

**Characterize multiple valves over the whole range of demand input easily**



- Precise positioning of up to four valves in relationship to each other
- Up to six profiles available
- Demand and trim inputs
- Replaces complex mechanical linkages
- Complete flexibility in profiling
- On line profile entry
- Large 4-line display with keypad
- User selectable name for each motor
- Selection of a feedback signal and alarming per motor
- Optional closed loop control

Most valves have a characteristic non-linear relationship between flow and percent open. In most combustion systems, controlling multiple valve positions simultaneously allows for efficient combustion over the full operating range. North American's 8386F valve profiler is an easy-to-use, menu-driven, electronic valve controller that replaces linked-valve arrangements and provides precise positioning of air, gas, O<sub>2</sub>, FGR, and other valves.

The Valve Profiler accepts 4-20 mA or 0.5 V dc as its demand input from any process control device (PC, PLC, or single loop controller). This signal dictates the positions of the valves according to their respective predefined profiles. Each valve is entirely independent of the others and depends only on the demand signal and its own profile.

Minor adjustments to each valve position can be made based on a trimming input signal. Valve positions can also be configured (via operator input) with a constant bias. These features can be enabled separately for any of the four valve positions. The trim input signal can represent O<sub>2</sub> trim, XSA trim or any other 4-20 mA trim signal.

Configuring the 8386F Valve Profiler is easy. Each of the six possible profiles consists of up to 11 demand settings between 0% and 100%, and each profile can contain up to four motors. Setup requires only the entry of the positions of each valve in use. Parameters in the setup also determine the behavior of each valve with respect to furnace conditions of purge, low fire, light-off, and excess air. Profiles can be adjusted at any time, even while in use.

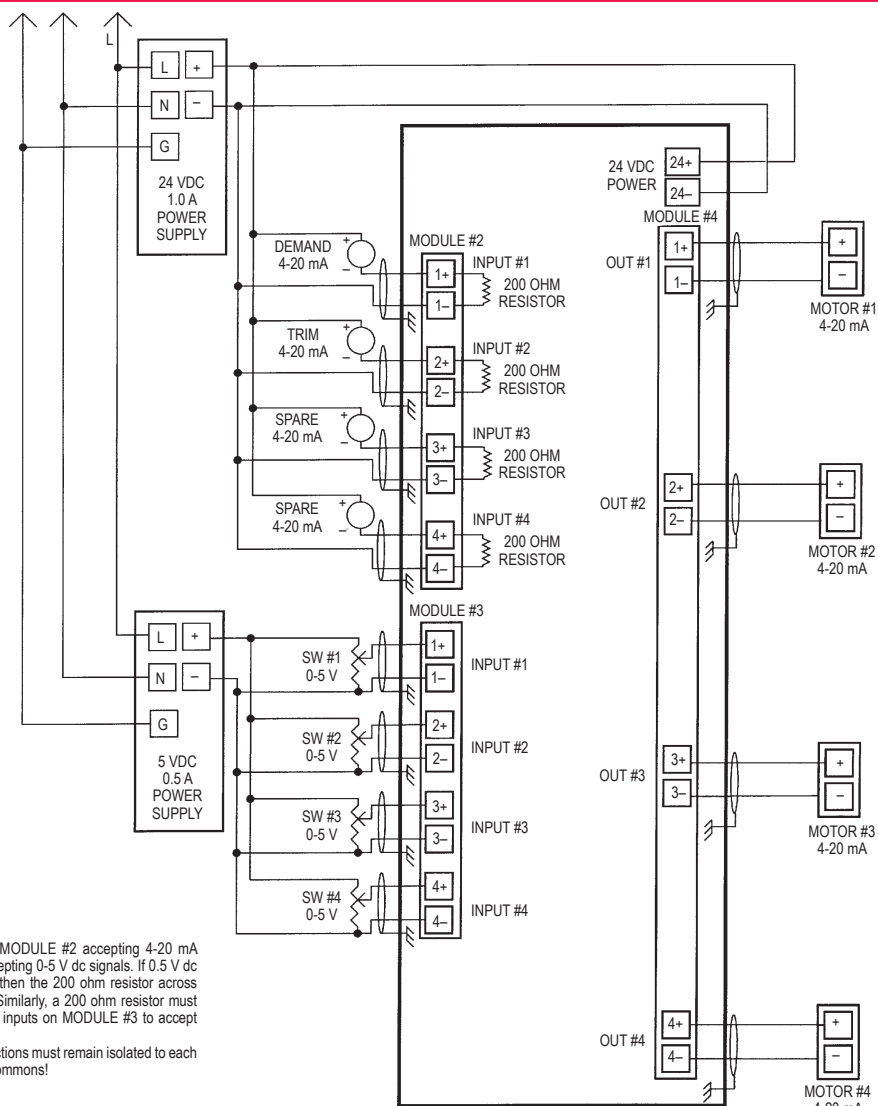
## SPECIFICATIONS

### Physical

- Agency approvals: CE Mark.
- Panel front: 7.10 in. (181 mm) × 9 in. (229 mm) × 4 in. (102 mm).  
Cutout: 3 1/4 in. (82.5 mm) × 7 1/16 in. (179.5 mm) plus drill pattern for eight bolts.
- NEMA 4/12 at faceplate.
- Operating temperature: 32-140 F (0-60 C).
- Relative humidity: 5-95% non-condensing.
- Display: four-line × 20-character LCD backlit display.
- Keypad: 32-key with tactile feedback.

### Electrical

## ANALOG WIRING DIAGRAM



**NOTE:** The drawing shows MODULE #2 accepting 4-20 mA signals and MODULE #3 accepting 0-5 V dc signals. If 0.5 V dc is required on MODULE #2, then the 200 ohm resistor across the input must be removed. Similarly, a 200 ohm resistor must be added across the desired inputs on MODULE #3 to accept 4-20 mA signals.

**CAUTION:** Module #4 connections must remain isolated to each motor as shown. Do not tie commons!

See 8386F Valve Profiler USER'S MANUAL for a complete wiring

Note: External power supplies sold

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