

# Model C-07200-A0 MANUAL/AUTO STATION

**The Hays Cleveland Model C-07200-A0 MANUAL/AUTO STATION** interfaces between a final control element and the automatic output of an upstream controller. Operator-adjustable manual outputs are available in the manual mode. Manual/Auto Stations provide smooth transfer between automatic and manual modes, and complete remote operation of a control loop in either mode.

## Basic Station

In the automatic mode, this station receives and passes the control signal to the final element. When in the manual mode, the station allows full manual operation.

## Ratio Station

The ratio control permits the operator to adjust the input/output relationship so that the output will be a percentage of the input. On 7261 models, the output can be any percent of input from 90% up to 110%. On 7271 models, the output can be any percent of input from 100% down to 50%.

## OPERATION

**The Hays Cleveland Model C-07200-A0 MANUAL/AUTO STATION** receives a conditioned or unconditioned control signal from a master or other control device, adds manual/automatic station capability, and retransmits that signal to a final or intermediate element. Front-panel-adjustable ratioing of input to output is available by order option. Front panel digital indication is of measured position, typically from a 1000-ohm slidewire in the positioned element. This position signal is also used as a 1-5 v DC retransmitted signal to another controller or another positioning M/A station.



A typical use for these units is as positioning control stations. A master pressure controller supplies a 1-5 v DC master loading signal output simultaneously to three Model C-7211-230-00A Boiler Sub-Master Fuel Valve M/A Stations. These are fuel valve positioner controllers with 117 v AC switched output to an electric actuator that has a single 1000-ohm position slidewire. The measured fuel valve position signal in each of the above Boiler Sub-Masters is retransmitted to a Model C-7211-230-00A (non-ratio), C-7261-230-00A (ratioing) forced draft air station with 117 v AC switched output to forced draft air electric actuators with 1000-ohm slidewires.

Alternately, the above forced draft air C-7211 or C-7261-230-00A could be replaced by a C-7211 or C-7261-210-00A, which are non-ratioing and ratioing versions with 4-20 ma outputs. These might be used for variable speed drives on the forced draft air fan.

Another version is available with switched 117 v AC input that can only be used with the switched 117 v AC output option.

### SPECIFICATIONS

- Power:** 120 v AC 50/60 Hz., .05a
- Isolation:** 300 v lines to case
- Input Signals & Impedances (Analog Input Models Only):**
  - 4-20 ma, 250 ohms
  - 1-5 v, 100K ohms
- Output Signal Range (Analog Output Models Only):**
  - 4-20 ma, 750 ohms (max)
  - 1-5 v
- Manual Control:** 10 turns produce 0 to 100% full-scale output.
- Ratio Control (Ratio Models Only):** Two modes available: Input x0.5 to x1; Input x0.9 to 1.1
- Ambient Temperature:** 40 to 120F (5 to 50C)
- Output Load:** 0.1 A (min), 1.0 A (max), 120 v AC 1ph.
- Dead Band Range (Switched Output Models Only):** 2-6% of input range
- Requirements:**
  - Active Range: 60% minimum
  - Resolution: 5% of active range, minimum
  - Resistance: 135 to 5000 ohms
- Connections:** Terminal strip
- Enclosure:** 18-gauge plated steel
- Mounting:** Panel
- Shipping Weight:** 6 lbs.

Specifications Subject to Change

## HOW TO ORDER

The basic catalog number for the **Hays Cleveland Model C-07200-A0 Manual/Auto Station** is shown below. Replace suffixes AA through E with the desired selections from the table below.

### C-072AA-B-CC-DD-E

**Typical Examples:** The code for a 117 v AC switched output fuel valve manual/auto station with a 1-5 v DC input from a master pressure controller is C-07211-230-00-A. For use with an AC20 or AC30 controller, use C-07211-130-01. The code for a 117 v AC switched output forced draft manual auto station with a 1-5 v DC retransmitted slidewire position

input from a 117 v AC fuel valve positioner is C-07211-230-00-A. The code for a 4-20 ma variable speed forced draft manual/auto station with a 1-5 v DC retransmitted slidewire position input from a fuel valve positioner is C-07211-210-00-A.

#### AA. Function of Station:

- Basic [Standard] (AA=11)
- Ratio  $\pm 10\%$  [gain = x0.9 to 1.1] (AA=61)
- Ratio + 0%, -50% [gain = x1.0 to 0.5] (AA=71)

#### B. Input Signal:

- 4-20 ma DC (B=1)
- 1-5 v DC (B=2)
- Switched 117 v AC [C-07211-330-00A only] (B=3)

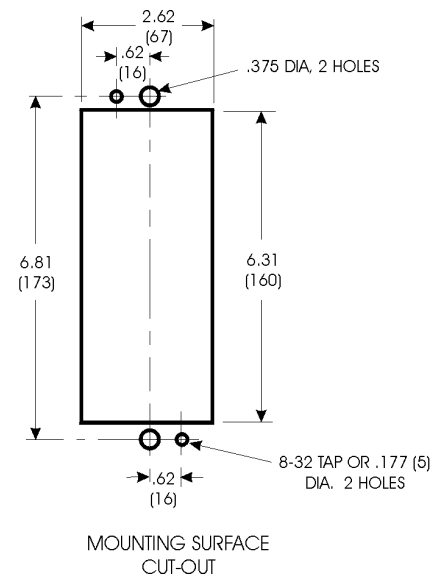
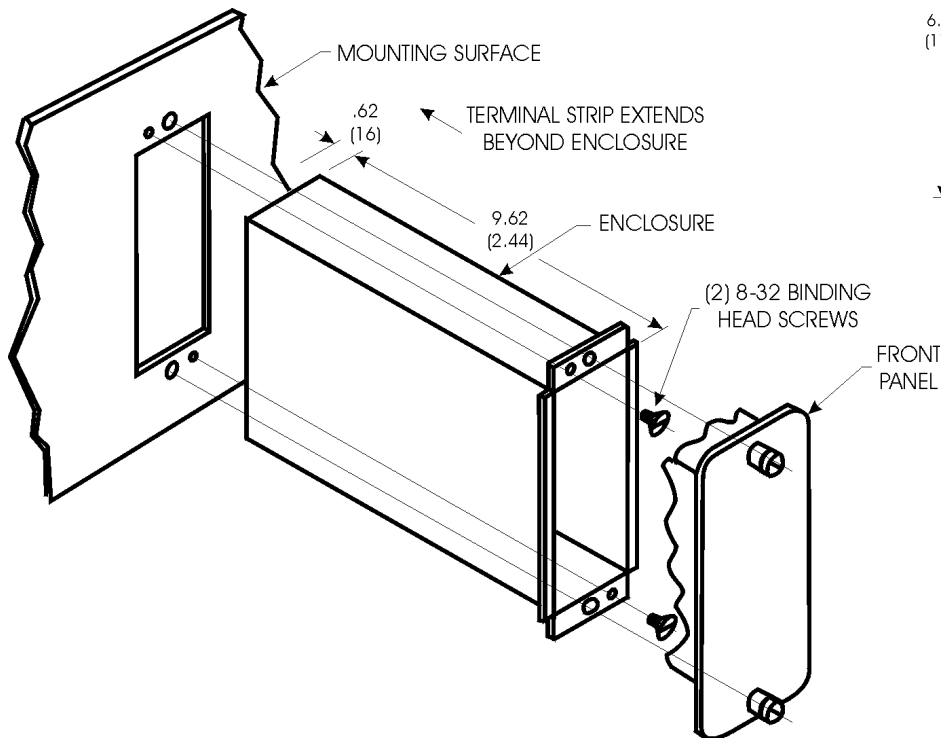
#### CC. Output Signal:

- 4-20 ma DC (CC=10)
- 1-5 v DC (CC=20)
- Switched 117 v AC (CC=30)

#### DD. Options:

- None (DD=00)
- Switch contact for bumpless transfer [used with AC20 and AC30 controllers – see C-07000-AC] (DD=01)

#### E. Current Model Designation: B



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