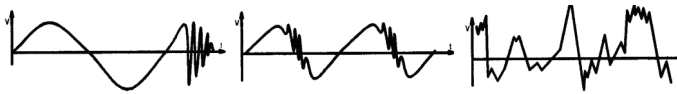


## GENERAL DESCRIPTION

### Transient Voltage Suppression in the Control Circuit

The opening and the closing of every electric device generates various random circuit phenomena depending on the type of loading, connected gears, cables, screens, etc. and their effect on command devices, both electro-mechanical and electrical. The mixed overvoltages, so generated, result from the disconnecting of these inductive loads. The electrical "noise" generated by these inductive loads varies dramatically. Typical diagrams include:



Every load represents a combination of factors such as, resistance, capacitive and inductive loads, type of input, temperature variations, etc., which determines the variables to consider in the choice of the most suitable transient voltage suppressor to avoid random malfunction or direct, the destruction of the connected device.

The suppression, which can operate at different circuit levels, is obtained using a module, mounted in parallel to the inductive load.

**This module must perform two functions:  
The elimination of the voltage increase and the fastest discharge of the accumulated magnetic energy.**

**Another important consideration is that the suppressor device itself must not generate noise, or modify, in any way, the normal function of the circuit.**

The positioning of the suppressor module in the circuit is another important factor. **The best solution is to mount the module as near as possible to the origin of the noise itself. This avoids the involving of other devices in the phenomenon such as cables.**

#### SOLUTION

Solutions include the use of diodes as DC current "dumping" circuit, the use of combinations resistance-capacitor (RC) for alternating current, and varistors, effective in both types of circuits. In addition, DETAS has developed combination devices RC + Varistors, in order to reach the best solution in difficult cases.

The wide choice available by DETAS permits you to find the type of suppressor suitable to your requirements. Finally, the DETAS and EE CONTROLS design departments can assist further with more detailed information about specific circuit needs voltage suppressors.

### Series D-9011 Electrical Noise Suppressors

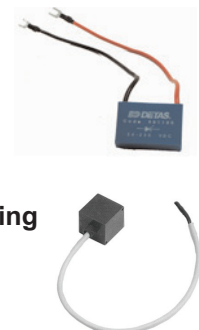
Common sources of **electrical noise** are contactor coils and solenoids, both AC & DC, and AC Motors.

**Type D-9011** are electrical noise suppressors available in three types, Diode, Varistor, and RC Circuit. Each is encapsulated in a Mini housing to be wired in parallel with the inductance or contactor coil. Important advantages include compact size, low cost, and versatile mounting.

Mounting includes an industrial adhesive backing with cut-to-length 8 inch leads. Type D-9011, then, mounts with any manufacturer's contactors, reducing inventory, with both cost and space savings.

#### D-9011 DESIGN FEATURES

- \* Versatile Mounting
- \* UL Varistors Approved
- \* Compact Size
- \* Polycarbonated Class V2 Housing
- \* Low Cost
- \* Epoxy Resin per sec. UL94VO
- \* 7.8" Wire Leads with Fork types terminals



DETAS  
SUPPRESSORS

#### Mounting and Wiring Options

**D-9011 with  
POWER  
CONTACTOR**



**D-9011 with MINI  
Contactor & Starter**

