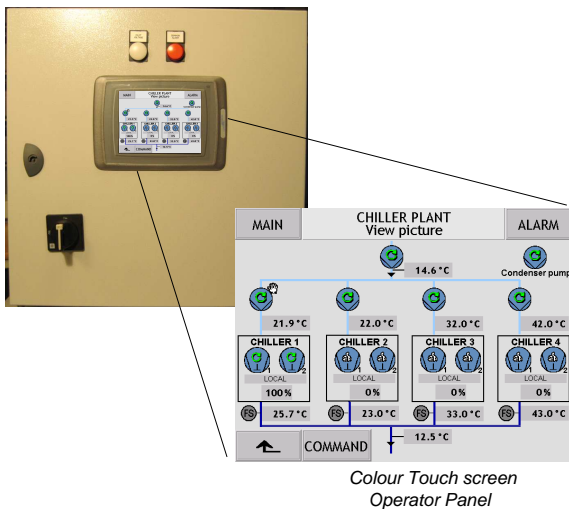


Marine Chilled Water Sequencer and System concept

Integrated sequence control and monitoring of standard Chiller- and Periphery units

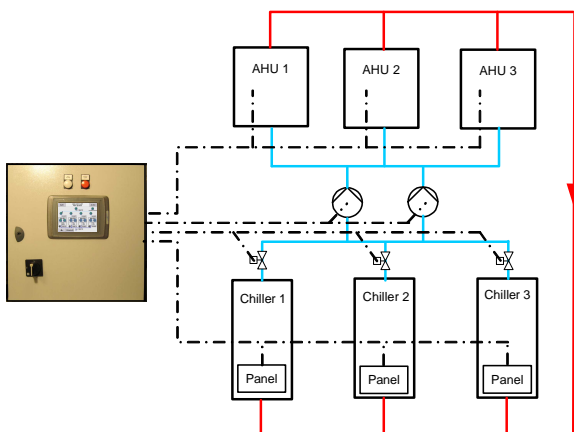


Description

This system concept is intended for sequence control of stand alone chiller- and AHU units.

As extra features this control system can also be offered to control tailor made systems such as:

- Chilled water pump control
- Chilled water distribution control
- AHU control
- Power optimizing control



Advantages

- Central operation of stand alone chillers - and AHU units
- Logical operation at a colour touch screen operator panel
- Large 6.5" operator panel
- System overview pictures
- Detailed supervision and control regarding:
 - Chillers
 - Compressors
 - AHU's
 - Pumps
- Delayed start after blackout
- Password and alarm system
- Common alarm output to main alarm system
- Ethernet communication to chiller- and AHU panels

Optional

- Integrated electrical starter and control panel in IP55 execution, including:
 - Main switch, ammeters, and control lamps
 - Motor starters – Pumps, Fans etc.
 - Pilot voltage supply transformer
- Remote operator display panel
- Network communication, on request, to SCADA system
- Virtual Network Computing (VNC) Server function
- Gas monitoring system

Additional benefits

- Standardized system ensures optimal functionality and reliability
- Quick installation and commissioning
- ISO9001 compliance

Chiller Units Sequence Control

The sequence controller can handle max. four chiller units. Uneven unit sizes and compressor types, reciprocating and screw types can be mixed.

The sequence control of the units is made according to the desired common supply or return temperature (water or brine) in the common manifold piping.

Chilled Water Pump Control

Manual control of the chilled water pumps by means of start/stop signals to external starters.

Alternative system designs can be offered (Optional)

Chilled Water Distribution Control

To achieve the design common supply temperature in a system, where more chillers are operating in parallel, each chiller line has to be ON/OFF controlled.

Alternative system designs can be offered (Optional)

Air Handling Unit Control

Optimization and central control of the de central AHU controllers is made possible by the Sequence controller connected in a LAN Ethernet.

Alternative system designs can be offered (Optional)

Local operation

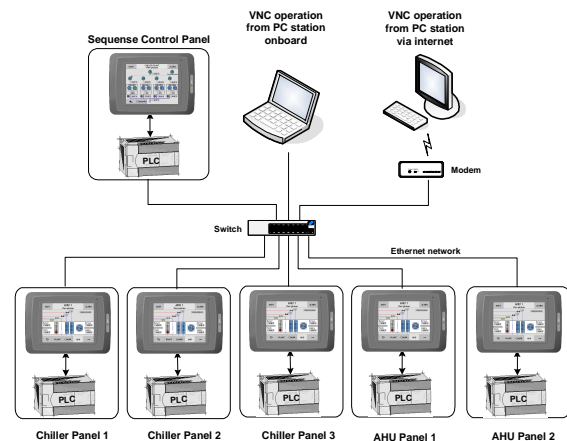
At the sequence operator panel operation of the integrated system includes:

- Efficient operation from a colour touch-screen display
- Graphic overview pictures of the entire system
- Monitoring of all status values, alarms and warnings
- Operation of connected equipment and setting of modes, limits and regulation set points.
- Trend curves that provides excellent overview of plant performance, e.g. temperature logging

Remote operation

Connected to the ships LAN Network, the sequence system can be remotely controlled and monitored from operator panels or PC stations, such as:

- Monitoring and remote control of all data from any given PC on the network
- Monitoring and remote control, via the internet, to Johnson Controls Marine service centre or owners technical department, for optimal crew support at e.g. trouble shooting



The above technical information is subject to updates in content and specification without prior notice.