



SERIES CP1-HC

Compliance Monitor

FEATURES

- CP1-HC replaces CP1-E.
- Single package reduces installation costs.
- NEMA 1 panel.
- All Microprocessor-based for simple tuning.
- NYC DEP-approved opacity monitor with burner cutoff function.
- NYC DEP-approved draft controller and draft safety switch.
- Standard Modbus communications.
- Standard remote alarm (mandatory in NYC).
- Optional flue gas temperature monitor and alarms.
- Analog outputs of draft, opacity, and flue gas temperature (optional) for recording and panel displays.
- Standard electronic draft gauge.
- Optional draft damper actuators and linkage.

APPLICATION

The **Series CP1-HC Compliance Monitor** is a complete, factory-packaged system that combines a NYC DEP-approved Opacity Monitor (Model **A0-8740-A0-10**) with a NYC DEP-approved Draft Control System (Model **C-07720-B0**), safety switch, and draft gauge in a *single* compact panel. An optional flue gas temperature monitor is available. **Installation labor and material costs are significantly reduced by using a factory-assembled panel instead of separate components!**

The NYC DEP-approved draft control system includes a standard two-line, alphanumeric display on the front of the panel, field-programmable control functions, integral draft safety switch, integral electronic draft gauge, and alarm output. An optional flue gas temperature alarm with displays is available. **Refer to bulletin C-07720.03 for complete specifications.**

The NYC DEP-approved opacity monitor has a 120-second burner cutoff function. The opacity monitor operator's panel is located on the front of the NEMA-1 housing. The opacity monitor includes a status indicator LED, audible alarm, and contact closure for the stan-



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COMPLIANCE MONITOR**

dard remote alarm. The light source and receiver stack units are included as part of the basic package. **Refer to bulletin A08740.00 for complete specifications.**

The following **optional field equipment** can be added to the package: **outlet damper actuator, and actuator linkage, plus thermocouples and thermocouple cables for the optional flue gas temperature monitor.** Please note that the **remote alarm** provided standard in this package is **mandatory in NYC!**

The **CP1-HC is quick to install and easy to set up.** Mount the panel in a convenient location free from excessive heat or vibration. Install the opacity monitor light source and receiver in the stack, and connect the cable at the panel. If there is a flue gas temperature monitor, install the thermocouple in the stack, and bring the cable connection to the panel. Connect the draft controller to the burner management system (as explained in the draft control manual). Wire the remote alarm. Install the actuator and linkage, and connect the actuator to the panel. The sample line pipe or tubing for the draft controller, safety switch, and gauge attaches conveniently at the top of the panel. That's it!



Series F-09140 Linear Actuator. See Bulletin DB9140.02 for complete information.

Series L-05500 Remote Audible/Visible Alarm. See Bulletin L05500.00 for complete information.





HOW TO ORDER

A. Model CP1-HC-A is the basic NYC Compliance Package. This package includes:

- Surface-mountable NEMA-1 panel with Universal Opacity Monitor A-08740 electronics and Draft Control System Model C-07720-B0-4120-03 electronics. An integral draft safety cutoff switch is included with draft controller.
- Light source and receiver stack units for opacity monitor.
- P/N 20458 Remote Audible/Visible Alarm. (Refer to bulletin **L05500.00** for more information.)
- One set of operating and maintenance manuals.

B. Model CP1-HC-B is the NYC Compliance Package with Flue Gas Temperature Monitor & Alarm. This package includes all of the features of package "A" above, plus flue gas temperature monitor and alarm electronics. A Type J thermocouple and connecting cable must be ordered separately if needed.

Draft Damper Actuators: Hays Cleveland supplies many actuators that are ideal for draft control. Two of the most common are:

- **F-09141-0101-A Linear Actuator.** The industry standard! Rated 75 lbs. thrust (equivalent to 18.75 ft. lbs.*), with 30-second full travel, and adjustable start limit switches. This actuator requires the following linkage: P/N 11372 Damper Lever Arm and two pieces of P/N 26908 Clevis Assembly. **Refer to bulletin DB9140.02 for complete specifications.** Note: *thrust (push-pull) range is stated in pounds. Equivalent ratings are provided for reference in Foot-Pounds (torque), and have been calculated for a 3" lever traveling through 90 degrees.*
- **F-0872-SER-15/30-110-50/60-2E-0000 Rotary Actuator.** Rated 140- inch lb torque, with 30 seconds full travel, and auxiliary limit switches. This actuator requires a lever arm, P/N L11547. **Refer to bulletin DB-F00SER.01 for complete specifications.**

SPECIFICATIONS

For component specifications, refer the bulletins listed here:

- C07720.XX Draft Control System
- A08740.XX Universal Opacity Monitor
- L05500.XX Remote Audible/Visible Alarm

For information on the panel-mounted versions and other Hays Cleveland products, please contact the Sales Office.

NEMA-1 Compliance Monitor Panel:

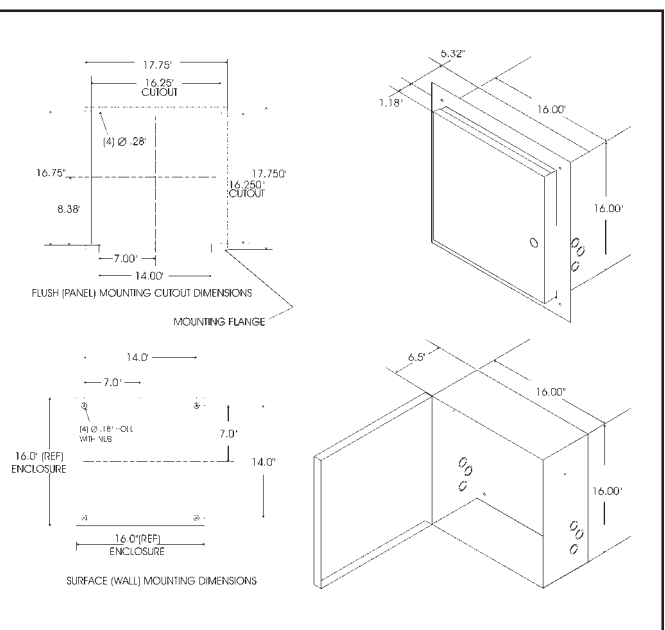
Line Power: 117 VAC, 50/60 Hz.

Ambient Temperature: 32 to 130F (0 to 55 C).

Cabinet Dimensions: 16" x 16" x 6.5".

Shipping Weight: approx. 23 lbs. for panel.

Specifications are subject to change without notice.



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