

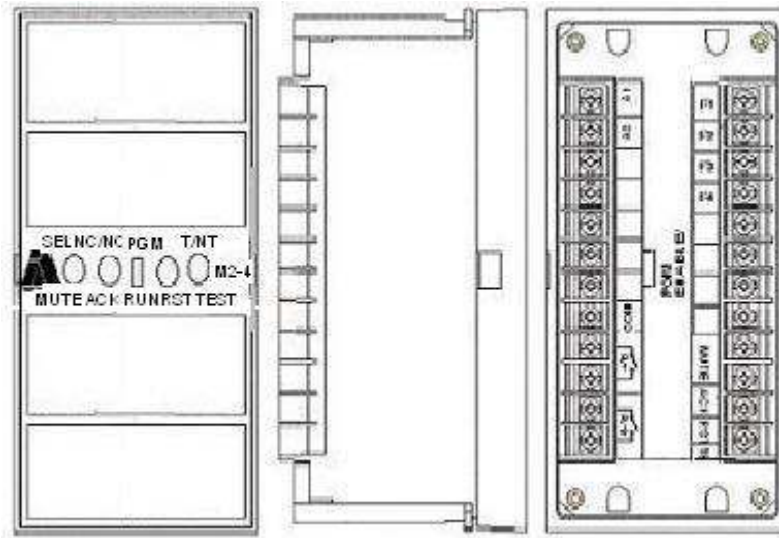


OPERATING INSTRUCTIONS Model : M2-4

OPI No. : OPI/108

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M2-4 is a powerful Microprocessor based Programmable Annunciator with control output. It has selectable NO or NC type fault I/Ps for each window, Trip or Alarm relay selection for each window and External terminals for remote operations and cascading facility.

Terminals Details

A1, A2 : Source voltage (85V to 270V AC/DC) / (18 to 90 VDC)

P1 & P2 : Short - Program Enable

Open - Program Disable

COM : Common fault terminal

F1 to F4 : Individual fault I/P terminals for respective window

MUTE, ACK, RST, TEST : For External push buttons, remote operations and cascading facility.

Front panel Switches.

SEL : To select the window for programming in PGM mode

MUTE: To mute the relay during fault conditions in RUN mode

NC/NO : Select NC or NO as input sensing in PGM Mode

ACK : To Acknowledge the fault during fault conditions in RUN Mode

RST: To reset the fault, once fault is rectified in RUN mode

T/NT: Select Trip Relay or Alarm Relay in PGM mode

TEST: To test healthy condition of all windows in RUN mode

Testing of Annunciator to find out if all the windows are healthy.

1) Apply source voltage between A1 & A2 (85V to 270V AC/DC) / (18 to 90 VDC)

2) Select PGM/RUN switch to RUN mode.



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Press

- 3) Test Button – All windows start flashing and relay will be activated
- 4) Mute Button – Relay will go OFF (Trip / Alarm)
- 5) ACK Button – Flashing Light window will become steady to acknowledge the fault.
- 6) RST Button – Steady light window will be OFF indicating the fault is rectified.

How to program

Example to Program 1 & 4 window.

Step1.

Short program enable terminals on rear side.

Put the front panel sliding switch in Program mode,

Press the SEL button on front panel once, the first window glow.

Step2.

Now press NC/NO button to select input fault as NC or NO, if you want to make NO as fault input sensing, press NC/NO button to select RED LED (ON), else if you want NC as input fault sensing select Red LED OFF.

Step3.

Press the T/NT switch on front panel to select Alarm or Trip relay, If you want Alarm relay to be programmed, press T/NT switch to select Green LED ON else if you want TRIP relay select Green LED OFF.

Step4.

To Program 4th window press SEL button till window 4 glows, once 4th window is selected. Repeat the Step2 & Step3 as done for the first window.

Step5

Put the front panel sliding switch in run mode, Now the annunciator is ready for application.

Remove program Enable short.

Run Mode.

When fault occurs in 1st or 4th window, corresponding faulty window will start flashing and respective relay (Trip or Alarm) will change over.

Press

- a) MUTE Button: Relay will go OFF (Trip or Alarm) but window will be Flashing.
- b) ACK Button :The flashing of window will stops and window light will become steady.
- c) RST Button: Steady light window will go OFF indicating the fault is rectified.

Selection of window color RED / YELLOW

Window color can be selected either RED or YELLOW by shifting the mini jumper to the next positions. To do this legend cover (Top cover) shall be opened using screw driver (Slot is provided on sides).



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How to Replace Legend

Open the legend cover, place required legend which is printed on Butter paper inbetween two polycarbonate clear sheets. Fix this set on to the window.

How to Cascade two or more Annunciators.

Mute,ACK, RST, TEST and COM terminals of each unit shall be connected in parallel connection. Now in RUN mode switch functions are common to all annunciators.

CAUTION:

When units are in cascade mode, ensure program enable shorting is removed. After programming every unit individually remove PGM enable shorting.

SEQUENCE OF OPERATION				FAULT INPUT AND OUTPUT SELECTION								
Fault	Switch Operation	Window	Relay	Switch Operation	RED LED		GREEN LED		PROGRAM SELECTED FOR			
					ON	OFF	ON	OFF				
No	-----	OFF	OFF	S E L	NC/NO	√	-----	-----	-----	NO TYPE		
Yes	-----	Flashing	ON			---	√	-----	-----		NC TYPE	
Yes	<u>Mute</u>	Flashing	OFF			---	-----	√	-----			
Yes	Ack	Steady ON	OFF			---	-----	-----	√			ALARM Relay
Yes	Reset	Steady ON	OFF			---	-----	-----	√			
Rectified	Reset	OFF	OFF	---	-----	-----	√	TRIP relay				

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Specifications for M2-4

Function	4 Window Programmable fault annunciator	
Rated Supply Voltage	85V to 270V AC/DC	18-90 VDC
Rated Frequency	50 / 60 Hz \pm 5%	N.A.
Power consumption	< 6VA / 1.2 W	4VA/1W
No. of windows	4	
Window Size	Windows of Dimension 66mm X 27.5mm (L X W)	
Fault input contacts	Selectable NO/NC type for every channel (Potential free contacts)	
Window Colour	Selectable Red / Yellow	
Control Output (No. of Relays)	2 (Trip and Non Trip (Alarm))	
Contact rating	1 C/O rated for 5A @ 250VAC / 28VDC resistive load	
Test facility	Provided (operational test)	
Cascading facility	Provided	
External Pushbuttons	Provided	
Standard Sequence	Manual Reset	
Recovery Time	2 Sec Minimum	
Dielectric Strength	(a)2.5KV AC, 50Hz for 1 minute.(Between current carrying & non-current carrying parts) (b)1.5 KV AC, 50Hz for 1 minute (between contacts & control circuit) (c) 750 V AC, 50Hz for 1 minute(between non-continuous relay contacts)	
Service life(under no load)	10 ⁶ operations minimum	
Electrical life(under full load)	10 ⁵ operations minimum	
Operating temperature	-10°C to +55°C	
Storage temperature	-25°C to +80°C	
Humidity	MAX 85% RH @ 40°C	
Insulation resistance	> 100M ohms @ 500 V DC	
Electrical Connection	Screw type terminals with self lifting clamp terminals	
Enclosure (series)	'N' Series	
Dimension	142.5 X 73.5 X 78mm (L X W X D)	