

CG APPLICATIONS

CARLO GAVAZZI



Application Note: June 2009

Market involved : Water Treatment

Product : DSA51XXS

Customer : Engineering companies,
System integrators

Subject : Surge protection for S. Erasmo
island sewer system

CUSTOMER ISSUE :

S. Erasmo is the biggest island in the Venice lagoon (4 km long) and its sewer system (valve control) is managed by Dupline.

Venice is located in an area with high keraunic level: more than 4 lightning/km² x year.

The effects of indirect lightnings (induced overvoltages on the long bus cables) can often cause serious damages to the I/O of the system with consequent maintenance costs and dangerous working stop.

OUR SOLUTION:

DSA51XXS is a universal surge arrester for 2-wire data lines.

It is just to be connected in series with the fieldbus and connected to a PE wire.

The suggested protection distance is 10 m, so if the connection between 2 consecutive devices is less than 10 m long, just 1 arrester is needed.

On the contrary, if the distance is even some km's, an arrester is needed only in the range of 10 m from any device to be protected.

ACHIEVED BENEFITS:

- Basic, medium and fine protection.
- Two-stage protection circuit with high lightning protection capability.
- High transfer frequency of 100 MHz.
- Fits all bus systems (e.g. Profibus, Modbus RTU, Dupline, etc.).
- With installation-friendly, screwless connection clamps.
- Space-saving housing, 17.5 mm wide.

