

DT1M DIN Rail Surge Protection Class I+II 25 kA



Surges and voltage transients are a major cause of expensive electronic equipment failure and business disruption. Damage may result in the loss of capital outlays, such as computers and communications equipment, as well as consequential loss of revenue and profits due to unscheduled system down-time. nVent ERICO offers multiple series of surge protective devices (SPDs) suitable for a vast range of applications that provide reliable protection from voltage transients on power distribution systems. The DT1M Series DIN Rail Surge Protective Devices provide reliable and efficient protection against voltage transients within the IEC Class I (25 kA) environment. Tested and independently certified to the IEC standard, the DT1M Series provides a range of compact, safe and high surge rated performance features for the harsh IEC Class I environment and suitable for protection within a wide range of applications.

Additionally, the nVent ERICO DT1M Series sets itself apart from the competition with an innovative and unique technology. This technology advancement provides spark gap-like performance with MOV current extinction. The same technology allows the DT1M Series to be thinner than the competition by as much as 50% and can also be universally coordinated with any Class II or Class III SPD.

CERTIFICATIONS







FEATURES

Spark gap surge performance with MOV-like current extinction

Universally coordinated with any Class II or Class III surge protection devices

Follow current limitation, no tripping of a 16 A gG fuse

Compact, yet high surge rated pluggable design, using minimum DIN rail width

Retaining clip ensures enhanced vibration and shock resistance performance

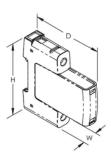
Red/Green status indication and change-over contacts standard for remote monitoring

Includes thermal disconnect for safe end of life

SPECIFICATIONS

| Catalog Number | DT1M27510R | DT1M27530R | DT1M27531R | DT1M27540R |
|--|-------------------------------------|--------------------------|-----------------------------------|--------------------------|
| Nominal System Voltage (Un) | 240 VAC | 220/380 - 240/415 VAC | 220/380 - 240/415 VAC | 220/380 - 240/415 VAC |
| Max Continuous Operating Voltage (Uc) | 275 VAC | 275 VAC | 275 VAC L-N 305 VAC N-PE | 275 VAC |
| Nominal Discharge Current (In), IEC | 25kA 8/20 μs | 25kA 8/20 μs | | 25kA 8/20 μs |
| Nominal Discharge Current (In), IEC, L-N | | | 25kA 8/20 μs | |
| Nominal Discharge Current (In), IEC, N-PE | | | 100kA 8/20 μs | |
| Max Discharge Current (Imax), IEC | 65kA 8/20 μs | 65kA 8/20 μs | | 65kA 8/20 μs |
| Max Discharge Current (Imax), IEC, L-N | | | 65kA 8/20 μs | |
| Max Discharge Current (Imax), IEC, N-PE | | | 150kA 8/20 µs | |
| Impulse Current (limp) | 25kA 10/350 μs | 25kA 10/350 μs | 25kA 10/350 μs 100kA 10/350 μs | 25kA 10/350 μs |
| Voltage Protection Level (Up) | 1500V | 1550V | | 1550V |
| Voltage Protection Level (Up), L-N | | | 1800V | |
| Voltage Protection Level (Up), N-PE | | | 1500V | |
| Back-Up Fuse @ Isccr | 315 A @ 50 kA | 315 A @ 50 kA | 315 A @ 50 kA | 315 A @ 50 kA |
| Frequency | 50 - 60 Hz | 50 - 60 Hz | 50 - 60 Hz | 50 - 60 Hz |
| Response Time | 100 ns Max | 100 ns Max | 100 ns Max | 100 ns Max |
| Short Circuit Current Rating (Isccr) | 50kA | 50kA | 50kA | 50kA |
| Distribution System | TN-C TN-S TT (L-N) | TN-C | TN-S TT | TN-S |
| Protection Modes | L-N L-PE L-PEN N-PE (TN-S) | L-PEN | L-N N-PE | L-PE N-PE |
| Follow Current Interrupt Rating (Ifi) | 50kA | 50kA | 50kA 100kA | 50kA |

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|--|--|--|--|--|
| Temporary Over Voltage 120 min (Ut/mode) | 442 V Withstand | 442 V Withstand | | 442 V Withstand |
| Temporary Over Voltage 120 min (Ut/mode), L-N | | | 442 V Withstand | |
| Temporary Over Voltage Withstand 200 ms (Ut), N-PE | | | 1200V | |
| Technology | Thermal Disconnect | Thermal Disconnect | Thermal Disconnect | Thermal Disconnect |
| Connection, Solid | 35 mm² Max | 35 mm² Max | 35 mm² Max | 35 mm² Max |
| Connection, Stranded | 25 mm² Max | 25 mm² Max | 25 mm² Max | 25 mm² Max |
| Torque (TQ) | 4.5 N·m | 4.5 N·m | 4.5 N·m | 4.5 N·m |
| Altitude | 2000 m Max | 2000 m Max | 2000 m Max | 2000 m Max |
| Humidity | 5 - 95 | 5 - 95 | 5 - 95 | 5 - 95 |
| Temperature | -40 to 70 °C |
| Enclosure Material | UL® 94V-0 Thermoplastic | UL® 94V-0 Thermoplastic | UL® 94V-0 Thermoplastic | UL® 94V-0 Thermoplastic |
| Enclosure Rating | IP 20 | IP 20 | IP 20 | IP 20 |
| Mounting | 35 mm top hat DIN rail |
| Remote Contact Switching Capacity | 1 A @ 250 VAC 1 A @ 125 VAC 0.5 A @ 48 VDC 0.5 A @ 24 VDC 0.5 A @ 12 VDC | 1 A @ 250 VAC 1 A @ 125 VAC 0.5 A @ 48 VDC 0.5 A @ 24 VDC 0.5 A @ 12 VDC | 1 A @ 250 VAC 1 A @ 125 VAC 0.5 A @ 48 VDC 0.5 A @ 24 VDC 0.5 A @ 12 VDC | 1 A @ 250 VAC 1 A @ 125 VAC 0.5 A @ 48 VDC 0.5 A @ 24 VDC 0.5 A @ 12 VDC |
| Remote Contacts | Yes | Yes | Yes | Yes |
| Status Indication | Mechanical flag | Mechanical flag | Mechanical flag | Mechanical flag |
| Depth (D) | 85mm | 85mm | 85mm | 85mm |
| Height (H) | 90 mm | 90 mm | 90 mm | 90 mm |
| Width (W) | 18 mm | 54 mm | 72 mm | 72 mm |
| Unit Weight | 0.18 kg | 0.51 kg | 0.69 kg | 0.68 kg |
| Replacement Module | DT1M275M | DT1M275M | DT1M27531M SGT1100M | DT1M275M |
| Complies With | EN 61643-11 Type 1, Type 2 IEC® 61643-11 Class I, Class II | EN 61643-11 Type 1, Type 2 IEC® 61643-11 Class I, Class II | EN 61643-11 Type 1, Type 2 IEC® 61643-11 Class I, Class II | EN 61643-11 Type 1, Type 2 IEC® 61643-11 Class I, Class II |



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.

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