

Accel Compression, Inc.

Full-Featured Touchscreen Compressor Controller



Suction Pressure	3.9 OZ
Discharge Pressure	84.8 PSI
Oil Pressure	56.7 PSI
Discharge Temperature	72.6 DEG F
Compressor Speed	1796 RPM

COMPRESSOR IS RUNNING

The Compressor is running normally
There are currently no warnings or alarms present.

I/O Status

Setup Menus

The CM5A is a full-featured, compressor controller that incorporates analog inputs and outputs along with full PID control of suction or discharge pressure. Enhanced features provide the user with higher levels of annunciation and more detailed system information. Inputs and limits can be programmed to suit the needs of the application. Analog I/O can be used with almost any 4-20 mA pressure transducer. It is also capable of controlling scrubber liquid level using 1, 2, or 3 float switches. **Touchscreen functions make it easy for the operator to make to set or change control settings.**

Inputs:

- Low Suction Pressure (4-20 mA Analog)**
- High Suction Pressure (4-20 mA Analog)**
- High Discharge Pressure (4-20 mA Analog)
- Discharge Pressure (4-20 mA Analog)
- Low Oil Pressure (4-20 mA Analog)
- Low Oil Level (Digital Input)
- Compressor Motor Aux Switch (Digital Input)
- Oil Cooler Motor Aux Switch (Digital Input)
- VSD Failed Input (Digital Input)
- Excessive Compressor Vibration (Digital Input)
- High Scrubber Level (Digital Input)
- Open Liquid Dump (Digital Input)
- Close Liquid Dump (Digital Input)
- Open Bypass Valve (Digital Input)
- Close Bypass Valve (Digital Input)
- Master On/Off Switch/Reset Switch (Digital Input)
- High Oil Temperature (thermocouple or digital input {selectable at time of order} – only one temperature input can use a thermocouple, other must be a digital input)
- High Discharge Temperature (thermocouple or digital input {selectable at time of order} – only one temperature input can use a thermocouple, other must be a digital input)
- Motor RPM (0-10 VDC Analog)
- Open Suction Inlet Control Valve (Digital Input)
- Close Suction Inlet Control Valve (Digital Input)

Outputs:

- Compressor Motor Start (Relay Output)
- Oil Motor Start (Relay Output)
- Liquid Dump Valve Open (Relay Output) Low
- Liquid Dump Valve Close (Relay Output)
- Bypass Valve Open (Relay Output)
- Bypass Valve Close (Relay Output)
- Run Warning Indicator (Relay Output)
- Alarm (Relay Output)
- Suction Control Valve Open (Relay Output)
- Suction Control Valve Close (Relay Output)
- Compressor Motor Start (24 VDC Transistor Out)
- Oil Cooler Motor Start (24 VDC Transistor Out)
- VSD Compressor Speed Control (4-20 mA)
- Input Control Valve (4-20 mA)

All programmable settings are password protected unless the password feature is turned off. Programmable settings incorporate multiple timers that give the operator flexibility control over each input. Adjustable response times can be used to take inputs out of the system, delay response to changing conditions, or prevent rapid cycling. The CM5A controller can be configured with two PID loops to control compressor speed as well as a suction pressure inlet control valve (or other device), if desired.

Special Features Available: SMS text messaging, full data logging and storage in CSV format, real time remote monitoring and control via internet

ANALOG SENSOR SETUP SCREEN

Suction P Sensor Low	Suction P Sensor High	Units
-17.4	17.4	OZ
Discharge P Sensor Low	Discharge P sensor High	Units
0.0	300.0	PSI
Oil Pressure Sensor Low	Oil Pressure Sensor High	Units
0.0	300.0	PSI
Min Compressor RPM	Max Compressor RPM	Units
0	1800	RPM

Main Screen

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Analog Sensor Setup and Units Selection

Alarm Action Special Parameters Entry Screen 1 of 8

0=Shutdown manual reset, 1=Shutdown timed reset
2=Shutdown instant reset, 3=Alarm only manual reset
4=Alarm only timed reset, 5=Alarm only instant reset
6=Input not used
7=Control shutdown no alarm and no reset required

Low Suction Pressure Alarm Restart	0
High Suction Pressure Alarm Restart	1
Low Disch Pressure Alarm Restart	0
High Disch Pressure Alarm Restart	0
Low Oil Pressure Alarm Restart	0
Low Oil Level Alarm Restart	0
High Oil Temperature Alarm Restart	0
High Disch Temperature Alarm Restart	0

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Main Screen

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System Input Status

Discrete Inputs (On or Off)

10	11	12	13	14	15	16	17	18
Closed	Open	Open	Open	Closed	Open	Closed	Open	Open
19	I10	I11	I12	I13	I14	I15	I16	I17
Open	Open	Open	Open	Open	Open	Open	Open	Closed

Analog Inputs

AI0 20.0 ma	AI2 8.5 ma	AI4 75.2 F
AI1 7.0 ma	AI3 13.8 ma	

Output Status

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Diagnostic Input Output Status

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