

NEW

# Overvoltage Protection Technology with Integrated Fuse



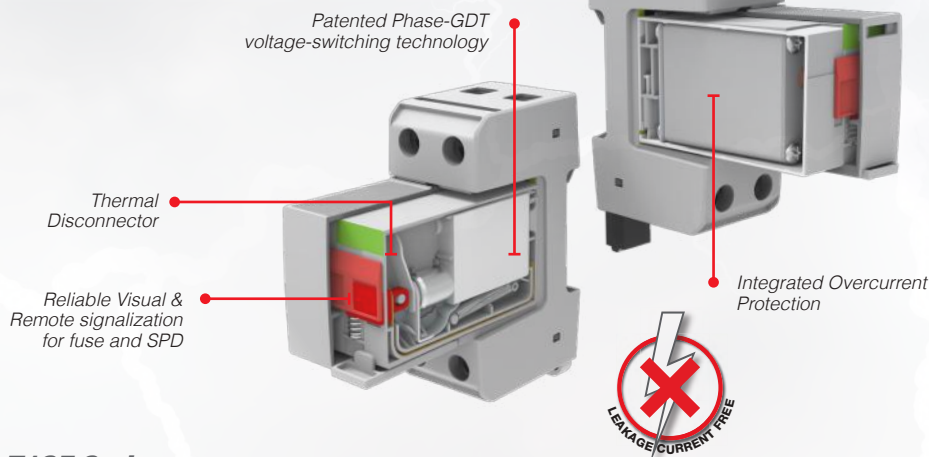
**Raycap**

# Surge Protection with Integrated Fuse

Raycap's technology with back up fuse combines the protection of a separate fuse into one unit, saving space in the control cabinet.

## Integrated Fuse Product Family: Type 1 and Type 2

- The coordinated tripping characteristics of the thermal disconnection mechanism and integrated backup fuse provide full-range fault current protection and end-of-life disconnection for enhanced safety
- Reduced installation space requirements, installation costs, wiring time and complexity
- Shorter connecting cables improve voltage protection level across installation points
- Enables installation on networks with low prospective currents
- Visual and remote signalization of fuse and SPD status
- New integrated fuse technology is available presently in two products: the ProTec T1SF and the ProTec T2F.



## Integrated Overcurrent Protection



On networks with high prospective currents, SPDs with integrated fuses provide enhanced safety and fault-current protection due to the coordinated tripping characteristics of the thermal disconnect and the integrated fuse.

### ProTec T1SF Series

Raycap's new ProTec T1SF Series is based on patented Phase Gas Discharge Tube (PGDT) and integrated overcurrent protection technologies. The products ensure safe thermal and fault-current disconnection on networks with prospective currents as low as 300A and as high as 75,000A. A coordinated thermal disconnect provides disconnection at low fault currents (<300A), extending a continuous fault-tripping characteristic down to 1A.

Type 1+2 leakage current free product  
for installation in the pre-metering area

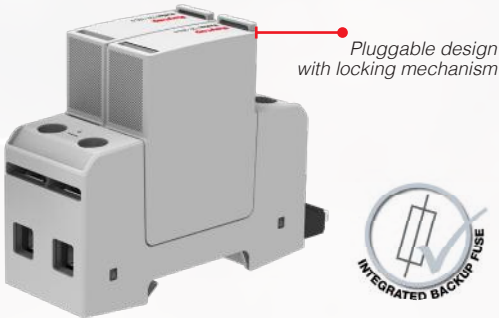
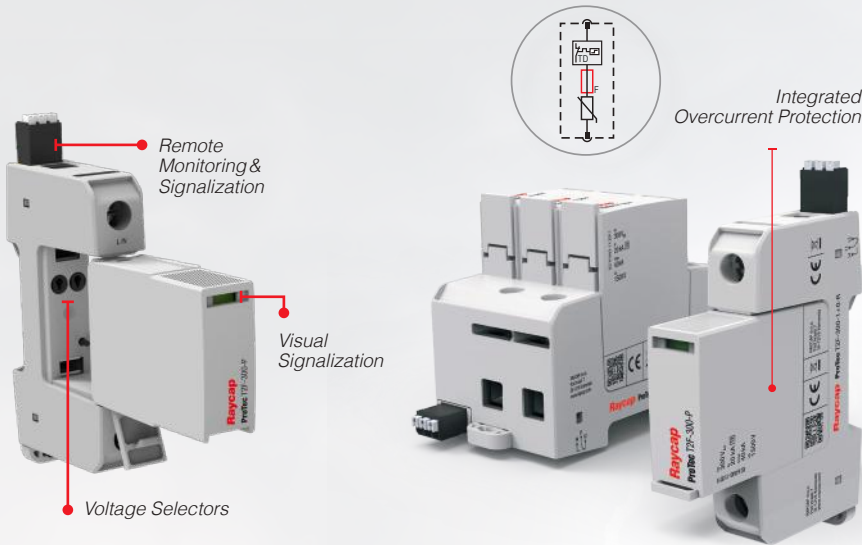
| TYPE 1+2 | PRODUCT SERIES                                        | $I_{imp}$  | $I_n$             | $I_{max}$ | COMBINATION | $U_c = 275V$ |
|----------|-------------------------------------------------------|------------|-------------------|-----------|-------------|--------------|
|          | <b>ProTec T1SF</b><br>Phase GDT Technology • EN T1+T2 | 25 kA      | 25 kA             | 65 kA     |             | ✓            |
|          |                                                       | Order Code | Configuration     |           |             |              |
|          | ProTec T1SF-275-1+0                                   | 59.A500    | Basic Version     |           | 1+0         |              |
|          | ProTec T1SF-275-1+0-R                                 | 59.A501    | Remote Monitoring |           |             |              |

# Type 2+3 DIN Rail mounted surge protection device with integrated fuse

## ProTec T2F Series

The practical 2-in-1 device simplifies planning, installation, and maintenance. For example, the need to dimension a backup fuse is not applicable with the ProTec T2F product series as this is already integrated and matched to its performance parameters.

The new Type 2 arrester has an integrated back up fuse, a protection level of 1,500 V, a maximum discharge capacity of 40 kA 8/20  $\mu$ s and a rated discharge current of 20 kA 8/20  $\mu$ s. In addition to the proven Raycap ProTec T2 technology developed for use in systems with a rated current of up to 315A without backup fuse, the T2F Series with integrated backup fuse offers protection independent of installed fuses found in equipment inside large industrial installations.



| PRODUCT SERIES            |                      | $I_n$      | $I_{max}$         | $U_{oc} / I_{cw}$ | COMBINATION | $U_c = 300V$ |
|---------------------------|----------------------|------------|-------------------|-------------------|-------------|--------------|
| <b>ProTec T2F Series</b>  |                      | 20kA       | 40kA              | 6kV/3kA           | all         | ✓            |
| MOV Technology • EN T2+T3 |                      | Order Code | Configuration     |                   |             |              |
| TYPE 2+3                  | ProTec T2F-300-1+0   | 59.A250    | Basic Version     |                   | 1+0         |              |
|                           | ProTec T2F-300-1+0-R | 59.A251    | Remote Monitoring |                   |             |              |
|                           | ProTec T2F-300-2+0   | 59.A252    | Basic Version     |                   | 2+0         |              |
|                           | ProTec T2F-300-2+0-R | 59.A253    | Remote Monitoring |                   |             |              |
|                           | ProTec T2F-300-3+0   | 59.A254    | Basic Version     |                   | 3+0         |              |
|                           | ProTec T2F-300-3+0-R | 59.A255    | Remote Monitoring |                   |             |              |
|                           | ProTec T2F-300-4+0   | 59.A256    | Basic Version     |                   | 4+0         |              |
|                           | ProTec T2F-300-4+0-R | 59.A257    | Remote Monitoring |                   |             |              |
|                           | ProTec T2F-300-1+1   | 59.A259    | Basic Version     |                   | 1+1         |              |
|                           | ProTec T2F-300-1+1-R | 59.A260    | Remote Monitoring |                   |             |              |
|                           | ProTec T2F-300-3+1   | 59.A261    | Basic Version     |                   | 3+1         |              |
|                           | ProTec T2F-300-3+1-R | 59.A262    | Remote Monitoring |                   |             |              |

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