

| EMC Suppressors

Complete OVERVIEW
of New Suppressors



| Contactor Suppressors

| Motor Suppressors

| Valve Suppressors

| Active Brake Rectifiers



SUPPRESSORS

FOR CONTACTORS, MOTORS, AND VALVES

EFFICIENT SUPPRESSION

An answer for all your needs: Murrelektronik Suppressor Modules



Choose Murrelektronik suppressor modules and benefit from our expertise: We have more than 35 years of experience in the field of EMC

Voltage spikes are a problem in machines and installations. Murrelektronik suppressors help avoid damage reliably. They increase the lifetime of electronic and electrical components and they permit the EMC-compatible design of machines, systems, and devices.

Problem:

Switching off inductive loads (motors, contactors, valves) causes voltage spikes of up to several kW. This has negative impacts:

- Interturn short-circuits caused by voltage spikes during switchoff
- Shortens the lifetime of relays
- The control sequence is disturbed
- Contactors are damaged

Solution:

Suppressors installed close to the interference source help reduce switchoff voltages spikes. Their benefits:

- Longer lifetime
- High interference protection
- Increased machine availability
- Increased operational reliability

Little Effort, Great Impact.

Murrelektronik collaborates closely with the manufacturers of contactors, valves, and motors to develop suppressors. The components are adjusted precisely to the individual types and are assembled with perfect mechanical fit – to achieve optimized suppression.

| WE CAN DO

No matter what coil or inductance that needs suppressing: We have the right solution!

For contactors...

- A variety of different suppressors that are integrated directly in the housing of all standard contactor types
- Universal suppressors are snapped on to DIN rails, bonded, or fixed with cable ties included in the scope of delivery

For motors...

- Suppression inside the motor terminal box, directly at the interference source
- 10-pole motor connector with integrated suppressor module and preterminated cable
- Universal suppressors for snapping onto DIN rail or mounting on or under the motor contactor

For valves...

- Suppressors are simply mounted between valve base and valve plug instead of the flat gasket



Visit our website for valve suppressors from Murrelektronik and suppressors for contactors of other manufacturers that are not listed here: www.murrelektronik.com



VERSATILITY

EMC problems are eliminated efficiently by Murrelektronik suppressors and filters. Contact us. We also have many additional options to suppress other inductive loads efficiently.

OVERVIEW OF SUPPRESSOR TYPES

Circuit	Characteristics of load current and voltages	Incorrect polarity protection and also suitable for AC	Additional switch-off delay	Back e. m. f. limitation	Damping also occurs below U_{limit}	Remarks
		no	very large	1 V	no	Advantages: <ul style="list-style-type: none"> Matches wide range of loads Best possible damping Simple construction Disadvantages: <ul style="list-style-type: none"> Long delay time
		yes	small	U_{VDR}	yes	Advantages: <ul style="list-style-type: none"> HF-damping due to RC-network High energy absorption Short delay time Disadvantages: <ul style="list-style-type: none"> Must be matched to the load Limited lifespan
		yes	small	U_{ZD}	no	Advantages: <ul style="list-style-type: none"> Limits positive and negative voltages Suitable for AC and DC Matches wide range of loads Disadvantages: <ul style="list-style-type: none"> No damping below U_{ZD}
		yes	small	U_{VDR}	no	Advantages: <ul style="list-style-type: none"> Matches wide range of loads High energy absorption Very simple construction Disadvantages: <ul style="list-style-type: none"> No damping below U_{VDR} Limited lifespan
		yes	small	$1.5 \times U_{\text{NOM}}$	yes	Advantages: <ul style="list-style-type: none"> HF-damping due to RC-network Immediate de-energization Excellent results with AC Disadvantages: <ul style="list-style-type: none"> Must be matched to the load Limited lifespan

Your benefits with Murrelektronik suppressors:

- Optimized suppression since modules are precisely matched to individual sources of voltage spikes
- Short installation time with prefabricated modules and optimized fixing options
- Increased availability and productivity by preventing operative failures
- Lower maintenance costs due to longer service life of contacts and switching elements

SUPPRESSORS

FOR CONTACTORS AND MOTORS



CONTACTOR SUPPRESSORS



MOTOR SUPPRESSORS



BRAKE RECTIFIERS

NEW SUPPRESSORS FOR CONTACTORS OF THE FOLLOWING MANUFACTURERS

Circuit diagrams: 	General Electric			OMRON			Rockwell Automation ALLEN-BRADLEY		Schneider Electric		SIEMENS		
	M	CL		J7KNA	J7KN	J7KN	100-M	100-C	TeSys AC coils	TeSys DC coils	S00	S0	
Appropriate contactors	M	CL00, 01, 02, 25	CL03, 04, 45	CL05...10	J7KNA	J7KN	J7KN	100 M	100-C09...C85	LC 1 D09...D38, LC 1 DT20, DT40, LC 2 D09...D38	LC 1 D09...D38, LC 1 DT20, DT40, LC 2 D09...D38	3 RT 20.15/16/17/18	3 RT 20.25/26/27/28
Ordering data		Art.-No.	Art.-No.	Art.-No.	Art.-No.	Art.-No.	Art.-No.	Art.-No.	Art.-No.	Art.-No.	Art.-No.	Art.-No.	Art.-No.
Voltage	Suppression												
24...240 V DC	Diode	2000-68300-110 0000	2000-69100-110 0000	2000-69200-110 0000				26360	2000-68200-110 0000		2000-69300-110 0000	2000-68500-110 0000	2000-68400-201 0000
24 V DC	Diode + LED												
24 V AC/DC	Diode/Z-Diode	2000-68300-440 0000	2000-69100-440 0000	2000-69200-440 0000			26400	26375		2000-69400-440 0000	2000-69300-520 0000	2000-68500-440 0000	2000-68400-440 0000
	VDR												
	VDR + LED												
	RC	2000-68300-430 0000	2000-69100-430 0000	2000-69200-430 0000	2000-69101-430 0000	2000-68800-230 0000	2000-69000-230 0000		2000-68200-430 0000	2000-69400-430 0000	2000-69300-430 0000	2000-68500-430 0000	2000-68400-430 0000
30...250 V DC	Z-Diode												
48 V AC/DC	VDR	2000-68300-440 0000	2000-69100-440 0000	2000-69200-440 0000				26401	2000-68200-440 0000	2000-69400-440 0000	2000-69300-440 0000	2000-68500-441 0000	2000-68400-441 0000
	RC	2000-68300-430 0000	2000-69100-430 0000	2000-69200-430 0000	2000-69101-430 0000				2000-68200-430 0000	2000-69400-430 0000	2000-69300-430 0000	2000-68500-430 0000	2000-68400-430 0000
110 V AC/DC	VDR												
	VDR + LED												
	VDR-RC												
	RC	2000-68300-132 0000	2000-69100-730 0000	2000-69200-730 0000	2000-69101-730 0000	2000-68800-730 0000	2000-69000-730 0000		2000-68200-132 0000	2000-69400-730 0000	2000-69300-730 0000	2000-68500-730 0000	2000-68400-730 0000
230 V AC/DC	VDR												
	VDR + LED												
	VDR-RC												
	VDR-RC + LED												
	RC	2000-68300-132 0000	2000-69100-232 0000	2000-69200-232 0000	2000-69101-232 0000	2000-68800-232 0000	2000-69000-232 0000	21143	2000-68200-132 0000	2000-69400-232 0000	2000-69300-232 0000	2000-68500-232 0000	2000-68400-232 0000
400 V AC/DC	VDR												
	RC	2000-68300-542 0000	2000-69100-542 0000	2000-69200-542 0000				26404	2000-68200-542 0000	2000-69400-542 0000	2000-69300-542 0000	2000-68500-542 0000	2000-68400-542 0000
	RC								2000-68200-532 0000	2000-69400-532 0000		2000-68500-532 0000	2000-68400-532 0000
Dimension drawing													
Note: Suppressors for other manufacturers, voltages and configurations on request.		¹ Also for DC coils from CL09...CL10 ² Also for DC coils from CL09...CL10											

SUPPRESSORS FOR MOTORS

Circuit diagrams: 	RC 3 U	RC 3 BU	RC 3 BUG	RC 3 R	RC 3 RG	HRC 3	RC 3 BUR	RC 3 RT	RC 3 ST	RC 3 ST	Active Brake Rectifier
	Ordering data	Art.-No.	Art.-No.	Art.-No.	Art.-No.	Art.-No.	Art.-No.	Art.-No.	Art.-No.	Art.-No.	Art.-No.
Voltage	Motor rating	Suppression	Suppression	Suppression	Suppression	Suppression	Suppression	Suppression	Suppression	Suppression	Suppression
3 x 400 V AC	4 kW	RC 23022	RC 23050 VDR 23115	RC 23104 VDR 23100	VDR 23170	RC 23141	RC 23004	RC 236082	RC 23180		
	5.5 kW 7.5 kW 10 kW		VDR 23115 RC 23011 RC(1) per phase 23043	RC 23104 VDR 23106	VDR 23171	VDR 23142 RC 23002					
	20 kW		VDR 23118	VDR 23106	VDR 23143 VDR(1) per phase 23144	RC 23009 VDR 23015					
3 x 575 V AC	4 kW 5.5 kW 7.5 kW	RC 23035		VDR 23172	RC 23141	RC 23006	RC 236082	RC 23181			
	10 kW 20 kW			VDR 23145 VDR 23146 VDR(1) per phase 23147	VDR 23016						
3 x 690 V AC	4 kW 7.5 kW 10 kW 20 kW		RC 23056	RC 23104 VDR 23105	VDR 23174	RC 23017					
Technical Data											
Frequency		for RC: 50...60 Hz / for VDR: 10...400 Hz	for RC: 50...60 Hz / for VDR: 10...400 Hz	for RC: 50...60 Hz / for VDR: 10...400 Hz	for RC: 50...60 Hz / for VDR: 10...400 Hz	for RC: 50...60 Hz / for VDR: 10...400 Hz	for RC: 50...60 Hz / for VDR: 10...400 Hz	for RC: 50...60 Hz / for VDR: 10...400 Hz	10...400 Hz	10...400 Hz	
Connection		-500 mm PVC cable 3 x 0.75 mm ² or 6 x 0.75 mm ²	-200 mm single core 0.5 mm ² with self-securing cable forks M4	-500 mm single core 1 mm ² ¹ 1x Art.No.23103 per each phase	-100 mm single core 0.5 mm ² [Art.No. 23174:1.5 mm ²] 1 mm ² isolated M6 [Art.No. 23175: isolated M4]	-150 mm single core 0.5 mm ² [Art.No. 23000:1.5 mm ²] 1.5 mm ² with self-securing cable forks M4	fits directly into SIRIUS contactors, size 00	fits directly into SIRIUS contactors, size 00	females, 10-pole + PE PUR cable black, 4 x 1.5 mm ² ; numbered wires, halogen-free	females, 10 pole + PE PRU cable black, 4 x 1.5mm ² ; numbered wires, DESIN ^a compatible	
Dimension drawing											
Note: Suppressors for other voltages, frequencies, and motor ratings on request. Do not use RC motor suppressors on variable frequency drives.											
Technical Data											
Input voltages											230 / 400 / 480 V AC
Control input											24 V DC
Output voltages											215 / 205 / 180 V AC (depending on input voltage)
Output current											0.75 A
Status LED											green
Brake suppressor											integrated
Connections											spring clamp terminals
Mounting											DIN rail
Dimension drawing											



stay connected

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