The **Auto-Face V touch switch and indicator panel** combines both operator inputs and visual annunciation in one display. Operator inputs are through ADI PB-100 touch dome switches located below the surface of the display with indication by long life high intensity LEDs. The graphic display is a multi-colored graphic representation of the area being controlled.

ADI PB-100 touch switches are attached to the aluminum substrate with machine screws and can be replaced from the rear of the panel. Switch contact is momentary, normally open, single pole rated at 40mA at 24VDC with a life expectancy of 5 million operations. Activation force for the switches is 220 grams with travel of .015 inches and an average effective operating force of 325 grams.

High intensity red, green, amber, blue, yellow and bi-color LEDs are used in these panels. T-13/4 LEDs are socket mounted on a printed circuit board with voltage dropping resistors for operation at 24 VDC, 12 VDC, or 5 VDC and diodes for LED test.

The graphic surface of the **Auto-Face V** display panel is a multicolored 7-mil polyester film protected by a 6-mil vinyl laminated overlay. The graphic artwork can be either black lines and text with multicolored background or colored lines and text with black background. Colors for the graphic are selected from ADI’s chart of 40 standard colors. Custom colors may be specified to meet design or architectural requirements. An attractive clear or black anodized aluminum frame enhances and protects the edge of the panel.

An ADI Z-Card microprocessor controller system can scan the switches, illuminate the LEDs, and provide inputs and outputs to a host computer via an RS232, RS422 or RS485 serial line. **Auto-Face V panels** may also be wired to terminals or multi-pin connectors; both allow for connection by the customer to a programmable controller or a hardwired system.

### Graphic Construction Detail

- .006” vinyl laminated non-glare protective overlay
- .007” multi-colored polyester graphic film bonded to a .010” rigid epoxy board sub layer which is bonded to an aluminum substrate
- ADI PB-100 touch switch with push-on 2-pin connector screwed to the aluminum substrate
- T-13/4 LED socket mounted to a pcb
- Printed circuit board (pcb) with dropping resistors and diodes for LED test
- Solder type LED input turret
- Pressed-in standoffs for mounting screws
- .125” clear irridited aluminum substrate with holes for touch switches and LEDs
- LEDs and ADI PB-100 touch switches wired to terminal strip(s), connector(s), or directly to a controller
- Mounting studs
- Anodized extruded aluminum T1 trimedge
- Custom built enclosure designed by ADI
1.0 General
This specification defines the basic construction and components for an AUTO-FACE V multi-colored graphic annunciator and control panel.

2.0 Construction
The control panel shall be constructed of .125" irridited aluminum plate substrate with a polyester graphic film and vinyl laminated overlay that is non-yellowing, durable and scratch resistant. LEDs shall be mounted on custom printed circuit boards (PCBs). All wiring to the PCBs shall be made on solder turrets. Switches and LEDs shall be socket mounted or have connectors for easy replacement.

3.0 Graphic
3.1 Graphic Colors
The polyester film shall be a graphic as shown in the architect’s plan with black legends and colored background areas. The graphic film shall be 7-mil photographic film, having all accent colors applied to the backside of the film. The panel supplier shall furnish a color chart with a minimum of 40 accent colors for architect selection.

3.2 Graphic Surface
The graphic surface (polyester film with vinyl overlay) shall be bonded to the aluminum substrate with an adhesive that has been proven not to delaminate in similar applications. The adhesive shall achieve 100% bonding without any creases, bumps, or blemishes in the graphic surface. The graphic surface shall be vinyl with a non-glare finish. Translucent openings shall be made in the graphic surface for back lighted indicators (LEDs). Backlit areas shall be subdued until the LED is illuminated. The illumination of any indicator shall be clearly visible from any normal viewing angle in front of the graphic surface.

3.3 Epoxy Board
A .010” rigid epoxy board sub-layer shall be installed between the graphic surface and the .125” aluminum substrate. The rigid epoxy board shall protect the graphic surface from the sharp edge of the switch cutouts in the aluminum substrate.

4.0 Substrate
The .125” aluminum substrate shall have holes for LEDs and switches. LEDs and switches shall not protrude through the graphic face. The aluminum substrate shall have holes drilled and tapped for switch and indicator mounting from the rear of the panel. The aluminum substrate shall have a clear irridited finish to prevent oxidation.

5.0 Indicators
The indicators shall be high intensity LEDs, T-1¾ in size, and rated for normal operation at a current of 20 mA. The LEDs shall have an operating life of a minimum of 170,000 hours of continuous or pulsed operation. LED body and lens shall be constructed of high impact plastic. All LEDs shall be socket mounted in .062” printed circuit cards constructed of epoxy glass material, NEMA Type FR-4, Grade 10. Resistors and diodes, for current limiting and LED test, shall be mounted on the printed circuit boards. Solder type, pressed in terminals, shall be provided for electrical connections to the LEDs. LED test switch (when specified) shall illuminate all LEDs simultaneously when activated.

6.0 Switches
The touch switches shall be momentary, normally open, with a contact rating of 40 mA at 24 VDC. The touch switches shall have a life expectancy of 5,000,000 operations when operated at the rated current and voltage. Touch switches shall be round and of the touch activated type, requiring a movement of .015” and an activation force of 220 grams. The effective operating force of the switches when installed in a panel shall be 325 grams +/- 100 grams. All touch switches shall be replaceable from the rear of the panel. A push-on two-wire connector shall be provided with each touch switch for making electrical connection.