

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

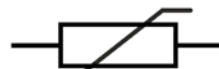
Part Number	Price	Type	Nominal Voltage	Voltage Range	Frequency	Shutdown Peak Voltage	Max Hold On Power	Max Switch Frequency	Circuit Diagram	Phases	Sub-Component Values	Weight (g [oz])	Drawing
26051	\$5uxa:	Zener diode	≤24VDC	12-30 VDC	–	≤16VDC	15W	0.5 Hz	3	1	GP15M/ZY15V	12 [0.42]	PDF
26180	\$5uxb:	Varistor	≤24VDC	≤25VAC, ≤30VDC	0-60 Hz	≤55V	50W	0.1 Hz	5	1	S07	15 [0.53]	PDF
26181	\$5uxc:	Varistor	≤48V AC/DC	24-48 VAC/VDC	0-60Hz	≤130V	70W	0.1 Hz	5	1	S14	15 [0.53]	PDF
26182	\$5uxd:	Varistor	≤110V AC/DC	48-130 VAC/VDC	0-60 Hz	≤225V	100W	0.1 Hz	5	1	S14	15 [0.53]	PDF
26183	\$5uxe:	Varistor	≤230V AC/DC	110-250 VAC/VDC	0-60 Hz	≤410V	200W	0.1 Hz	5	1	S14	15 [0.53]	PDF
20001	\$5uxf:	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
22052	\$5uxl:	RC	≤230V AC/DC	127-240 VAC/VDC	0-60 Hz	≤529 V	15W	0.1 Hz	1	1	0.22uF/100R	12 [0.42]	PDF
22051	\$5uxn:	RC	≤110V AC/DC	48-127 VAC/VDC	0-60 Hz	≤253V	15W	0.1 Hz	1	1	0.47uF/100R	12 [0.42]	PDF
20010	\$5uxu:	RC	≤230V AC/DC	110-230 VAC/VDC	0-60 Hz	≤460V	75W	0.5 Hz	1	1	0.68uF/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
26051	AWG22	1007	Can snap onto Siemens contactors	Pigtail with fork cable lug	M3-M4
26180	AWG22	1007	With cable ties or adhesive film	Pigtail with fork cable lug	M3-M4
26181	AWG22	1007	With cable ties or adhesive film	Pigtail with fork cable lug	M3-M4
26182	AWG22	1007	With cable ties or adhesive film	Pigtail with fork cable lug	M3-M4
26183	AWG22	1007	With cable ties or adhesive film	Pigtail with fork cable lug	M3-M4
20001	AWG22	1007	With cable ties or adhesive film	Pigtail with fork cable lug	M3-M4
22052	AWG22	1007	Can snap onto Siemens contactors	Pigtail with fork cable lug	M3-M4
22051	AWG22	1007	Can snap onto Siemens contactors	Pigtail with fork cable lug	M3-M4
20010	AWG22	1007	With cable ties or adhesive film	Pigtail with fork cable lug	M3-M4



Fork cable lug

Murrelektronik Universal Surge Suppressors Specifications

Ambient Temperature Range	-20°C to +60°C [-4°F to +140°F]
Storage Temperature	-55°C to +80°C [-67°F to 176°F]
Installation Height (above mean sea level)	≤2000 m
Relative Humidity (no condensation)	5 to 85 %
Climatic Class	3K3
Degree of Pollution	3
Overvoltage Category	III
Housing Material	Plastic
Flame Resistance	EN60695 (of low flammability)
Flammability	UL94 (V0)
Agency Approvals	CE (2011/65/EU), cURus (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

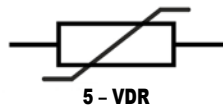
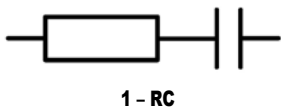


Features

- 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)

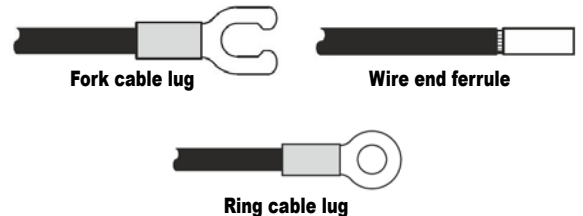
Murrelektronik Surge Suppressors for Motors Selection Guide

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
23050	\$5uxj	RC	575VAC	3 x 400-575 VAC	50/60 Hz	≤850V	4kW / 5HP	1Hz	1	3	0.22μF / 220R	38 [1.34]	PDF
230563	\$5uxg	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
23146	\$5uxh	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
23050	AWG22	1015	With adhesive film or snap-on DIN rail with adapter	Fork cable lug	M4
230563	AWG20	1015	Can be snapped onto a 35mm DIN rail	Wire end ferrule Length: 10mm Cable length 250mm ±5mm	10mm
23146	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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Storage Temperature	-55°C to +80°C [-67°F to 176°F]
Installation Height (above mean sea level)	≤2000 m
Relative Humidity (no condensation)	5 to 85 %
Climatic Class	3K3
Degree of Pollution	3
Overvoltage Category	III
Housing Material	Plastic
Flame Resistance	EN60695 (of low flammability)
Flammability	UL94 (V0)
Agency Approvals	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



3124270



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

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
3124033	\$-5uxi:	Zener diode	24	18-30	0-60 Hz	50V	100W	0.1 Hz	1	20ms	ZY-47	1	LED (yellow)	15 [0.53]	PDF
3124046	\$-5uxj:	Varistor	110	48-130	0-60 Hz	220V	100W	0.1 Hz	2	20ms	S14 K130	1	LED (yellow)	25 [0.88]	PDF
3124233	\$5uxk:	Zener diode	24	18-30	0-60 Hz	50V	100W	0.1 Hz	1	20ms	ZY-47	1	LED (yellow)	10 [0.35]	PDF
3124270	\$5uxo:	RC	110	48-130	0-60 Hz	220V	10W	0.1 Hz	3	20ms	0.22µF/ 220R	1	LED (yellow)	10 [0.35]	PDF
3124873	\$5uxp:	Zener diode	24	18-30	0-60 Hz	55V	100W	0.1 Hz	1	20ms	ZY-47	1	LED (yellow)	12 [0.42]	PDF
3124133	\$5uxs:	Zener diode	24	18-30	0-60 Hz	47V	50W	0.1 Hz	1	20ms	S07 K25	1	LED (yellow)	15 [0.53]	PDF
3124170	\$5uxt:	RC	110	95-132	0-60 Hz	165V	10W	0.1 Hz	3	20ms	0.15µF/ 220R	1	LED (yellow)	13 [0.46]	PDF
3124833	\$5uxv:	Zener diode	24	18-30	0-60 Hz	50V	100W	0.1 Hz	1	20ms	ZY-47	1	LED (yellow)	5 [0.18]	PDF
3124832	\$5uxy:	Zener diode	24	18-30	0-60 Hz	50V	100W	0.1 Hz	1	20ms	ZY-47	1	LED (yellow)	5 [0.18]	PDF

Murrelektronik Surge Suppressors for Solenoid Valve Plugs Mounting and Connections

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

Circuit Diagrams

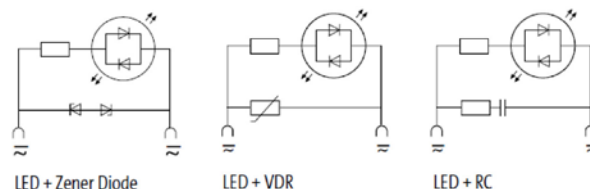


Diagram 1

Diagram 2

Diagram 3

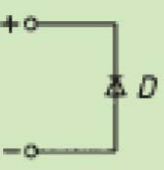
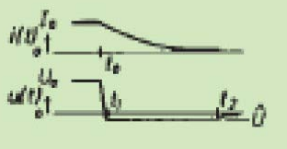
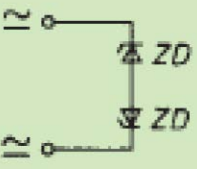
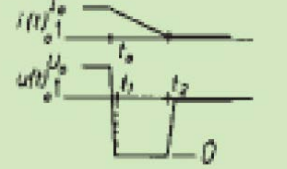


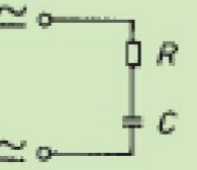
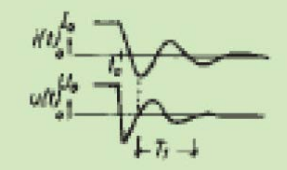
Murrelektronik Surge Suppressors for Solenoid Valve Plugs Specifications

Ambient Temperature Range	-20°C to +60°C [-4°F to +140°F]
Storage Temperature	-55°C to +80°C [-67°F to 176°F]
Installation Height (above mean sea level)	≤2000 m
Relative Humidity (no condensation)	5 to 85 %
Climatic Class	IEC/EN60721-3-3, 3K3
Degree of Protection	EN 60529 (IP65 fastened with screw when assembled), IP65
Degree of Pollution	3
Overvoltage Category	III
Housing Material	Polyamide black, flame retardant, temperature resistance up to 130°C
Flame Resistance	EN60695 (of low flammability)
Flammability	UL94 (V0)
Agency Approvals	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(SJ/T 11364-2014) (e / 20 EPUP)

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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	Advantages: Matches wide range of loads Best possible damping Simple construction Disadvantages: Long delay time
		Yes	Small	U_{ZD}	No	Advantages: Limits positive and negative voltages Suitable for AC and DC Matches wide range of loads Disadvantages: No damping below U_{ZD}
		Yes	Small	U_{VDR}	No	Advantages: Matches wide range of loads High energy absorption Very simple construction Disadvantages: No damping below U_{VDR} Limited lifespan
		Yes	Small	$1.5 \times U_{NOM}$	Yes	Advantages: HF damping due to RC network Immediate de-energization Excellent results with AC Disadvantages: Must be matched to the load Limited lifespan