

# DT1 DIN Rail Surge Protection Class I+II 12.5 kA, 1+0 Mode



## FEATURES

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

External back-up fuse is not required up to 315 A (IEC only)

Retaining clip ensures enhanced vibration and shock resistance performance

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



## SPECIFICATIONS

Table 1/3

| Catalog Number                        | DT17510R              | DT130010R             | DT175010R          | DT148010R           |
|---------------------------------------|-----------------------|-----------------------|--------------------|---------------------|
| Nominal System Voltage (Un)           | 60 V                  | 240 V                 | 600 V              | 400 V               |
| Max Continuous Operating Voltage (Uc) | 75 V                  | 300 V                 | 750 V              | 480 V               |
| Nominal Discharge Current (In), IEC   | 20kA 8/20 $\mu$ s     | 20kA 8/20 $\mu$ s     | 20kA 8/20 $\mu$ s  | 20kA 8/20 $\mu$ s   |
| Max Discharge Current (Imax), IEC     | 50kA 8/20 $\mu$ s     | 50kA 8/20 $\mu$ s     | 35kA 8/20 $\mu$ s  | 50kA 8/20 $\mu$ s   |
| Impulse Current (Iimp)                | 12.5kA 10/350 $\mu$ s | 12.5kA 10/350 $\mu$ s | 5kA 10/350 $\mu$ s | 10kA 10/350 $\mu$ s |
| Voltage Protection Level (Up)         | 700V                  | 1400V                 | 2700V              | 2000V               |
| Response Time                         | 25 ns Max             | 25 ns Max             | 25 ns Max          | 25 ns Max           |

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|-------------------------------------------|--------------------------------|--------------------------------|------------------------------|--------------------------------|
| Back-Up Fuse @ Isccr                      | 250 A @ 50 kA<br>315 A @ 25 kA | 250 A @ 50 kA<br>315 A @ 25 kA | 250 A @ 50 kA                | 250 A @ 50 kA<br>315 A @ 25 kA |
| Frequency                                 | 50 - 60 Hz                     | 50 - 60 Hz                     | 50 - 60 Hz                   | 50 - 60 Hz                     |
| Short Circuit Current Rating (Isccr)      | 25kA<br>50kA                   | 25kA<br>50kA                   | 50kA                         | 25kA<br>50kA                   |
| Protection Modes                          | L-PE<br>L-PEN<br>N-PE<br>L-N   | L-PE<br>L-PEN<br>N-PE<br>L-N   | L-N<br>L-PE<br>L-PEN<br>N-PE | L-PE<br>L-PEN<br>N-PE<br>L-N   |
| Temporary Over Voltage 120 min (Ut/mode)  | 114 V Withstand                | 442 V Safe Fail                | 1143 V Safe Fail             | 762 V Safe Fail                |
| Temporary Over Voltage Withstand 5 s (Ut) | 114V                           | 337V                           | 871V                         | 571V                           |
| Voltage Protection Rating (VPR)           | 330V                           | 900V                           | 2500V                        | 1500V                          |
| Nominal Discharge Current (In), UL        | 20kA 8/20 µs                   | 20kA 8/20 µs                   | 20kA 8/20 µs                 | 20kA 8/20 µs                   |
| Replacement Module                        | DT175M                         | DT1300M                        | DT1750M                      | DT1480M                        |
| Short Circuit Current Rating (SCCR)       | 100kA                          | 200kA                          | 150kA                        | 200kA                          |
| Technology                                | Thermal Disconnect             | Thermal Disconnect             | Thermal Disconnect           | Thermal Disconnect             |
| Connection, Solid                         | 35 mm <sup>2</sup> Max         | 35 mm <sup>2</sup> Max         | 35 mm <sup>2</sup> Max       | 35 mm <sup>2</sup> Max         |

Table 2/3

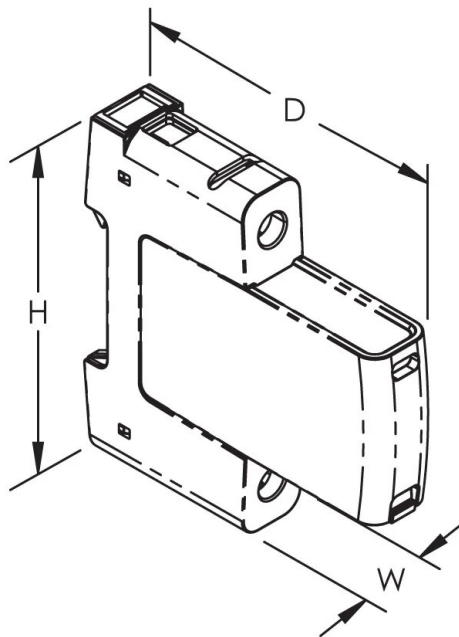
| Catalog Number                    | DT17510R                                                                             | DT130010R                                                                            | DT175010R                                                                            | DT148010R                                                                            |
|-----------------------------------|--------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| Connection, Stranded              | 25 mm <sup>2</sup> Max                                                               | 25 mm <sup>2</sup> Max                                                               | 25 mm <sup>2</sup> Max                                                               | 25 mm <sup>2</sup> Max                                                               |
| Torque (TQ)                       | 4.5 N·m                                                                              | 4.5 N·m                                                                              | 4.5 N·m                                                                              | 4.5 N·m                                                                              |
| Humidity                          | 5 - 95                                                                               | 5 - 95                                                                               | 5 - 95                                                                               | 5 - 95                                                                               |
| Temperature                       | -35 to 85 °C                                                                         | -35 to 85 °C                                                                         | -35 to 85 °C                                                                         | -35 to 85 °C                                                                         |
| Enclosure Material                | UL® 94V-0<br>Thermoplastic                                                           | UL® 94V-0<br>Thermoplastic                                                           | UL® 94V-0<br>Thermoplastic                                                           | UL® 94V-0<br>Thermoplastic                                                           |
| Enclosure Rating                  | IP 20                                                                                | IP 20                                                                                | IP 20                                                                                | IP 20                                                                                |
| Mounting                          | 35 mm top hat DIN rail                                                               | 35 mm top hat DIN rail                                                               | 35 mm top hat DIN rail                                                               | 35 mm top hat DIN rail                                                               |
| Remote Contact Switching Capacity | 0.5 A @ 12 VDC<br>0.5 A @ 24 VDC<br>0.5 A @ 48 VDC<br>1 A @ 125 VAC<br>1 A @ 250 VAC | 0.5 A @ 12 VDC<br>0.5 A @ 24 VDC<br>0.5 A @ 48 VDC<br>1 A @ 125 VAC<br>1 A @ 250 VAC | 0.5 A @ 12 VDC<br>0.5 A @ 24 VDC<br>0.5 A @ 48 VDC<br>1 A @ 125 VAC<br>1 A @ 250 VAC | 0.5 A @ 12 VDC<br>0.5 A @ 24 VDC<br>0.5 A @ 48 VDC<br>1 A @ 125 VAC<br>1 A @ 250 VAC |

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|-------------------|-----------------|-----------------|-----------------|-----------------|
| Remote Contacts   | Yes             | Yes             | Yes             | Yes             |
| Status Indication | Mechanical flag | Mechanical flag | Mechanical flag | Mechanical flag |
| Depth (D)         | 92mm            | 92mm            | 92mm            | 92mm            |
| Height (H)        | 90 mm           | 90 mm           | 90 mm           | 90 mm           |
| Width (W)         | 18 mm           | 18 mm           | 18 mm           | 18 mm           |

Table 3/3

| Catalog Number        | DT17510R                                                            | DT130010R                                                           | DT175010R                                                           | DT148010R                                                           |
|-----------------------|---------------------------------------------------------------------|---------------------------------------------------------------------|---------------------------------------------------------------------|---------------------------------------------------------------------|
| Unit Weight           | 0.17 kg                                                             | 0.18 kg                                                             | 0.2 kg                                                              | 0.2 kg                                                              |
| Certification Details | UL® 1449 Edition 5<br>Type 1CA                                      | UL® 1449 Edition 5<br>Type 1CA                                      | UL® 1449 Edition 5<br>Type 1CA                                      | UL® 1449 Edition 5<br>Type 1CA                                      |
| Complies With         | EN 61643-11 Type 1,<br>Type 2<br>IEC® 61643-11 Class I,<br>Class II | EN 61643-11 Type 1,<br>Type 2<br>IEC® 61643-11 Class I,<br>Class II | EN 61643-11 Type 1,<br>Type 2<br>IEC® 61643-11 Class I,<br>Class II | EN 61643-11 Type 1,<br>Type 2<br>IEC® 61643-11 Class I,<br>Class II |
| Certifications        | VDE, CE, ERICO DT1<br>Series, cUR, UR                               | UR, CE, ERICO DT1<br>Series, cUR, VDE                               |                                                                     | CE, ERICO DT1 Series,<br>UR, cUR, VDE                               |

## DIAGRAMS



## 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](http://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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