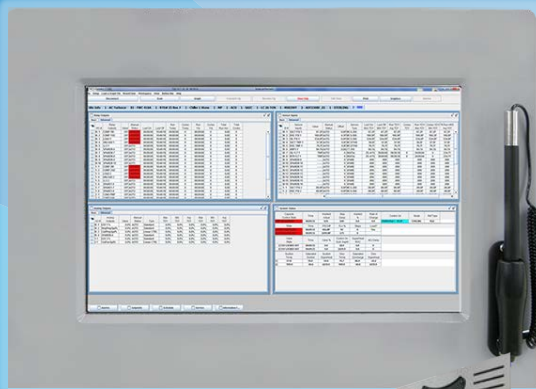


MCS-TOUCH-15.4



MCS-TOUCHSCREENS

- ▶ *High Resolution (1280x800) LCD Display*
- ▶ *Touchscreens are NEMA 4 IP66 rated (enclosure only)*
- ▶ *Preloaded with MCS-CONNECT*
- ▶ *Vesa Mount or mount in an Enclosure*



MCS-TOUCH-10.1



MCS-MAGNUM-MLB-10.1



5580 Enterprise Pkwy., Fort Myers, FL 33905
Office: (239) 694-0089 Fax: (239) 694-0031
www.mcscontrols.com

Precision Monitoring with MCS-TOUCHSCREENS

... for Multiple Chillers and HVAC Systems

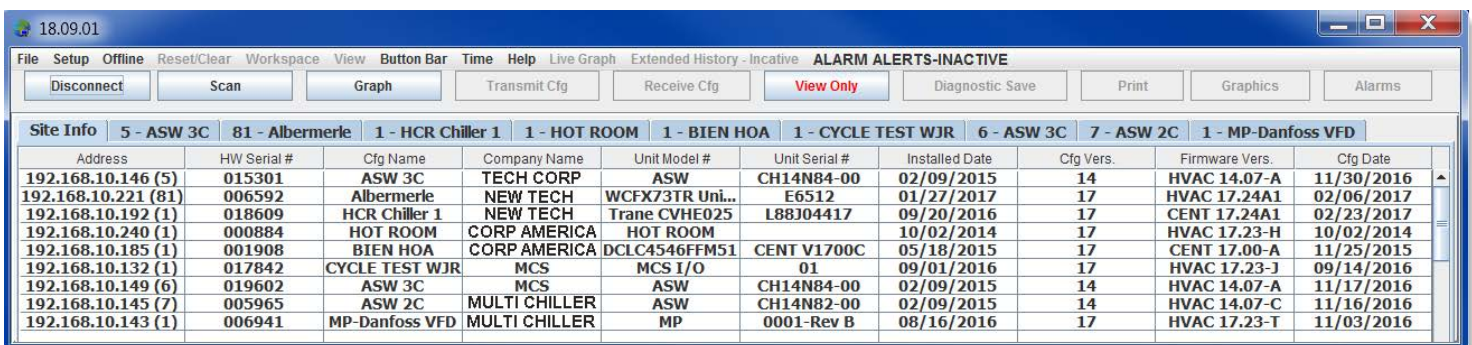
Building owners, operators and managers are faced with running their HVAC systems in the most efficient and effective way possible. Managing systems for optimal energy usage, dependable operation and precise comfort often requires their full attention....and then some.

To better utilize valuable time without having to compromise their ability to oversee their building's entire heating, ventilation and air-conditioning (HVAC) system, MCS has created the MCS-TOUCHSCREEN displays.

These advanced touchscreens are designed to deliver monitoring and management capabilities... right to your fingertips.

Retrofit Compatibility - The MCS TOUCHSCREEN simple and easy-to-use display is available as an upgrade on an MCS Controller or with the purchase of a new MCS Controller. Our Controllers can be retrofitted to most existing chillers used in the industry today.

Multi-Chiller Monitoring - One MCS-TOUCHSCREEN is capable of monitoring up to SIXTY separate chillers for maximum chiller control. MCS-CONNECT scans for available controllers on the network as shown below. *You simply choose the controller you want to monitor.*



Address	HW Serial #	Cfg Name	Company Name	Unit Model #	Unit Serial #	Installed Date	Cfg Vers.	Firmware Vers.	Cfg Date
192.168.10.146 (5)	015301	ASW 3C	TECH CORP	ASW	CH14N84-00	02/09/2015	14	HVAC 14.07-A	11/30/2016
192.168.10.221 (81)	006592	Albermerle	NEW TECH	WCFX73TR Uni..	E6512	01/27/2017	17	HVAC 17.24A1	02/06/2017
192.168.10.192 (1)	018609	HCR Chiller 1	NEW TECH	Trane CVHE025	L88J04417	09/20/2016	17	CENT 17.24A1	02/23/2017
192.168.10.240 (1)	000884	HOT ROOM	CORP AMERICA	HOT ROOM		10/02/2014	17	HVAC 17.23-H	10/02/2014
192.168.10.185 (1)	001908	BIEN HOA	CORP AMERICA	DCLC4546FFM51	CENT V1700C	05/18/2015	17	CENT 17.00-A	11/25/2015
192.168.10.132 (1)	017842	CYCLE TEST WJR	MCS	MCS I/O	01	09/01/2016	17	HVAC 17.23-J	09/14/2016
192.168.10.149 (6)	019602	ASW 3C	MCS	ASW	CH14N84-00	02/09/2015	14	HVAC 14.07-A	11/17/2016
192.168.10.145 (7)	005965	ASW 2C	MULTI CHILLER	ASW	CH14N82-00	02/09/2015	14	HVAC 14.07-C	11/16/2016
192.168.10.143 (1)	006941	MP-Danfoss VFD	MULTI CHILLER	MP	0001-Rev B	08/16/2016	17	HVAC 17.23-T	11/03/2016

The MCS-TOUCHSCREEN comes preloaded with the MCS-CONNECT software and once attached to the network, can monitor MCS-MAGNUMS or the MCS MicroMag to view the 'unit's status', 'extended history', 'alerts', 'alarms', 'setpoints', and more, all in a user-friendly graphic format.

- Key chiller operating parameters are easily viewed and displayed on a single display screen for quick evaluation and decision making.
- MCS-CONNECT and MCS-TOUCHSCREENS are part of the MCS support system.



Remote Touchscreens . . .

Communicating with your controller from the MCS-Touchscreen

Local Serial Communication RS-485 - Hardwired direct from controller to MCS-TOUCHSCREEN. The RS-485 is bidirectional, allowing communication up 4000 ft from controller using two conductor shielded 22 AWG wiring. Using the RS-485 serial connection, you are communicating directly with the controller you are hardwired to. Communication ports 1-3 are set aside on the MCS-MAGNUM or Micromag for using this port. **See drawing on next page.**



Setting up Communication using a PC Computer:

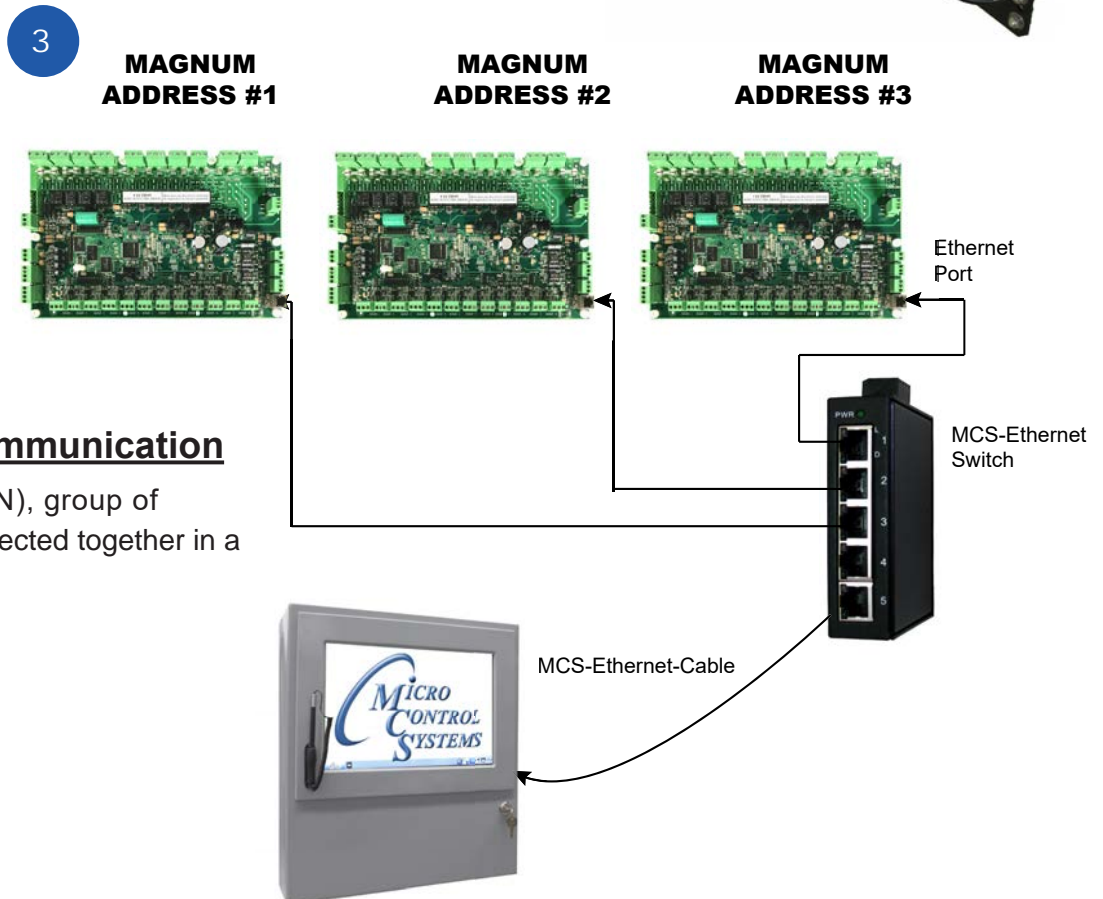
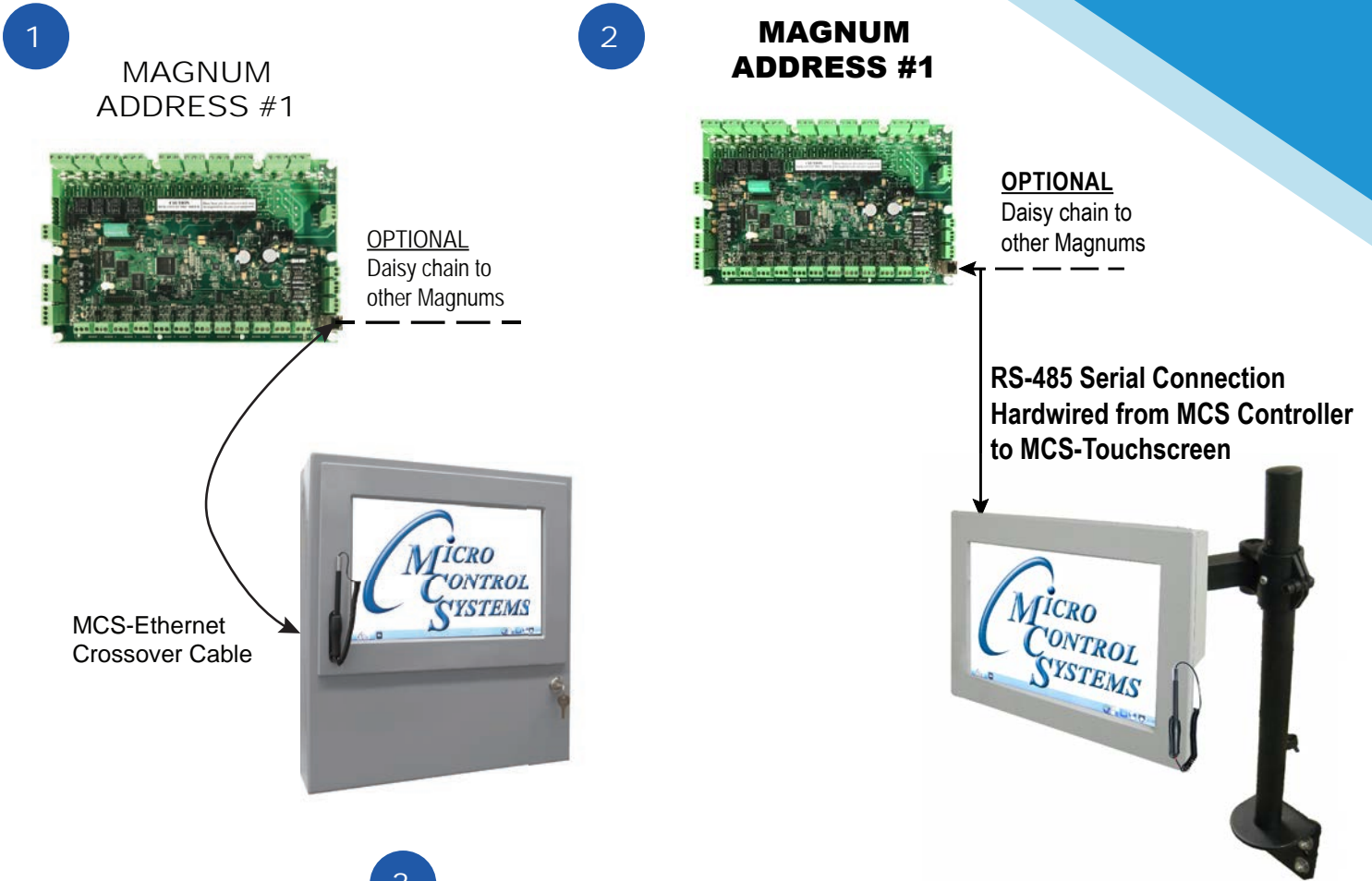
Using your PC, communication can be set up with MCS-CONNECT to your controller. If you are on a Local area network, communication is setup the same, as if using an MCS-Touchscreen. MCS support can provide the Graphics files, which are used on the MCS-Touchscreen, and can be loaded onto your PC hard drive in the MCS directory/Graphics subdirectory.

Use the connection setup as shown on the next page.

MCS-REMOTE 15.4 ENCLOSURE



Remote Communicating . . .



Local Ethernet Communication

Local area network (LAN), group of computers that are connected together in a localized area.

MCS-CONNECT and your Touchscreen

MCS-CONNECT is installed on every MCS-TOUCHSCREEN. Its purpose is to provide both local and remote communication for MCS Micro Controllers either by themselves or as part of a network.

MCS-CONNECT permits the user to monitor the status of the Micro Controller in real time, and with proper authorization, changes can be made to the system. In as fast as 10 seconds, configuration files can be transmitted to, or received from a MCS Micro Controller.

Another powerful feature of MCS-CONNECT is its ability to graph event history. Since MCS controllers automatically perform history logging, the user can select which inputs or outputs to graph, and view the results either in REAL TIME or over a user selectable period of time.



MCS-TOUCHSCREENS come standard with custom display screens allowing users to acknowledge alarms, change set points, and force points on selected screens. Transitioning from screen to screen is fast and easy by tapping the touch screen or using the stylus on the touchscreen.

PERFORMANCE MANAGEMENT

The MCS-TOUCHSCREEN display continuously captures data and provides trending capability for power and chiller performance, and chilled and condenser water parameters for precise energy management.



MCS-TOUCH-10.1 *and its many uses . . .*

The **MCS-TOUCH-10.1** joins the family of touchscreens from MCS, which are available for mounting in control enclosures or used as a stand-alone touchscreen.

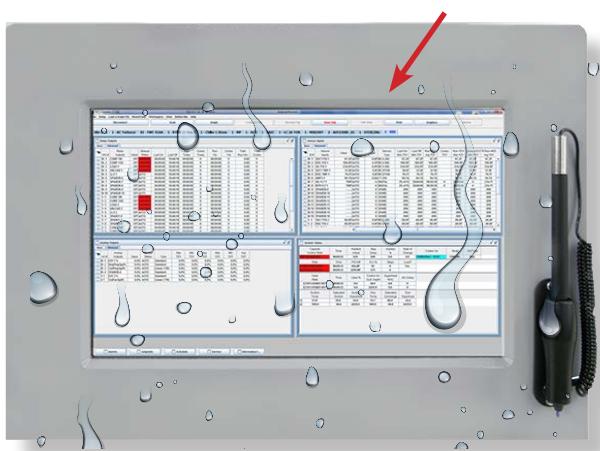
Information and graphics on the MCS-TOUCH-10.1 are shown on a 10.1" high resolution (1280x800) LCD display with LED back lighting, which will guarantee long-life operation.

Utilizing a gasket for an environment seal provides the MCS-TOUCH with a NEMA4 rating.

Depending on the Box Enclosure you choose, an installation can be either indoor or outdoor.

Waterproof

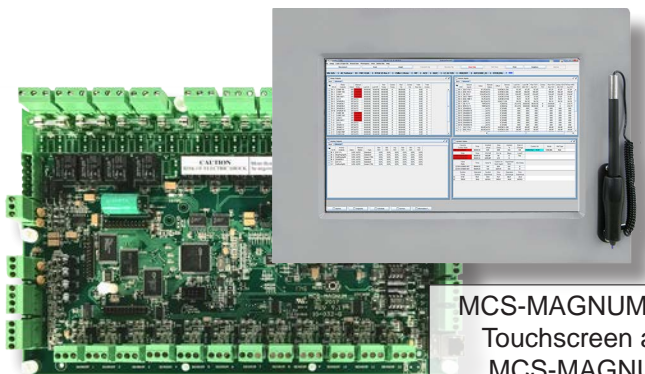
Silicone Gasket Seal for areas subject to weather, etc. when installed in an Enclosure



MCS-MAGNUM-MLB-10.1
10.1" Touchscreen
mounted in Enclosure

Specifications

Dimensions.....	12.204"L x 9.055"W x 3.215"H
Mounting	
Door Mount	10.875"L x 7.875" with cutout 14 mount studs thru customers Enclosure HT800 Cellular Silicone Gasket NEMA4 IP66 rated Indoor or outdoor (when mounted correctly)
VESA Mount (option).....	75 x 75 mm; 100 x 100 mm (indoor only)
LCD Screen.....	10.1" Diagonal (Aspect Ratio 16:10) 16.2 Million Colors 1280x800 Resolution View Angle 85°U, 85°D, 85°L, 85°R 5-Wire resistive touch w/Stylus pen White LED Backlight (Min Life 50,000 Hrs) Luminance Min. 400 cd/m ²
Surface Treatment.....	Glare/Anti-Reflection ≤1.5% Hard-Coating (3H)
Environment Limits	-20°C to +65°C Operating Temperature -25°C to +70°C Storage Temperature 0 to 90% Humidity; Non-Condensing
Power Input	12VDC regulated
Motherboard - Rev 4.0.....	Freescale i.MX6 Dual Core 800mhz 2Gb of 512mhz DDR3 RAM memory 16Gb of eMMC Flash memory 10m/100m/1G Ethernet 1 Micro-SD Slots 1 USB On-The-Go (OTG) 2 USB Host 2.0 Real Time Clock (RTC) w/ Battery LVDS for 15.4" LCD 5-wire touch 3 RS485 communication ports (max. baud rate 115k) Mini PCIe Interface



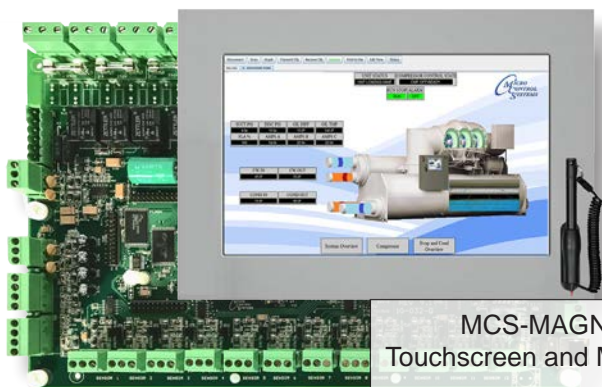
MCS-MAGNUM-10.1
Touchscreen and
MCS-MAGNUM

MCS-TOUCH-15.4 *and its many uses . . .*

MCS-CENTRIFUGAL
15.4" Touchscreen
mounted in Enclosure



MCS-MAGNUM-MLB-15.4
15.4" Touchscreen mounted
in Enclosure



MCS-MAGNUM-15.4
Touchscreen and MCS-MAGNUM

MCS-MAGNUM-NEMA4-15.4
15.4" Touchscreen mounted in
Nema4 Enclosure



Specifications

Dimensions.....	17"L x 12.11"W x 3.228"H
Mounting	
Door Mount	15.75"L x 10.875" with cutout 14 mount studs thru customers Enclosure HT800 Cellular Silicone Gasket NEMA4 IP66 rated Indoor or outdoor (when mounted correctly)
VESA Mount (option).....	75 x 75 mm; 100 x 100 mm (indoor only)
LCD Screen	15.4" (16:10 Diagonal) 16.2 Million Colors 1280x800 Resolution View Angle 70°U, 70°D, 70°L, 70°R 5-Wire resistive touch w/Stylus pen White LED Backlight (Min Life 50,000 Hrs) Luminance Min. 300 cd/m ²
Surface Treatment	Glare/Anti-Reflection ≤1.5% Hard-Coating (3H)
Environment Limits	-20°C to 70°C Operating Temperature -30°C to 80°C Storage Temperature 0 to 95% Humidity; Non-Condensing
Power Input	12VDC regulated
Motherboard - Rev 4.0.....	Freescale i.MX6 Dual Core 800mhz 2Gb of 512mhz DDR3 RAM memory 16Gb of eMMC Flash memory 10m/100m/1G Ethernet 1 Micro-SD Slots 1 USB On-The-Go (OTG) 2 USB Host 2.0 Real Time Clock (RTC) w/ Battery LVDS for 15.4" LCD 5-wire touch 3 RS485 communication ports (max. baud rate 115k) Mini PCIe Interface



MCS-TOUCH-15.4 with
Vesa Mount optional arm

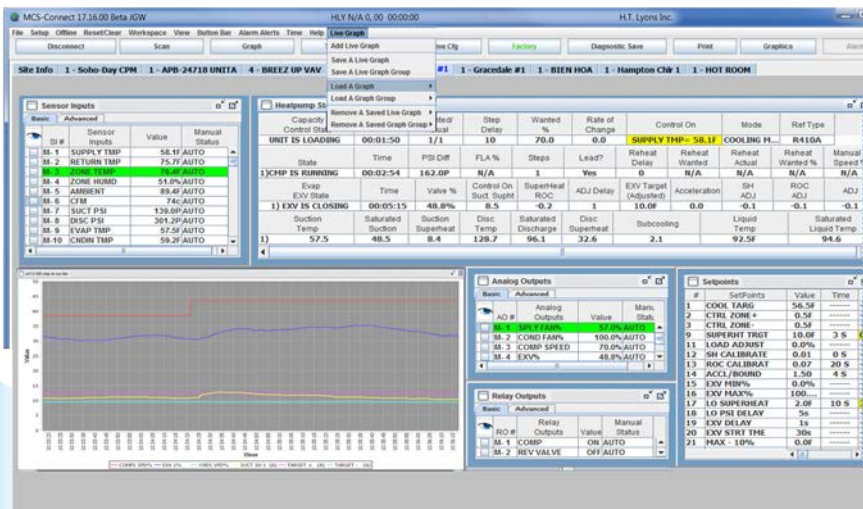
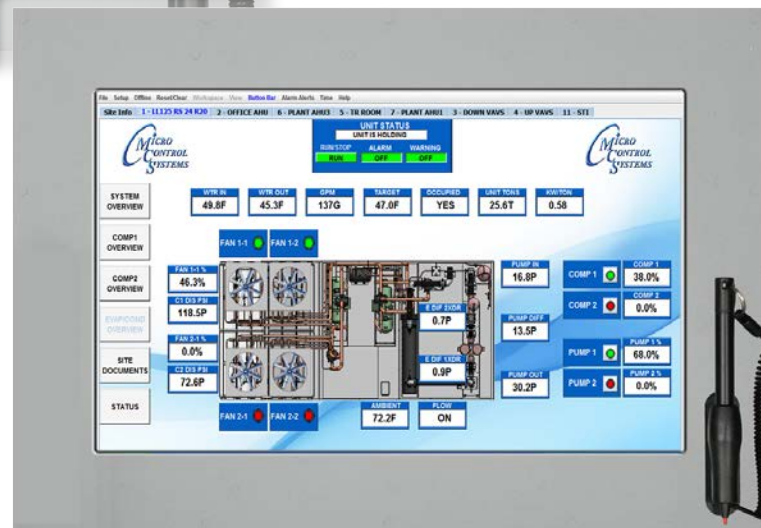
GRAPHICS and Your Touchscreen

Below are Graphic Screens that have been custom designed by MCS to help view the controllers you are monitoring . . .



Monitoring the water flow from the chiller along with the status of the chiller

Viewing different aspects of the chiller including fans, pumps and compressors for two chillers.



View the status of the unit you are controlling while viewing a "live Graph" in real time.

GRAPHICS - Customized to Your Chiller



Carrier 19DK System Overview



Carrier 23XL System Overview



Carrier 19DK Condenser/Evaporator Overview



Carrier 23XL Compressor Overview



Carrier 19DK Compressor Overview



Carrier 23XL Condenser/Evaporator Overview

GRAPHICS - Customized to your Chiller



Trane RTHA System Overview



McQuay PEH087 System Overview



Trane RTHA Compressor Overview



McQuay PEH087 Compressor Overview



Trane RTHA Condenser/Evaporator Overview



McQuay PEH087 Condenser/Evaporator Overview

A whiteboard with a grey frame is mounted on a blue wall. The word "Notes" is written in a blue, cursive font on the white surface. A black marker with a coiled cord is attached to the right side of the whiteboard.

Notes



**Providing HVAC/R
Solutions Worldwide**

The MCS Commitment

The founders of Micro Control Systems, Inc. have been in the manufacturing of Microprocessor Controls their entire careers and have over eight decades of combined HVAC/R Microprocessor Controls experience. MCS was founded to meet the needs of the Utility and HVAC/R Industries with products based on the following design criteria:

- ◆ **Quality & Service**
- ◆ **Cost Effectiveness**
- ◆ **Ease of Use**

Our commitment is to provide practical solutions for the industries needs and to be both a leader, and partner in the effective use of Microprocessor Controls.

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