

## AT92 Series - ATLINE

ATLINE

# Modular protector for data lines

Efficient protection for data lines, containing coordinated protection for one pair of lines.

- Protection for data lines and the connected equipment (computers, PLCs, sensors, etc.).
- Wide variety of SPDs for different working voltages.
- Discharge takes place in an internal encapsulated element, without external flashes.
- Both common and differential modes of protection.
- Low residual voltage.
- Very fast response.
- Mechanic connection, which provides better lightning current withstanding capacity than other standard data line connectors.

ATLINE SPDs have been tested in **official, independent laboratories**, obtaining their characteristics according to relevant standards (related in the table).

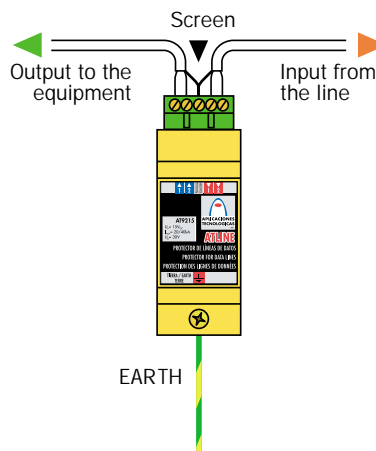
### INSTALLATION

ATLINE SPDs should be installed preferably **as close to the equipment as possible**. One communication cable or data line may contain several wires. Each ATLINE can protect two of these wires. It is very important to know precisely the **working voltage, current and function of each wire**, in order to select the proper SPD. In case where two equipments located in **separated buildings but linked together** are to be protected, protection must be installed in both sides of the line.

The recommended **installation procedure** is the following:

1. Cut the data cable.
2. Insert the cable ends in the connectors. Verify carefully that input and output connections are correctly placed.
3. If the cable is screened, connect the screen at the indicated place.
4. Connect the bottom terminal to the earth termination system where current will be diverted.

**Earth connection** is a must. Earthing in all the installation must be bonded either directly or by a spark gap and resistance should be lower than  $10\Omega$ . If the indications of this datasheet are not fulfilled during the use or installation of the SPDs, the protection assured by this device could be endangered.



### AT92 SERIES - ATLINE

**AT9205 ATLINE 5:**

5V<sub>DC</sub> lines

**AT9212 ATLINE 12:**

12V<sub>DC</sub> lines

**AT9215 ATLINE 15:**

15V<sub>DC</sub> lines

**AT9224 ATLINE 24:**

24V<sub>DC</sub> lines

**AT9230 ATLINE 30:**

30V<sub>DC</sub> lines

**AT9248 ATLINE 48:**

48V<sub>DC</sub> lines

**AT9260 ATLINE 60:**

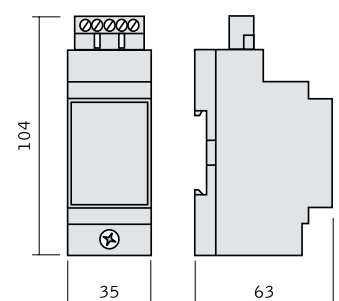
60V<sub>DC</sub> lines

**AT9280 ATLINE 80:**

80V<sub>DC</sub> lines

**AT9210 ATLINE 110:**

110V<sub>DC</sub> lines





**AT9205 ATLINE 5:** 5V<sub>DC</sub> lines  
**AT9212 ATLINE 12:** 12V<sub>DC</sub> lines  
**AT9215 ATLINE 15:** 15V<sub>DC</sub> lines  
**AT9224 ATLINE 24:** 24V<sub>DC</sub> lines  
**AT9230 ATLINE 30:** 30V<sub>DC</sub> lines

|  |                                  | ATLINE5   | ATLINE12             | ATLINE15             | ATLINE24             | ATLINE30             |
|--|----------------------------------|---|----------------------|----------------------|----------------------|----------------------|
|  |                                  | AT9205  | AT9212               | AT9215               | AT9224               | AT9230               |
| Reference                                    |                                  |   |                      |                      |                      |                      |
| Nominal voltage:                             | U <sub>n</sub>                   | 5V <sub>DC</sub>  | 12V <sub>DC</sub>    | 15V <sub>DC</sub>    | 24V <sub>DC</sub>    | 30V <sub>DC</sub>    |
| Maximum continuous operating voltage:        | U <sub>c</sub>                   | 7V <sub>AC,DC</sub>   | 15V <sub>AC,DC</sub> | 18V <sub>AC,DC</sub> | 31V <sub>AC,DC</sub> | 37V <sub>AC,DC</sub> |
| Nominal discharge current (8/20μs wave):     | I <sub>n</sub>                   | 10kA / 20kA   |                      |                      |                      |                      |
| Maximum discharge current (8/20μs wave):     | I <sub>max</sub>                 | 20kA / 40kA   |                      |                      |                      |                      |
| Impulse current (10/350μs wave):             | I <sub>imp</sub>                 | 4kA / 8kA   |                      |                      |                      |                      |
| Protection level (1,2/50μs):                 | U <sub>p</sub>                   | 9V  | 18V                  | 20V                  | 35V                  | 40V                  |
| Protection level at I <sub>n</sub> (8/20μs): | U <sub>p</sub> (I <sub>n</sub> ) | 13V   | 25V                  | 25V                  | 40V                  | 45V                  |
| Nominal current:                             | I <sub>N</sub>                   | 360mA   |                      |                      |                      |                      |
| Resistance (series):                         | R <sub>s</sub>                   | 15Ω   |                      |                      |                      |                      |
| Response time:                               | t <sub>r</sub>                   | < 1ns   |                      |                      |                      |                      |
| SPD location:                                |                                  | Indoor  |                      |                      |                      |                      |
| Type of connection:                          |                                  | Series (two ports)  |                      |                      |                      |                      |
| Mounting method:                             |                                  | Fixed   |                      |                      |                      |                      |
| Working temperature:                         | ϑ                                | -55°C to +85°C  |                      |                      |                      |                      |
| Dimensions:                                  |                                  | 35 x 104 x 63mm (2 mod. DIN43880)   |                      |                      |                      |                      |
| Fixing:                                      |                                  | DIN Rail  |                      |                      |                      |                      |
| Enclosure material:                          |                                  | Polycarbonate   |                      |                      |                      |                      |
| Enclosure protection:                        |                                  | IP20  |                      |                      |                      |                      |
| Insulation resistance:                       |                                  | > 10 <sup>14</sup> Ω  |                      |                      |                      |                      |
| Autoextinguish enclosure:                    |                                  | V-0 Type according to UNE-EN 60707 (UL94)   |                      |                      |                      |                      |
| Connections to line:                         |                                  | Maximum section 2.5mm <sup>2</sup> (AWG 9)  |                      |                      |                      |                      |
| Connections to ground:                       |                                  | Max/Min section multi-stranded: 16 / 45mm <sup>2</sup> (5/1 AWG)<br>Max/Min section single-stranded: 4 / 45mm <sup>2</sup> (11/1 AWG) |                      |                      |                      |                      |

**Certificated tests according to: IEC 61643-21 / NFC 61-0740**

Relevant standards: UNE21186 / NFC 17102 / UNE21185 / IEC61024-1 / IEC61312-3





**AT9248 ATLINE 48:** 48V<sub>DC</sub> lines  
**AT9260 ATLINE 60:** 60V<sub>DC</sub> lines  
**AT9280 ATLINE 80:** 80V<sub>DC</sub> lines  
**AT9210 ATLINE 110:** 110V<sub>DC</sub> lines

|  |             | <b>ATLINE48</b>   | <b>ATLINE60</b>      | <b>ATLINE80</b>      | <b>ATLINE110</b>      |
|--|-------------|---|----------------------|----------------------|-----------------------|
|  |             | <b>AT9248</b>   | <b>AT9260</b>        | <b>AT9280</b>        | <b>AT9210</b>         |
| Reference                                |             |   |                      |                      |                       |
| Nominal voltage:                         | $U_n$       | 48V <sub>DC</sub>   | 60V <sub>DC</sub>    | 80V <sub>DC</sub>    | 110V <sub>DC</sub>    |
| Maximum continuous operating voltage:    | $U_c$       | 65V <sub>AC,DC</sub>  | 72V <sub>AC,DC</sub> | 96V <sub>AC,DC</sub> | 132V <sub>AC,DC</sub> |
| Nominal discharge current (8/20μs wave): | $I_n$       | 10kA / 20kA   |                      |                      |                       |
| Maximum discharge current (8/20μs wave): | $I_{max}$   | 20kA / 40kA   |                      |                      |                       |
| Impulse current (10/350μs wave):         | $I_{imp}$   | 4kA / 8kA   |                      |                      |                       |
| Protection level (1,2/50μs):             | $U_p$       | 70V   | 90V                  | 120V                 | 160V                  |
| Protection level at $I_n$ (8/20μs):      | $U_p(I_n)$  | 75V   | 100V                 | 135V                 | 180V                  |
| Nominal current:                         | $I_N$       | 360mA   |                      |                      |                       |
| Resistance (series):                     | $R_s$       | 15Ω   |                      |                      |                       |
| Response time:                           | $t_r$       | < 1ns   |                      |                      |                       |
| SPD location:                            |             | Indoor  |                      |                      |                       |
| Type of connection:                      |             | Series (two ports)  |                      |                      |                       |
| Mounting method:                         |             | Fixed   |                      |                      |                       |
| Working temperature:                     | $\vartheta$ | -55°C to +85°C  |                      |                      |                       |
| Dimensions:                              |             | 35 x 104 x 63mm (2 mod. DIN43880)   |                      |                      |                       |
| Fixing:                                  |             | DIN rail  |                      |                      |                       |
| Enclosure material                       |             | Polycarbonate   |                      |                      |                       |
| Enclosure protection:                    |             | IP20  |                      |                      |                       |
| Insulation resistance:                   |             | > 10 <sup>14</sup> Ω  |                      |                      |                       |
| Autoextinguish enclosure:                |             | V-0 Type according to UNE-EN 60707 (UL94)   |                      |                      |                       |
| Connections to line:                     |             | Maximum section 2,5mm <sup>2</sup> (AWG 9)  |                      |                      |                       |
| Connections to ground:                   |             | Max/Min section multi-stranded: 16 / 45mm <sup>2</sup> (5/1 AWG)<br>Max/Min section single-stranded: 4 / 45mm <sup>2</sup> (11/1 AWG) |                      |                      |                       |

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Relevant standards: UNE21186 / NFC 17102 / UNE21185 / IEC61024-1 / IEC61312-3