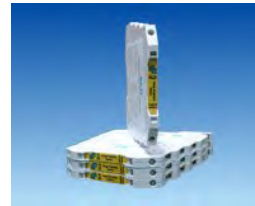




INDUSTRIAL INTERFACE LIGHTNING & SURGE PROTECTION

- Range of units to suit all Process Control and Mains applications
- Ultra-slim Process Control Modules
- Multi-stage Hybrid input circuitry provides maximum protection
- Up to 10kA Maximum surge current
- Automatic Earthing to DIN rail
- 5 Year product warranty



Introduction

Surge and lightning protection is becoming a large consideration for all Process Control installations. Lightning strikes, static discharges and induced voltages from power lines are all typical sources of high voltage transients and overloads. Any low voltage circuitry can easily be damaged or destroyed by these voltages and so Industrial Interface have designed a range of products to protect Process Control equipment from these effects.

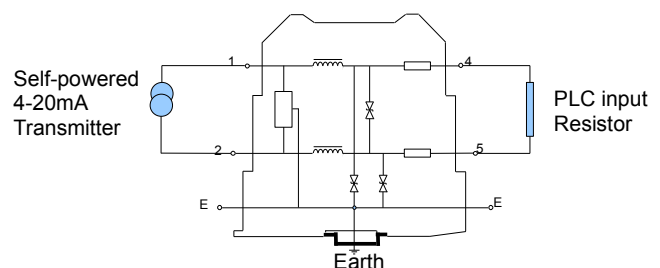
These devices incorporate three-stage protection encompassing gas discharge tubes, voltage clamping diodes and metal oxide varistors. This hybrid protection ensures that any surge currents are directed instantaneously to ground, while clamping voltages on the output terminals to suitable levels. Once the surge has subsided the device will automatically return to normal operation.

This design, combined with conservative ratings on the MOV's make these devices the maintenance-free alternative to existing surge protection devices.

A number of application examples are shown below.

Typical 4-20 mA current loop application showing how an SLD-67 device is wired to protect the input circuitry of a PLC from voltage transients.

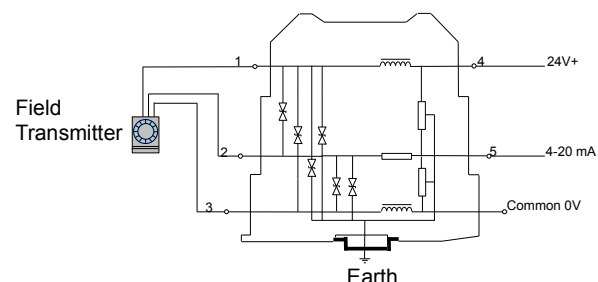
A 32 V device is recommended for 24 Vdc powered current loop circuits. The diagram shows how the automatic connection of the protective earth to the TS35 DIN rail saves on installation wiring and time.



Field transmitter powered through SLD-67 protection device.

4-20 mA signalled returned back through surge protector to process monitoring system.

Again a 32V device is recommended although a 55V device is available for higher voltage systems.



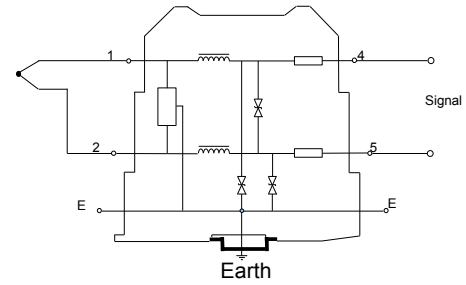


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This is the set up to protect mV inputs from such sources as thermocouples and photocells etc.

Typically these systems require a lower clamping voltage so an SLD-67 with a 7 V clamping voltage is recommended.

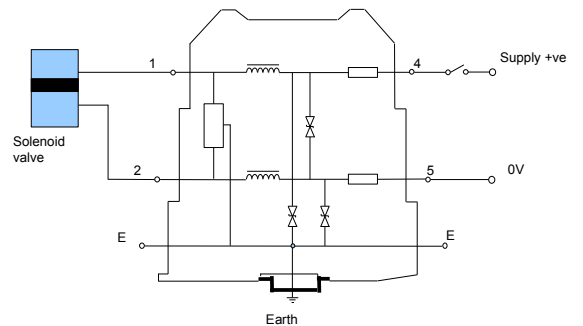
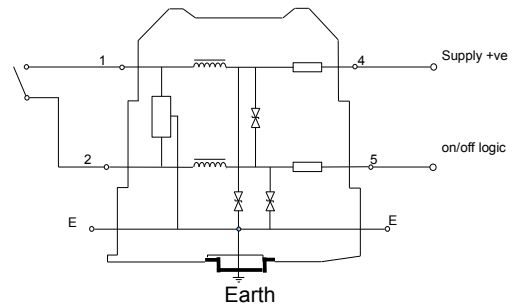
This arrangement is also suitable for turbine flowmeters.



For Digital inputs and outputs the following would be typical wiring diagrams.

The choice of clamping voltage would again be a function of the system operating voltage.

For Digital outputs the clamping voltage should be set the next available level above the system operating voltage.



There are many other applications for these surge devices, shown opposite are devices for incoming power and RS232 and Ethernet networks.

If your particular application is not shown here please contact our sales department for more information.











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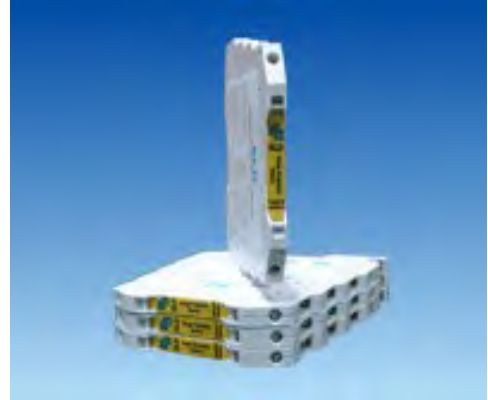
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SLD-67 Series

CONTROL SIGNAL SURGE PROTECTION DEVICES

- Units to suit all Process I/O Circuits
- Multi-stage hybrid input circuitry for maintenance free protection
- Ultra-slim design only 6.7mm wide!
- Automatic earth connection
- Suitable for all standard i/o including mA, Volts, Thermocouples and RTD's
- Designed to IEC 61643-1
- Ten year product warranty



Description

The SLD-67 range of ultra-slim surge protection devices from Industrial Interface are designed to protect process control signals from the effects of high voltage transients and overloads.

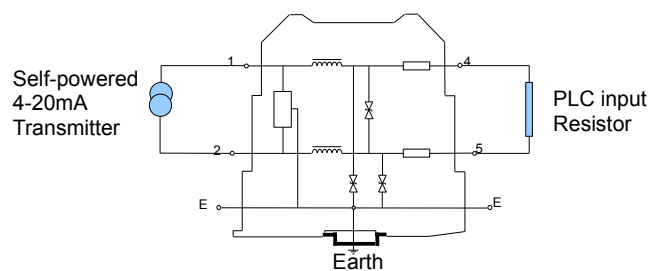
The units work by diverting the transient current to earth whilst limiting the voltage on the signal lines to acceptable levels. The necessary earth connection is automatically achieved through the mounting of the units to a suitably earthed DIN rail.

Units are available for all standard process control signal types, including 2 and 3-wire 4-20mA loops, voltage inputs and outputs, mV and thermocouple inputs and 2 and 3-wire RTD inputs. There are also versions for digital inputs and outputs.

Some typical applications are shown below.

Typical 4-20 mA current loop application showing how an SLD-67 device is wired to protect the input circuitry of a PLC from voltage transients.

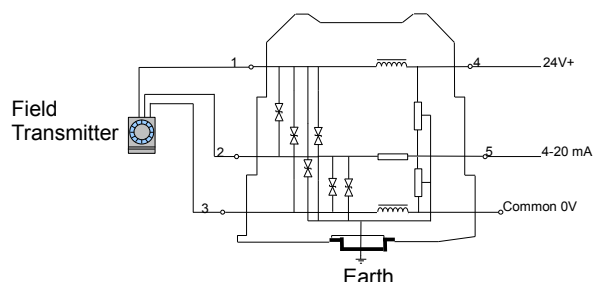
A 32 V device is recommended for 24 Vdc powered current loop circuits. The diagram shows how the automatic connection of the protective earth to the TS35 DIN rail saves on installation wiring and time.



Field transmitter powered through SLD-67 protection device.

4-20 mA signalled returned back through surge protector to process monitoring system.

Again a 32V device is recommended although a 55V device is available for higher voltage systems.

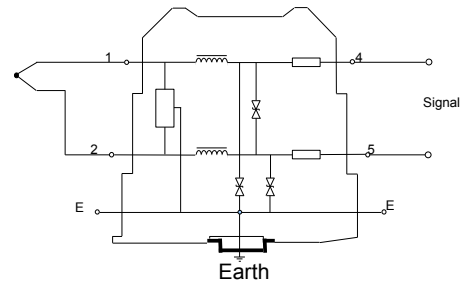




This is the set up to protect mV inputs from such sources as thermocouples and photocells etc.

Typically these systems require a lower clamping voltage so an SLD-67 with a 7 V clamping voltage is recommended.

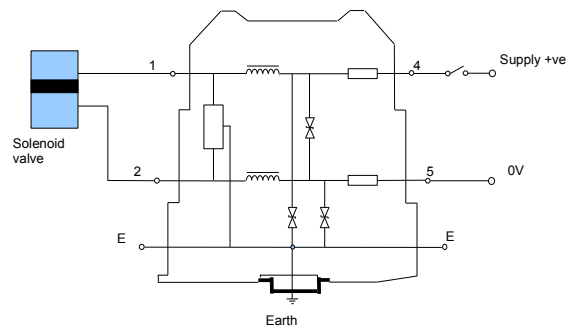
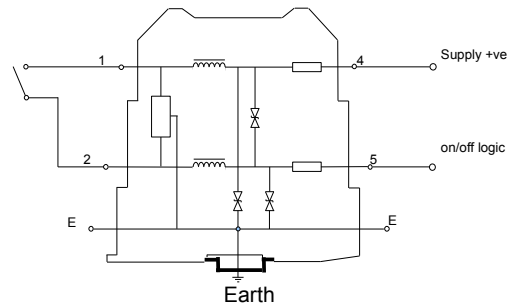
This arrangement is also suitable for turbine flowmeters.



For Digital inputs and outputs the following would be typical wiring diagrams.

The choice of clamping voltage would again be a function of the system operating voltage.

For Digital outputs the clamping voltage should be set the next available level above the system operating voltage.



Parameter	SLD67-32	SLD67-16	SLD67-7	SLD67-RTD	SLD67-32-3W
Rated Operating Voltage (Un) Vdc	32	16	7	7	32
Maximum Cont Operating Voltage (Uc) Vdc	36	17	7.7	5	36
Protection Level (Up) Vdc	<45	<25	<12	<12	<45
Max Discharge Current (Imax 8/20)	10 kA	10 kA	10 kA	10 kA	10 kA
Response Time	< 1nS	< 1nS	< 1nS	< 1nS	< 1nS
Leakage Current (Un) uA	5	5	500	0.3	5
Series Resistance (Ω/line)	2	2	2	2.7	2
Operating Ambient deg C	-40 to +80	-40 to +80	-40 to +80	-40 to +80	-40 to +80
Relative Humidity	5-95%	5-95%	5-95%	5-95%	5-95%
Dimensions					90 x 36 x 66 mm
Designed to EN 61643-21:2000	Yes	Yes	Yes	Yes	Yes
Installation on 35 mm DIN rail	Yes	Yes	Yes	Yes	Yes
High Speed Communications Option	Yes add HS	Yes add HS	Yes add HS	Yes add HS	Yes add HS



SLD-RJ45

SURGE PROTECTION DEVICE

- Quick response speed
- Computer Network Protection
- High specification low cost
- Designed to IEC 61643-21
- Hybrid multi-level protection
- 100 M bits/s transfer rate



Description

The SLD range of surge protection devices from Industrial Interface are used to protect all types of electrical installations from the damaging effects of surge voltages. These surge voltages, also known as transients or spikes are typically caused by lightning, switching of fluorescent tubes or other electrical apparatus or by fuses blowing. The Industrial Interface range offers protection to circuits as diverse as 12Vdc Control circuits and 125A 3-phase industrial supplies. The SLD-RJ45 unit is designed specifically to protect computer networks and features in/out RJ45 sockets for ease of connection.

Parameter	SLD-RJ45
Rated Operating Voltage (Un)	5 V
Maximum Continuous Operating Voltage (Uc)	8 V
Protection Level (Up)	< 45 V
Nominal Discharge Current (In 8/20)	2.5 kA
Insertion Loss	<0.5 dB
Transfer Rate	100 M bits/s
Operating Ambient	-40 to +70 deg C
Relative Humidity	0 to 90 %
Dimensions	93 x 25 x 25 mm
Designed to	IEC-61643-21
Installation	RJ45 Sockets
Options	Multi-way versions and 19" rack versions available



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SLD-RJ11

SURGE PROTECTION DEVICE

- Quick response speed
- Protection for telephone lines
- High specification low cost
- Designed to IEC 61643-21
- Hybrid multi-level protection
- 2 M bits/s transfer rate



Description

The SLD range of surge protection devices from Industrial Interface are used to protect all types of electrical installations from the damaging effects of surge voltages. These surge voltages, also known as transients or spikes are typically caused by lightning, switching of fluorescent tubes or other electrical apparatus or by fuses blowing. The Industrial Interface range offers protection to circuits as diverse as 12Vdc Control circuits and 125A 3-phase industrial supplies. The SLD-RJ11 unit is designed specifically to protect telephone lines and comes complete with standard RJ11 sockets.

Parameter	SLD-485
Rated Operating Voltage (Un)	110 V
Maximum Continuous Operating Voltage (Uc)	170 V
Nominal Discharge Current (In 8/20)	5 kA
Insertion Loss	<0.5 dB
Transfer Rate	2 M bits/s
Operating Ambient	-40 to +70 deg C
Relative Humidity	0 to 90 %
Dimensions	65 x 25 x 25 mm
Designed to	IEC-61643-21
Installation	RJ11 sockets
Options	Multi-way and 19" rack versions available



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SLD-485

SURGE PROTECTION DEVICE

- Quick response speed
- Protection for RS485 comms links
- High specification low cost
- Designed to IEC 61643-21
- Hybrid multi-level protection
- 2 M bits/s transfer rate



Description

The SLD range of surge protection devices from Industrial Interface are used to protect all types of electrical installations from the damaging effects of surge voltages. These surge voltages, also known as transients or spikes are typically caused by lightning, switching of fluorescent tubes or other electrical apparatus or by fuses blowing. The Industrial Interface range offers protection to circuits as diverse as 12Vdc Control circuits and 125A 3-phase industrial supplies. The SLD-485 unit is designed specifically to protect RS 485 communication links from the effects of lightning and other voltage transients.

Parameter	SLD-485
Rated Operating Voltage (Un)	12 V
Maximum Continuous Operating Voltage (Uc)	15 V
Protection Level (Up)	< 80 V
Nominal Discharge Current (In 8/20)	5 kA
Insertion Loss	<0.5 dB
Transfer Rate	2 M bits/s
Operating Ambient	-40 to +70 deg C
Relative Humidity	0 to 90 %
Dimensions	93 x 25 x 25 mm
Designed to	IEC-61643-21
Installation	3 -way terminal blocks
Options	Multi-way versions available



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SLD-BNC

SURGE PROTECTION DEVICE

- Quick response speed
- Protection for video signals
- High specification low cost
- Designed to IEC 61643-21
- Hybrid multi-level protection
- 16 M bits/s transfer rate



Description

The SLD range of surge protection devices from Industrial Interface are used to protect all types of electrical installations from the damaging effects of surge voltages. These surge voltages, also known as transients or spikes are typically caused by lightning, switching of fluorescent tubes or other electrical apparatus or by fuses blowing. The Industrial Interface range offers protection to circuits as diverse as 12Vdc Control circuits and 125A 3-phase industrial supplies. The SLD-BNC unit is designed specifically to protect video signal networks from the effects of Lightning and other voltage transients.

Parameter	SLD-BNC
Rated Operating Voltage (Un)	12 V
Maximum Continuous Operating Voltage (Uc)	18 V
Protection Level (Up)	< 80 V
Nominal Discharge Current (In 8/20)	5 kA
Insertion Loss	<0.5 dB
Transfer Rate	16 M bits/s
Operating Ambient	-40 to +70 deg C
Relative Humidity	0 to 90 %
Dimensions	93 x 25 x 25 mm
Designed to	IEC-61643-21
Installation	BNC in line
Options	Multi-way versions and 19" rack versions available



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SLD-XD24B

SURGE PROTECTION DEVICE

- Quick response speed
- Protection for video signals
- High specification low cost
- Designed to IEC 61643-21
- Hybrid multi-level protection
- 16 M bits/s transfer rate



Description

The SLD range of surge protection devices from Industrial Interface are used to protect all types of electrical installations from the damaging effects of surge voltages. These surge voltages, also known as transients or spikes are typically caused by lightning, switching of fluorescent tubes or other electrical apparatus or by fuses blowing. The Industrial Interface range offers protection to circuits as diverse as 12Vdc Control circuits and 125A 3-phase industrial supplies. The SLD-BNC unit is designed specifically to protect CCTV video signal networks from the effects of Lightning and other voltage transients.

Parameter	SLD-XD24B
Rated Operating Voltage (Un)	24 V power 12 V video signal
Maximum Continuous Operating Voltage (Uc)	36V power 18 V video signal
Nominal Discharge Current (In 8/20)	5 kA
Maximum Discharge Current (Imax 8/20)	10 kA
Insertion Loss Video	<0.5 dB
Transfer Rate	16 M bits/s
Operating Ambient	-40 to +70 deg C
Relative Humidity	0 to 90 %
Dimensions	140 x 36 x 66 mm
Designed to	IEC-61643-21
Installation	BNC and wiring terminal
Options	35 mm DIN rail



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SLD-20C

POWER SUPPLY SURGE PROTECTION DEVICE

- Quick response speed
- Built-in Thermal cut out
- Optional remote monitoring
- Standard installation size
- High specification low cost
- Designed to IEC 61643-1
- Status Indicator



Description

The SLD range of surge protection devices from Industrial Interface are used to protect all types of electrical installations from the damaging effects of surge voltages. These surge voltages, also known as transients or spikes are typically caused by lightning, switching of fluorescent tubes or other electrical apparatus or by fuses blowing. The Industrial Interface range offers protection to circuits as diverse as 12Vdc Control circuits and 125A 3-phase industrial supplies. The SLD-20C unit is available in 1P 2P 1P+NPE, 3P 4P and 3P+NPE configurations. Most units feature a status indicator and remote monitoring terminal option.

Parameter	SLD-20C
Rated Operating Voltage (Un)	220/380 Vac 50/60 Hz
Maximum Continuous Operating Voltage (Uc)	385 V ac 50/60 Hz
Protection Level (Up)	< 1.8kV
Nominal Discharge Current (In 8/20)	20 kA
Max Discharge Current (Imax 8/20)	40 kA
Response Time	<25 nS
Drain Current (75% Uc) L(N)-PE	< 20 uA
Maximum Fuse Rating	80 AgL
Environmental Protection Level	IP 20
Operating Ambient	-40 to +70 deg C
Relative Humidity	0 to 90 %
Dimensions	90 x 18 x 66 mm
Designed to	IEC-61643-1
Installation	35 mm DIN rail
Options	1P, 2P, 1P+NPE, 3P, 4P, 3P+NPE Remote terminal, custom operating voltages



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SLD-D230

POWER SUPPLY SURGE PROTECTION DEVICE

- Quick response speed
- Built-in Thermal cut out
- Optional remote monitoring
- Standard installation size
- High specification low cost
- Designed to IEC 61643-1
- Status Indicator



Description

The SLD range of surge protection devices from Industrial Interface are used to protect all types of electrical installations from the damaging effects of surge voltages. These surge voltages, also known as transients or spikes are typically caused by lightning, switching of fluorescent tubes or other electrical apparatus or by fuses blowing. The Industrial Interface range offers protection to circuits as diverse as 12Vdc Control circuits and 125A 3-phase industrial supplies. The SLD-D230 single pole unit is suitable for use in TN-S or TT electrical installations. Most units feature a status indicator and remote monitoring terminal option.

Parameter	SLD-D230
Rated Operating Voltage (Un)	220 Vac 50/60 Hz
Maximum Continuous Operating Voltage (Uc)	385 V ac 50/60 Hz
Protection Level (Up)	< 1.3kV
Nominal Discharge Current (In)	5 kA
Max Discharge Current (Imax 8/20)	15 kA
Response Time	L-N: <25 nS, L(N)-PE:< 100 nS
Drain Current (75% Uc) L(N)-PE	No leakage current
Maximum Fuse Rating	16 AgL
Environmental Protection Level	IP 20
Operating Ambient	-40 to +70 deg C
Relative Humidity	0 to 90 %
Dimensions	90 x 36 x 66 mm
Designed to	IEC-61643-1
Installation	35 mm DIN rail
Options	Remote terminal, custom operating voltages



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SLD-75B

POWER SUPPLY SURGE PROTECTION DEVICE

- Quick response speed
- Built-in Thermal cut out
- Optional remote monitoring
- Standard installation size
- High specification low cost
- Designed to IEC 61643-1
- Status Indicator



Description

The SLD range of surge protection devices from Industrial Interface are used to protect all types of electrical installations from the damaging effects of surge voltages. These surge voltages, also known as transients or spikes are typically caused by lightning, switching of fluorescent tubes or other electrical apparatus or by fuses blowing. The Industrial Interface range offers protection to circuits as diverse as 12Vdc Control circuits and 125A 3-phase industrial supplies. The SLD-75B unit is available in 1P 2P 1P+NPE, 3P 4P and 3P+NPE configurations. Most units feature a status indicator and remote monitoring terminal option.

Parameter	SLD-75B
Rated Operating Voltage (Un)	220/380 Vac 50/60 Hz
Maximum Continuous Operating Voltage (Uc)	385 V ac 50/60 Hz
Protection Level (Up)	< 2.3kV
Nominal Discharge Current (In 8/20)	75 kA
Max Discharge Current (Imax 8/20)	120 kA
Response Time	<25 nS
Drain Current (75% Uc) L(N)-PE	< 20 uA
Maximum Fuse Rating	125 AgL
Environmental Protection Level	IP 20
Operating Ambient	-40 to +70 deg C
Relative Humidity	0 to 90 %
Dimensions	90 x 36 x 66 mm
Designed to	IEC-61643-1
Installation	35 mm DIN rail
Options	1P, 2P, 1P+NPE, 3P, 4P,3P+NPE Remote terminal, custom operating voltages



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