

# Critical filter and surge protective devices—ITCFxxx30xxx models



ITCFxxx30-RJ Model

## Introduction

Since 1980, Eaton's Innovative Technology® has provided surge protective devices (SPDs) to power quality equipment users around the world. Whatever your electrical surge protection need may be, Eaton's Innovative Technology has a surge protective device to fill it.

## Product description

Series or parallel wired, terminal strip connected, multi-stage hybrid Active Tracking Network (ATN®) enhanced sine wave tracking surge protective device.

## Application description

Dedicated AC power circuits, ≤30A, feeding variable speed drives, process controllers, PLCs, power supplies, microprocessor-based loads, CNCs, and a wide variety of other mission-critical and general-purpose individual loads.

## Features

- Peak surge current: 80 kA per phase, 40 kA per mode
- Warranty: 10-year free replacement ①
- Enclosure: ABS plastic UL® 94-5VA
- Connection: wire clamping box terminals
  - Minimum 18 AWG (0.8 mm<sup>2</sup>) wire size
  - Maximum 10 AWG (5.0 mm<sup>2</sup>) wire size
- Weight: ≈ 1 lb (0.45 kg)
- Operating temperature: -40°F (-40°C) to +140°F (+60°C)
- Circuit description: multi-stage hybrid network using circuit encapsulation and advanced surge path technology
- Protection modes: all mode—dedicated L-N (normal mode), dedicated L-G, N-G (common mode)
- Input power frequency: 0–64 Hz (AC)
- Response time: active <1 nanosecond
- Maximum continuous operating current: 30A rms up to 250V
- Circuit interrupt: reference installation instructions for details

① With product registration.

**Table 1. Maximum EMI/RFI Attenuation—MIL-STD-220**

10 kHz	100 kHz	1 MHz	10 MHz	100 MHz	Maximum Attenuation Frequency
24 dB	44 dB	58 dB	42 dB	53 dB	67 dB at 0.6 MHz

## Standards and certifications

- Unit listings: recognized components under UL 1449 Third Edition, UL 1283 Fifth Edition (120 Vac models only)
- Manufacturer qualifications: ISO® 9001:1994 Quality System Certification BSI FM 30833



## Performance data

Table 2. Technical Specifications

Available Models	Nominal System Voltage (AC-Vrms, DC-Vpk)	ANSI/IEEE® C62.41-1991 Measured Limiting Voltage ①			UL SVR	
		A1 Ring Wave 2 kV, 67A 180° Phase Angle	A3 Ring Wave 6 kV, 200A 90° Phase Angle	B3/C1 Impulse Wave 6 kV, 3 kA 90° Phase Angle	UL 1449-2 Suppressed Voltage Ratings	
		L-N L-G, N-G	L-N L-G, N-G	L-N L-G, N-G	L-N L-G, N-G	Peak Surge Current Phase/Mode
ITCF12010xx	48–150 Vac	30	240	430	400	80 kA/40 kA
	48–200 Vdc	70, 50	340, 140	420, 430	400, 400	
ITCF24030xx	120–275 Vac	60	400	760	800	80 kA/40 kA
	120–300 Vdc	90, 50	520, 140	790, 770	800, 800	

① Test environment: positive polarity. Tested with AC power applied. All units tested at terminals, time base = 1 ms. All measurements referenced from zero volts per NEMA® LS-1.

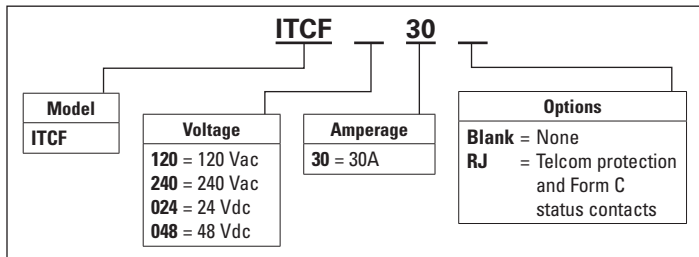
Table 3. Let-Through Voltages Based Upon IEEE Std C62.62-2010 Testing Waveforms ①

Test Impulse	xxCF12030xxx
IEEE Category A 100 kHz ring wave—6000V, 200A	150V
IEEE Category B 100 kHz ring wave—6000V, 500A	330V
IEEE Category B combination wave—6000V, 3000A (UL 1449-3 VPR)	460V

① All tests conducted on 120 Vac units.

## Product selection

Table 4. Catalog Numbering Selection



## Dimensions

Approximate dimensions in inches (mm).

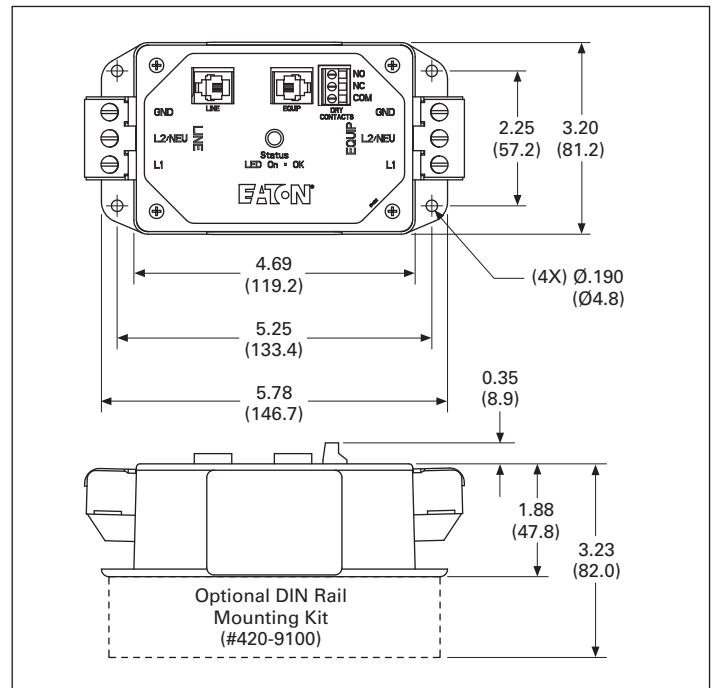


Figure 1. ITCFxxx30xxx Model Dimensions

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