YORK®

Service Information

File In/With: –	SI0367
	New 1117
Equipment Affected: YK Style G and Style H Chillers	
V.03 03630 OptiView Chiller Control Panel Software	

GENERAL

Beginning December 2016, enhanced software will be supplied in new production YK Style G and H chillers and in replacement microboard kit 331-03630-601. This software is backward compatible to all previous YK Style G and Style H chillers equipped with microboard 031-03630-001. The enhancements are listed below.

The microboard, software version and program card part number is:

031-03630-001 Y.OPT.01.03.308 (P/N 031-03601-002)

VSD COOLING SYSTEM VENT MODE FOR CHILLERS WITH RAPTYR VSD

A venting mode has been added to the Manual VSD Cooling settings. This allows the Service Technician logged in at Service access level, to activate the Venting Mode to help purge air from the VSD cooling system. The setting is accessed at the VSD Details screen. After choosing the Manual VSD Cooling choice Venting Mode and pressing Enter, a second dialog box will open with the prompt "Enter Manual VSD Cooling Timeout". The Venting Mode time may be set between 1 and 60 minutes with a default setting of 10 minutes. During this vent time, the pump will be cycled on for 15 seconds then off for 15 seconds to help purge the air from the cooling system. The chiller must be stopped in order to run the venting mode.

GEAR RATIOS

Additional Compressor Codes and Gear Codes with their associated Gear Ratios were added.

BUG FIXES

"Leaving Chilled Liquid - Flow Switch Open" Fault

This fault was unknowingly changed to not trip during soft shutdown in V.01. Prior to V.01, the existing logic would cause a cycling shutdown during Running or during Soft Shutdown. This was fixed in this release.

“Condenser - Flow Switch Open” Fault

This fault was unknowingly changed to not trip during soft shutdown in V01. Prior to V01, the existing logic would cause a cycling shutdown during Running or during Soft Shutdown. This was fixed in this release.

"Evaporator - XDCR or Leaving Liquid Probe" Fault

The "Evaporator - XDCR or Leaving Liquid Probe" fault is being set at the 20 minute mark with the Coast-down set to "Enhanced" It should not be set for that condition. This was corrected.

BV-8 Start/Stop Switch Status

The panel stop switch was always being reported as 1 ON regardless of the software run switch state. This was fixed to be based on the state of the Local Run/Stop setpoint. When Local Run/Stop is set to Run, BV-8 is set to 0. When Local Run/Stop is set to Stop, BV-8 is set to 1.

Remote PWM Setpoint

The scaling of the Remote PWM Setpoint was incorrect. This software release corrects that error.

INPUT POWER LIMITING SETPOINT

This Load Limit and Override combination are used to Demand Limit the chiller in place of current limiting. It only applies when Demand Limit Type is set to Power.

The Input Power Limit Setpoint can be remotely changed based on the chiller’s Control Source setting. The Active Input Power Limit Setpoint contains the actual setpoint being used for Input Power Limit Control. The following table shows what setpoint will be used based on the Current Limit Control Source.

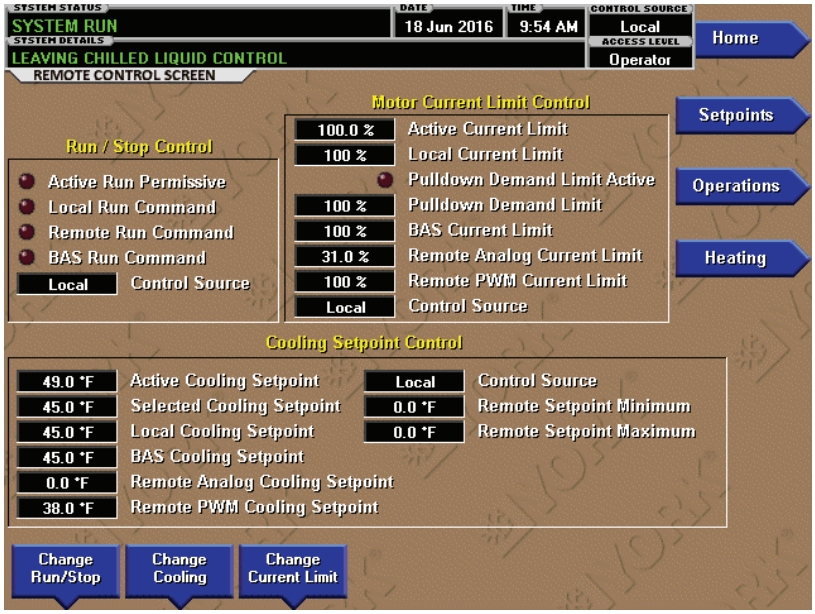
CONTROL SOURCE	ACTIVE INPUT POWER LIMIT (WHEN DEMAND LIMIT TYPE IS POWER)
Local	Lowest of: Local Input Power Limit Pulldown Demand Limit (when Pulldown Demand Limit Active)
BAS	BAS Current Limit Setpoint
Analog	Lowest of: Local Input Power Limit Remote Analog Input Power Limit Pulldown Demand Limit (when Pulldown Demand Limit Active)
Digital Remote	Lowest of: Local Input Power Limit Remote PWM Input Power Limit Pulldown Demand Limit (when Pulldown Demand Limit Active)

The allowable range for the Active Input Power Limit is the same as the Local Input Power Limit. If a remote value is received that results in an active setpoint that is greater than the maximum, the active setpoint will be set to the maximum. If a remote value is received that results in an active setpoint that is less than the minimum, the active setpoint will be set to the minimum.

INDIVIDUAL REMOTE SETPOINTS

Many data centers and process cooling customers wanted the capability to remotely start/stop the chiller with a hard-wired interface but also wanted to set the chiller Leaving Chilled Liquid Temperature setpoint though the communications link. This software release allows the user to set each setpoint independently to one of the following:

- Start/Stop (Local, BAS, Hardwire)
- Motor Current Limit (Local, BAS, 0-10V, 4-20mA, PWM)
- Cooling Setpoint (Local, BAS, 0-10V, 4-20mA, PWM)



LD23129

PROXIMITY PROBE CALIBRATION COUNT

The number of times that the Prox Probe has been calibrated is now displayed on the Prox Probe Calibration screen.

R-513A REFRIGERANT

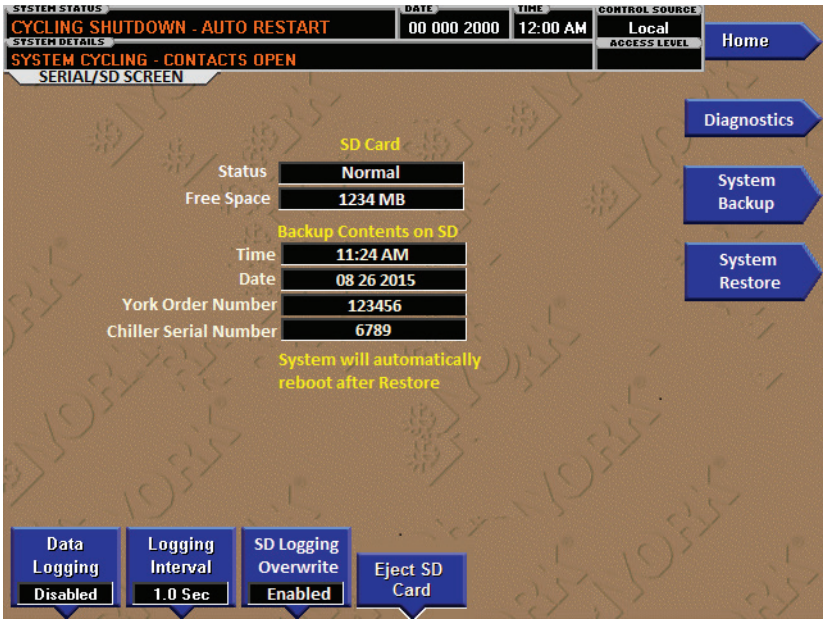
Added support for R-513A refrigerant.

DATALOGGING

This software release provides the ability to datalog all of the chiller operating parameters to an SD card in an Excel compatible .csv format. This eliminates the need to use a printer or a laptop for datalogging.

There is no limit on the SD card size. An 8 GB card will log well over a month's worth of data.

To set Datalogging on, from the Home Screen press SETPOINTS>SETUP>DIAGNOSTICS>SERIAL/SD and the following screen will be displayed:



LD23301

The Data Logging button may be used to select the mode of Data Logging: Disabled, Serial (to a printer or laptop PC), SD (SD card) or, Serial and SD. If "SD" or "Serial and SD" is selected, the chiller operating data shall be recorded at the Data Logging Interval into the SD card. The Data logging interval can be set on the Serial/SD Screen.

The data is stored in a folder named OOOO_SSSS where OOOO is the York Order Number and SSSS is the Chiller Serial Number.

The panel software will create a file for each day within this folder with the name YK_YYYYMMDD.csv where DD equals the day of the month in addition to the Y Year and M Month fields. The format of the csv file is the same as the previous data log Hyper Terminal file format. A new YK_YYYYMMDD.csv file is created at midnight.

If the SD Logging Overwrite is enabled, the SD card data logging will overwrite the oldest day csv file with a new day csv file when the SD is full. If the SD Logging Overwrite is disabled, SD card data logging will stop when the SD card is full.

Before removing the SD card the user should stop datalogging and then press the Eject SD Card button. This stops the system from writing data to the SD card. Failure to do this before removing the SD card could corrupt the data file.

The datalog day file can be read in to Excel. The file may also be emailed to others for their review. The data headers are included. Below is a small sample of some of the points logged in a YK chiller.

Date	Time	Elapsed Time	ECHLT	LCHLT	LCHLT Setp	ECLT	LCLT	Heating Setp	Evap Press	Cond Press	Delta P	Delta P/P	Motor Curr	Motor Curr Setp	Load Limit	CC State	PRV Cmd	PRV Pos
11/12/2016	00:00.0	474341.5	56.6	45.2	45	76	86.9	95	40.8	99.9	59.1	1.45	67.6	100	1	1	100	0
11/13/2016	00:00.1	474341.6	56.6	45.2	45	76	86.9	95	40.8	99.9	59.1	1.45	67.6	100	1	1	100	0
11/13/2016	00:00.3	474341.7	56.6	45.2	45	76	86.9	95	40.8	99.9	59.1	1.45	67.6	100	1	1	100	0
11/13/2016	00:00.3	474341.8	56.6	45.2	45	76	86.9	95	40.8	99.9	59.1	1.45	67.6	100	1	1	100	0
11/13/2016	00:00.4	474341.9	56.6	45.2	45	76	86.9	95	40.8	99.9	59.1	1.45	67.6	100	1	1	100	0
11/13/2016	00:00.5	474342	56.6	45.2	45	76	86.9	95	40.8	99.9	59.1	1.45	67.6	100	1	1	100	0
11/13/2016	00:00.6	474342.1	56.6	45.2	45	76	86.9	95	40.8	100	59.1	1.45	67.7	100	1	1	100	0
11/13/2016	00:00.7	474342.2	56.6	45.2	45	76	86.9	95	40.8	100	59.2	1.45	67.7	100	1	1	100	0
11/13/2016	00:00.8	474342.3	56.6	45.2	45	76	86.9	95	40.8	100	59.2	1.45	67.7	100	1	1	100	0
11/13/2016	00:00.9	474342.4	56.6	45.2	45	76	86.9	95	40.8	100	59.2	1.45	67.7	100	1	1	100	0
11/13/2016	00:01.0	474342.5	56.6	45.2	45	75.9	86.9	95	40.8	100	59.2	1.45	67.7	100	1	1	100	0

SYSTEM BACKUP AND RESTORE

This software release also provides the ability to save all of the Sales Order, Configuration and Setpoints data to the SD card, and transfer that information to another 03630 microboard, if the original board fails. This is the equivalent of all the information which was previously stored in the BRAM chip in the 02430 microboard.

A certain amount of space on the SD card is designated for System backup only, and will not be used for data logging. The remaining space on the SD card can be used for Datalogging; therefore one SD card can do both.

The System backup includes all data on NOVRAM and the time/date when backup is performed. The backup file is named OOOO_SSSS.ovb, where OOOO is the York Order Number and SSSS is the chiller serial number. Only one file will be created on the SD card. If the York Order Number or Chiller Serial Number is changed on the panel, the old backup file is deleted and a new backup file with the changed order number and chiller serial number is created.

The panel software will backup NOVRAM data to the SD card automatically each night at midnight. Alternatively, the user may manually save the data by pressing the “System Backup” button on the Serial/SD. The System Backup and System Restore buttons are only displayed when Data Logging is Disabled. When the manual backup is initiated, a security log entry is generated.

System Restore will restore the NOVRAM data from the SD card. Only one backup file will be on the SD card from the backup process. If there are multiple backup files on a SD card from copying files on a computer, the software will always use the file with the latest date and time. After the restore operation has completed, a security log entry will again be generated.