SPECIFICATIONS

SERVICE REQUIREMENTS: Air: minimum 60/80 psig (4/5.5 bar), maximum 116 psig (8 bar) at 5.0 CFM (140 dm^3/m). Clean, dry, non-lubricated.
Electrical: 115 VAC / 230 VAC (factory set) at 50/60 Hz.

CONNECTIONS: Air: ¼" NPTI

INSTALLATION INSTRUCTIONS

1) This filter system is equipped with one or two pneumatic double acting cylinders, or a magnetically couple drive, piloted by individual 4-way solenoid valves. The linear type cylinder provides force to move the cleaning disc while a second rotary type cylinder actuates the purge valve. Connect the air supply lines (customer supplied) to the inlet port (1/4" NPTI) of each solenoid valve mounted on the control panel.

2) Connect the incoming single-phase electrical supply to the panel mounted disconnect switch inside the automation enclosure. Please reference the units wiring diagram for proper terminal connection for the line and neutral wires. Ground connects to the ground ⏚ terminal mounted on the face of the switch.

INSTALLATION CHECKLIST

Complete this checklist before operating the system:

- ☐ Verify that the input power wiring is attached correctly to the main disconnect switch mounted inside the enclosure.
- ☐ Verify that the incoming automation electrical supply is the proper voltage. Improper voltage will cause serious damage to the filter's electrical systems. The proper voltage is factory set at 115 volts or 230 volts (single phase VAC).

START-UP VERIFICATION and OPERATION

Before circulating fluids through the filter system, start the system dry and verify the following:

1) Turn the main power switch to the ON position (located on the enclosure door). Along with the illumination of the GREEN (power status) light, the display should show the main screen (image 1).
2) Touch the **ON/OFF** button (lower left hand corner of screen). The status box on Image 1 will change from OFF to ON.
3) Touch the **CLEAN** button. The status box should show CLEAN. At this time, the pneumatic drive assembly will send the cleaning disc down the length of the element and return the disc to the top. After the cycle is complete the status box will return to ON.
4) Touch the **PURGE** button. The status box should now show PURGE. The cleaning disc will stroke and the purge valve will open. After purging is complete the purge valve will close and the cleaning disc will return to the top. After the cycle finished the status box will return to ON.

BUTTON DESCRIPTIONS

Below is a description of each button function on the main screen (Image 1).

A. **ON/OFF** button – See warning box to the right. Turns the PLC ON and OFF. In the event of power failure, the operator will have to turn the system back ON. To reset the system and clear all error messages, turn the system OFF and back ON.
B. **CLEAN** button – Allows the operator to initiate a manual cleaning sequence. When the button is touched, CLEAN will be displayed in the status box.
C. **PURGE** button – Allows the operator to initiate a purge sequence. When the button is touched, PURGE will be displayed in the status box.
D. **PARAMETER ADJUST** button – Touching this button will display the parameter adjustment screen. This is where changes can be made to the clean and purge sequences.

Below is a description of each button function on the Parameter Adjustment screen (Image 2).

A. **Clean Interval (s)** – The Clean Interval is the amount of time between cleaning strokes. Clean strokes will automatically occur based on this. Units are in seconds. ***Setting this value to zero (0) will disable the***

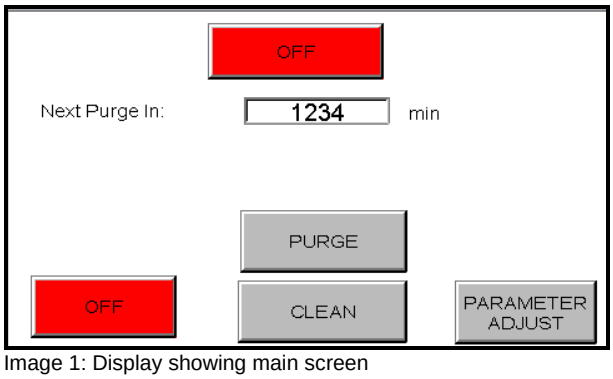

Image 1: Display showing main screen

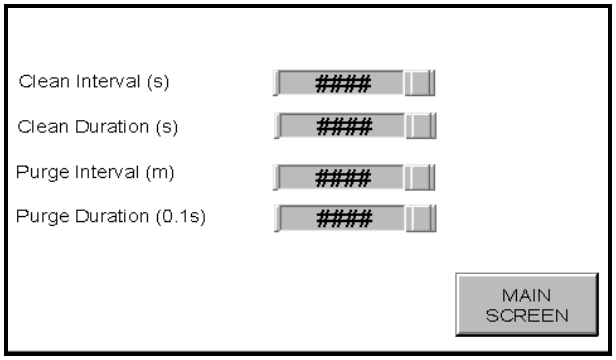

Image 2: Display showing parameter adjustment screen

ON	Controller is On
CLEAN	Cleaning Cycle is running
PURGE	Purging Cycle is running
HIGH DP	Fault Due to High DP
OFF	Controller is Off (See warning box below)

Table 1: Status states that can be display on main screen. (For the Siemen's Controller the states have their own display box that is grayed out when not in use.)

***WARNING**: When the PLC is off, only the PLC control is disabled. The green power light will still be illuminated to indicate that all electrical circuits are powered. Use caution when working on the system in this mode to prevent electrical shock. The ON/OFF button is not intended to be a replacement for following proper lockout procedures.*

FAILURE TO FOLLOW THIS WARNING MAY LEAD TO DEATH OR SEVERE INJURY.

timed clean function.

B. **Clean Duration (s)** – The Clean Duration is the amount of time the linear actuator will be energized to allow the cleaning disc to travel along the element. This time will be dependent on air and process pressure. Units are in seconds.
C. **Purge Interval (m)** – Sets the amount of time between automatic purge intervals. Units are in minutes. ***Setting this value to zero (0) will disable the timed purge function.***
D. **Purge Duration (0.1s)** – Determines the amount of time that the purge valve is open during the purge sequence. Units are in 0.1 seconds.
E. **Main Screen** button – Touching this button will return the user to the Main Screen (Image 1).

FAULT MESSAGES

Below is a description of each fault message on the Eaton HM*i* operator interface. To reset the system and clear all fault messages and outputs, turn the system OFF and back ON.

A. **HIGH DP** – When the system initiates more than 2 cleanings due to differential pressure within 30 minutes, a fault is set and the message **HIGH DP** will flash on the display. Possible causes: plugged element, incorrect clean settings, incorrect purge settings or insufficient inlet pressure to properly clean the element.

Optional DIFFERENTIAL PRESSURE SWITCH ADJUSTMENT

The differential pressure switch senses a difference in pressure between the inlet and outlet piping. When the factory pressure preset has been reached, it triggers a cleaning sequence. The factory preset is 15 PSID (1 bar).

To adjust the preset, remove the DP switch cover and turn the hex-adjusting nut. Turn it clockwise to decrease the allowable differential pressure between the inlet and outlet piping. Turn the hex nut counterclockwise to increase the allowable differential pressure between the inlet and outlet piping. One flat turn ($1/6^{th}$ of a turn) of the hex-adjusting nut changes the setting by approximately 2 PSID (0.14 bar).

CUSTOMER INTERFACE

A. **GENERAL FAULT (RL1)** – This relay is energized during normal operation. It will de-energize to indicate power loss, system is OFF, purge header valve failure or if an excess differential pressure condition exists (purge is disabled if there are more than two differential pressure purge sequences in 30 minutes). See electrical schematic for connection details. The contact rating is 7A at 30 VDC or 110 VAC.
B. **REMOTE CLEAN** – Supplying a momentary 24VDC signal to input I:0/0 will start a clean sequence.
C. **REMOTE START** – Supplying a momentary 24VDC signal to input I:0/1 will start a purge sequence.
D. **CLEAN IN PROCESS** – Output O:0/0 will be set during the clean sequence.
E. **PURGE IN PROCESS** – Output O:0/1 will be set during the purge sequence.

If you are interested in ordering spare parts or having service performed on your filter, please contact Customer Service.

Eaton reserves the right to change specifications, dimensions and model designations without prior notice.

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