

Shelter Air Conditioning Controllers

A5-G302



A5-G 302 series of controllers designed by Presevi Industries Pvt. Ltd. for removing heat from the unmanned cellular phone shelters. It could be also used in server rooms where one has to maintain critical room temperature.

These cost-effective controllers could cycle two air conditioners that are kept with 100% redundancy. It measures the grill temperature of individual machines as well as the common return air temperature of the conditioned space, using three temperature sensors. It controls compressors and evaporative fans of each air conditioner independently.

These controllers fitted at the Local Switching Centers (LSCs) would cycle between duty and standby units at predefined time intervals between 1-24Hrs. It has a provision to switch ON the standby unit, in case the duty unit is defective. The controller is provided with two types of alarms named primary and secondary alarms through the potential free relays. The controller would switch ON the working unit, whenever the duty air conditioner become defective and generates the secondary alarm. It generates the primary alarm whenever both the air conditioners become defective.

Product Highlights

- Control 1/2 air conditioners
- Separate termination for each unit
- Unit Status Indication
- 16 to 30°C temperature setting with digital display
- Room temperature display
- Power down memory
- HP, LP, PF, Grill error and compressor Over load / under load protection
- Smoke / Fire error detection
- Utility monitoring
- Provision to sense generator operation
- Phase Changeover facility
- Primary Alarm
- Secondary Alarm
- Unit fail alarm
- Diesel saving facility for AMF panel

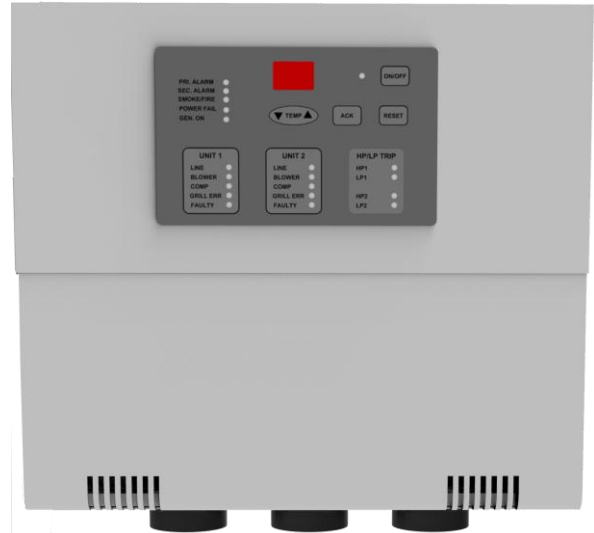


Fig.1 Shelter AC Controller A5-G302

The controller is provided with a 7 segment digital display to indicate the room temperature (in the normal case) as well as the grill temperature, compressor currents etc. Separate LEDs are provided to indicate the status of the controller. These controllers developed to operate air conditioners with 100% redundancy are designed as per IEC norms by considering EMI/ EMC.

These field-proven controllers not only saves energy and operational cost of these evaporative cooling sites but also detect most of the failure mechanisms like gas leak, fan failure, overload, power failure, smoke / fire etc. It has provisions to correct and communicate the status from LSC to the Main Switching centre (MSC). It has a provision to operate both the air conditioners, in the event of higher cooling requirement. Provision is given to switch ON only one unit, under similar situations if operated from a MG set.

The model **A5-G302-2C** is used to operate 2 numbers of twin compressor air conditioning units.

Application

Telecom Exchanges (RLUs), Cellular Sites (LSCs), Computer server rooms, ATM Centers, Unmanned cooling cabins, communication huts in railways.

Product Selection Chart

Model number	No. of units	Duty cycling	Out puts		Alarm out puts						Errors							LED display	Battery voltage sensing	Interface	
			Compressors	Blower fan	Primary	Secondary	Unit fail	High temp.	Smoke / Fire	Power fail	HP	LP	Comp. O/L	Comp. U/L	Blower error	Grill error	Power fail			Smoke/Fire	PC/Modem
A5-G302-1C-1P	2	✓	1	1	✓	✓	Primary		✓	✓	✓	✓	*	✓	✓	✓	✓	✓	*	✓	✓
A5-G302-2C-3P	2	✓	2	1	✓	✓	Primary		✓	*	*	✓	*	✓	✓	✓	✓	✓	*	✓	✓
A5-G302-1C-3P	2	✓	1	1	*	*	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

✓ - Provided

* - Not provided

Electrical specifications

Input Voltage (V AC)			Frequency (Hz)			Power consumption (VA)	Compressor Relay Rating (A)		Fan & Alarm relay Rating (A)
Min.	Typ	Max.	Min.	Typ	Max.		Steady state	In rush	Steady state
180	220	270	45	50	55	9	30	70	5

Electrical wiring diagram can be given on request

Notes & Abbreviations

LSC- Local Switching Centre
 MSC – Main Switching Centre
 PSTN – Public Switched Telephone Network

MG - Motor Generator set
 EMI – Electro Magnetic Interference
 EMC – Electro Magnetic Compatibility

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