



Eaton® Innovative Technology® Special Applications

Technical Data

New Information

Description

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General Description

Since 1980, Eaton's® Innovative Technology® has been providing field-proven power quality solutions worldwide. A leading research company in a survey of over 10,000 users rated Innovative Technology No.1 in both product quality and service. All Innovative Technology products are manufactured in an ISO® 9001:2000 and ISO 14001 certified facility.

Product Application

Innovative Technology provides special Transient Voltage Surge Suppression (TVSS) applications for:

- Dedicated series load protection.
- Telephone lines feeding the telephone switch, fax machines or modems.
- Data communication lines.
- Security lines (video camera cables, remote sensors).
- Speakers and public address systems.
- Antenna cables.
- Residential and light commercial services.



Dedicated Load Protection

HT Model



HT Model

General Specifications

Description

Series or parallel wired, terminal strip connected, Threshold Suppression Network (TSN) transient suppression device.

Application

Dedicated ac and dc power circuits operating at 5 – 275 Vac/5 – 300 Vdc, ≤30 amperes, feeding general purpose loads.

Warranty

Ten-year free replacement.

Unit Listings

Recognized components under UL 1449 Second Edition and cUL®, UL 1283 filter, CSA®.

Manufacturer Qualifications

ISO 9001:1994 Quality System Certification BSI FM 30833.

Mechanical Specifications

Enclosure

ABS Plastic, UL94-5VA.

Connection

Wire clamping box terminals.

Weight

≈ 1 lb. (0.45 kg).

Operating Temperature

-40°F (-40°C) to +140°F (+60°C).

HS-DIN-IP Series



HS-DIN-IP Series

General Specifications

Description

40 kA, parallel wired, terminal strip connected, multi-stage hybrid Active Tracking Network (ATN®) surge protective device.

Application

Dedicated ac power circuits feeding a wide variety of mission-critical and general-purpose individual loads.

Warranty

Ten-year free replacement.

Unit Listings

Recognized components under UL 1449 Second Edition and cUL, UL 1283 filter.

Manufacturer Qualifications

ISO 9001:1994 Quality System Certification BSI FM 30833.

Mechanical Specifications

Enclosure

ABS Plastic, UL94V-0.

Connection

Wire clamping box terminals; minimum 22 AWG (0.34 mm²) wire size — maximum 12 AWG (4.0 mm²) wire size.

Weight

≈ 1 lb. (.45 kg).

Operating Temperature

-40°F (-40°C) to +140°F (+60°C).

HS-DIN Series



HS-DIN Series

General Specifications

Description

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

Application

Dedicated ac power circuits operating at 5 – 250 Vac/5 – 300 Vdc, ≤10 amperes, feeding variable speed drives, variable frequency drives, process controllers, PLCs, power supplies, microprocessor-based loads, CNCs and a wide variety of other mission-critical and general-purpose individual loads.

Warranty

Ten-year free replacement.

Unit Listings

Recognized components under UL 1449 Second Edition and cUL, UL 1283 filter.

Manufacturer Qualifications

ISO 9001:1994 Quality System Certification BSI FM 30833.

Mechanical Specifications

Enclosure

Polyamide, Nylon 6,6 UL94V-0.

Connection

Wire clamping box terminals; 24 AWG (.25 mm²) wire size — 12 AWG (4 mm²) wire size.

Weight

≈ 1 lb. (.45 kg).

Operating Temperature

-40°F (-40°C) to +140°F (+60°C).

HS-60A Model



HS-60A Model

General Specifications

Description

120 V and 250 V, series or parallel wired, terminal strip connected, multi-stage hybrid Active Tracking Network (ATN) enhanced sine wave tracking surge protective device.

Application

Dedicated ac power circuits, ≤60 amperes, feeding variable speed drives, variable frequency drives, process controllers, PLCs, power supplies, microprocessor-based loads, CNCs and a wide variety of other mission-critical and general-purpose individual loads.

Warranty

Ten-year free replacement.

Unit Listings

Recognized components under UL 1449 Second Edition and UL 1283.

Manufacturer Qualifications

ISO 9001:1994 Quality System Certification BSI FM 30833.

HS Model



HS Model

General Specifications

Description

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

Application

Dedicated ac and dc power circuits operating at 5 – 275 Vac/5 – 300 Vdc, ≤10 amperes, feeding variable speed drives, variable frequency drives, process controllers, PLCs, power supplies, microprocessor-based loads, CNCs and a wide variety of other mission-critical and general-purpose individual loads.

Warranty

Ten-year free replacement.

Unit Listings

Recognized components under UL 1449 Second Edition (certain models), UL 1283 filter, CSA.

Manufacturer Qualifications

ISO 9001:1994 Quality System Certification BSI FM 30833.

HS-30A Models



HS-30A Model

General Specifications

Description

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

Application

Dedicated ac power circuits, ≤30 amperes, 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.

Warranty

Ten-year free replacement.

Unit Listings

Recognized components under UL 1449 Second Edition, UL 1283.

Manufacturer Qualifications

ISO 9001:1994 Quality System Certification BSI FM 30833.

HS-P-SP Model



HS-P-SP Model

General Specifications

Description

Series wired, terminal strip connected, multi-stage hybrid Active Tracking Network (ATN) sine wave tracking surge protective device with remote alarm capability and 2 pair (RJ14) telecommunication circuit protection.

Peak Surge Current

80 kA per phase; 40 kA per mode.

Warranty

Ten-year free replacement.

Unit Listings

Recognized components under UL 1449 Second Edition, UL 1283, Telecommunications circuit UL 497A, CSA.

Manufacturer Qualifications

ISO 9001:1994 Quality System Certification BSI FM 30833.

ITHST Dual Stage TVSS/Filter



ITHST Dual Stage TVSS/Filter

General Specifications

Description

The Innovative Technology HST is a dual stage series-connected line filter. The ITHST incorporates an inductor coil as a true series element along with capacitors to form an LC (Low Pass) filter. The LC filter works in conjunction with surge suppression elements to protect load equipment from damaging transients, as well as conditions the ac line from noise. The ITHST is designed to protect sensitive electronic loads, ensuring maximum facility uptime.

Features

- The highest level of surge protection for all sensitive load applications.
- High surge current capacity (up to 160,000 amperes per phase).
- Industry's highest noise attenuation (75 dB at 100 kHz).
- Proven track record in harshest environments.
- Five-year free replacement warranty.
- Single-phase applications for critical loads.
- Unit listings: UL 1449, UL 1283, UL 1363, UL 497, CSA.
- Suppression fault indication with optional remote capability.

Mechanical Specifications

- Choose between 120 Vac and 240 Vac models.
- 3 Amperes: hardwired.
- 5 Amperes: hardwired.
- 10 Amperes: hardwired.
- 15 Amperes: hardwired.
- 20 Amperes: hardwired.
- Hospital Grade: 15 Amperes with telecom surge protection.

Residential/Small Business

IT-RSS Model



IT-RSS Model

General Specifications

Description

Parallel configured, hardwire connected, 40 kA per phase, 80 kA total peak surge current capacity, Transient Voltage Surge Suppression device.

Application

Office and residential service entrance locations feeding various types of loads.

Warranty

Ten-year free replacement.

Unit Listings

UL 1449, Second Edition; cUL.

Manufacturer Qualifications

ISO 9001:1994 Quality System Certification BSI FM 30833.

Mechanical Specifications

Enclosure

Aluminum, NEMA® 4 (IP66) weather-proof enclosure (meets and exceeds NEMA 12, 13 and 3R ratings).

Connection

#10 stranded wire.

Weight

≈ 5 lbs. (2.2 kg).

Operating Temperature

-40°F (-40°C) to +140°F (+60°C).

XT-40 Model



XT-40 Model

General Specifications

Description

Parallel configured, hardwire connected, Transient Voltage Surge Suppression device providing 40 kA per phase peak surge current.

Application

Location Categories A and B — Medium and low exposure level ac power distribution panels, branch panels and/or individual equipment disconnects feeding all types of loads.

Warranty

Ten-year free replacement.

Unit Listings

UL 1449, Second Edition; cUL.

Manufacturer Qualifications

ISO 9001:1994 Quality System Certification BSI FM 30833.

XT-DC Model



XT-DC Model

General Specifications

Description

Parallel configured, hardwire connected, 40 kA per phase, Transient Voltage Surge Suppression device for 48 Vdc and 125 Vdc power systems.

ANSI/IEEE C62.41 Location Categories

A, B and C.

Application

Medium and low exposure level dc power distribution systems.

Warranty

Five-year free replacement.

Manufacturer Qualifications

ISO 9001:1994 Quality System Certification BSI FM 30833.

Mechanical Specifications

Enclosure

Aluminum, NEMA 4 (IP66) weather-proof enclosure (meets and exceeds NEMA 12, 13 and 3R ratings).

Mounting

Internally threaded conduit fitting and/or multipoint mounting holes (mounting feet optional), flush mount face-plate available separately.

Connection

#10 stranded wire.

Weight

≈ 3 lbs. (1.3 kg).

Operating Temperature

-40°F (-40°C) to +140°F (+60°C).

Telco Applications

ITC-CAT5e Model



ITC-CAT5e Model

General Specifications

Description

Category 5e local area network Transient Voltage Surge Suppression device; 100Base-Tx, 10Base-T.

Application

TIA/EIA-568-A-5 (Category 5e) Local Area Networks.

Warranty

Five-year free replacement.

Manufacturer Qualifications

ISO 9001:1994 Quality System Certification BSI FM 30833, CE.

Mechanical Specifications

Enclosure

ABS Plastic, UL94V-0.

Connection

Lines: Category 5e RJ45-modular jack connectors.

Ground: 6.00 inches (152.4 mm) long braided cable with #6 ring terminal.

Weight

0.1 lb. (0.05 kg).

ITC-CAT5e-RK Model

General Specifications

Description

16 Line Category 5e local area network Transient Voltage Surge Suppression device; 100Base-Tx, 10Base-T.

Application

TIA/EIA-568-A-5 (Category 5e) Local Area Networks; Ethernet.

Warranty

Five-year free replacement.

Manufacturer Qualifications

ISO 9001:1994 Quality System Certification BSI FM 30833.

Mechanical Specifications

Enclosure

Rack mount: 19.00 inches (482.6 mm); 2 RU height; Matte Black finish.

Connection

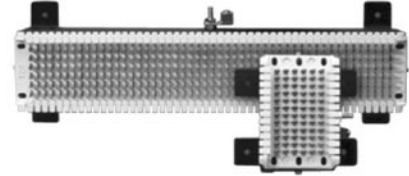
Lines: Category 5e RJ45-modular jack connectors.

Ground: 16 gauge steel, 3 mounting methods; Ground lug (#6 – #14 wire).

Weight

2.2 lbs. (1.0 kg).

MDF-ISDN Model



MDF-ISDN Model

General Specifications

Description

Telecommunication line Transient Voltage Surge Suppression device.

Application

Standard 3002/C2 unconditioned voice grade lines, fax, modem and ISDN lines.

Warranty

Five-year free replacement.

Manufacturer Qualifications

ISO 9001:1994 Quality System Certification BSI FM 30833.

Mechanical Specifications

Enclosure

Metal bottom section with ABS plastic terminal housing upper half.

Connection

Lines: Standard punchdown block terminal #22 – #26 AWG (0.3 – 0.13 mm²).

Ground: 10/32 lug with wire clamping box terminal #6 – #12 AWG (13.3 – 3.3 mm²).

Weight

MDF 6 ≈ 0.5 lb. (0.9 kg); MDF 25 ≈ 5 lbs. (2.2 kg).

Operating Temperature

-40°F (-40°C) to +140°F (+60°C).

Bridge Clip



Bridge Clip

General Specifications

Description

Type 66 punch downblock-mounted, secondary, telephone- or data-line overvoltage/current surge protection devices.

Application

Secondary data or telecom protection for voice grade applications, 10 Mbps Ethernet and high-speed Token Ring networking installations. Each bridging module protects one pair.

Warranty

Five-year free replacement.

Unit Listings

UL 497A.

Design Qualification

Commercial Building Telecomm. Wiring Standard ANSI/EIA/TIA-568.

Manufacturer Qualifications

ISO 9001:1994 Quality System Certification BSI FM 30833.

Mechanical Specifications

Enclosure

Molded plastic.

Connection

Press fit onto punchdown block tabs. Press fit for ground onto available ground strips.

Weight

≈ 1 lb. (0.4 kg).

Operating Temperature

-40°F (-40°C) to +185°F (+85°C).

ITC-ISDN Model



ITC-ISDN Model

General Specifications

Description

Telecommunication line Transient Voltage Surge Suppression devices.

Application

Standard 3002/C2 unconditioned voice grade lines, fax, modem and ISDN lines.

Warranty

Five-year free replacement.

Manufacturer Qualifications

ISO 9001:1994 Quality System Certification BSI FM 30833.

Mechanical Specifications

Enclosure

ABS Plastic, UL94V-0 with integral multi-point mounting feet.

Connection

Lines: 4T, 6T 12T-wire clamping box terminal strips, #14 (2.5 mm²) wire maximum RJ14-modular jack connectors. Ground: 10/32 lug with wire clamping box terminal #6 – #12 AWG (16 – 4 mm²)

Weight

RJ14 ≈ 0.5 lbs. (0.22 kg): 4T, 6T 12T ≈ 1 lb. (0.45 kg).

TC-4S and TC-8S Models



TC-4S-53

General Specifications

Description

Data, Telecom and Signal Line Surge Suppression device with 4 or 8 position terminal strip/hardware interface and data rates up to 2 Mbps.

Application

ISDN lines, voice grade lines, fax lines, modem lines.

Warranty

Five-year free replacement.

Manufacturer Qualifications

ISO 9001:1994 Quality System Certification BSI FM 30833.

Unit Listings

UL 497A standards.

Mechanical Specifications

Enclosure

ABS Plastic, UL94-5VA rated.

Connection

Signal input hardware/terminal strip; Signal output hardware/terminal strip; Up to 4 pair and shield protected (paired protection); Ground: screw terminal for single unit installation or grounding bus for multi-unit installation.

Weight

≈ 0.5 lb. (0.25 kg).

Operating Temperature

-40°F (-40°C) to +140°F (+60°C).

Data Signal Protection

Data-Line Model



Data-Line Model

General Specifications

Description

Terminal strip connected data-line surge protective device, 10 kA peak surge current per pair.

Application

1, 2 or 3 pair data, signal and 4 – 20 mA current loop circuits, ISDN lines.

Warranty

Five-year free replacement.

Manufacturer Qualifications

ISO 9001:1994 Quality System Certification BSI FM 30833.

Mechanical Specifications

Enclosure

ABS Plastic, UL94V-0.

Connection

Wire clamping box terminals. Line(s): #18 – #22 AWG (0.8 – 0.3 mm²). Ground: #6 – #12 AWG (13.3 – 3.3 mm²).

Weight

≈1 lb. (0.46 kg).

Operating Temperature

-40°F (-40°C) to +140°F (+60°C).

Twinax-AB



Twinax-AB

General Specifications

Description

In-line, terminal strip connected twinaxial data-line protection device.

Application

1 pair shielded twinaxial data line.

Warranty

Five-year free replacement.

Manufacturer Qualifications

ISO 9001:1994 Quality System Certification BSI FM 30833.

Mechanical Specifications

Enclosure

ABS Plastic (gray), UL94V-0.

Connection

Wire clamping box terminals. Line and Neutral: #18 – #22 AWG; Ground: #14 – #6 AWG.

Weight

≈1 lb. (0.46 kg).

Operating Temperature

-40°F (-40°C) to +176°F (+80°C).

ITC-12T-30VDC Model



ITC-12T-30VDC Model

General Specifications

Description

dc voltage system surge protective device.

Application

dc voltages up to 30 Vdc, solenoid, electronic control circuits.

Warranty

Five-year free replacement.

Manufacturer Qualifications

ISO 9001:1994 Quality System Certification BSI FM 30833.

Mechanical Specifications

Enclosure

ABS Plastic, UL94V-0 with integral multi-point mounting feet.

Connection

Lines: 12 terminal wire clamping box terminal strips, #14 (2.5 mm²) wire maximum, not polarity sensitive.

Ground: 10/32 lug with wire clamping box terminal #6 – #12 AWG (16 – 4 mm²).

Weight

≈1 lb. (0.45 kg).

Operating Temperature

-40°F (-40°C) to +176°F (+80°C).

OEM Model



OEM Model

General Specifications

Description

Series configured, terminal strip or hardwire connected, surge protective devices.

Application

4 – 20 mA current loops, signal lines and low speed data lines feeding transducers, flow meters, leak detectors and similar field sensor applications.

Warranty

Five-year free replacement.

Manufacturer Qualifications

ISO 9001:1994 Quality System Certification BSI FM 30833.

Mechanical Specifications

Enclosure

ABS Plastic, UL94V-0.

Connection

Lines: wire clamping box terminal strips.

Ground: lug with wire clamping box terminal.

Weight

≈ 1 lb. (.45 kg).

Operating Temperature

-40°F (-40°C) to +140°F (+60°C).

RS232-DB25



RS232-DB25

General Specifications

Description

Data and signal line surge suppression device.

Application

Data and signal lines utilizing DB25 interface and operating at up to 300 Kbps.

Warranty

Five-year free replacement.

Manufacturer Qualifications

ISO 9001:1994 Quality System Certification BSI FM 30833.

Mechanical Specifications

Enclosure

ABS Plastic, UL94-5VA rated.

Interface

Male DB25 (input or output); Female DB25 (input or output); Bi-directional suppression; Pin configuration — pins 1 – 8 and 20 used, 7 is ground and 1 is shield.

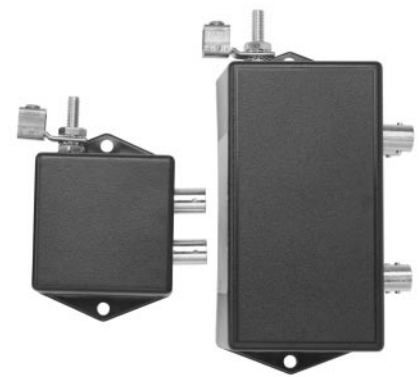
Connection

Integral mounting screws.

Weight

≈ 0.25 lb. (0.12 kg).

Coax Model



Coax Model

General Specifications

Description

Coaxial connected surge protective device.

Application

LANs operating Thin Ethernet/ThinNet (10Base-2), Token Ring (802.5), CCTV, cable TV, RF receivers, satellite receivers, and a wide variety of similar coaxial connected data and signal transfer circuits.

Warranty

Five-year free replacement.

Manufacturer Qualifications

ISO 9001:1994 Quality System Certification BSI FM 30833 MIL-STD-220A IEEE-STD-C62.36-1994.

Mechanical Specifications

Enclosure

ABS Plastic, UL94V-0 (all models).

Connection

Input: Female BNC 1 each (BNC model); Female F 1 each (F model); Female BNC 2 each (BNC-2 model).

Output: Female BNC 1 each (BNC model); Female F 1 each (F model); Female BNC 2 each (BNC-2 model).

Ground: Wire clamping box terminals (all models).

Weight

≈1 lb. (0.46 kg) (all models).

Operating Temperature

-40°F (-40°C) to +176°F (+80°C).

Product Specifications

Table 1. Model Specifications

Model Family	Dedicated Load Protection							Voltage Configuration			Telco Applications				Data Signal									
	10 Amperes	30 Amperes	60 Amperes	Series Filter				120/240 Vac	120 Vac	120/208 Vac	240 Vac	24 - 48 Vdc	125 Vdc	Ethernet	Telephone (POTS)	ISDN	Fax/Modem	4 - 20 mA Current Loop	RS232-DB25	Twinaxial	Token Ring/Arcnet	CCTV	TV/Satellite	
HS DIN	X																							
HS	X												X											
HS30A	X	X																						
HS60A	X	X	X																					
HS-P-SP	X	X	X											X		X								
HT		X											X											
ITHST-3A				X																				
ITHST-5A					X																			
ITHST-10A						X																		
ITHST-15A							X																	
ITHST-20A								X																
ITRSS									X															
XT-40									X	X														
XT-DC												X												
ITC-CAT5e													X											
MDF-ISDN														X	X	X								
Bridge Clip														X	X	X								
ITC-ISDN														X	X	X								
TC														X	X	X								
Dataline																		X						
Twinax-AB																				X				
ITC-12T-30V												X												
OEM																		X						
RS232-DB25																			X					
Coax																					X	X	X	

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