

# Murrelektronik Universal Surge Suppressors for Contactors



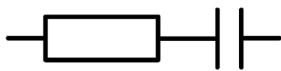
## Features

- Protects systems and devices from induced voltage peaks
- Install as close as possible to the source of interference
- RC elements must not be operated with a frequency converter (variable frequency drive)
- Select models can be snapped onto Siemens contactors



## Murrelektronik Universal Surge Suppressors for Contactors Selection Guide

Part Number	Price	Type	Nominal Voltage	Voltage Range	Frequency	Shutdown Peak Voltage	Max Hold On Power	Max Switch Frequency	Circuit Diagram	Phases	Sub-Component Values	Weight (g [oz])	Drawing
<a href="#">26051</a>	\$8.00	Zener diode	≤24VDC	12-30 VDC	-	≤16VDC	15W	0.5 Hz	3	1	GP15M/ ZY15V	12 [0.42]	PDF
<a href="#">26180</a>	\$8.00	Varistor	≤24VDC	≤25VAC, ≤30VDC	0-60 Hz	≤55V	50W	0.1 Hz	5	1	S07	15 [0.53]	PDF
<a href="#">26181</a>	\$8.00	Varistor	≤48V AC/DC	24-48 VAC/VDC	0-60Hz	≤130V	70W	0.1 Hz	5	1	S14	15 [0.53]	PDF
<a href="#">26182</a>	\$8.25	Varistor	≤110V AC/DC	48-130 VAC/VDC	0-60 Hz	≤225V	100W	0.1 Hz	5	1	S14	15 [0.53]	PDF
<a href="#">26183</a>	\$8.25	Varistor	≤230V AC/DC	110-250 VAC/VDC	0-60 Hz	≤410V	200W	0.1 Hz	5	1	S14	15 [0.53]	PDF
<a href="#">20001</a>	\$8.50	RC	≤48V AC/DC	24-60 VAC/VDC	0-60 Hz	≤110.4 V	15W	0.5 Hz	1	1	1.6 uF/100R	13 [0.46]	PDF
<a href="#">22052</a>	\$8.50	RC	≤230V AC/DC	127-240 VAC/VDC	0-60 Hz	≤529 V	15W	0.1 Hz	1	1	0.22µF/100R	12 [0.42]	PDF
<a href="#">22051</a>	\$8.50	RC	≤110V AC/DC	48-127 VAC/VDC	0-60 Hz	≤253V	15W	0.1 Hz	1	1	0.47µF/100R	12 [0.42]	PDF
<a href="#">20010</a>	\$8.50	RC	≤230V AC/DC	110-230 VAC/VDC	0-60 Hz	≤460V	75W	0.5 Hz	1	1	0.68µF/220R	27 [0.95]	PDF



1 - RC



3 - Diode / Z-diode



5 - VDR

## Murrelektronik Universal Surge Suppressors for Contactors Mounting and Connections

Part Number	Wire	UL Style	Mounting	Connection	Connection Size
<a href="#">26051</a>	AWG22	1007	Can snap onto Siemens contactors	Pigtail with fork cable lug	M3-M4
<a href="#">26180</a>	AWG22	1007	With cable ties or adhesive film	Pigtail with fork cable lug	M3-M4
<a href="#">26181</a>	AWG22	1007	With cable ties or adhesive film	Pigtail with fork cable lug	M3-M4
<a href="#">26182</a>	AWG22	1007	With cable ties or adhesive film	Pigtail with fork cable lug	M3-M4
<a href="#">26183</a>	AWG22	1007	With cable ties or adhesive film	Pigtail with fork cable lug	M3-M4
<a href="#">20001</a>	AWG22	1007	With cable ties or adhesive film	Pigtail with fork cable lug	M3-M4
<a href="#">22052</a>	AWG22	1007	Can snap onto Siemens contactors	Pigtail with fork cable lug	M3-M4
<a href="#">22051</a>	AWG22	1007	Can snap onto Siemens contactors	Pigtail with fork cable lug	M3-M4
<a href="#">20010</a>	AWG22	1007	With cable ties or adhesive film	Pigtail with fork cable lug	M3-M4



Fork cable lug

## Murrelektronik Universal Surge Suppressors Specifications

<b>Ambient Temperature Range</b>	-20°C to +60°C [-4°F to +140°F]
<b>Storage Temperature</b>	-55°C to +80°C [-67°F to 176°F]
<b>Installation Height (above mean sea level)</b>	≤2000 m
<b>Relative Humidity (no condensation)</b>	5 to 85 %
<b>Climatic Class</b>	3K3
<b>Degree of Pollution</b>	3
<b>Overvoltage Category</b>	III
<b>Housing Material</b>	Plastic
<b>Flame Resistance</b>	EN60695 (of low flammability)
<b>Flammability</b>	UL94 (V0)
<b>Agency Approvals</b>	CE (2011/65/EU), cULus (UL508, C22.2 No. 14-10) (E140415), RoHS (2011/65/EU & 2015/863), EAC (TR CU 004, TR CU 020) (RUC-DE.A301.B.03875), REACH (Nr. 1907/2006) (SVHC List 01.2020), WEEE (2012/19/EU), China RoHS(SJ/T 11364-2014) (e / 20 EPUP)

# Murrelektronik Surge Suppressors for Motors



stay connected



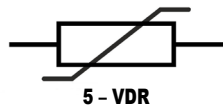
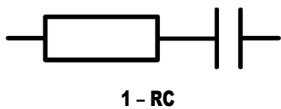
## Features

- Protects systems and devices from induced voltage peaks
- Install as close as possible to the motor / source of interference
- RC elements must not be operated with a frequency converter (variable frequency drives)

23050

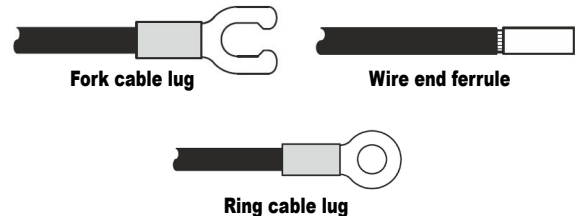
## Murrelektronik Surge Suppressors for Motors Selection Guide

Part Number	Price	Type	Nominal Voltage	Voltage Range	Frequency	Shutdown Peak Voltage	Motor Rating	Max Switch Frequency	Circuit Diagram	Phases	Sub-Component Values	Weight (g [oz])	Drawing
<a href="#">23050</a>	\$26.00	RC	575VAC	3 x 400-575 VAC	50/60 Hz	≤850V	4kW / 5HP	1Hz	1	3	0.22µF / 220R	38 [1.34]	PDF
<a href="#">230563</a>	\$40.50	RC	575VAC	575...575 VAC	50/60 Hz	≤950V	7.5 kW / 10HP	0.1 Hz	1	3	0.47µF / 220R	146 [5.15]	PDF
<a href="#">23146</a>	\$48.00	Varistor	575VAC	575...575 VAC	10-400 Hz	≤1050V	20kW / 25HP	0.5 Hz	5	3	S20	75 [2.65]	PDF



## Murrelektronik Surge Suppressors for Motors Mounting and Connections

Part Number	Wire	UL Style	Mounting	Connection	Connection Size
<a href="#">23050</a>	AWG22	1015	With adhesive film or snap-on DIN rail with adapter	Fork cable lug	M4
<a href="#">230563</a>	AWG20	1015	Can be snapped onto a 35mm DIN rail	Wire end ferrule Length: 10mm Cable length 250mm ±5mm	10mm
<a href="#">23146</a>	AWG18	1015	M20x1.5 thread for direct connection to the terminal box of the motor Thread length: 10mm	Cable with ring lug Cable length 150mm	M6



## Murrelektronik Surge Suppressors for Motors Specifications

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<b>Installation Height (above mean sea level)</b>	≤2000 m
<b>Relative Humidity (no condensation)</b>	5 to 85 %
<b>Climatic Class</b>	3K3
<b>Degree of Pollution</b>	3
<b>Overtoltage Category</b>	III
<b>Housing Material</b>	Plastic
<b>Flame Resistance</b>	EN60695 (of low flammability)
<b>Flammability</b>	UL94 (V0)
<b>Agency Approvals</b>	CE (2011/65/EU), cURus (UL508, C22.2 No. 14-10) (E338196, E140415), RoHS (2011/65/EU & 2015/863), EAC (TR CU 004, TR CU 020) (RUC-DE.A301.B.03875), REACH (Nr. 1907/2006) (SVHC List 01.2020), WEEE (2012/19/EU), China RoHS(SJ/T 11364-2014) (e / 20 EPUP)

# Murrelektronik



## Surge Suppressors for Solenoid Valve Plugs

### Features

- For valves (Form A, B, C, CI)
- Yellow LED "Supply Voltage Indicator"
- Protects systems and devices from induced voltage peaks
- Ideal for retrofit
- Mounts between valve and cable

Not UL



3124270



### Murrelektronik Surge Suppressors for Solenoid Valve Plugs Selection Guide

Part Number	Price	Type	Nominal Voltage (VAC/VDC)	Voltage Range (VAC/VDC)	Frequency	Shutdown Peak Voltage	Max Hold On Power	Max Switch Frequency	Circuit Diagram	Drop Delay Time	Sub-Component Values	Phase	Indication	Weight g [Oz]	Drawing
<a href="#">3124033</a>	\$10.00	Zener diode	24	18-30	0-60 Hz	50V	100W	0.1 Hz	1	20ms	ZY-47	1	LED (yellow)	15 [0.53]	<a href="#">PDF</a>
<a href="#">3124046</a>	\$10.00	Varistor	110	48-130	0-60 Hz	220V	100W	0.1 Hz	2	20ms	S14 K130	1	LED (yellow)	25 [0.88]	<a href="#">PDF</a>
<a href="#">3124233</a>	\$12.00	Zener diode	24	18-30	0-60 Hz	50V	100W	0.1 Hz	1	20ms	ZY-47	1	LED (yellow)	10 [0.35]	<a href="#">PDF</a>
<a href="#">3124270</a>	\$12.00	RC	110	48-130	0-60 Hz	220V	10W	0.1 Hz	3	20ms	0.22µF / 220R	1	LED (yellow)	10 [0.35]	<a href="#">PDF</a>
<a href="#">3124873</a>	\$14.00	Zener diode	24	18-30	0-60 Hz	55V	100W	0.1 Hz	1	20ms	ZY-47	1	LED (yellow)	12 [0.42]	<a href="#">PDF</a>
<a href="#">3124133</a>	\$14.00	Zener diode	24	18-30	0-60 Hz	47V	50W	0.1 Hz	1	20ms	S07 K25	1	LED (yellow)	15 [0.53]	<a href="#">PDF</a>
<a href="#">3124170</a>	\$14.00	RC	110	95-132	0-60 Hz	165V	10W	0.1 Hz	3	20ms	0.15µF / 220R	1	LED (yellow)	13 [0.46]	<a href="#">PDF</a>
<a href="#">3124833</a>	\$14.00	Zener diode	24	18-30	0-60 Hz	50V	100W	0.1 Hz	1	20ms	ZY-47	1	LED (yellow)	5 [0.18]	<a href="#">PDF</a>
<a href="#">3124832</a>	\$14.00	Zener diode	24	18-30	0-60 Hz	50V	100W	0.1 Hz	1	20ms	ZY-47	1	LED (yellow)	5 [0.18]	<a href="#">PDF</a>

### Murrelektronik Surge Suppressors for Solenoid Valve Plugs Mounting and Connections

Part Number	Mounting	Orientation	Terminal Spacing (mm [in])	Connection
<a href="#">3124033</a>	Attachable to valve	Vertical	18 [0.71]	For use with 18mm DIN style Form A plug
<a href="#">3124046</a>		Vertical	18 [0.71]	For use with 18mm DIN style Form A plug
<a href="#">3124233</a>		Vertical	11 [0.43]	For use with 11mm DIN style Form B plug
<a href="#">3124270</a>		Vertical	11 [0.43]	For use with 11mm DIN style Form B plug
<a href="#">3124873</a>		Horizontal	10 [0.39]	For use with 10mm DIN style Form B plug
<a href="#">3124133</a>		Horizontal	11 [0.43]	For use with 11mm DIN style Form B plug
<a href="#">3124170</a>		Horizontal	11 [0.43]	For use with 11mm DIN style Form B plug
<a href="#">3124833</a>		Vertical	8 [0.31]	For use with 8mm DIN style Form C plug
<a href="#">3124832</a>		Vertical	9.4 [0.37]	For use with 9.4 mm DIN style Form CI plug

### Circuit Diagrams

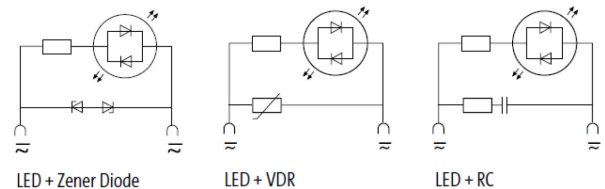


Diagram 1

Diagram 2

Diagram 3

### Murrelektronik Surge Suppressors for Solenoid Valve Plugs Specifications

<b>Ambient Temperature Range</b>	-20°C to +60°C [-4°F to +140°F]
<b>Storage Temperature</b>	-55°C to +80°C [-67°F to 176°F]
<b>Installation Height (above mean sea level)</b>	≤2000 m
<b>Relative Humidity (no condensation)</b>	5 to 85 %
<b>Climatic Class</b>	IEC/EN60721-3-3, 3K3
<b>Degree of Protection</b>	EN 60529 (IP65 fastened with screw when assembled), IP65
<b>Degree of Pollution</b>	3
<b>Overvoltage Category</b>	III
<b>Housing Material</b>	Polyamide black, flame retardant, temperature resistance up to 130°C
<b>Flame Resistance</b>	EN60695 (of low flammability)
<b>Flammability</b>	UL94 (V0)
<b>Agency Approvals</b>	CE (2011/65/EU) (EU-Doc), RoHS (2011/65/EU & 2015/863), EAC (TR CU 004, TR CU 020) (RUC-DE.A301.B.03875), REACH (Nr. 1907/2006) (SVHC List 01.2020), WEEE (2012/19/EU), China RoHS(SJT 11364-2014) (e / 20 EPUP)

# Murrelektronik Surge Suppressors



Comparison of Different Types of Suppressors						
Circuit	Characteristics of Bad Current and Voltage	Incorrect Polarity Protection (Also Suitable for AC)	Additional Switch-off Delay	Back EMF Limitation	Damping Also Occurs Below $U_{Limit}$	Advantages and Disadvantages
		No	Very large	1V	No	<p><b>Advantages:</b> Matches wide range of loads Best possible damping Simple construction</p> <p><b>Disadvantages:</b> Long delay time</p>
		Yes	Small	$U_{ZD}$	No	<p><b>Advantages:</b> Limits positive and negative voltages Suitable for AC and DC Matches wide range of loads</p> <p><b>Disadvantages:</b> No damping below <math>U_{ZD}</math></p>
		Yes	Small	$U_{VDR}$	No	<p><b>Advantages:</b> Matches wide range of loads High energy absorption Very simple construction</p> <p><b>Disadvantages:</b> No damping below <math>U_{VDR}</math> Limited lifespan</p>
		Yes	Small	$1.5 \times U_{NOM}$	Yes	<p><b>Advantages:</b> HF damping due to RC network Immediate de-energization Excellent results with AC</p> <p><b>Disadvantages:</b> Must be matched to the load Limited lifespan</p>