EDR82717 - 600VDC, 1.4A SPDT Relay

The EDR82717 belongs to the family of a DC & AC/DC Subminiature, Single Pole Double Thought Solid State Relays

Electronic Design & Research
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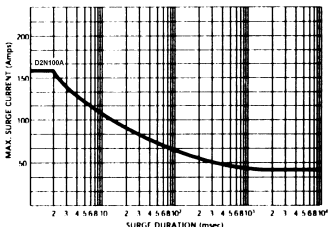
Features:
Utilizes only 0.75 sq. in. of PCB area and only 1.05" tall
1.4A continuously current and no heat sink is required
18 A pulse in a miniature package
CMOS input
7A is a maximum continues current
0.060 Ohms on-state resistance

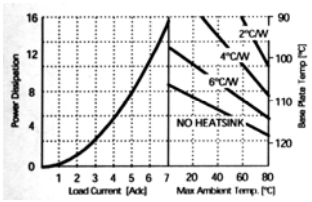
Input Specifications:

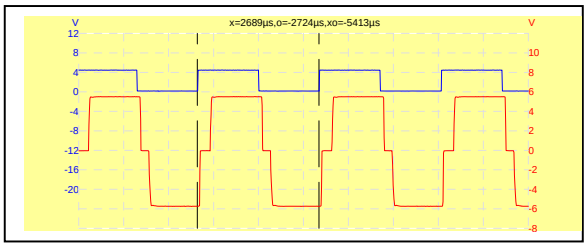
Input Control Voltage (pin 4)	see page #5
Nominal Current	0.5 mA
Power Supply +Vcc (pin 5)	see the order page for selection

Output Specifications:

Operating DC voltage range	650 VDC
Maximum continuous current	1.4 A
Maximum surge current (IDM) - .3mS/18 A	
Continuous current (ID)	7 A
Maximum on-state resistance	0.070 Ohm
Rising time	34 µS
Delay-on time	600 µS
Falling time	13 µS
Delay-off time	200 µS
Maximum switching frequency	500 Hz
"Dead Time"	**580 µS**







Control

Load

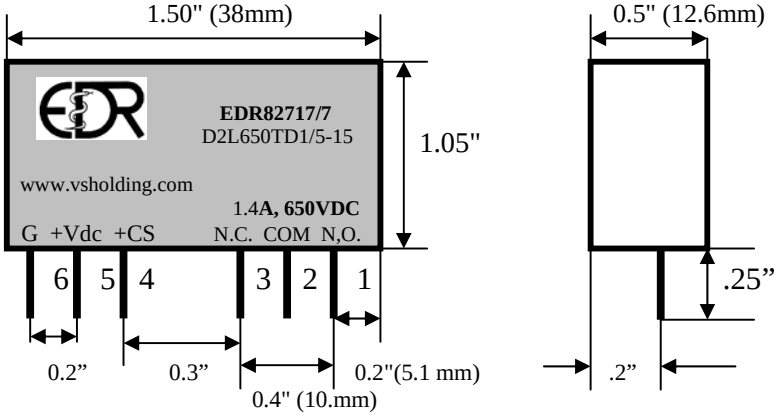
A sample of chopping of a bio-polar power

General Specifications:

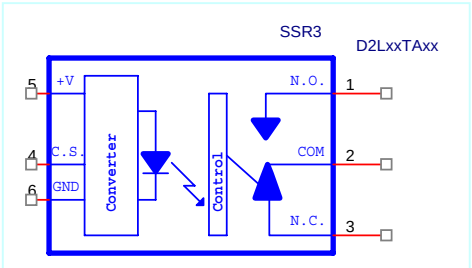
Ambient operating temperature range	-40^0 C to 85^0 C
Ambient storage temperature range	-55^0 C to 125^0 C
Dielectric Strength input-to-output	2,500 VAC

Mechanical Specifications:

Weight (oz)		.2
Encapsulation	Epoxies Etc.	50-2366RFR / 50-2366CFR



PIN 1: N.O. (normal open)
PIN 2: COM
PIN 3: N.C. (normal close)
PIN 4: + Control Signal
PIN 5: + Vdc (5-15)
PIN 6 GND



All Dimensions are in inches (millimeters).

Dimensions for SIP4 package	1.05"H x 1.5"L x 0.5"W
Terminals/solder for SIP4 package	control - 0.40", power – 0.6"

Transient Protection: All loads are inductive, even ones that are not so obvious or labeled. An inductive load produces a harmful transient voltage, which is much higher than the applied voltage, when it is turned on and off. A SSR built with a MOSFET output acts as an ideal switch and can produce a seemingly "non-inductive" load, which can cause damage if not suppressed. A transient voltage suppressor, which is bi-directional for AC applied voltage and unidirectional for DC applied voltage, should be used to clamp excessive spikes.

Electronic Design & Research Inc. ** 7331 Intermodal Dr. ** Louisville ** KY 40258
Tel: 502-933-8660; Fax: 502-933-3422; Sales: 800-336-1337; e-mail: vsholding@vsholding.com

Input Electrical Characteristics (Ta = 25^{0}C) for D2L650TD1, p/n EDR82717

Characteristic	Test Condition	Min	Typ.	Max.	Unit
Control voltage range			+Vdc x 0.7		V
Maximum Turn-On Voltage, Vdc=5VDC			3.5		V
Maximum Turn-Off Voltage, Vdc=+5VDC			1.5		V
Input Current			<1		mA

Input Electrical Characteristics (Ta = 25^{0}C) for D2L650TD1/5-15, p/n EDR82717/7

Power Supply, Vcc	4.7	5	15	V
Power Supply Current	20	22	40	mA

Switching time test, 280VDC & 0.7A; Load – 400 Ohm, voltage attenuation 10:1

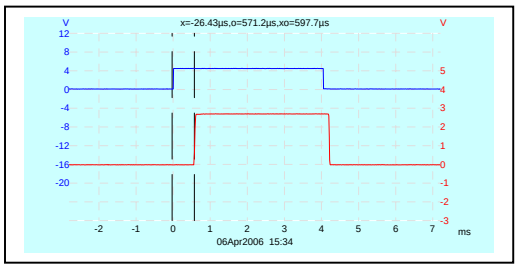


Figure 1 Turn-on delay is 0.6 mS

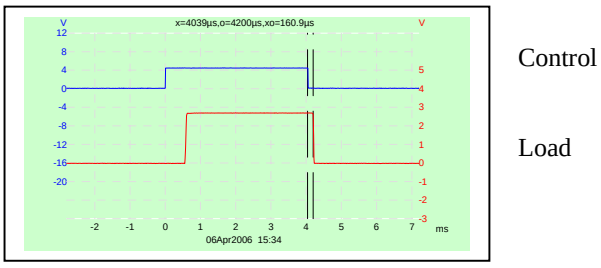


Figure 2 Turn-off delay is 0.2mS

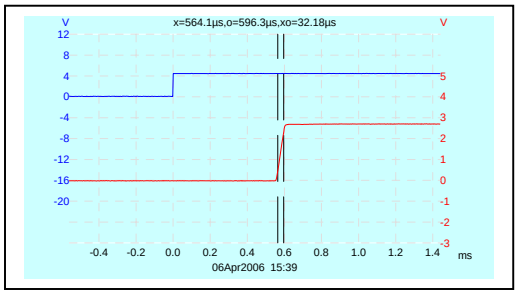


Figure 3 Rising Time is 32.18 µS

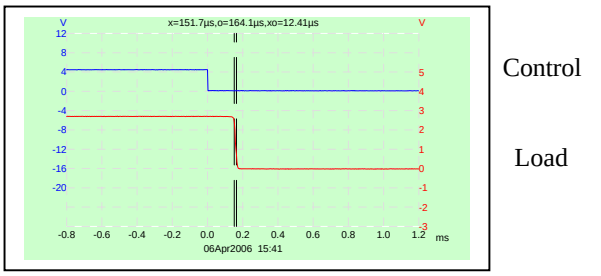


Figure 4 Fall Time is 12.41µS

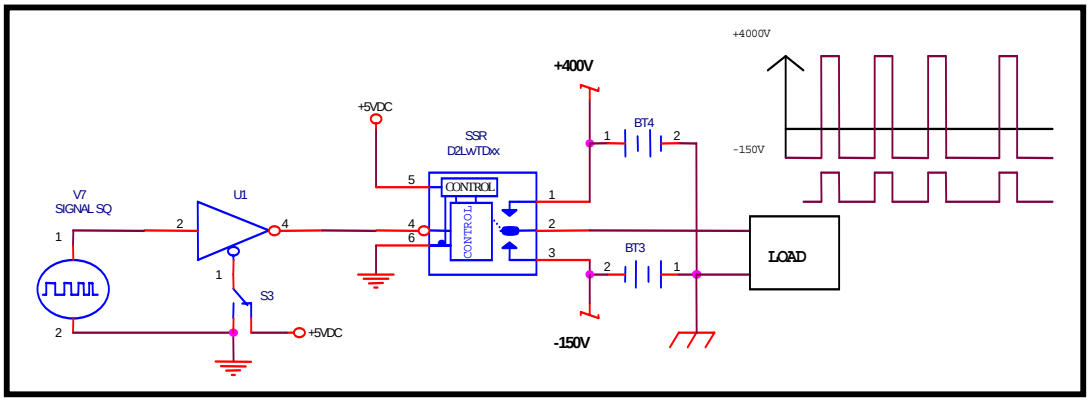


Figure 5 Switching unsymmetrical bi-polar powers

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EDR82957 - 55VDC/40AVC, 3A SPDT Relay

The EDR82957 belongs to the family of a DC & AC/DC Subminiature, Single Pole Double Thought Solid State Relays

Electronic Design & Research
http://www.vsholding.com

Technology for people's ideas

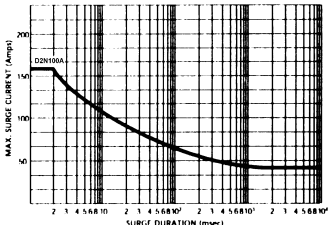
Features:
Utilizes only 0.75 sq. in. of PCB area and only .625" tall
3A continuously current and no heat sink is required
50 A pulse in a miniature package
Low power control input
8A is a maximum continues current
0.065 Ohms on-state resistance

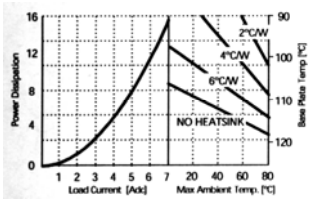
Input Specifications:

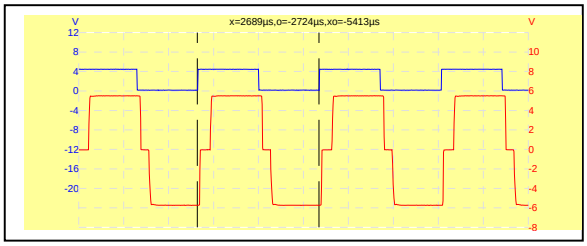
Input Control Voltage (pin 4)	threshold at ½ Vdc
Nominal Control Signal Current	.4 mA
Power Supply +Vdc (pin 5)	min 20 to 32 VDC/ 20mA max
ESD input rating	2500V

Output Specifications:

Operating voltage range	+/- 55 VDC
Maximum continuous current	3.0 A rms
Maximum surge current (IDM) -	.3mS/40 A
Continuous current (ID), 25 ^{o}C	8 A
Maximum on-state resistance	0.065 Ohm
Rising time	670 µS
Delay-on time	160 µS
Falling time	45µS
Delay-off time	110 µS
Maximum switching frequency	100 Hz
"Dead Time"	**700 µS**







Control

Load

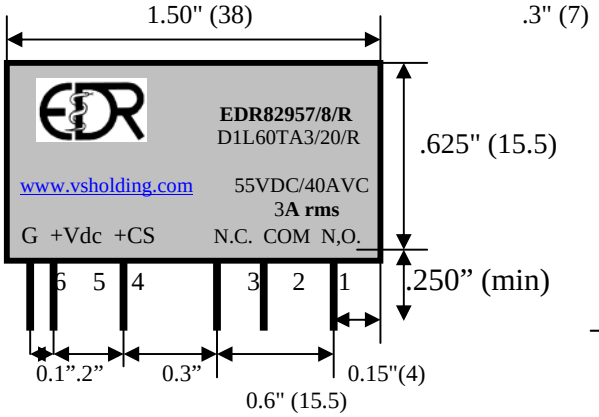
A sample of chopping of a bio-polar power

General Specifications:

Ambient operating temperature range	-25^{0} C to 85^{0} C
Ambient storage temperature range	-55^{0} C to 125^{0} C
Dielectric Strength input-to-output	2,500 Vrms min

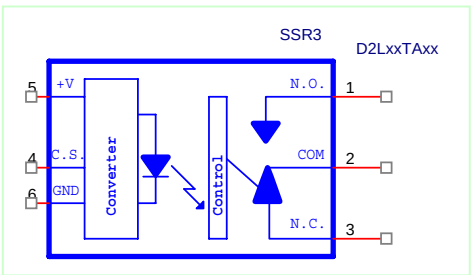
Mechanical Specifications:

Weight (oz)		.2
Encapsulation	Epoxies Etc.	50-2366RFR / 50-2366CFR



p/n EDR82957 with a straight pins **p/n EDR82957/R with a right angle pins**

PIN 1: N.O. (normal open)
PIN 2: COM
PIN 3: N.C. (normal close)
PIN 4: + Control Signal
PIN 5: + Vdc
PIN 6 GND



All Dimensions are in inches (millimeters).

Dimensions for SIP6 package	0.625"H x 1.5"L x 0.3"W
Terminals/solder	0.025" square

Transient Protection: All loads are inductive, even ones that are not so obvious or labeled. An inductive load produces a harmful transient voltage, which is much higher than the applied voltage, when it is turned on and off. A SSR built with a MOSFET output acts as an ideal switch and can produce a seemingly "non-inductive" load, which can cause damage if not suppressed. A transient voltage suppressor, which is bi-directional for AC applied voltage and unidirectional for DC applied voltage, should be used to clamp excessive spikes.

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EDR82958 - 30VDC/21AVC, 6A SPDT Relay

The EDR82958 belongs to the family of a DC & AC/DC Subminiature, Single Pole Double Thought Solid State Relays

Electronic Design & Research
http://www.vsholding.com

Technology for people's ideas

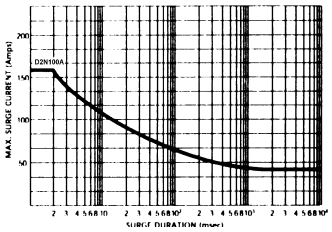
Features:
- Utilizes only 0.75 sq. in. of PCB area and only .625" tall
- 6A continuously current and no heat sink is required
- 38 A pulse in a miniature package
- Low power control input
- 12A is a maximum continues current
- 0.010 Ohms on-state resistance

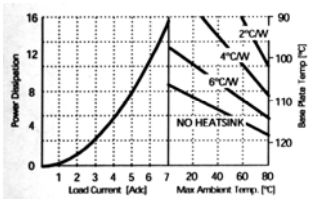
Input Specifications:

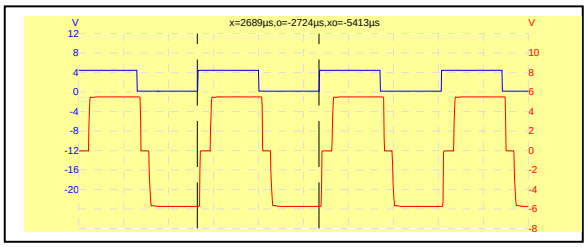
Input Control Voltage (pin 4)	threshold at ½ Vdc
Nominal Control Signal Current	.4 mA
Power Supply +Vdc (pin 5)	min 20 to 32 VDC/ 20mA max
ESD input rating	2500V

Output Specifications:

Operating voltage range	+/- 30 VDC
Maximum continuous current	6.0 A rms
Maximum surge current (IDM) -	.3mS/38 A
Continuous current (ID), 25 ^{o}C	12 A
Maximum on-state resistance	0.010 Ohm
Output capacitance	290 pF
Rising time	670 µS
Delay-on time	160 µS
Falling time	45µS
Delay-off time	110 µS
Maximum switching frequency	100 Hz
"Dead Time"	**700 µS**







Control

Load

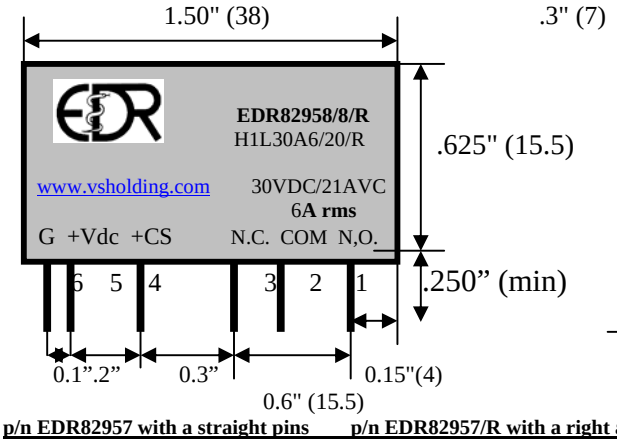
A sample of chopping of a bio-polar power

General Specifications:

Ambient operating temperature range	-25^{0} C to 85^{0} C
Ambient storage temperature range	-55^{0} C to 125^{0} C
Dielectric Strength input-to-output	2,500 Vrms min

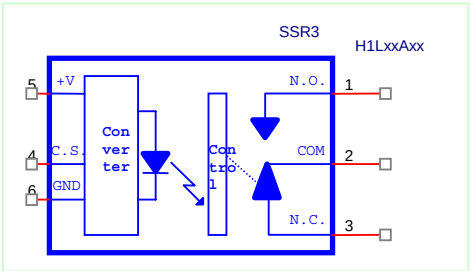
Mechanical Specifications:

Weight (oz)		.2
Encapsulation	Epoxies Etc.	50-2366RFR / 50-2366CFR



p/n EDR82957 with a straight pins **p/n EDR82957/R with a right angle pins**

PIN 1: N.O. (normal open)
PIN 2: COM
PIN 3: N.C. (normal close)
PIN 4: + Control Signal
PIN 5: + Vdc
PIN 6 GND



All Dimensions are in inches (millimeters).

Dimensions for SIP6 package	0.625"H x 1.5"L x 0.3"W
Terminals/solder	0.025" square

Transient Protection: All loads are inductive, even ones that are not so obvious or labeled. An inductive load produces a harmful transient voltage, which is much higher than the applied voltage, when it is turned on and off. A SSR built with a MOSFET output acts as an ideal switch and can produce a seemingly "non-inductive" load, which can cause damage if not suppressed. A transient voltage suppressor, which is bi-directional for AC applied voltage and unidirectional for DC applied voltage, should be used to clamp excessive spikes.

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EDR82719 - 400VDC/280AVC, 100mA SPDT Relay

The EDR82719 belongs to the family of a DC & AC/DC Subminiature, Single Pole Double Thought Solid State Relays

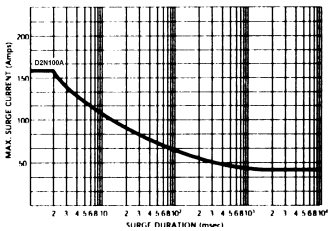
Features:
- Utilizes only 0.75 sq. in. of PCB area and only 1.05" tall
- 100mA continuously current
- 300 mA pulse in a miniature package
- **Only 10mA input current**
- 30 Ohms on-state resistance
- Guarantee for 5 years

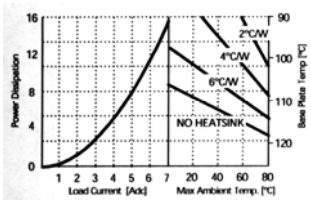
Input Specifications:

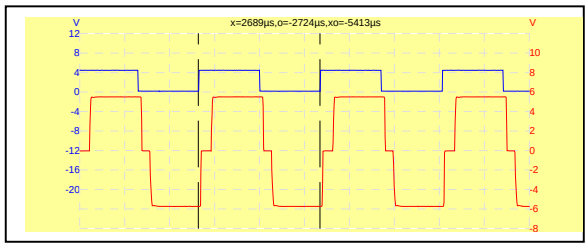
Input Control Voltage (pin 4)	24VDC
Nominal Current	10 mA

Output Specifications:

Operating DC voltage range	+/-400VDC
Maximum continuous current	100 mA
Maximum surge current (IDM) - .1S/.0.3 A	
Maximum on-state resistance	30 Ohm
Rising time	0.034 µS
Delay-on time	0.400 µS
Falling time	0.013µS
Delay-off time	0.200 µS
Maximum switching frequency	200 Hz
"Dead Time"	**100 µS**







Control

Load

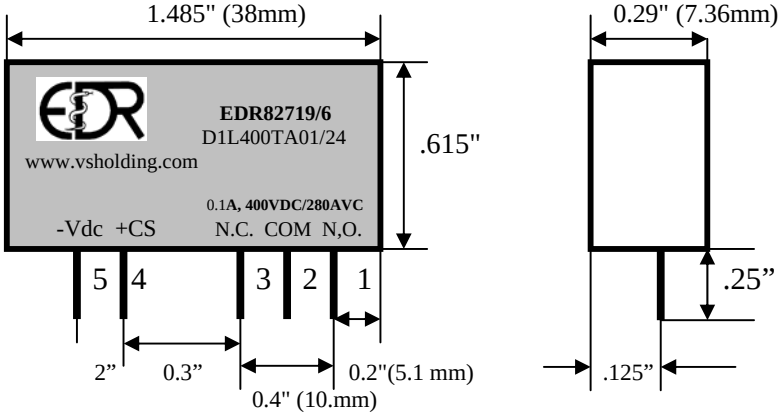
A sample of chopping of a bio-polar power

General Specifications:

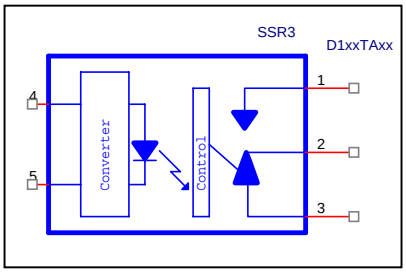
Ambient operating temperature range	-40^0 C to 85^0 C
Ambient storage temperature range	-55^0 C to 125^0 C
Dielectric Strength input-to-output	2,500 VAC

Mechanical Specifications:

Weight (oz)		.2
Encapsulation	Epoxies Etc.	50-2366RFR / 50-2366CFR



PIN 1: N.O. (normal open)
PIN 2: COM
PIN 3: N.C. (normal close)
PIN 4: + Control Signal
PIN 5: GND (-Vdc)



All Dimensions are in inches (millimeters).

Dimensions for SIP4 package	1.05"H x 1.5"L x 0.5"W
Terminals /solder for SIP4 package	control - 0.40", power – 0.6"

Transient Protection: All loads are inductive, even ones that are not so obvious or labeled. An inductive load produces a harmful transient voltage, which is much higher than the applied voltage, when it is turned on and off. A SSR built with a MOSFET output acts as an ideal switch and can produce a seemingly "non-inductive" load, which can cause damage if not suppressed. A transient voltage suppressor, which is bi-directional for AC applied voltage and unidirectional for DC applied voltage, should be used to clamp excessive spikes.

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EDR82454 - 55VDC40/VAC, 3.0A SPDT Relay

The EDR82454 belongs to the family of a DC & AC/DC Subminiature, Single Pole Double Thought Solid State Relays

Electronic Design & Research
http://www.vsholding.com

Technology for people's ideas

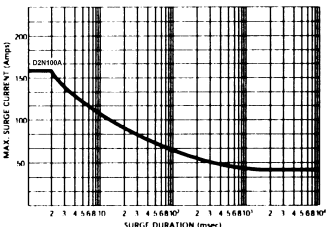
Features:
- Utilizes only 1.36 sq. in. of PCB area and only 1.15" tall
- 3 A continuously current
- 50 A pulse in a miniature package
- **Only 12mA input current**
- 0.060 Ohms on-state resistance
- Guarantee for 5 years

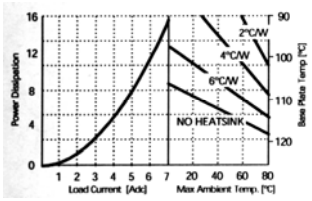
Input Specifications:

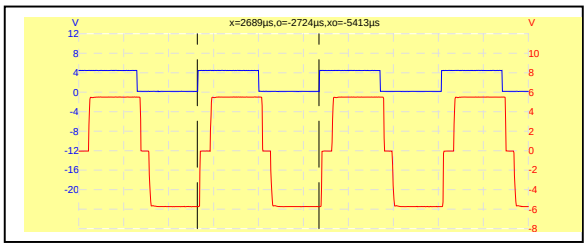
Input Control Voltage (pin 4)	18-36VDC
Nominal Current	12 mA

Output Specifications:

Operating DC voltage range	+/-55VDC/40AVC
Maximum rated current	3.0 A
Maximum continuous current	6.0 A
Maximum surge current (IDM) - .1S	50 A
Maximum on-state resistance	0.05 Ohm
Rising time	0.034 µS
Delay-on time	0.400 µS
Falling time	0.013µS
Delay-off time	0.200 µS
Maximum switching frequency	200 Hz
"Dead Time"	**100 µS**







Control

Load

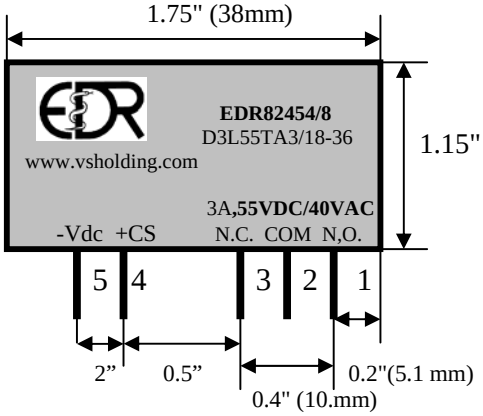
A sample of chopping of a bio-polar power

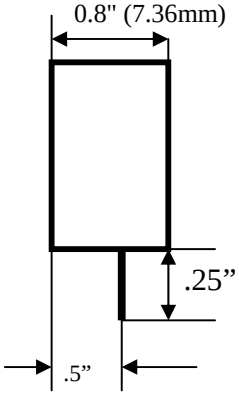
General Specifications:

Ambient operating temperature range	-40^0 C to 85^0 C
Ambient storage temperature range	-55^0 C to 125^0 C
Dielectric Strength input-to-output	2,500 VAC

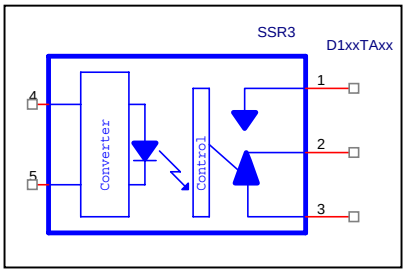
Mechanical Specifications:

Weight (oz)		.2
Encapsulation	Epoxies Etc.	50-2366RFR / 50-2366CFR





PIN 1: N.O. (normal open)
PIN 2: COM
PIN 3: N.C. (normal close)
PIN 4: + Control Signal
PIN 5: GND (-Vdc)



All Dimensions are in inches (millimeters).

Dimensions for SIP4 package	1.05"H x 1.5"L x 0.5"W
Terminals /solder for SIP4 package	control - 0.40", power – 0.6"

Transient Protection: All loads are inductive, even ones that are not so obvious or labeled. An inductive load produces a harmful transient voltage, which is much higher than the applied voltage, when it is turned on and off. A SSR built with a MOSFET output acts as an ideal switch and can produce a seemingly "non-inductive" load, which can cause damage if not suppressed. A transient voltage suppressor, which is bi-directional for AC applied voltage and unidirectional for DC applied voltage, should be used to clamp excessive spikes.

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