

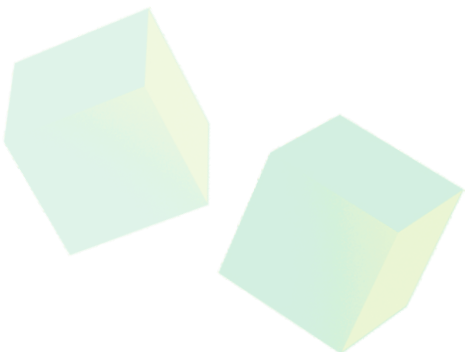


# ALARM ANNUNCIATORS

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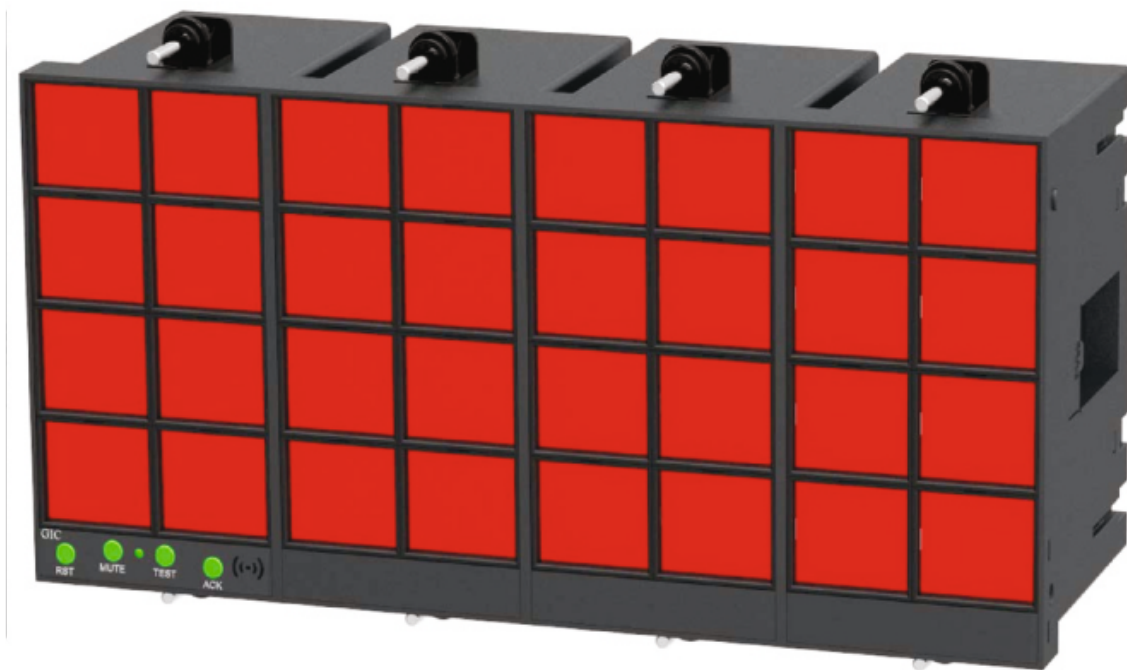
2-48 Windows Alarm Annunciators

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# Alarm Annunciators

- Standard models available from 2 to 48 windows
- Choice of 3 window sizes and 6 different window colours
- Optically isolated fault inputs with wide fault input voltage range (12 - 240V AC/DC +/-10%)
- AC-DC Fail Annunciation with universal supply range of 90 to 270V AC/DC
- Field selection for NO / NC fault input contacts, grouping of alarms, window size configuration
- Space saving due to lower depth of only 100mm
- Integral push buttons for Test, Acknowledge, Mute and Reset operations with remote terminals
- Four SPDT relay outputs (2 for grouping {Trip/ Non Trip}, 1 for external hooter, 1 for ring back sequence or Supervisory)
- 6 Field selectable operation sequences as per ISA standard
- Integral buzzer for audible alarm output of 90dB
- Communication interface with RS485 Modbus RTU protocol
- Replaceable LEDs, Fast Scan, Manned / Unmanned, Supervisory Relay & Supply fail annunciation available
- CE and RoHS complied



## Working Principle


Whenever there is a change of input contacts from Normally Open to Close or from Normally Close to Open position, annunciator changes from rest condition to alarm condition.

Hence there is an immediate recognition of fault input which will have a corresponding visual and audio alarm as per the particular selected program sequence.

The base unit of alarm annunciator has four programmable keys for Mute, Acknowledge, Reset & Test function. On pressing the Mute key the internal buzzer can be deactivated. Acknowledge key is used to accept the fault condition, Reset key enables to reset the alarm annunciator to its default state and Test key helps to perform the complete test of the system.



## Technical Specifications

Parameters	Fast Scan	Normal Scan
Supply Voltage (≡)	90 - 270 V AC/DC or 18 - 60 V DC	
Supply Frequency (AC)	50/60 Hz	
LED Indication (Green)	ON - Healthy / Manned Mode	ON - Healthy
	Blinking - Unmanned Mode [Slow Blinking Rate - 300msec ON, 3sec OFF] Blinking - Error [Fast Blinking Rate - 500msec Cyclic ON/OFF] Error: 1) User selected wrong windows configuration 2) Slave Communication error	Blinking - Error [Fast Blinking Rate - 500msec Cyclic ON/OFF] Error: 1) User selected wrong windows configuration 2) Number of windows are more than number of fault inputs.
No. of Windows	2 to 48 windows in different configurations	
Window Size	Small: 34x31mm, Medium: 68x31mm, Large: 68x63mm	
Window Colour	Red, Yellow, Blue, Green, Amber and White	
Illumination	Low power super bright white LEDs (replacable LEDs available)	Low power super bright white LEDs
Fault Input Signal	Potential free (NO/NC field selectable)	
Fault Input Voltage	Internal: 12V DC (Potential free)	Internal: 12V DC / External: 12V-270V AC/DC
Scan Time	10 msec	100 msec
Flash Rate	1) Fast flash - 0.5 Sec ON / 0.5 Sec OFF (60 flashes/Min) 2) Slow flash - 0.5 Sec ON / 1.5 Sec OFF (30 flashes/Min)	
Terminal	Pluggable terminal blocks for conductor up to 2.5mm <sup>2</sup>	
Output Relay Contact	4 C/O Relays (2 for grouping + 1 for external hooter + 1 for Ring back sequence)	
Relay Contact Rating	NO - 5A / NC - 3A @250V AC & NO - 5A / NC - 3A @ 30V DC (resistive), (Relay Actuation time 10 to 130ms after signal detection)	NO - 5A / NC - 3A @ 250V AC & NO - 5A / NC - 3A @ 30V DC (resistive), (Relay Actuation time 130ms after signal detection)
Audible Alarm Output	90 dB at 10 cm distance (In-built configurable Buzzer)	
Facia Type	Individual window lens, replaceable from front.	
Alarm Sequences	As per ISA standard (Field configurable) 1) Manual Reset (M-1) 2) Auto Reset (A-1) 3) Ring Back (R-1-12) 4) Auto Reset with No-lock(A-1-4) 5) Manual reset first out with no subsequent alarm flashing and silence push button (F2M-1) 6) Auto reset first out with no subsequent alarm flashing and silence push button (F2A-1) 7) Manual Reset (M-2) [Applicable for Fast Scan Module]	
Push Button Controls	Integral Push buttons for Test, Mute, Acknowledge and Reset functions. Provision of output connections for remote access of push buttons.	
Communication Port	Computer interface with RS 485 Modbus RTU protocol.	
Operating Temperature	-10°C to +55°C	
Storage Temperature	-15°C to +60°C	
Humidity	95% R.H.	
Mounting Type	Panel Mounting	
Certification		
Degree of Protection	Front panel IP40, Rear panel IP20	

### EMI / EMC Compliance

Harmonic Current Emissions  
ESD  
Radiated Susceptibility  
Electrical Fast Transient

IEC 61000-3-2 Class A  
IEC 61000-4-2 Level II Class A  
IEC 61000-4-3 Level III Class A  
IEC 61000-4-4 Level III (Power Supply and Input Signal with external supply),  
IEC 61000-4-4 Level III (Capacitive coupled on Input Signal and Remote keys with internal 12V supply),  
IEC 61000-4-4 Level II (Capacitive coupled on Communication)  
IEC 61000-4-5 Level IV (Power supply and Input Signal with external supply)  
IEC 61000-4-6 Level III Class A  
IEC61000-4-11 All VII Level Pass  
CISPR 11 / CISPR 14-1 Class A  
CISPR 11 / CISPR 14-1 Class A

Surge  
Conducted Susceptibility  
Voltage Dips and Interruptions(AC)  
Conducted Emission  
Radiated Emission

### Safety Compliance

Test Voltage Between I/P and O/P  
Impulse Voltage Between I/P  
And O/P  
Single Fault Test  
Insulation Resistance  
Leakage Current  
Pollution Degree

IEC 60255-5, 2.5kV, 50Hz, 1Min  
IEC 60255-5, 5kV, 1.2/50us, 0.5J  
  
IEC 61010-1  
UL 508 > 50 kΩ  
UL 508 < 3.5 mA  
II

### Environmental Compliance

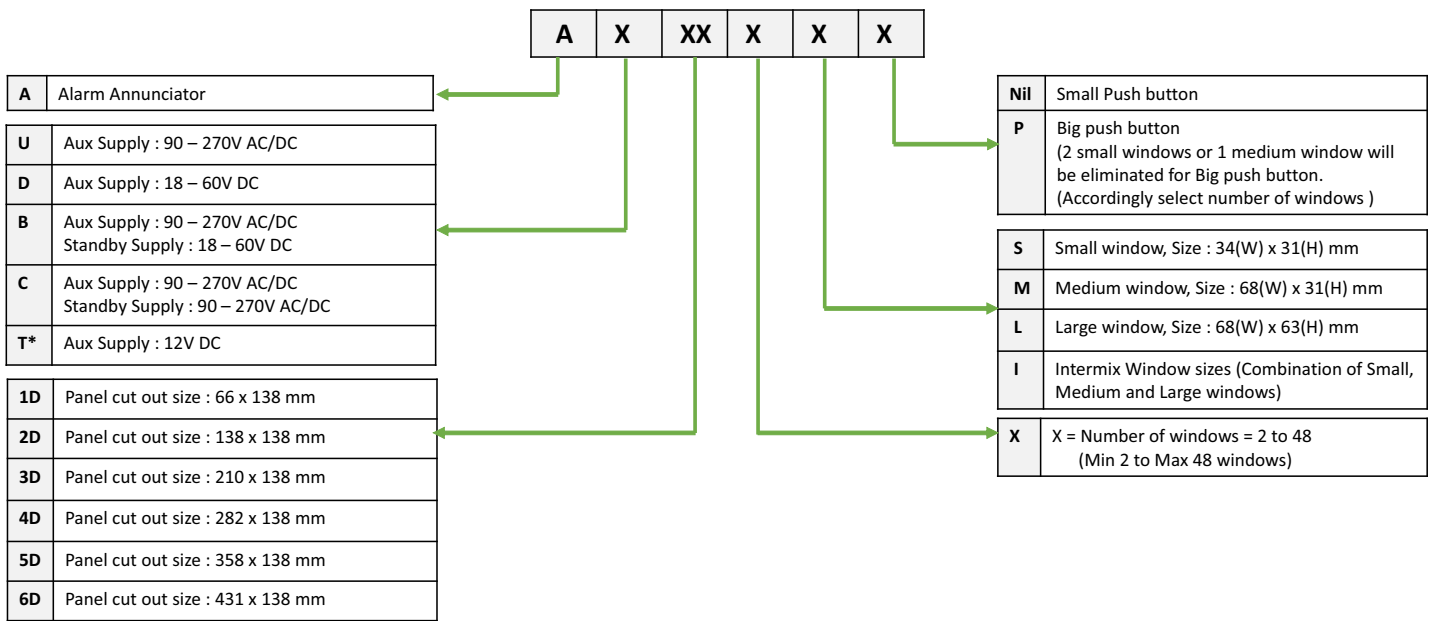
Cold Heat  
Dry Heat  
Vibration

IEC 60068-2-1  
IEC 60068-2-2  
IEC 60068-2-6, 10 to 55Hz



## Technical Specifications

Parameters	AC-DC Fail Annunciator	
<b>Supply Characteristics</b>		
Supply Voltage	Auxiliary Supply: 90-270V AC/DC Stand by supply: 18-60V DC	Auxiliary Supply: 90-270V AC/DC Stand by supply: 90-270V AC/DC
Supply Frequency (AC)	50/60 Hz	
Power Consumption	0.5W per window	
LED Indication (Green)	ON - Healthy /Manned Mode Blinking -Unmanned Mode [Slow Blinking Rate- 300msec ON, 3sec OFF] Blinking -Error [Fast Blinking Rate- 500msec Cyclic ON/OFF] Error: 1) User selected wrong windows configuration. 2) Slave Communication error.	
<b>Annunciator Characteristics</b>		
No. of windows	2 to 32 windows in different configurations	
Window size	Small-34x31mm, Medium-68x31mm, Large-68x63mm	
Window colour	Red, Yellow, Blue, Green, Amber and White	
Illumination	Low power super bright white LEDs	
Fault input signal	Potential free (NO/NC field selectable)	
Fault input voltage	Internal – 12V DC (Potential free)	
Scan Time	40 msec	
Terminal	Pluggable terminal blocks for conductor up to 2.5mm <sup>2</sup>	
Flash rate	1) Fast flash – 0.5 Sec ON / 0.5 Sec OFF (60 flashes/Min) 2) Slow flash – 0.5 Sec ON / 1.5 Sec OFF (30 flashes/Min)	
Output relay Contact	4 C/O Relays (2 for grouping + 1 for external hooter + 1 for Ring back sequence)	
Relay Contact Rating	NO– 5A / NC– 3A @250V AC & NO– 5A / NC– 3A @30V DC (resistive)	
Alarm Sequences	As per ISA standard (Field configurable) 1) Manual Reset (M-1) 2) Auto Reset (A-1) 3) Ring Back (R-1-12) 4) Auto Reset with No-lock(A-1-4) 5) Manual reset first out with no subsequent alarm flashing and silence push button (F2M-1) 6) Auto reset first out with no subsequent alarm flashing and silence push button (F2A-1) 7) Manual Reset (M-2) [Applicable for Fast Scan Module]	
Facia type	Individual window lens, replaceable from front.	
Audible Alarm Output	90 dB from 10 cm Distance (inbuilt Buzzer) Buzzer Functionality can be enable or Disable by using Mute Key. Default Setting : Buzzer Functionality is Enable. To Disable, Press Mute Key continuously for 5 Sec, buzzer will beep for three times to indicate buzzer is disabled. To Enable, Press Mute key continuously for 5 Sec, buzzer will beep for two times to indicate buzzer is enabled.	
Push Button Controls	Integral Push buttons for Test, Mute, Acknowledge and Reset functions. Provision of output connections for remote access of push buttons	
Communication Port	Computer interface with RS485 Modbus RTU protocol.	
Operating Temperature	-10 ° C to +55 ° C	
Storage Temperature	-15 ° C to +60 ° C	
Humidity	95% R.H.	
Mounting Type	Panel Mounting	



**NOTE :**

1. AU & AD series annunciator available with potential fault input (12 – 265V AC/DC) + 100msec scan time + RS485 + 4 relay output
2. AB & AC series annunciator available with potential free fault input + 40msec scan time + RS485 + 4 relay output
3. AT series annunciator available in 1D size only w/o RS485 + 2 relay O/P
4. Basic version available in AU and AD series only with potential free fault input + 3 relay O/P and w/o RS485. Suffix **B** to ordering code for Basic Annunciator.
5. For Replaceable LED & 10ms scan time suffix **"03"** to AU and AD series CAT ID.

## Ordering Information



Cat. No.	Product Size	No. of Windows	Window Size	Keys
AU1D8S	1D	8	Small	Small
AU1D6SP	1D	6	Small	Big
AD1D8S	1D	8	Small	Small
AD1D6SP	1D	6	Small	Big
AB1D8S	1D	8	Small	Small
AB1D6SP	1D	6	Small	Big



AU2D16S	2D	16	Small	Small
AU2D14SP	2D	14	Small	Big
AD2D16S	2D	16	Small	Small
AD2D14SP	2D	14	Small	Big
AB2D16S	2D	16	Small	Small
AB2D14SP	2D	14	Small	Big
AC2D16S	2D	16	Small	Small
AC2D14SP	2D	14	Small	Big



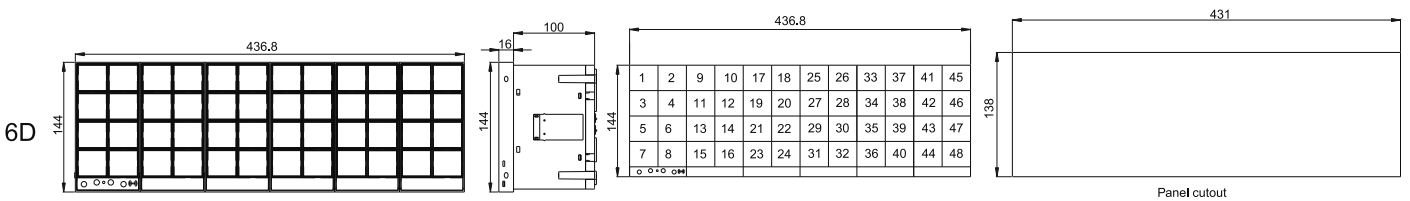
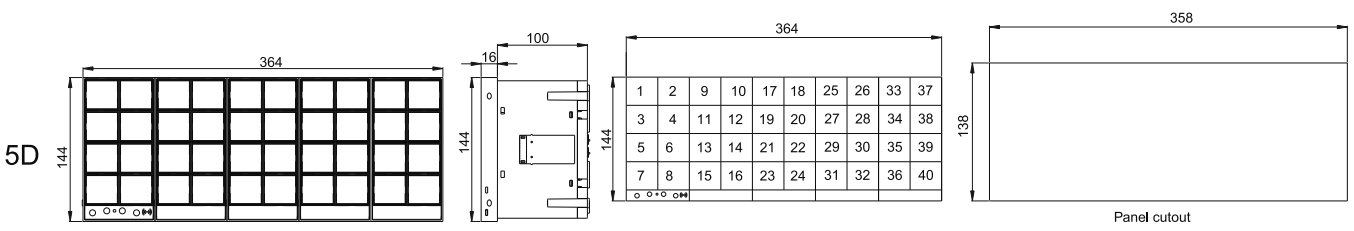
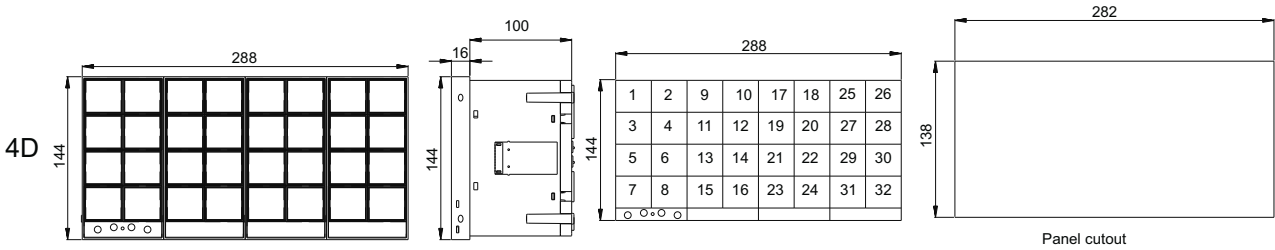
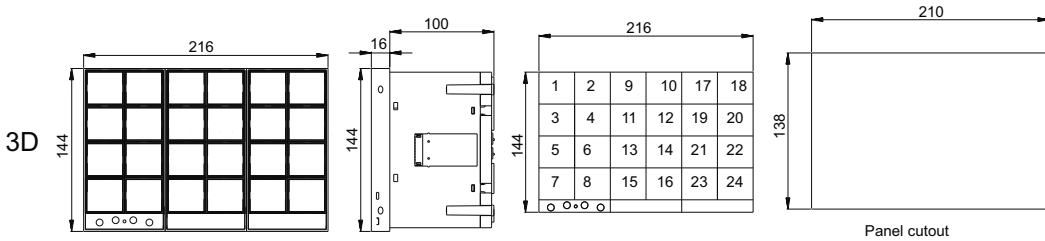
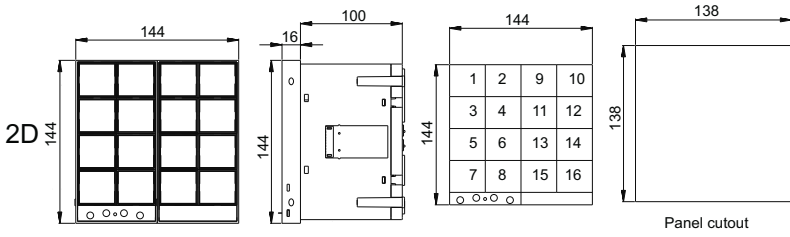
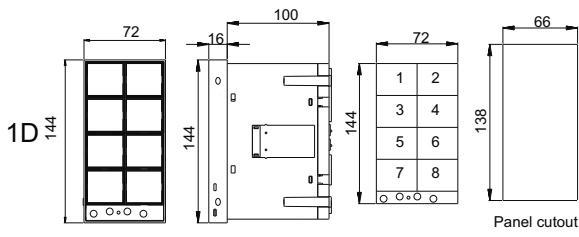
AU3D24S	3D	24	Small	Small
AU3D22SP	3D	22	Small	Big
AD3D24S	3D	24	Small	Small
AD3D22SP	3D	22	Small	Big
AB3D24S	3D	24	Small	Small
AB3D22SP	3D	22	Small	Big
AC3D24S	3D	24	Small	Small
AC3D22SP	3D	22	Small	Big



AU4D32S	4D	32	Small	Small
AU4D30SP	4D	30	Small	Big
AD4D32S	4D	32	Small	Small
AD4D30SP	4D	30	Small	Big
AB4D32S	4D	32	Small	Small
AB4D30SP	4D	30	Small	Big
AC4D32S	4D	32	Small	Small
AC4D30SP	4D	30	Small	Big

**NOTE:** Available upto 6D size with maximum 48 windows

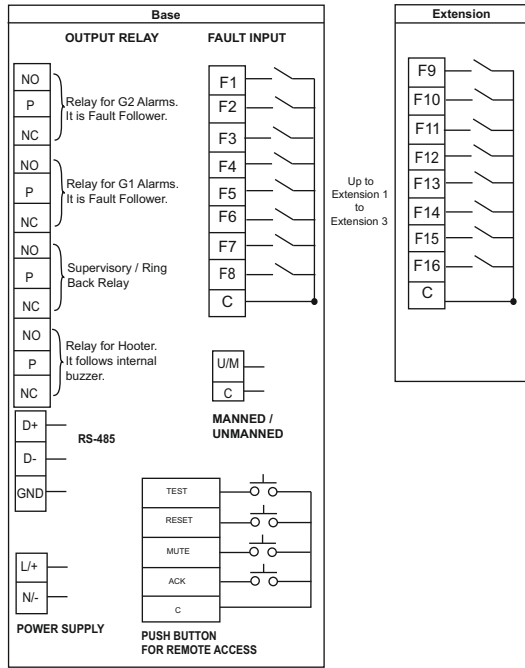
# MOUNTING DIMENSIONS (mm)



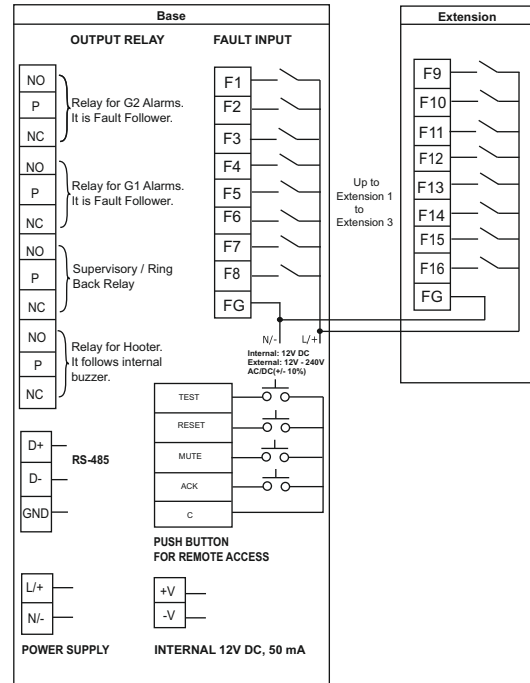
Weight with box (approx.): 1D=580g, 2D=950g, 3D=1320g, 4D=1690g, 5D=2060g, 6D=2430g

# CONNECTION DIAGRAM

## Potential free fault input ( AU & AD series with 03 suffix)



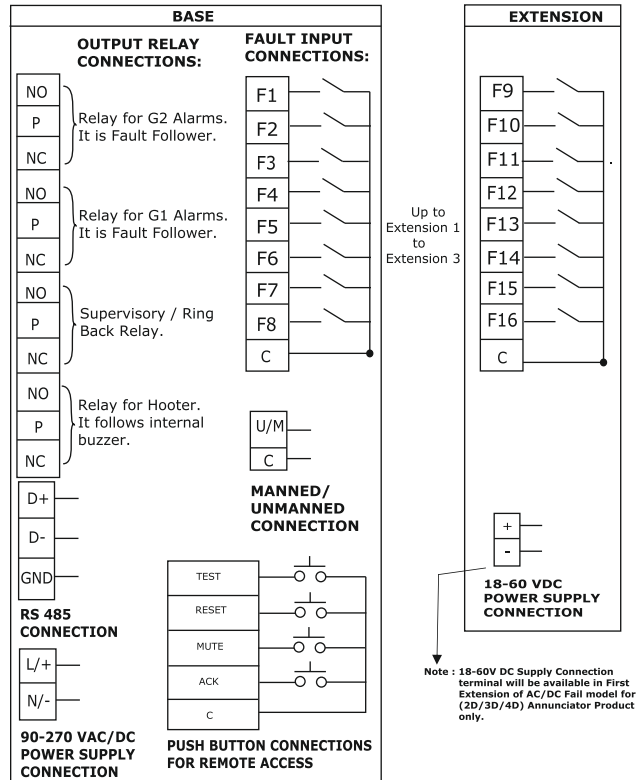
## Potential fault input (AU & AD series)



**Terminal Connection:** For Output Relay, Fault Input, Remote Keys, Power Supply Connection: AWG 28 to 12, Ph1- 3.5mm, Torque 0.5Nm(4.5lb.in)  
For Internal 12V supply, RS485 Connection: AWG 28 to 16, Flat- 2.5mm, Torque 0.2Nm(1.77lb.in)

## AC-DC FAIL ANNUNCIATOR

### AB Series



### AC Series

