



**CLEVELAND
CONTROLS™**

Model C-07200-A0 MANUAL/AUTO STATION

Series C-07200-A0 Manual/Auto Stations interface between a final control element and the automatic output of an upstream controller. Manual/Auto Stations provide smooth transfer between automatic and manual modes, with complete remote operation of a control loop in either mode. Operator-adjustable outputs are available in the manual 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 on this model 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

C-07200-A0 Manual/Auto Stations receive a conditioned or unconditioned signal from a control device, add manual/automatic station capability, and retransmit the signal to a final or intermediate element. A measured position value, typically from a 1000-ohm potentiometer, is displayed on the front panel. The position signal is retransmitted as a 1-5 V dc signal to another controller or another positioning M/A station. A front-panel **ratio** control of input to output is optional.



In a typical application, a M/A station is used to position a fuel valve actuator. A master pressure controller supplies a 1-5 V dc master loading signal simultaneously to two or more boiler submaster M/A stations functioning as fuel valve position controllers, providing 117 V ac switched output to an electric actuator with a single 1000-ohm potentiometer. 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 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 potentiometer 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 potentiometer 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)

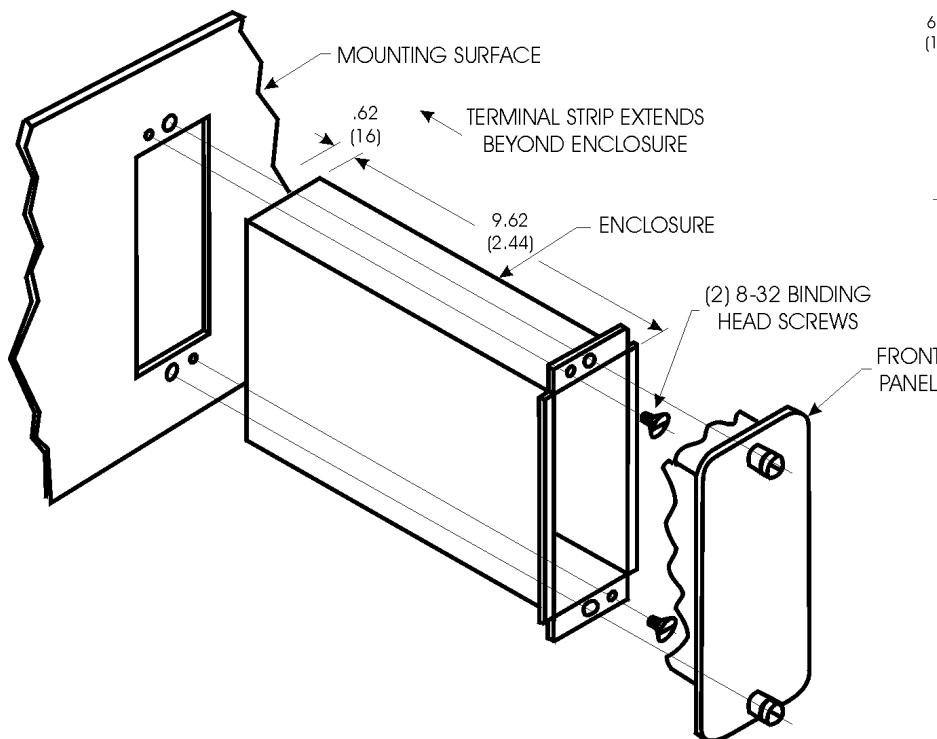
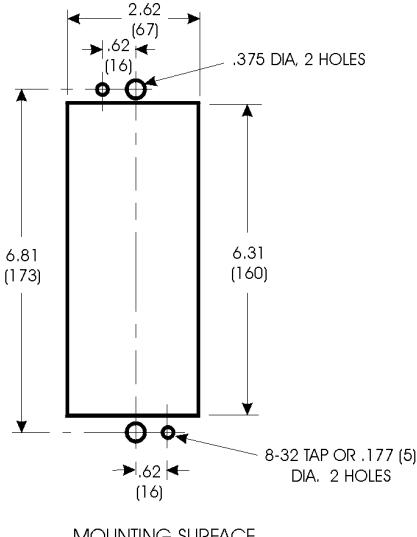
CC. Output Signal:

- 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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