



# UIP-B

## Universal Instrument Panel — Basic Version



### Features

- ◆ Compact design
- ◆ Sealed to IP67 specifications front and rear
- ◆ J1939 CAN and J1708 data bus
- ◆ 13 customizable telltales
- ◆ PRND321 indicator
- ◆ DEF LED bargraph gauge
- ◆ Customizable gauges
- ◆ Dual-color gauge warning LEDs
- ◆ Supports additional external NGI gauges
- ◆ Integral buzzer
- ◆ Analog and switched inputs
- ◆ Switched output
- ◆ Two menu navigation buttons
- ◆ 9 to 32 volt operation
- ◆ Backlit LCD and buttons

### Applications

- ◆ Heavy trucks
- ◆ Buses, coaches and recreational vehicles
- ◆ Military vehicles
- ◆ Forklifts, wheel loaders and skid steers
- ◆ Cranes, road-building and construction equipment
- ◆ Earth-moving and mining vehicles
- ◆ Utility and emergency vehicles
- ◆ Farm and agricultural vehicles
- ◆ Stationary engine instrumentation

**AMETEK VIS** UIP-B is part of the Universal Instrument Panel family that can satisfy the instrumentation requirements for all vehicle platforms. Easily customize the gauges, telltales and display to fit your application with minimal cost and time.

The cluster collects data from the vehicle J1939 CAN data bus, discrete switch inputs, and analog inputs. Data can also be broadcast out on the J1939 CAN data bus. The system can be expanded by adding optional external NGI or C-COM gauges.

One of the four gauges is a bargraph gauge with four progressive bars that can satisfy the requirements of a DEF gauge. The green bars indicate the current level in 25% increments. Additionally the lowest bar can be changed from green to amber to red to at customer specified values to alert the operator of low and critically low conditions.

The backlit, 13 segment, 7-digit alphanumeric LCD displays an odometer, engine hourmeter, two resettable trip mileage and hours, diagnostic fault codes and warning messages, as well as service intervals. The LCD will also display vehicle data such as engine temperature, transmission temperature, and engine oil pressure.

Backlighting color is white, with color options available in each decal. Each gauge and the telltales are separate decals to maximize flexibility.

UIP-B is sealed to IP67 specifications both front and rear. Designed to withstand harsh conditions typical of off-road environments, the UIP-B meets all SAE J1455 and J1113 requirements for vehicular instrumentation.

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VEHICULAR INSTRUMENTATION SYSTEMS

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## Specifications

### Physical Characteristics

Housing material – black polycarbonate ABS plastic  
 Connectors – Sealed 34-pin Tyco  
 Unsealed 22-pin JAE  
 16-pin JAE  
 6-pin JAE  
 (NGI Connectors)

### Environmental Characteristics

Temperature, humidity, shock, vibration, and salt spray – meets or exceeds SAE #J1455-1994-08  
 Operational temperature – -40°C to +85°C

### Electrical Characteristics

Operating limits – 9 to 32 VDC, reverse polarity protected  
 Transient protection – meets or exceeds SAE #J1455-1994-08

### Electrical Outputs

1 switch to ground – 500 mA

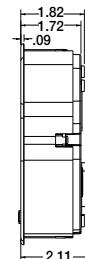
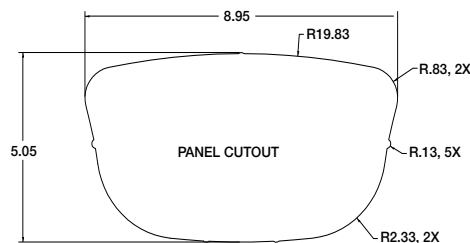
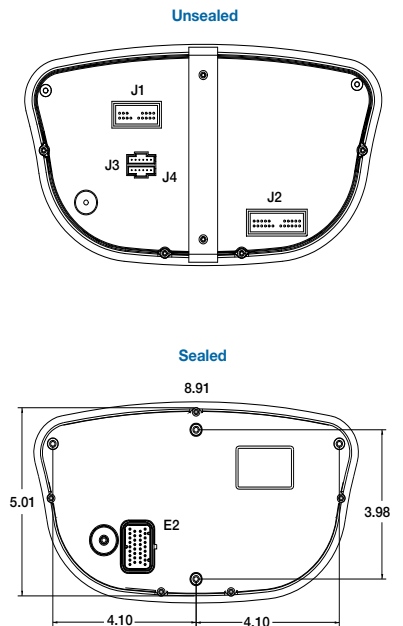
### Electrical Inputs

Battery/ignition – 9 to 32 volts  
 Operating current – 3 amperes max  
 Backlighting – variable through dashlight dimmer control, CAN message  
 Discrete inputs – 12 switch to ground, 5 switch to battery  
 Analog inputs – 5; 0-6400 ohms, or 0 to +5 VDC  
 Data bus – 1 SAE J1939 CAN, 1 SAE J1708  
 External gauge data – NGI

## Electrical Connections

Unsealed	Sealed	Description
J2:1	E2:1	Active Low 4
J2:2	E2:10	Active Low 2
J2:3	E2:2	Active Low 3
J2:4	E2:11	Active Low 1
J2:5	E2:3	Active Low 5
J2:6	E2:12	Active low 6
J2:7	E2:4	Active Low 7
J2:8	E2:13	Active Low 8
J2:9	E2:5	Active Low 9
J2:10	E2:14	Active Low 10
J2:11	E2:22	Active Low 12
J2:12	E2:23	Active Low 11
J2:13	E2:25	Active High 2
J2:14	E2:24	Active High 1
J2:15	E2:9	Active High 5
J2:16	E2:8	Active High 4
J2:17	E2:15	Active High 3
J2:18		NC
J2:19		NC
J2:20		NC
J2:21	E2:7	Mode Switch
J2:22	E2:6	Set Switch

Unsealed	Sealed	Description
J1:1	E2:28	Panel Lamps
J1:2	E2:20	Analog #1
J1:3	E2:21	Analog #2
J1:4	E2:29	Analog #3
J1:5	E2:32	Analog #4
J1:6	E2:33	Analog #5
J1:7	E2:16	Battery (-) GND
J1:8	E2:19	Ignition
J1:9	E2:17	Analog Ground
J1:10	E2:18	Output_1
J1:11	E2:27	J1708 (+)
J1:12	E2:26	J1708 (-)
J1:13	E2:30	J1939 (+)
J1:14	E2:31	J1939 (-)
J1:15		NC
J1:16	E2:34	Battery (+)



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