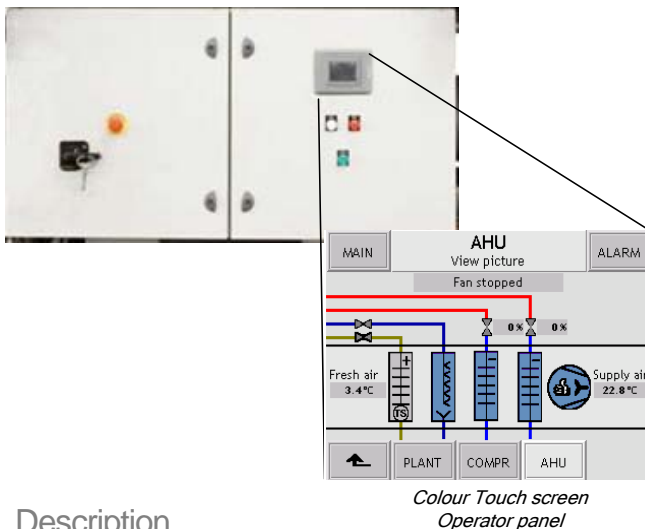




Marine Deck unit control concept

Efficient control and monitoring of standard Heating, Ventilation, Air-Condition and Refrigeration system



Description

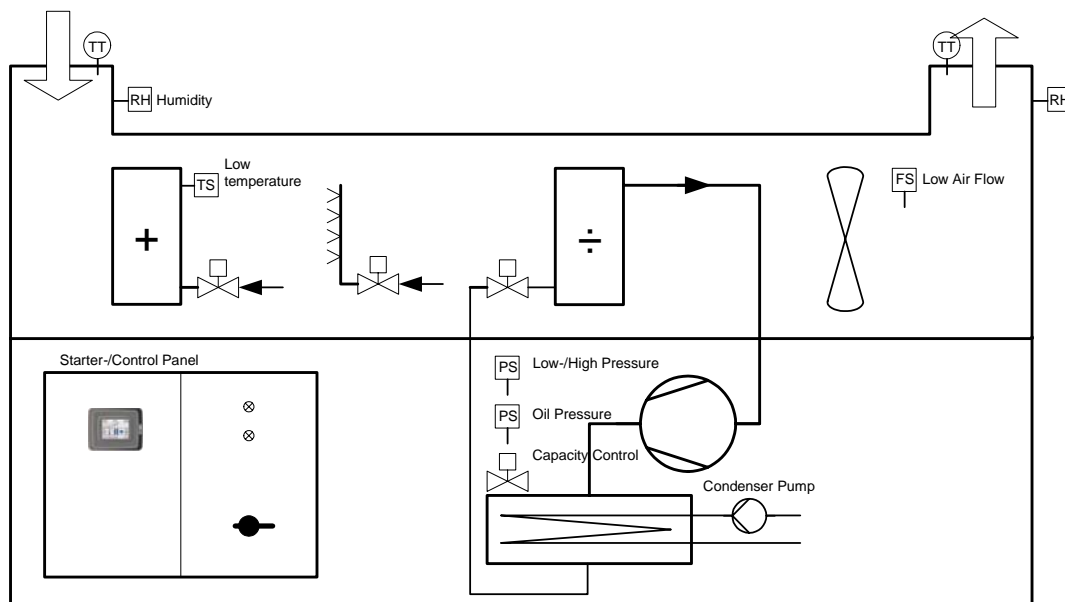
The Marine Deck unit control concept integrates control and monitoring of one compressor and one Air Handling Unit (AHU), and the entire concept is build in one common unit, se below sketch.

The Marine Deck unit control concept includes an electrical panel complete with motor starters and control equipment.

The supply air temperature is controlled by the compressor capacity and a thermostatic expansion valve.

Advantages

- Easy operation at a colour touch screen operator panel
- Compressor supervision and control
- AHU supervision and control
- Summer/winter compensation
- Password and alarm system
- Common alarm output to main system
- Integrated electrical starter and control panel in IP55 execution, including:
 - Main switch and control lamps
 - Compressor motor starter
 - Fan motor starter
 - Condenser pump motor starter
- Remote operator panel (Optional)
- Gas monitoring system (Optional)
- Network communication to SCADA system (Optional)
- Virtual Network Computing (VNC) Server function (Optional)
- Larger display, such as 6.5" in stead of 3.5" (Optional)



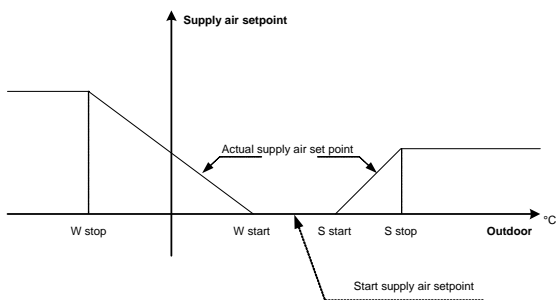
Additional benefits

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

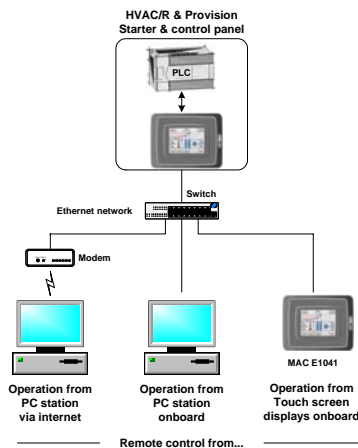
AHU control

The AHU control offers several functions and measuring data such as:

- AHU status
- Fan control
- Supply-air regulation
- Manual or automatic switching between heating and cooling regulation
- Heating regulation, with output for motor valve or electrical heating elements
- Humidity regulation, including control output for steam generator
- Thermostatic freeze protection
- Outdoor compensation



Running hour meter incl. service warning are included for Fan- and Compressor- motors.



Compressor control

The below mentioned data, settings and functions ensure optimal compressor operation.

Measurements data and settings

- Compressor status
- Capacity regulation
- Manual/auto mode

Compressor protection against

- High discharge pressure/Interlock to condenser pump
- Low suction pressure
- Low lubrication oil pressure
- Motor overload
- Motor recycling

Local operation

At the operator panel local operation of the Deck Unit system includes:

- Efficient operation from a 3.5" 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
- Trend curves and settings can be stored on a USB key

Remote operation

Connected to the ships LAN Network, the Marine Deck unit 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..