# TRANSIENT SURGE FILTER, 240 V UN, 20 A

## CATALOG NUMBER

**TSF20A240V**

The nVent ERICO Critec Transient Surge Filter (TSF) product family is a UL registered, IEC compliant, compact, serviceable solution for protection of PLC controllers, SCADA systems, motor control centers and other process control systems.

## CERTIFICATIONS

## FEATURES

- Compact, space saving design
- Replaceable surge module reduces down time and unprotected time during maintenance
- Compliance to the latest UL 1449 Edition 4 and IEC 61643-11 surge standards and UL 1283 Electromagnetic Interference Filters (EMI) standard
- Low let-through voltages on the critical line to neutral mode
- Transient Discriminating (TD) Technology provides increased service life

## PRODUCT ATTRIBUTES

- Nominal System Voltage (Un): 240 V
- Rated Load Current (IL): 20 A
- Max Continuous Operating Voltage (Uc): 275 V
- Stand-off Voltage: 440
- Frequency: 0 – 100 Hz
- Max Discharge Current (Imax), L-N: 20 kA 8/20 µs

Max Discharge Current (Imax), L-PE: 20 kA 8/20 µs

Max Discharge Current (Imax), N-PE: 20 kA 8/20 µs

Filtering: -50 dB @ 100 kHz

Distribution System: 1Ph 2W+G

Protection Modes: L-N;L-PE;N-PE

Status Indication: Mechanical flag;Remote Contacts

Mounting: 35 mm top hat DIN rail

Connection, Solid: #14 – #10

Connection, Stranded: #14 – #10

Enclosure Material: UL® 94V-0 Thermoplastic

Enclosure Rating: IP 20

Temperature: -31 to 104 °F

Module Width: 3 M

Width: 2.130"

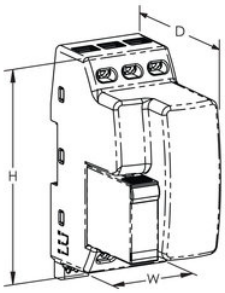
Depth: 3 3/4"

Height: 4.830"

Unit Weight: 1.120 lb

Replacement Module: TSF240MTDS

## DIAGRAMS



| IEC 61643-11 Ratings | | | | | |
|---|---|---|---|---|---|
| **Part Number** | **TSF6A24V** | **TSF6A120V** | **TSF20A120V** | **TSF6A240V** | **TSF20A240V** |
| Max Continuous Operating Voltage (Uc) | 30 V | 170 V | | 275 V | |
| Rated Load Current (IL) | 6 A | | 16 A | 6 A | 16 A |
| Nominal Discharge Current (In), L-N | 3 kA 8/20 µs | | | | |
| Nominal Discharge Current (In), L-PE | 3 kA 8/20 µs | | | | |
| Nominal Discharge Current (In), N-PE | 3 kA 8/20 µs | | | | |
| Voltage Protection Level (Up), L-N | 330 V | 330 V | 330 V | 800 V | 850 V |
| Voltage Protection Level (Up), L-PE | 500 V | 1050 V | 1050 V | 1800 V | 1900 V |
| Voltage Protection Level (Up), N-PE | 500 V | 1050 V | 1050 V | 1800 V | 1900 V |
| Overcurrent Protection Circuit Breaker | Clipsal 4CB106/10 | | Clipsal 4CB116/10 | Clipsal 4CB106/10 | Clipsal 4CB116/10 |
| Complies With | IEC® 61643-11 Class II | | | | |

| UL 1449 Edition 4 / UL 1283 Edition 5 Ratings | | | | | |
|---|---|---|---|---|---|
| **Part Number** | **TSF6A24V** | **TSF6A120V** | **TSF20A120V** | **TSF6A240V** | **TSF20A240V** |
| Max Continuous Operating Voltage (Uc) | - | 170 V | | 275 V | |
| Rated Load Current (IL) | - | 6 A | 20 A | 6 A | 20 A |
| Nominal Discharge Current (In), L-N | - | 3 kA 8/20 µs | | | |
| Nominal Discharge Current (In), L-PE | - | 3 kA 8/20 µs | | | |
| Nominal Discharge Current (In), N-PE | - | 3 kA 8/20 µs | | | |
| Voltage Protection Rating (VPR), L-N | - | 330 V | 400 V | - | - |
| Voltage Protection Rating (VPR), L-PE | - | 900 V | 800 V | - | - |
| Voltage Protection Rating (VPR), N-PE | - | 700 V | 700 V | - | - |
| Measured Limiting Voltage (MLV), L-N | - | - | - | 620 V | 680 V |
| Measured Limiting Voltage (MLV), L-PE | - | - | - | 1450 V | 1360 V |
| Measured Limiting Voltage (MLV), N-PE | - | - | - | 1220 V | 1330 V |
| Overcurrent Protection Fuse | - | Bussmann FNQ-R-7-1/2 | Mersen ATMR25 | Bussmann FNQ-R-7-1/2 | Mersen ATMR25 |
| Certification Details | - | UL® 1449 Edition 4 Type 2CA, 3 kA Mode | | UL® 1449 Edition 4 Type 4CA, 3 kA Mode | |
| | | UL® 1283 Edition 5 EMI Filter | | | |

## WARNING

nVent products shall be installed and used only as indicated in nVent's product instruction sheets and training materials. Instruction sheets are available at www.nvent.com and from your nVent customer service representative. Improper installation, misuse, misapplication or other failure to completely follow nVent's instructions and warnings may cause product malfunction, property damage, serious bodily injury and death and/or void your warranty.


**North America**
+1.800.753.9221
Option 1 – Customer Care
Option 2 – Technical Support

**Europe**
Netherlands:
+31 800-0200135
France:
+33 800 901 793

**Europe**
Germany:
800 1890272
Other Countries:
+31 13 5835404

**APAC**
Shanghai:
+ 86 21 2412 1618/19
Sydney:
+61 2 9751 8500