iPro Rack User Interface

The iPro Rack is a unit controller designed to manage compressors, fans, and control valves used in refrigeration systems. The Visograph user interface allows for navigation and acquisition of system information. This guide provides an overview of the information provided by the Visograph user interface.

STEP 1: Enter the Top Screen

To enter the main screen to access system status and navigation, press T1 under the ENTER prompt.



Figure 1 - Top Screen

STEP 2: Activate the Application

If the application is inactive, press and hold T3 under the ON 1 prompt for five seconds.



Figure 2 - Inactive Application



Press and hold **T1** under the **ON 1** prompt until the status changes from **OFF** to **ON**, then press **EXIT**. The until will now be activated. To deactivate the unit, follow the same procedure for activation.

NOTE: The prompts that originally read ON will now read OFF when the status changes from activated to deactivated.



Figure 3 - Active Application

STEP 3: Enter the Main Screen

The main screen is designed to provide an overview of the main system status and allow for navigation to peripheral device status and application configuration.



Figure 4 - Main Screen

- a. Number of compressors turned on / Number of compressors available
- b. Digital unloader active capacity
- c. Suction pressure, Suction set point
- d. Number of fans running / Number of fans available
- e. Variable speed fan capacity
- f. Temperature differential, Temperature differential set point
- g. Compressor alarms active
- h. Fan alarms active
- i. Navigation buttons

STEP 4: View Active Alarms

To view active alarms, press **T8** under the **ALARM** prompt. Alarms are grouped according to type, and each group in active alarm state will be flashing in the **ALARM** menu. Alarms will clear once conditions for alarms are no longer present. Other alarms must be manually cleared.



Figure 5 - Active Alarms

STEP 5: Enter the Service Menu

The service menu allows the user to view the IO status and peripheral system status, and create overrides for outputs. To enter the service menu, press **T5** under the Service prompt. The list below defines what is available in the service menu. To enter any service submenu, scroll over the desired menu with arrow keys **T1/T2/T4/T5** and press **T3** under the **Enter** prompt.



Figure 6 - Service Menu



Figure 7 - Analog Outputs

Scroll to the ANALOG OUTPUTS menu using the T1/T2 keys, then press ENTER (T3).



Figure 8 - Analog Outputs Menu

- Column A Analog output designation
- Column B Configuration of analog output
- Column C Value of analog output (0-100%)



Figure 9 - Load Status

Scroll to the LOAD STATUS menu using the T1/T2 keys, then press ENTER (T3).

Α	В	С	
D01 D02 D03 D04 D05	O1-INV 1 SUCTION CIR 1 O7-COMP 1 CIR 1 O11-COMP2 CIR 1 C15-COMP 3 CIR1 O114-LIQ LINE SOL	ON ON OFF OFF OFF	
Т1 Т	2 T3 T4 T5 T6	EXIT	

Figure 10 - Load Status Menu

- Column A Digital output designation
- Column B Configuration of digital output
- Column C Value of digital output (ON/OFF)



Figure 11 - Compressor Service

Scroll to the COMPRESSOR SERVICE menu using the T1/T2 keys, then press ENTER (T3).

COMPRESSOR SERVICE CIRCUIT 1
INVERTER 1 SERVICE
COMPRESSOR 1 SERVICE COMPRESSOR 2 SERVICE
T1 T2 T3 T4 T5 T6 T7 T8

Figure 12 - Compressor Service Menu

Compressor Service information is listed for each configured compressor.



Figure 13 - Compressor Service Menu Commands

Available commands in the COMPRESSOR SERVICE menu are:

- Reset Hour Counter (T1)
- Enable Compressor (T2)
- Disable Compressor (T3)

Press and hold the corresponding button for the desired command.

Digital Inputs: Status of Digital Inputs



Figure 14 - Digital Inputs

Scroll to the DIGITAL INPUTS menu using the T1/T2 keys, then press ENTER (T3).



Figure 15 - Digital Inputs Menu

- Column A Digital input designation
- Column B Configuration of digital input
- Column C Value of digital input (ON/OFF)

PROBES	
SUPERHEAT	
LANGUAGE	
REAL TIME CLOCK	
🔺 💙 ENTER 🗙 🗧 EXIT	
T1 T2 T3 T4 T5 T6 T7 T8	

Figure 16 - Probes

Scroll to the **PROBES** menu using the **T1/T2** keys, then press **ENTER** (**T3**).

PROBE (PB1-PB20)	
PROBE (PB21-PB39)	
T1 T2 T3 T4 T5 T6 T7 T8	

Figure - 17 - Probes Menu

Probe values are divided by two groups. Group 1 (PB1-PB20) shows probe values for inputs landed on the iPro controller. Group 2 (PB21-PB39) shows probe values for inputs landed on XEV30 valve drivers.



Figure 18 - Probe Values

- Column A Analog output designation
- Column B Configuration of analog output
- Column C Value of analog output (0-100%)

Superheat: Displays Calculated Rack Superheat



Figure 19 - Superheat

Scroll to the SUPERHEAT menu using the T1/T2 keys, then press ENTER (T3).



Figure 20 - Superheat Menu



Figure 21 - Coresense Setup

Scroll to the CORESENSE SETUP menu using the T1/T2 keys, then press ENTER (T3).

CORESENSE 5
CORESENSE 6
CORESENSE 7 CORESENSE 8

Figure 22 - Coresense Devices

The setup of CORESENSE is grouped by device address. Scroll to the desired device by using the T1/T2 keys, then press ENTER (T3).

	1
CORESENSE 5 R1501 DISCHARGE TEMP TRIP VAL 260 F DISCHARGE TEMP TRIP RESET 218 F RESET CORE SENSE NO	
▲ ▼ SET	

Figure 23 - Coresense Values

To change values, scroll to the desired value using the T1/T2 arrow keys, then press SET (T3). The value will flash when it is ready to be edited. Use the arrow keys T1/T2 to change the value, then press SET (T3) to save changes.



Figure 24 - Coresense Informataion

Scroll to the CORESENSE INFORMATION menu using the T1/T2 keys, then press ENTER (T3).



Figure 25 - Coresense Devices Information

Information related to **CORESENSE** is grouped by device address. Scroll to the desired device by using the **T1/T2** keys, then press **ENTER** (**T3**).

CORESENSE INFORMATION displays the following input values:

- Compressor Current
- Locked Rotor Peak Current
- Discharge Temperature
- Number of Running Hours
- Number of Compressor Switching Cycles
- Total Number of Short Cycles
- Alarm Status



Figure 26 - Analog Outputs Override

Scroll to the ANALOG OUTPUTS OVERRIDE menu using the T1/T2 keys, then press ENTER (T3).



Figure 27 - Analog Outputs Override Menu

- Column A Analog output designation
- Column B Configuration of analog output
- Column C Override value of analog output (0-100%)
- Column D Override status (disabled/enabled)

AO1 6-0-10V OUT INV COND CIRI 0 9 DIS AO2 2-0-10V OUT INV 1 SUCT CIRI 0 % DIS AO3 0-NOT USED AO4 0-NOT USED
ENTER 2 EXIT
T1 T2 T3 T4 T5 T6 T7 T8

Figure 28 - Analog Outputs Override Values

To override a value, scroll to the desired value using the T1/T2 arrow keys, then press SET (T3). The value will flash when it is ready to be edited. Use the arrow keys T1/T2 to change the value, then press SET (T3) to save changes.

Digital Output Override: Allows for Override of Digital Outputs

DIGITAL OUTPUT OVERRIDE	
XEV30 OVERRIDE	
XEV30 VALVE STATUS	
SUBCOOLER CONTROL	
T1 T2 T3 T4 T5 T6 T7 T8	

Figure 29 - Digital Output Override

Scroll to the DIGITAL OUTPUT OVERRIDE menu using the T1/T2 keys, then press ENTER (T3).

1	AB	C D	
	D01 01-INV1 SUCTION CIR1 D02 07-COMP1CIR1 D03 011-COMP2 CIR1 D04 C15-COMP3 CIR1	OFF DIS OFF DIS OFF DIS OFF DIS	
	DO5 O114-LIQ LINE SOL	OFF DIS	
	T1 T2 T3 T4 T5	T6 T7 T8	

Figure 30 - Digital Output Override Menu

- Column A Digital output designation
- Column B Configuration of digital output
- Column C Override value of digital output (ON/OFF)
- Column D Override status (disabled/enabled)



Figure 31 - Digital Output Override Values

To override a value, scroll to the desired value using the T1/T2 arrow keys, then press SET (T3). The value will flash when it is ready to be edited. Use the arrow keys T1/T2 to change the value, then press SET (T3) to save changes. Scroll to the override status using the T1/T2 keys, then press SET (T3). The value will flash when it is ready to be edited. Use the arrow keys T1/T2 to change the value from disable to enable, then press SET (T3) to save changes. Scroll to the override status using the T1/T2 keys, then press SET (T3). The value will flash when it is ready to be edited. Use the arrow keys T1/T2 to change the value from disable to enable, then press SET (T3) to save changes.





Figure 32 - XEV30 Override



Figure 33 - XEV30 Override Menu

- Column A XEV valve output location
- Column B Valve assignment
- Column C Valve override value (0-100%)
- Column D Override status (disabled/enabled)



Figure 34 - XEV30 Override Values

To override a value, scroll to the desired value using the T1/T2 arrow keys, then press SET (T3). The value will flash when it is ready to be edited. Use the arrow keys T1/T2 to change the value, then press SET (T3) to save changes. Scroll to the override status using the T1/T2 keys, then press SET (T3). The value will flash when it is ready to be edited. Use the arrow keys T1/T2 to change the value from disable to enable, then press SET (T3) to save changes. SCR (T3) to save change the value from disable to enable, then press SET (T3) to save changes.

DIGITAL OUTPUT OVERRIDE XEV30 OVERRIDE	
XEV30 VALVE STATUS	
SUBCOOLER CONTROL	
ENTER 🛣 📮 EXIT	
T1 T2 T3 T4 T5 T6 T7 T8	

Figure 35 - XEV30 Valve Status

Scroll to the XEV30 VALVE STATUS menu using the T1/T2 keys, then press ENTER (T3).



Figure 36 - XEV30 Valve Status Menu

- Column A XEV valve output location
- Column B Valve assignment
- Column C Valve status (0-100%)

Subcooler Control: Allows for Viewing Status of Subcooler Operation and Input Values



Figure 37 - Subcooler Control

Scroll to SUBCOOLER CONTROL menu using the T1/T2 keys, then press ENTER (T3).

SUB SETPOINT 15 F DROP LEG TEMP 59 F SUB STATUS ENABLE LIQ SOL ON

Figure 38 - Subcooler Control Page 1

Scroll to the next page by pressing T2.

EEPR SETPOINT	60	F	
EEPR	96	%	
LIQ OUT TEMP	59	F	
SUCTION PRESS	105	PSI	
100 C			
2 2		EX	uT -

Figure 39 - Subcooler Control Page 2

Scroll to the next page by pressing T2.

026-4962 R1

1						
	EEPR SETPOI	NT	60	F		
	EEPR		96	%		
	LIQ OUT TEN	P	59	F		
	SUCTION PR	ESS	105	PSI		
	÷ Ţ				Ð	ат

Figure 40 - Subcooler Control Page 3

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