



Breakermatic Digital Refrigerators

Overview

The **BREAKERMATIC Digital Refrigerators** has been specially designed to prevent damage to your refrigerator or refrigeration equipment caused by a blackout or high/low voltage. It absorbs high energy spikes and protects the electronic controls of the refrigeration equipment. It plugs directly into the outlet.

Easy to install and guaranteed 24/7 protection!

Ideal for:

- Household Freezers
- Water Coolers
- Household Refrigerators
- State-of-the-Art Household Refrigerators

Operation

1. Protection against steady-state voltage variations. The BREAKERMATIC Digital Refrigerator 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. The response time to a fault is delayed to 1 s to prevent false triggering. 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.
2. Reconnection delay or wait cycle. Upon energizing the protector, or upon termination of a voltage fault, the protector will initiate a time delay before connecting the output. The duration of the time delay is indicated in the specifications. The connection delay is designed to allow the power grid to stabilize after a service interruption, and to ensure the proper pressure equalization into the refrigeration system.
3. 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. The protector will disconnect the output almost instantaneously to prevent undesired transient voltages reach the protected equipment.
4. Suppression of fast transient over voltages. Transient over voltages are very short-duration, high-energy voltage spikes produced by the connection or disconnection of loads or induced by atmospheric discharges near the electrical grid. They propagate through it until they reach the equipment. The BREAKERMATIC DIGITAL REFRIGERATORS trim transient over voltages between phase and neutral (differential mode) and between current-carrying lines and ground (common mode) without disconnecting the output. It clamps the transients voltages to the indicated voltage protection level.

Models

Model	Nominal voltage	Nominal amperage	Frequency	Cut off voltages	Reconnection delay	Response delay	Voltage protection level	Language
PME110-ETREST	120VAC	10A	50/60 Hz	95V-138V	3:50	1s	0.6kV	Spanish
PME110-ETRUEM	120VAC	10A	50/60 Hz	95V-138V	3:50	1s	1kV	English (Trinidad WI)
PME110-E++EST	120VAC	10A	50/60Hz	95V-138V	3:50	1s	0.6kV	Spanish
PME110-ETRING	120VAC	10A	50/60Hz	95V-138V	3:50	1s	0.6kV	English

PME110-ETRxxx_datasheet_en_2025.docx
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BREAKERMATIC

Fabricado por:



NIT 900.340.440-0
Teléfono 876 4576 Fax 876 7227
Autopista Medellín Km. 2.5. Entrada
Parcelas 900 Mts
CIEM OIKOS OCCIDENTE - Bodega B27
Cota – Cundinamarca - Colombia



CO13/5465

Specifications

Electrical				
Nominal Voltage	120			VAC
Nominal frequency	50 - 60			Hz
Steady state voltage protection				
Low cut-off voltage	95 +/- 3%			VAC
High cut-off voltage	138 +/- 3%			VAC
Reconnection Hysteresis	3 - 6			VAC
Response time (voltage failure to disconnection)	1 +/- 20%			s.
Reconnection delay cycle	3:50 +/- 20%			min:seg.
Blackout detection				
Minimum blackout duration (0% nominal voltage)	32 -64			ms
Minimum brownout duration (50% nominal voltage)	100			ms
Transient voltage suppresser				
IEEE C62.41 Location	Cat. A3			
	PME110-ETREST PME110-ETRING	PME110-ETRUEM	PME110-E++EST	
Allowed Maximum continuous voltage (r.m.s.) phase-neutral phase-ground	175 175	300 300	175 na	VAC VAC
Voltage protection level (clamping voltage). phase-neutral phase-ground	0.6 0.6	1.0 1.0	0.6 na	kV kV
Maximum peak current (1 time, 8/ 20 us) phase-neutral phase-ground	6.5 6.5	6.5 6.5	6.5 na	kA kA
Maximum peak current (2 times) phase-neutral phase-ground	4 4	4 4	4 na	kA kA
Energy (10/1000 us)	3 x 158	3 x 280	1 x 158	J
Applied standards	IEC 61000-4-5:2005 / NMX-J-610/4-5:2013 NMX-J-508 num. 6.2.8 Pass			
Maximum load				
Amperage	10			A
Mechanicals				
Dimensions				
Length	96			mm
Width	63			mm
Height	30			mm
Weight	147			gr.
Connections				
	PME110-ETREST PME110-ETRING	PME110-ETRUEM	PME110-E++EST	
Input plug	NEMA 5-15P	NEMA 5-15P	NEMA 1-15P	
Output receptacle	NEMA 5-15R	NEMA 5-15R	NEMA 5-15R	
Applied standards (plug and receptacle)	NTC 1650 num. 10.1, 16, 17.2, 19, 21, 24, 29 NMX-J-508 6.2.3, 6.3.2, 6.3.3			
Isolation materials				
Enclosure	ABS			
Receptacle	PC			
Printed circuit board	FR4			
Flame retardant classification (UL94)				
Enclosure	V0, 5VA			
Plug and receptacle	V0			
Printed Circuit board	V0			
Glow wire test (NTC 5283:2015, NMX-J-565/2-11:2005)	Enclosure 650°C pass Receptacle 850°C pass			
Ball pressure test NTC 1650 num. 25.2 y 25.3	<2			mm.
Isolation resistance NTC1650:2004 Num 17.1 NMX-J-508 num. 6.2.1	>550 >5			Mohms

Dielectric rigidity NTC1650:2004 num 17.2 NMX-J-508 num. 6.2.2	>1.25 >1.24	kV
Impact (NTC /IEC 62262:2013)	pass	
Contact		
Material	Brass 260 (70% Cu, 30% Zn)	
Oxidation Resistance Test (NTC 1650 num 29)	It shows no traces of corrosion or oxidation.	
Enviromental		
Maximum operating ambient temperature	45	°C
Place of use: Indoor use, in a dry and ventilated place Outdoor use and/or in wet places	Yes No	

Product certificates

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

Shipping packaging

Type	Capacity	Dimensions (Length x Width x Height) (cm)	Weight (Kg)
Carton CC72	72 pcs (12 x 6 pack o 2 x 36 pack)	58 x 33 x 52	13.85
Carton CC60	60 pcs (10 x 6 pack)	51 x 35 x 50	11.75
Carton CC36pack	36 pcs in blister	52 x 30 x 25	5.7
Carton CC 6 pack	6 pcs in blister	24 x 19 x 16	1.2