

# Temperature Control Relay

- Wide ambient Temperature monitoring & controlling range with inbuilt temperature sensor.
- Protection Relay against variations of the ambient temperature set point (StH & StL)
- 3 digit LCD display for Real time Temperature Indication.
- User adjustable offset (-10°C to +10°C)
- LED indication for Relay Trip.



## Ordering Information

Cat. No.	Description
41A111AR	110 - 240 VAC, Temperature Control Relay (TCR - 111) Double SP
41A111BR	110 - 240 VAC, Temperature Control Relay (TCR - 112) Single SP

# Temperature Control Relay



Cat. No.	41A111AR	41A111BR
<b>Parameters</b>		
Series nos.	TCR - 111	TCR - 112
Number of set points	Double SP	Single SP
Supply Voltage ( $\Phi$ )	110 - 240 VAC, -20% to +10%	
Frequency	47Hz - 63Hz	
Power Consumption (Max.)	3 VA	
<b>Device Characteristics</b>		
Sensor	Inbuilt Temperature Sensor	
Temperature Unit	°C	
Display Resolution	0.1°C	
Accuracy	± 3°C Max	
Output Control Mode	Relay ON/OFF	
Hysteresis	2°C (Fixed)	
Temperature measurement and Controlling Range	-10°C to 55°C	-5°C to 55°C
Set Point Range	Low Level (StL) -10°C to (StH-4°C)	High Level (StH) Internally Fixed to 5°C
Offset	(StL + 4°C) to +55°C 0°C to +55°C	
Minimum difference between StH & StL (for double SP only)	-10°C to 10°C 4°C	
LED Indication	ON - Relay ON condition (Red Color)	
Display Type	Positive Image, Reflective, TN	
Contact Ratings	NO - 5A & NC - 3A @ 250 VAC / 30 VDC Resistive	
Operating Temperature	- 10° C to +55° C	
Storage Temperature	- 20° C to +65° C	
Dimension (W x H x D) (in mm)	18 X 85 X 82	
Weight (unpacked)	70 g	
Mounting	DIN rail	
Certification		
Degree of Protection	IP 20 for Terminals, IP 40 for Enclosure	

## EMI / EMC

Harmonic Current Emissions	IEC 61000-3-2
ESD	IEC 61000-4-2
Radiated Susceptibility	IEC 61000-4-3
Electrical Fast Transients	IEC 61000-4-4
Surge	IEC 61000-4-5
Conducted Susceptibility	IEC 61000-4-6
Voltage Dips & Interruptions (AC)	IEC 61000-4-11
Conducted Emission	CISPR 14-1
Radiated Emission	CISPR 14-1

## Environmental

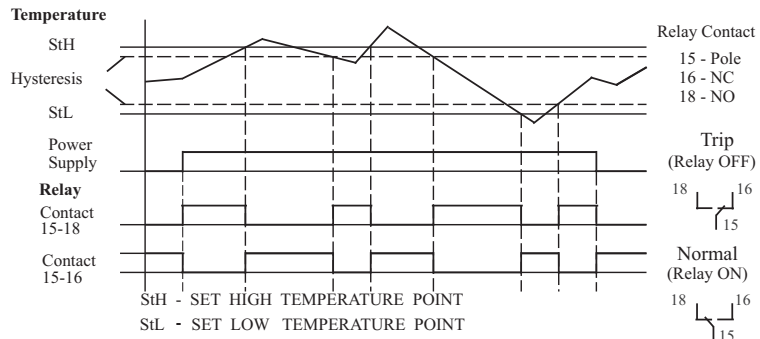
Cold Heat	IEC 60068-2-1
Dry Heat	IEC 60068-2-2
Vibration	IEC 60068-2-6
Repetitive Shock	IEC 60068-2-27
Non-Repetitive Shock	IEC 60068-2-27

# Temperature Control Relay

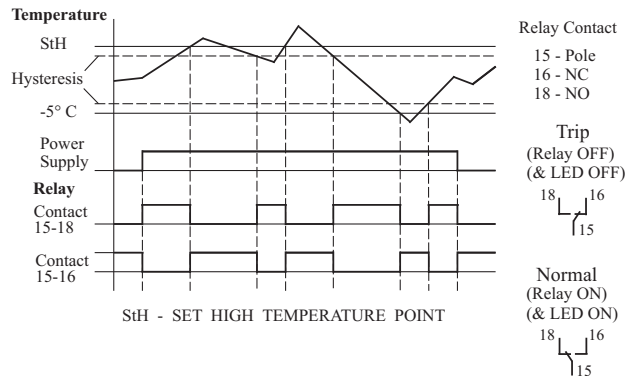


## FUNCTION DIAGRAM

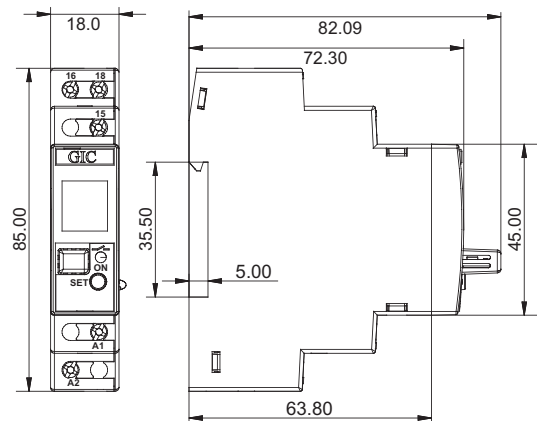
### Double SP - 41A111AR:



### Single SP - 41A111BR:

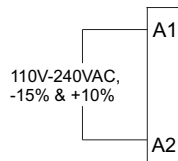


## MOUNTING DIMENSIONS (mm)

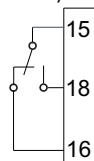


## CONNECTION DIAGRAM

### SUPPLY CONNECTION





### SPDT Relay CONNECTION



NO-5A & NC-3A@  
250VAC/30VDC RESISTIVE

## TERMINAL TORQUE & CAPACITY

 Ø 3.5 mm...4.0mm	0.60 N.m (6 Lb.in)
	1 x 4.0 mm <sup>2</sup> Solid/Stranded Wire
AWG	1 x 20 to 10