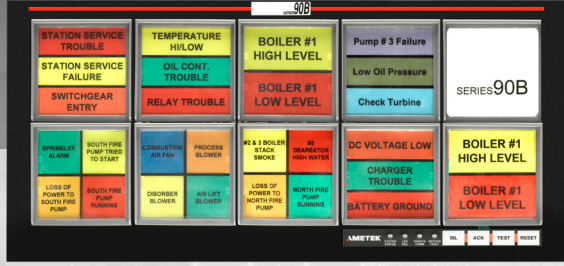


# ALARM MANAGEMENT PRODUCTS

## Series 90B Annunciator

### For Power Generation, Transmission & Distribution, Petroleum, Petrochemical and Other Process Industries



#### Innovative Alarm Monitoring System

##### Innovative Annunciator

The AMETEK Power Instruments Series 90B Annunciator brings alarm monitoring to a new level. It features long life, reliable LED illumination for local viewing of alarms and a host of communication options to connect to other devices. Alarms can be viewed remotely via a standard web browser using a built-in web server.

##### Reliability

Every Series 90B Annunciator is equipped with low-power, long-life LEDs. The brightness exceeds standard incandescent bulbs and lasts years longer. If an LED needs replacing, an automatic detector provides notification so critical alarms are not missed. An optional built-in ground fault detector is available for indicating ground faults in field wiring.

##### Communications

Dual independent communication ports (RS-232/485 and Ethernet) are available to transmit alarms to other devices. The Series 90B can receive alarms using communication ports, eliminating the need to connect digital inputs and associated wiring. The Series 90B supports Modbus, DNP and ASCII protocols.

##### Web Browser Display

The Series 90B has a built-in web server for displaying alarms remotely via a standard web browser. The web browser displays a graphic image for each event with the date and time of the occurrence.

##### Time Stamped Alarms (SER)

All your alarms can include a time stamp, synchronized by IRIG-B, NTP or internal clock. Time stamps can be presented through Modbus, DNP or to a local printer or terminal for viewing.

##### Ease of Installation

Every option is built into the Series 90B Annunciator unit so it is self-contained. Installation and wiring are simplified and, in most cases, the power supply is built into the annunciator. While all systems are preconfigured to specifications, the software configuration tool allows users to make easy modifications without changing PCB board jumpers.

Window legends are printed on standard transparency film, making them easy to change at any time. All features and options are field selectable and upgradeable.

FEATURES AND BENEFITS	
1	LED illumination (standard)
2	Dual communications: Serial and multi-user ethernet
3	Modbus, DNP protocols
4	Web browser display of alarms
5	Time-stamped alarms (SER)



# SPECIFICATIONS

## INPUT

### FIELD CONTACTS

- Normally Open (N.O.) or Normally Closed (N.C.) input selection through software or hardware
- Wetted (voltage supplied) or dry (voltage free) contacts

### FIELD CONTACT VOLTAGE

- 20-150 VDC, 20-150 VAC (.0018 mA per input)

### INPUT ISOLATION

- Each input is optically isolated

### INPUT RESPONSE

- 50 milliseconds (standard)
- 1 millisecond fast response (optional)
- 50 milliseconds to 250 seconds software adjustable

## DISPLAY

### LED

- White LED, minimum 2 per window

### WINDOW SIZES (H X W)

- Quad: 1.5 x 1.5 inch (38 x 38 mm)
- Third: 1.0 x 3.0 inch (25 x 76 mm)
- Half: 1.5 x 3.0 inch (38 x 76 mm)
- Full: 3.0 x 3.0 inch (76 x 76 mm)

### WINDOW COLORS

- White, red, yellow, amber, green, blue

### LEGENDS

- Laser printed on transparency film or engraved windows

## ALARM SEQUENCE

### SEQUENCE SELECTIONS

- LNL, AO, AONL, AF, AFNL, FR, AM, FRM, AS, ASFR, ASFRM, TFS, TFSFRM, TFSM, ARR, FRR, VS, VSRR, MC
- SOFTWARE CONFIGURABLE
  - Dual color sequences
  - Customized flash rates
  - Up to 4 first out groups

## CONTROLS

- Integral test, acknowledge, silence and reset with LED status lights
- External push button inputs
- Configurable switch inputs (inhibit LEDs, horns, relays)

## OUTPUTS

### AUXILIARY RELAY OPTION

- Individual or dual relay per point
- Follows field contact or alarm sequence
- Software configurable
- Energized/de-energized operation
- Form A or form B (N.O. or N.C.)
- Form C (SPDT)

### COMMON RELAYS

- 2 relays included for: critical and non-critical horn; ring back audible
- 2 relays available for: critical and non-critical re-flash, common alarm; watchdog, power fail, ground fault
- Software configurable
- Energized/de-energized operation
- Form A or form B (N.O. or N.C.)

## RELAY RATINGS

- 24 VDC @ 3.0 amps
- 110 VDC @ 0.1 amps
- 120 VAC @ 3.0 amps

## AUDIBLE

- Internal 80 db @ 30 cm audible device
- external horns available

## COMMUNICATION

- RS-232/485 & Ethernet, single or dual communications & web browser display

## PROTOCOLS

- Modbus RTU and Ethernet
- Main or secondary
- Transmit or receive alarms
- Pushbutton controls

## DNP 3.0

- Secondary mode
- Transmit alarms
- Pushbutton controls

## SERIAL ASCII

- For local terminal/printer

## TIME STAMPED ALARMS

- 1 or 4 msec time stamp resolution
- IRIG-B, NTP time sync input or internal clock
- Point #, alarm status, time and date
- Modbus, DNP, ASCII outputs
- 40,000 event storage, non-volatile

## CONNECTIONS

### INPUT/OUTPUT TERMINALS

- Fixed barrier terminal block, 12 GA (2.5 mm) maximum, ring, spade or bare wire termination

### COMMUNICATION PORTS

- Serial: 9 pin female D connector
- Ethernet: RJ45 connector
- WEB Server: via Ethernet
- Email Notification: via Ethernet

### TIME SYNCHRONIZATION

- IRIG-B: BNC connector
- NTP: via Ethernet

## MECHANICAL

### MOUNTING

- Semi-flush panel mounting
- 19-inch rack mounting
- Wall (surface) mounting
- NEMA enclosures

### WEIGHT

- 1.5 lb per cell (0.68 kg per cell)

## POWER REQUIREMENTS

### INTERNAL OR EXTERNAL POWER SUPPLIES

- 230 VAC (176-264 VAC 50 Hz)
- 120 VAC (88-132 VAC 60 Hz)
- 125 VDC (100-250 VDC)
- 48 VDC (38-58 VDC)
- 24 VDC (19-29 VDC)

Max. 2.2 watts/input @ power input

## ENVIRONMENT

### OPERATING TEMPERATURE RANGE

- -4 to 140°F (-20 to 60°C)

## HUMIDITY

- 20-95% RH

## SURGE WITHSTAND

- ANSI C37.90.1 (oscillatory)

## FAST TRANSIENT

- IEC-61000-4-4

## SURGE IMMUNITY

- IEC-61000-4-5

## EMI/RFI/ESD

- IEC-61000-4-3, 4-6, 4-8, 4-2
- EN 61326 CISPR 16

## ISOLATION

- 1950 VDC or 1400 VAC input to output, logic, case

## CERTIFICATIONS

- UL, ULC, CE, FM Class 1, Div 2, FMC

## SEMI-FLUSH MOUNTING DETAILS

Cells H or W	Overall H or W	Panel Cutout H or W
1	5.0 (127)	4.06 (103)
2	8.47 (215)	7.53 (191)
3	11.94 (303)	11.00 (279)
4	15.40 (391)	14.47 (368)
5	18.88 (479)	17.94 (456)
6	22.34 (568)	21.41 (544)
7	25.81 (656)	24.88 (632)
8	29.28 (744)	28.34 (720)
9	32.75 (832)	31.81 (808)
10	36.22 (920)	35.29 (896)
11	39.69 (1008)	38.75 (984)
12	43.16 (1096)	42.22 (1072)
13	46.63 (1184)	45.69 (1160)
Depth behind panel: 6.75", 10" with rear cover		

### WORLD HEADQUARTERS

255 North Union Street  
Rochester, NY 14605  
Toll Free: +1.800.950.6686  
Tel: +585.263.7700  
Fax: +585.454.7805

### EUROPEAN HEADQUARTERS

UK  
+44.770.280.9377  
power.sales@ametek.com

### ASIA PACIFIC HEADQUARTERS

Singapore  
+65.6484.2388  
sales@ametekasia.com

### AMETEK INSTRUMENTS INDIA PVT. LTD.

Bengaluru  
+91.80.6782.3252  
power.sales@ametek.com

### WEBSITE

www.ametekpower.com

### EMAIL

pi.marketing@ametek.com



**POWER INSTRUMENTS**

REV 06/2023