LIGHTNING INDUCED SURGE

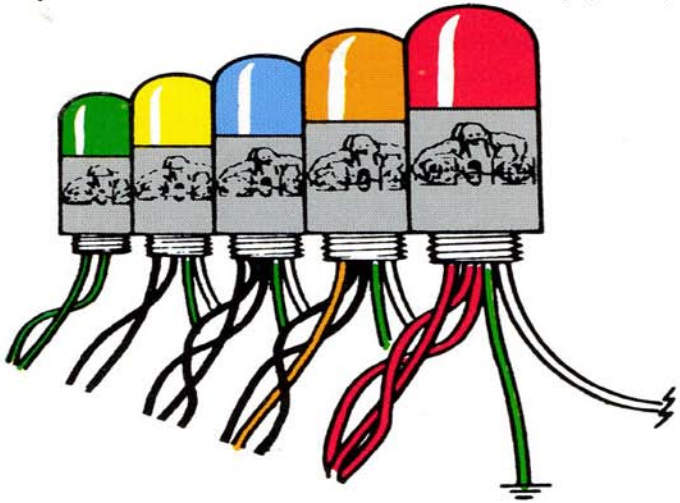
Overvoltage damage caused by Electrical Surge

CAN BE ELIMINATED

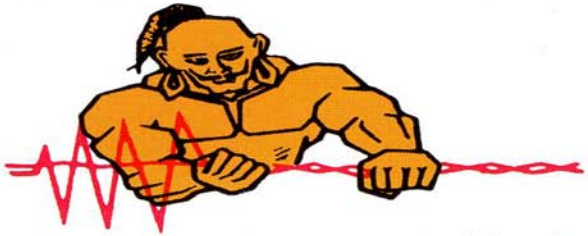
The most versatile products in the field of overvoltage elimination...

SILENT SLAVE® SYSTEMS

SLAVE: (slav); (definition 2d): A mechanical device which is directly responsive to another. (Webster's 3rd International Dictionary (1976))



SYSTEM REQUIREMENTS and INSTALLATION GUIDELINES



Incorporating the Johnson Technology of Time and Distance Logic Engineering©

The Silent Slave overvoltage elimination system (SURGE) is inexpensive, easy to install and has 30 year proven track record with over 30,000 systems installed world wide.

This system can be installed as a complete facility protection or it can be designed to protect the more surge prone areas. Expanding the system is as easy as adding more units. Every unit added increases the level of protection.

A small investment in a Silent Slave System now will eliminate the unpredictable reinvestment of replacing damaged equipment in the future.

Stop Lightning Induced Damage

- Silent Slave will save you money and down time by keeping your equipment safe from lightning induced surge damage.
- Silent Slave is installed at each electrical panel.
- The distributed installation will take care of overvoltage conditions regardless of where they enter.
- The faster they are suppressed the less the time to cause damage.

Silent Slave System Design

- Silent Slave is designed as a modular device.
- The level of protection can be increased by adding units. Every electrical panel within a facility can be protected by adding units. The over all facility protection is increased with each unit.

Protection is accumulative

- The values applied to protective *ampacity* and *joules* at each main or sub panel are accumulative to facility protection.
- They all work in the isolated area as well as simultaneous operation during catastrophic events.

Designing A System For Over All Protection

- Determine Location of Units.
- Determine Types of Units.
- Determine Number of units
- Compare to System Requirements Chart.

Determine Location Of Units

- Locate all Main and Sub Electrical Panels, Disconnects and Contactors.
- List the VOLTAGE and AMPS of each.

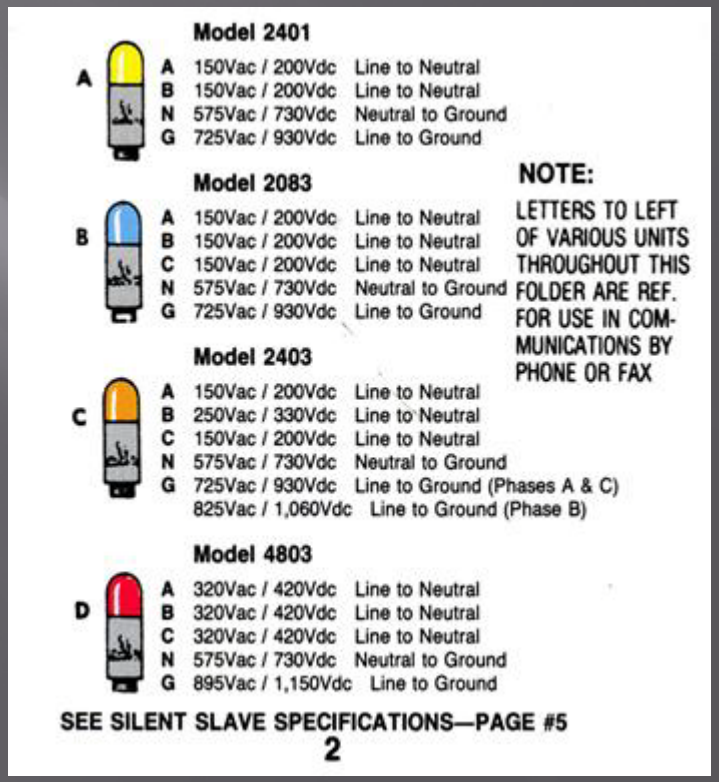
NOTE: If intentions are to first protect problem areas, list the panels that feed these areas. The protection of total facility can build in stages. The more units installed the greater the overall level of protection.

Determine Type Of Units

DETERMINE ELECTRICAL PARAMETERS

- Meter AC or DC voltage between circuit conductors.
- i.e. line/line, line/neutral, line/ground, neutral/ground
- NOTE: An electrical network operating at 380ac would require the 4803 model. Use a 4803 on the high or wild phase of a 24oVac delta.

MODEL CHART



Model 2401

A	A	150Vac / 200Vdc	Line to Neutral
	B	150Vac / 200Vdc	Line to Neutral
	N	575Vac / 730Vdc	Neutral to Ground
	G	725Vac / 930Vdc	Line to Ground

Model 2083

B	A	150Vac / 200Vdc	Line to Neutral
	B	150Vac / 200Vdc	Line to Neutral
	C	150Vac / 200Vdc	Line to Neutral
	N	575Vac / 730Vdc	Neutral to Ground
	G	725Vac / 930Vdc	Line to Ground

Model 2403

C	A	150Vac / 200Vdc	Line to Neutral
	B	250Vac / 330Vdc	Line to Neutral
	C	150Vac / 200Vdc	Line to Neutral
	N	575Vac / 730Vdc	Neutral to Ground
	G	725Vac / 930Vdc	Line to Ground (Phases A & C)
		825Vac / 1,060Vdc	Line to Ground (Phase B)

Model 4803

D	A	320Vac / 420Vdc	Line to Neutral
	B	320Vac / 420Vdc	Line to Neutral
	C	320Vac / 420Vdc	Line to Neutral
	N	575Vac / 730Vdc	Neutral to Ground
	G	895Vac / 1,150Vdc	Line to Ground

NOTE:

LETTERS TO LEFT OF VARIOUS UNITS THROUGHOUT THIS FOLDER ARE REF. FOR USE IN COM-MUNICATIONS BY PHONE OR FAX

SEE SILENT SLAVE SPECIFICATIONS—PAGE #5

System Requirements

SILENT SLAVE SYSTEM REQUIREMENTS

Single Phase Main

200 amps or less	2 Silent Slaves
400 amps	4 Silent Slaves
600 amps	6 Silent Slaves

Single Phase Sub-Distribution

60 amps or less	1 Silent Slave
Over 60 amps to 200 amps	2 Silent Slaves

Three Phase Main

200 amps or less	3 Silent Slaves
400 amps	4 Silent Slaves
600 amps	6 Silent Slaves
1000 amps	10 Silent Slaves
1200 amps	12 Silent Slaves
1400 amps or over	15 Silent Slaves

Three Phase Sub-Distribution

60 amps or less	1 Silent Slave
Over 60 amps to 200 amps	3 Silent Slaves

Add one (1) additional Silent Slave for each electric motor of fifty (50) horsepower or more. In this application, the Silent Slave must be attached to the line side of the motor's contactor or starter.

Installing The System

- The installation must be performed by a licensed electrician.
- Time to install will vary by location of each unit. In an electrical panel, main or sub it takes approximately 30 minutes per unit. This allows for opening the panel and getting ready to install. NOTE: Always meter the power before installing to double check you have the correct units.

Installing

- For complete instruction of installing the Silent Slave go to technical support and down load the manual.
- Always install units with cap pointing up or down. Never install unit where it can be used as a step or handle. Always point away from traffic.