

The UPA-100 Power Alert **reduces the risk of electrical arc flash** by pre-verifying the electrical isolation from outside of a control panel. Hardwired to the circuit breaker or main disconnect, the UPA flashes whenever voltage is present. Engineered with **redundant circuitry**, the Power Alert is powered by the same voltage that it indicates.

OPERATION

The eight detector UPA-100 visually alerts to the presence of dangerous AC or DC (Stored Energy) potentials occurring between any combination of the four monitored input lines (L1, L2, L3, GND). Two LED indicators are assigned to each input line and are designated "+" and "-". For each input line carrying an AC potential (bi-polar), both the "+" and "-" LEDs will be active. A DC or Stored Energy potential will illuminate the "+" LED for the positive line and the "-" LED for the negative line.

OSHA 1910.147 THE CONTROL OF HAZARDOUS ENERGY (LOCKOUT/TAGOUT)

Following the application of lockout or tagout devices to energy isolating devices, all potentially hazardous stored or residual energy shall be relieved, disconnected, restrained, and otherwise rendered safe. (d)(5)(ii)

If there is a possibility of reaccumulation of stored energy to a hazardous level, verification of isolation shall be continued until the servicing or maintenance is completed, or until the possibility of such accumulation no longer exists. (d)(6)

"Verification of Isolation." Prior to starting work on machines or equipment that have been locked out or tagged out, the authorized employee shall verify that isolation and de-energization of the machine or equipment have been accomplished.



NEMA 4X

Universal Power Alert

SPECIFICATIONS

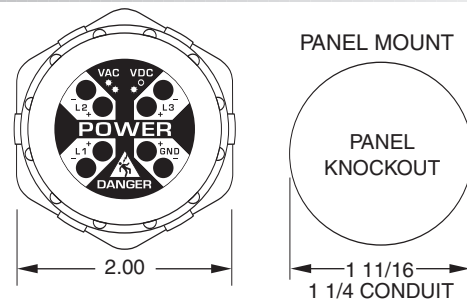
OPERATIONAL RANGE	AC Single or 3-Phase	40 to 750 VAC, 50/60/400 Hz, (LINE-TO-LINE or LINE-TO-GND)
	DC or Stored Energy	30 to 1000 VDC, (LINE-TO-LINE or LINE-TO-GND)
MAXIMUM RATED VOLTAGE	750 VAC/1000 VDC (LINE-TO-LINE or LINE-TO-GND)	
DETECTION THRESHOLDS	29 VAC 3-Phase, 40 VAC SINGLE-Phase, 27 VDC (TYP Cutoff)	
POWER CONSUMPTION	1.2 Watts @ 750 VAC (Approximately)	
TEMPERATURE RATING	Operate	-4° to 131°F (-20° to +55°C)
	Storage	-40° to 185°F (-40° to +85°C)
ENCLOSURE	NEMA 4X 105°C PVC, Totally Encapsulated for Environment Protection	
TERMINATIONS	(4) 8ft, 18 AWG 1000V, UL-1452	
WEIGHT	9 oz.	

- Detects Single or 3-Phase AC & DC Voltage or Stored Energy
- Redundant Circuitry
- Verification of Zero Energy in a Panel
- Fits 1-1/4" Conduit Knock-Out

ORDERING INFORMATION

MODEL NUMBER	DESCRIPTION
UPA-100	Universal Power Alert

DIMENSIONS (INCHES)



INDICATOR FLASH RATES (L1, L2, L3, GND)

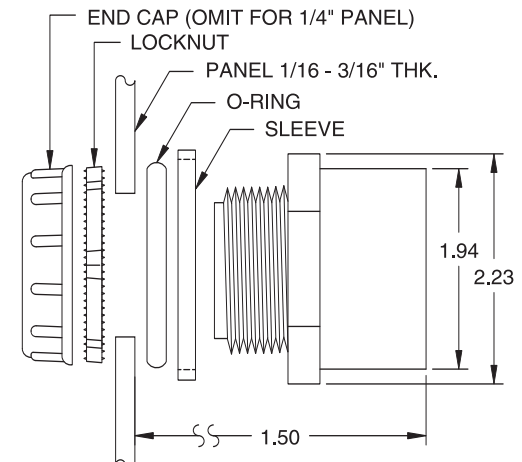
3- Phase Line-To-Line (VAC)	<29	30	120	240	480	600	750
Flashes/Sec (Typical)	0	1.3	4.2	5.8	7.3	8.0	8.8
DC or Stored Energy (VDC)	<27	30	48	110	300	600	1000
Flashes/Sec (Typical)	0	1.6	2.5	4.5	6.9	8.8	9.1

GND DETECTOR THRESHOLDS (LEAKAGE ANY PHASE-TO-GROUND)

3- Phase Line-To-Line (VAC)	30	120	240	480	750
L1, L2, or L3 To Ground Continuity (OHMS)	2M	2M	3M	5M	7M
Detector Included Fault Current (µA)	7	26	38	60	67

DETECTOR INCLUDED FAULT CURRENT (PHASE-TO-GROUND SHORT)

3- Phase Line-To-Line (VAC)	30	120	240	480	750
0 OHM Phase-To-Ground Current (µA)	28	108	219	455	730



INSTALLATION: INSIDE PANEL SURFACE MUST BE UNIFORM. TIGHTEN LOCKNUT UNTIL SLEEVE BOTTOMS-OUT.



- Verification of Stored Energy Inside A Panel
- Fits 30mm Knockout
- Redundant Circuitry
- 40-750 VAC, 30-1000 VDC

The UPA 130 Power Alert **reduces the risk of electrical arc flash** by pre-verifying the electrical isolation from outside of a control panel. Hardwired to the circuit breaker or main disconnect, the UPA flashes whenever voltage is present. Engineered with **redundant circuitry**, the Power Alert is powered by the same voltage that it indicates.

OPERATION

The eight detector UPA-130 visually alerts to the presence of dangerous AC or DC (Store Energy) potentials occurring between any combination of the four monitored input lines (L1, L2, L3, GND). Two LED indicators are assigned to each input line and are designated "+" and "-". For each input line carrying an **AC potential** (bi-polar), both the "+" and "-" LEDs will be active. A **DC or Stored Energy potential** will illuminate the "+" LED for the positive line and the "-" LED for the negative line.

30mm Universal Power Alert

SPECIFICATIONS

OPERATIONAL RANGE	AC SINGLE OR 3-PHASE	40 to 750 VAC, 50/60/400 Hz, (LINE-TO-LINE or LINE-TO-GND) (UL Approved 50/60 Hz)			
	DC OR STORED ENERGY	30 to 1000 VDC, (LINE-TO-LINE or LINE-TO-GND)			
MAXIMUM RATED VOLTAGE	750 VAC/1000 VDC (LINE-TO-LINE or LINE-TO-GND)				
DETECTION THRESHOLDS	29 VAC 3-Phase, 40 VAC SINGLE-Phase, 27 VDC (TYP CUTOFF)				
POWER CONSUMPTION	1.2 Watts @ 750 VAC (Approximately)				
TEMPERATURE RATING	Operate	-4° to 131°F (-20° to +55°C)			
	Storage	-40° to 185°F (-40° to +85°C)			
ENCLOSURE	Totally Encapsulated for Environment Protection				
TERMINATIONS	(4) 6ft, 18 AWG 1000V, UL-1452	RED	YEL	BLU	GRN
		A Ø	B Ø	C Ø	GRD
WEIGHT	7 oz.				

INDICATOR FLASH RATES (L1, L2, L3, GND)

3- Phase Line-To-Line (VAC)	<29	30	120	240	480	600	750
Flashes/Sec (Typical)	0	1.3	4.2	5.8	7.3	8.0	8.8
DC or Stored Energy (VDC)	<27	30	48	110	300	600	1000
Flashes/Sec (Typical)	0	1.6	2.5	4.5	6.9	8.8	9.1

GND DETECTOR THRESHOLDS (LEAKAGE ANY PHASE-TO-GROUND)

3- Phase Line-To-Line (VAC)	30	120	240	480	750
L1, L2, or L3 To Ground Continuity (OHMS)	2M	2M	3M	5M	7M
Detector Included Fault Current (µA)	7	26	38	60	67

DETECTOR INCLUDED FAULT CURRENT (PHASE-TO-GROUND SHORT)

3- Phase Line-To-Line (VAC)	30	120	240	480	750
0 OHM Phase-To-Ground Current (µA)	28	108	219	455	730

NOTE: For 3-Phase Wye applications, it is normal for the "GND" indicators not to flash unless a phase is lost.

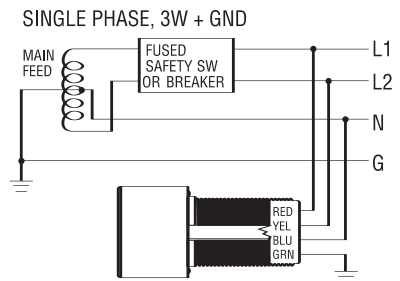
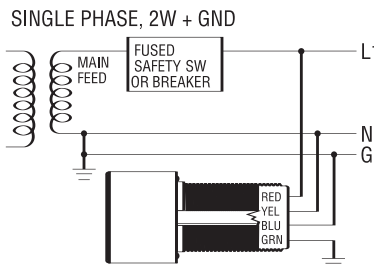
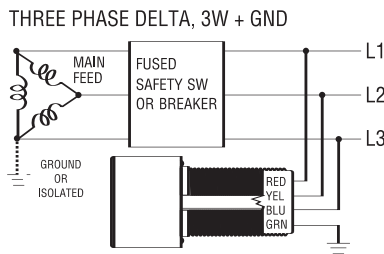
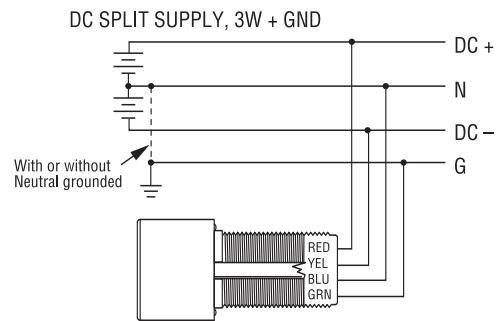
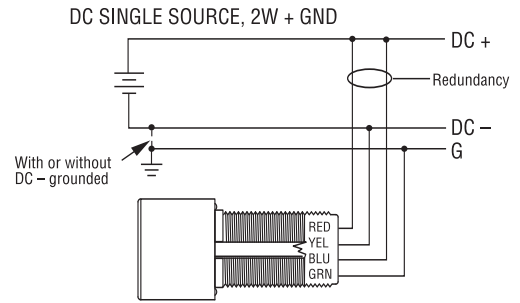
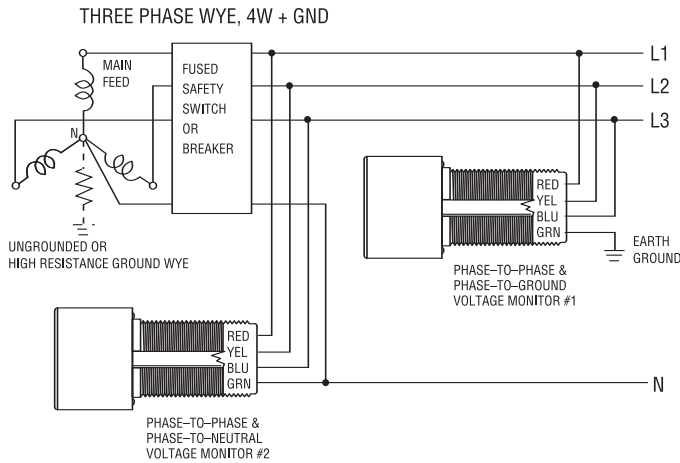
ORDERING INFORMATION

MODEL NUMBER	DESCRIPTION
UPA-130	30mm Universal Power Alert
Accessories	
UPA-WP40	ANSI Warning Plate
UPA-BZL	Flush Mounting Kit for 1-1/4" Conduit Knockout

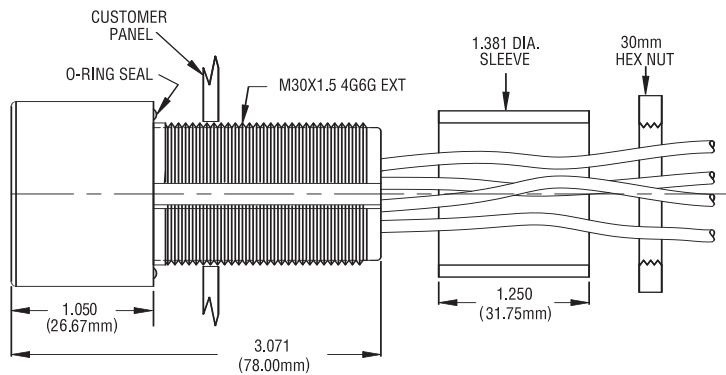
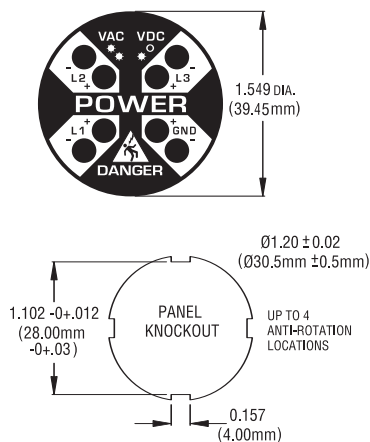


Power Alerts // UPA-130 Series

WIRING



DIMENSIONS (INCHES)





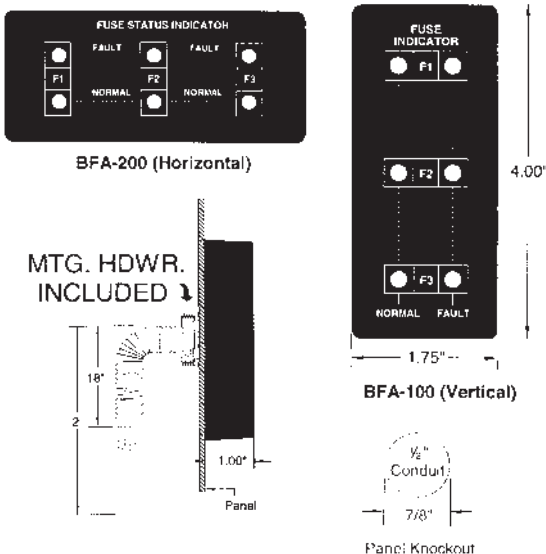
Fuse Status Indicator

- Shows Normal and Open Fuse
- Mounts External to Panel
- View Status from a Distance
- For All Fuses UL Class H, J, K, R, RK
- Reports Connection Integrity
- Vertical or Horizontal Mount
- Universal Input 208-600 VAC

ORDERING INFORMATION

MODEL NUMBER	DESCRIPTION
BFA-100	Vertical Mount
BFA-200	Horizontal Mount

DIMENSIONS (INCHES)



OPERATION

With nominal 3-phase line voltage applied, a flashing green NORMAL LED gives positive indication of a good fuse and integrity of the wire connection to each side of the fuse.¹

A flashing red FAULT LED gives positive indication of an unconnected or open fuse, or a BFA wiring fault that needs corrected such as a lost connection to either side of the fuse or mismatched line and load wires.²

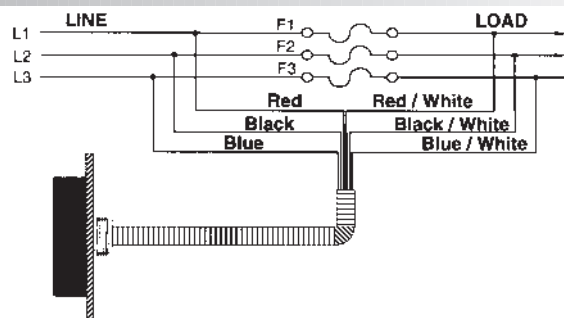
When phase loss occurs, both FAULT and NORMAL LEDs will extinguish.³ The BFA will continue to indicate the status of the fuse during a phase loss if a regenerated voltage is produced on the open phase from a rotating motor.⁴

1 2 3 4 BFA-SERIES Troubleshooting Guide



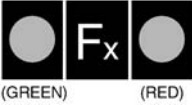

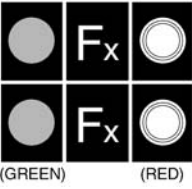
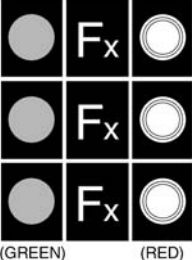
SPECIFICATIONS

NOMINAL VOLTAGE	208-600 VAC, ±10%, Phase-to-Phase, 50/60 Hz	
MAX. CONTINUOUS VOLTAGE	660 VAC, Phase-to-Phase	
REV. CONNECTION PROTECTED	Yes	
DETECTION THRESHOLD	10-15 VAC Across Open Fuse	
MAXIMUM DETECTOR LEAKAGE CURRENT	0.5 mA @ 600 VAC (Approx.)	
FRESNEL LENS INDICATORS	Normal	(3) Green LEDs, 2 Flashes/Sec
	Fault	(3) Red LEDs, 2 Flashes/Sec
MAXIMUM RATED VOLTAGE	750 VAC/1000 VDC (LINE-TO-LINE or LINE-TO-GND)	
DETECTION THRESHOLDS	29 VAC 3-Phase, 40 VAC SINGLE-Phase, 27 VDC (TYP CUTOFF)	
POWER REQUIRED	2.5 VA @ 208 VAC, and 5.5 VA @ 480 VAC	
TEMPERATURE RATINGS	Operate	32° to 131°F (0° to +55°C)
	Storage	-40° to 185°F (-40° to +85°C)
ENCLOSURE	94V-0 Flame Retardant Black ABS Plastic, Panel Mount with 1/2" Plastic Electrical Conduit Adapter; Encapsulated for Environmental Protection.	
TERMINATIONS	(6) 2', 18 AWG, 600V, 105°C PVC Stranded Wire w/Wire Pin Terminations, Jacketed with 18" Slit Nylon Corrugated Tubing, .556" OD	
WEIGHT	NET: 3.52 oz	Shipping: 5.12 oz

WIRING



BFA-SERIES 3 PHASE FUSE STATUS INDICATOR TROUBLESHOOTING GUIDE

- 1.** FLASHING OFF

 (GREEN) (RED)
 A. Normal, fuse good, electrical contact across fuse
-
- 2.** OFF FLASHING

 (GREEN) (RED)
 A. Unconnected or blown fuse
 B. Bad Connection Load Side (white stripe wire)
 C. Both of the above
-
- 3.** OFF OFF

 (GREEN) (RED)
 A. Phase voltage loss with no motor regeneration
 B. The above accompanied with an unconnected or blown fuse
-
- 4.** OFF FLASHING DIMLY

 (GREEN) (RED)
 A. Bad Connection Line Side (solid color wire)
 B. The above accompanied with an unconnected or blown fuse
 C. Phase Voltage loss with motor regeneration accompanied with an unconnected or blown fuse
-
- 5.** OFF FLASHING

 (GREEN) (RED)
 A. (2) Unconnected or blown fuses
 B. Corresponding wires interchanged between solid colors or white stripe colors
 C. 1 or 2 unconnected or blown fuses and B
-
- 6.** OFF FLASHING

 (GREEN) (RED)
 A. (3) Unconnected or blown fuses
 B. Line Side connections do not correspond to Load Side connections
 C. 1 or more unconnected or blown fuses and B

CAUTION: The BFA should not be confused with ATC Diversified Electronics 3-Phase Voltage Detectors. The BFA is designed to detect blown fuses and not voltage potentials from Phase-to-Ground or Phase-to-Phase in the 40 VAC range and up. It should be understood that dangerous voltage potentials can still exist within the panel even though the BFA has no LEDs flashing. For voltage detection see The ATC Diversified UPA Series Power Alerts.



3-Phase Ground Fault Display

The ATC Diversified Electronics GFD Series is intended for the use on ungrounded systems to detect and indicate the phase of the first ground fault condition. This enables corrective action to avoid the potential hazards resulting from a second ground fault.

OPERATION

With nominal 3 phase line voltage applied, a flashing NORMAL green LED gives indication of a non-fault condition and integrity of the wire connection to the corresponding phase.

A flashing red LED gives positive FAULT indication of either a phase-to-ground fault, or a lost connection to the corresponding phase.

NOTE: Distributed capacitance to ground or equally loaded phases to ground will de-sensitize detection and will require lower phase-to-ground resistance to produce a FAULT indication.

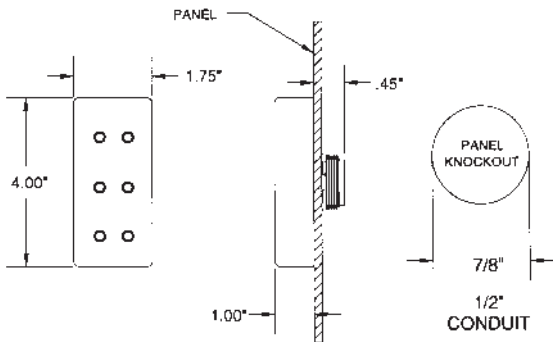
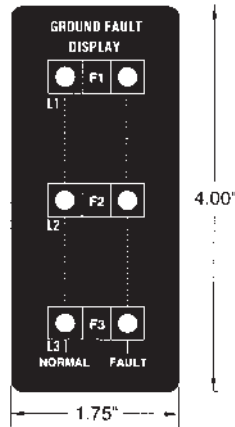
SPECIFICATIONS

NOMINAL VOLTAGE	208-600 VAC, ±10%, Phase-to-Phase, 50/60 Hz	
MAX. CONTINUOUS VOLTAGE	660 VAC, Phase-to-Phase	
WIRING ERROR PROTECTION	Yes	
DETECTION THRESHOLD	11.7 k Ω ±20% @ 50 Hz; 9.3 k Ω ±20% @ 60 Hz Single Phase-to-Ground	
DETECTOR INDUCED FAULT CURRENT	50 Hz	7.5 mA @ 600 VAC (1 Phase-to-Ground shorted)
	60 Hz	9 mA @ 600 VAC (1 Phase-to-Ground shorted)
FRESNEL LENS INDICATORS	Normal	(3) Green LEDs, 2 Flashes/Sec
	Fault	(3) Red LEDs, 2 Flashes/Sec
APPARENT POWER REQUIRED	50 Hz	2.5 VA @ 600 VAC
	60 Hz	3 VA @ 600 VAC
TEMPERATURE RATINGS	Operate	32° to 131°F (0° to +55°C)
	Storage	-49° to 185°F (-45° to +85°C)

ORDERING INFORMATION

MODEL NUMBER	DESCRIPTION
GFD-100	Vertical Mount
GFD-200	Horizontal Mount

DIMENSIONS (INCHES)



ENCLOSURE	94V-0 Flame Retardant Black ABS Plastic, Panel Mount w/1/4" Plastic Electrical Conduit Adapter, Encapsulated for Environmental Protection	
TERMINATIONS	(4) 2 ft., 18 AWG, 600V, 105°C PVC Stranded Wire w/ Wire Pin Terminations, Jacketed with 18" Slit Nylon Corrugated Tubing, .556" O.D.	
WEIGHT	NET: 3.52 oz Shipping: 5.12 oz	

WIRING

