



Breakermatic AIR 220

Overview

The BREAKERMATIC AIRE 220 is designed to prevent damage caused by electrical variations to your 220V equipment, especially mini-split air conditioners and refrigeration equipment that are connected with NEMA 6-15, NEMA 6-20 or NEMA 10-20 plugs or sockets.

Operation

- Protection against steady-state voltage variations.** The BREAKERMATIC AIRE 220 disconnects the output if the steady-state voltage is above the high cut-off voltage or below the low cut-off voltage indicated in the specifications. In the case of adjustable equipment, the cut-off voltages can be set within the ranges indicated in the specifications. The response time to a fault is typically 1 s. The voltage must remain outside the range longer than the response time for the disconnection to be activated. While the fault persists, the corresponding high or low voltage indicator will remain lit.
- Reconnection delay or standby cycle.** When the protector is energized, or at the end of a voltage failure, the protector will initiate a time delay before connecting the output. The duration of the time delay is indicated in the specifications. The standby cycle protects sensitive equipment from short operating cycles, allowing, in the case of A/C and refrigeration equipment, system pressures to equalize before reconnecting.
- Autostart ®.** This feature reduces the standby cycle to 5 seconds when the protector has been off for a considerable amount of time.
- Detection of blackouts, "sag", etc.** The protector will disconnect the load if it detects a sudden voltage drop below 50% of the nominal voltage and will initiate a standby cycle.

Models

Model	Nominal Voltage	Nominal amperage	Frequency	Cut off voltages	Reconnect ion delay	Response delay	Connections	On-off switch	Language
PIN220-C00EST	220VAC	15A	50/60 Hz	176V-253V	4:00	1 s	NEMA 6-15	No	Spanish
PIN220-CM0EST	220VAC	15A	50/60 Hz	Ajustable	4:00	1 s	NEMA 6-15	Yes	Spanish
PIN220-D00EST	220VAC	20A	50/60 Hz	176-253 V	4:00	1 s	NEMA 6-20	No	Spanish
PIN220-DM0EST	220VAC	20A	50/60 Hz	Ajustable	4:00	1 s	NEMA 6-20	Yes	Spanish
PIN220-Y00EST	220VAC	20A	50/60 Hz	176-253 V	4:00	1 s	NEMA 10-20	No	Spanish
PIN220-C00ING	220VAC	15A	50/60 Hz	176V-253V	4:00	1 s	NEMA 6-15	No	English
PIN220-D00ING	220VAC	20A	50/60 Hz	176V-253V	4:00	1 s	NEMA 6-20	No	English
PIN220-G00EST	220VAC	15A	50/60 Hz	176V-253V	4:00	1 s	NEMA 6-15P NEMA 6-20R	No	Spanish
PIN220-GM0EST	220VAC	15A	50/60 Hz	Ajustable	4:00	1 s	NEMA 6-15P NEMA 6-20R	Yes	Spanish



PIN220-C00ING



PIN220-CM0EST



PIN220-D00ING



PIN220-DM0EST



PIN220-Y00EST

Specifications

Electrical						
Nominal Voltage	220					VAC
Nominal Frequency	50 - 60					Hz
Steady state voltage protection						
	C/G	CM/GM	D	DM / YM	Y	
Low cut-off voltage	176 +/- 3%		176 +/- 3%		176 +/- 3%	VAC
Min position		150 +/- 3%		150 +/- 3%		
Max position		214 +/- 3%		214 +/- 3%		
High cut-off voltage	253 +/- 3%		253 +/- 3%		253 +/- 3%	VAC
Min position		214 +/- 3%		214 +/- 3%		
Max position		278 +/- 3%		278 +/- 3%		
Reconnection Hysteresis	5 - 10					VAC
Response delay	1 +/- 20%					s.
Reconnection delay cycle	4:00 +/- 20%					Min:seg
Blackout detection						
Minimum blackout duration (0% nominal voltage)	32 -64					ms
Minimum brownout duration (50% nominal voltage)	>100					ms
Maximum load						
	C/G	CM/GM	D	DM / YM	Y	
Maximum Resistive Load (cos φ = 1)						
Current (Amperage)	15	15	20	20	20	A
Power	3.3	3.3	4.4	4.4	4.4	KW
Maximum Load for inverter type air conditioner or Refrigeration Equipment						
Input power consumed.	Nominal / Maximum					
Current (Amperage)	3.3/3.6	3.3/3.6	4.4/4.8	4.4/4.8	4.4/4.8	KW
	14/16	14/16	19 / 22	19 / 22	19 / 22	A
Maximum Load for Conventional Air Conditioner or Refrigeration Equipment						
Input power consumed Maximum	2.6	2.6	3.5	3.5	3.5	KW
Nominal amperage Maximum	12	12	16	16	16	A
Apparent Power (No load)	15					VA
Mechanicals						
Dimensions						
Length	135					mm
Width	87					mm
Height	45					mm
Weight	237					gr.
Connections						
	C /CM	G/GM	D/DM	Y/YM		
Input plug	NEMA 6-15P	NEMA 6-15P	NEMA 6-20P	NEMA 10-20P		
Output Receptacle	NEMA 6-15R	NEMA 6-20R	NEMA 6-20R	NEMA 10-20R		
Isolation materials						
Enclosure	ABS					
Plug and Receptacle	PC					
Printed circuit board	FR4					
Flame retardant classification (UL94)						
Enclosure	V0, 5VA					
Plug and Receptacle	V0, 5VA					
Printed circuit board	V0					
Glow wire test	Enclosure 650°C pass					
(NTC 5283:2015, NMX-J-565/2-11:2005)	Plug and Receptacle 850°C pass					
Ball pressure test	<2					mm.
NTC 1650 num. 25.2 y 25.3						
Isolation resistance (NTC1650:2004 Num 17.1)	>550					Mohms
Dielectric strength (NTC1650:2004 num 17.2)	>2					KV
Impact						
(NTC /IEC 62262:2013)	pass					
Contacts						
Material	Tinned Brass 260 (70% Cu, 30% Zn), Sn electroplated					
Oxidation Resistance Test	It shows no traces of corrosion or oxidation.					
(NTC 1650 num 29)						
Environmental						
Maximum operating ambient temperature	45					°C
Place of use: Indoor use, in a dry and ventilated place	Yes					
Outdoor use and/or in wet places	No					

Product certificates

NOM NOM-003-SCFI Certificate No.: ANC2401C00016056 hasta 25/12/2025

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Pag. 2 / 3 Rev. 11/08/2025

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CO13/5465

Application notes

1. As a general rule, select the surge protector that fits your A/C plug.
2. Check the rated input current of your equipment, which should not exceed that indicated in the voltage protector's specifications table.
3. The maximum cooling capacity will depend on the efficiency of the A/C or refrigeration equipment. To determine the input power consumed by your equipment, divide the rated cooling capacity by the EER (not to be confused with the SEER). It should not exceed that indicated in the voltage protector's specification. Care should be taken to use consistent units: if the cooling capacity is expressed in BTU/h, the EER in BTU/Wh. Alternatively, the cooling capacity can be expressed in W or kW, and the EER in W/W.
4. **Example:** We want to check if we can use a PIN220-D with an air conditioner with the following specifications: a) Cap 48,000 BTU/h b) EER 10.9 BTU/Wh
We get: $\text{Pin} = 48000/10.9 = 4390\text{W} = 4.39\text{ KW} < 4.4\text{ KW (PIN220-D) ok}$

Shipping packaging

Type	Capacity	Dimensions (Length x Width x Height) (cm)	Models	Weight (Kg)
Carton corrugado CC54	54 pcs (9 x 6 pack)	51 x 35 x 50	C, D, G CM, DM	15.6 16.2
CC 6 pack	6 pcs en blister	33.5 x 16 x 16	C, D, G CM, DM	1.7 1.8