

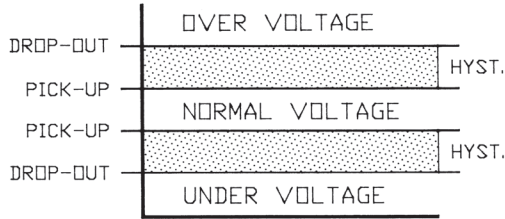
The **VBA Series** offers protection to **SINGLE PHASE** equipment that is required to operate between two voltage limits. Supply voltage is monitored for a preselected **UNDER** and **OVER** voltage limit.

### OPERATION

With normal operating voltage applied, the internal relay will energize (PICK-UP). When the voltage falls outside the preset Over/Under trip points for longer than the release delay, the relay will de-energize (DROP-OUT). When line conditions return to normal, the VBA Series automatically resets and the internal relay energizes.

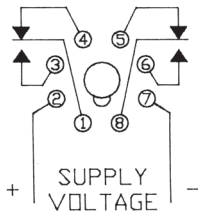
The HYSTERESIS in each unit on the Under and Over limits provides a differential between the PICK-UP and DROP-OUT trip points.

### WIRING



WIRING DIAGRAMS  
(SHOWN IN DE-ENERGIZED STATE)

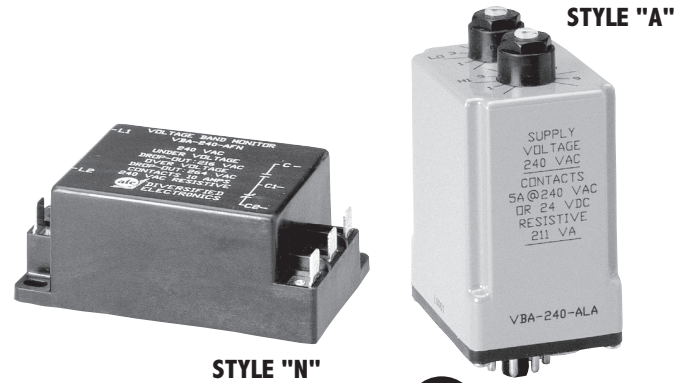
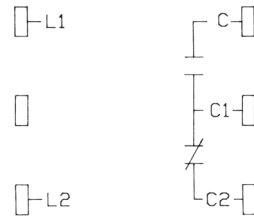
PLUG-IN MODEL  
Style A



(DC POLARITY SHOWN)

RB-08 or PF083A

SURFACE MOUNTED  
Style N



## Single Phase Voltage Band Monitor

### SPECIFICATIONS

**POWER REQUIRED** Models Up To 110 VDC: 3 Watts, Max.  
Models Up To 300 VAC: 5 VA, Max.

**OUTPUT RATING** Style A DPDT, 5A @ 240 VAC, Resistive;  
211 VA @ 240 VAC  
Style N SPDT, 10A @ 240 VAC, Resistive;  
180 VA, @ 120 VAC

**RESPONSE TIMES** Operate 50 mSEC (approx.)  
(500 mSEC on 12 VDC units)  
Release 0.5 SEC (approx.)

**TEMPERATURE RATING** Operate 32° to +131°F (0° to +55°C)  
Storage -49° to 185°F (-45° to +85°C)

**WEIGHT** 5 oz.

| MODEL VOLTAGE | NOMINAL VOLTAGE | PICK-UP UNDER VOLTAGE | PICK-UP OVER VOLTAGE | HYSTERESIS VOLTAGE |
|---------------|-----------------|-----------------------|----------------------|--------------------|
| VBA-24-A*A    | 24 VAC          | 19-24                 | 24-29                | 2                  |
| VBA-120-A*A   | 120 VAC         | 90-120                | 120-150              | 5                  |
| VBA-208-A*A   | 208 VAC         | 185-208               | 208-240              | 8                  |
| VBA-240-A*A   | 240 VAC         | 200-240               | 240-270              | 10                 |
| VBA-12-D*A    | 12 VDC          | 10-12                 | 12-15                | 1                  |
| VBA-24-D*A    | 24 VDC          | 19-24                 | 24-29                | 1                  |
| VBA-28-D*A    | 28 VDC          | 22-28                 | 28-34                | 1                  |
| VBA-48-D*A    | 48 VDC          | 38-48                 | 48-58                | 2                  |
| VBA-110-D*A   | 110 VDC         | 85-110                | 110-135              | 5                  |
| VBA-24-AFN    | 24 VAC          | 21.6                  | 26.4                 | 0                  |
| VBA-120-AFN   | 120 VAC         | 108                   | 132                  | 0                  |
| VBA-208-AFN   | 208 VAC         | 187                   | 229                  | 0                  |
| VBA-220-AFN   | 208/240 VAC     | 198                   | 242                  | 0                  |
| VBA-230-AFN   | 230 VAC         | 207                   | 253                  | 0                  |
| VBA-240-AFN   | 240 VAC         | 216                   | 264                  | 0                  |

\*Adjustments - F = Fixed  
K = Knob  
L = Locknut

► APPLICATION NOTES – WIRING DIAGRAMS

