

Standardized motor suppression from Murrelektronik

In the guideline EN 60204/VDE 0113 para. 11.2.2 it states, that motors in PLC or NC controlled machines and systems must be fitted with a suitable suppressor.

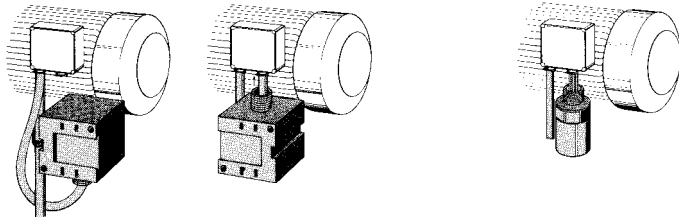
Murrelektronik offers a suitable motor suppressor for every application. The suppressor should, if at all possible be mounted very close to the source of interference (Motor). The European norm (EN) 50262 has been valid since 12/31/1999 for metric threads and replaces the DIN 46320 for PG threads. In this transitional

period Murrelektronik offers both variants. There are also modules available which can be snapped onto DIN-rail.

The use of motor suppression equipment protects the motor from high inductive voltage spikes when switching off. At the same time, it increases the contact life span of the control unit. With the optimum suppression modules from Murrelektronik, you receive the highest level of operational safety.

The machine or control panel will function within the EMC regulations, without affecting other electrical equipment in the surrounding area.

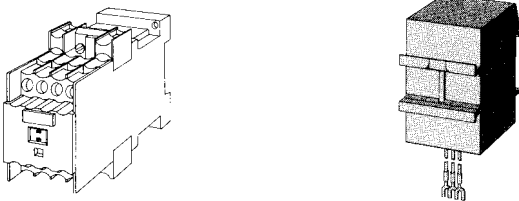
Murrelektronik offers the perfect mounting method for every application!



For connection to the motor terminal box

The Murrelektronik motor suppressor in the series RC3U, RC3R and RC3 RG have a M16 x 1.5, M20 x 1.5, PG 9 or PG 13.5 screw thread for direct mounting on to the terminal box of the motor.

Suppression, where the interference arises!

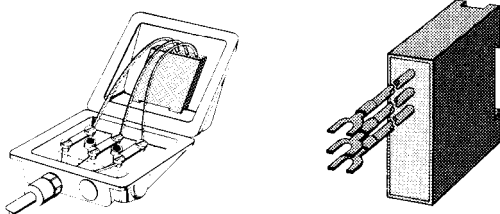


Under the contactor

The motor suppressor series HRC3/HRC3K snap on to 35 mm DIN-rail (EN 50022). The contactor can then be snapped piggy-back style on to the suppressor.

HRC3S contains additional contactor suppression as well.

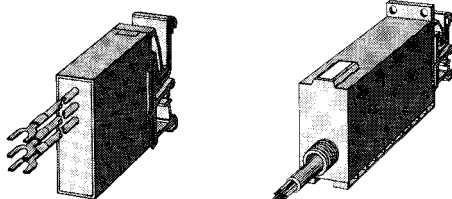
Space savings.



Direct mounting in the terminal box

Our smallest motor suppressor RC3BU fit snugly into the terminal box of the motor.

Direct suppression on the motor.

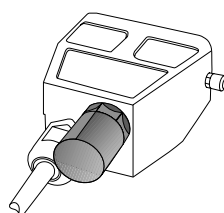


Snaps on to DIN and C-rails

Murrelektronik motor suppressors can be fitted with a snap foot to allow mounting on DIN-rail. The models are in a space saving 12mm housing.

RC3BU, RC3BUG

Snap on, connect, finished.



Mounting direct on the motor

With the RC 3 ST, the motor can be quickly connected and at the same time suppressed.

Suppression and connection in one.

Mounting methods:

- on the motor terminal box
- inside the motor terminal box
- inside the distribution box
- on 35 mm DIN-rail to EN 50022, and C-rail



RC 3 U
with M16 x 1.5 screw



RC 3 U
with PG 9 screw

RC 3 BU

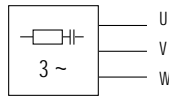


RC 3 BUG

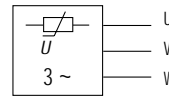


Circuit diagram

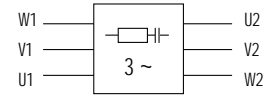
RC-suppression



Varistor-suppression (VDR)



6-wire

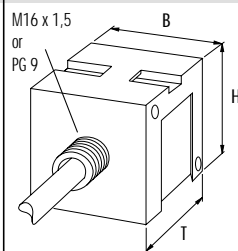


Ordering data		Art.-No.	Art.-No.	Art.-No.	Art.-No.
Voltage	Motor rating	suppression	suppression	suppression	suppression
		RC	RC	RC	RC
3 x 400 V AC	4 kW	23022	23020	23050	23104
	4 kW			²⁾ 231428	23100
	4 kW			23115	RC
	7,5 kW			23115	RC
	10 kW	RC 23011	RC 23010	23118	RC 23104
	10 kW	RC/6-wire 23043	RC/6-wire 23040		RC 23106
3 x 575 V AC	20 kW			23118	VDR 23101
	4 kW			23050	
	7,5 kW	RC 23035	RC 23030		RC 23104
	20 kW				VDR 23102
3 x 690 V AC	45 kW				RC/6-wire ¹⁾ 23103
	4 kW			RC 23056	RC 23104
	7,5 kW				RC 23104
	20 kW				VDR 23105

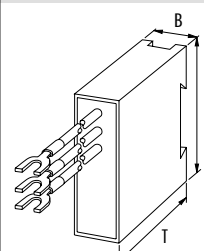
Technical data

Frequency	for RC: 50...60 Hz	for VDR: 10...400 Hz
Material	flame retardant plastic to UL 94	
Potting compound	2-component epoxy	
Temperature range	-20...+60 °C	
Connection method	approx. 500 mm PVC cable 3 x 0,75 mm ² resp. 6 x 0,75 mm ²	approx. 200 mm single core 0,5 mm ² self-securing M4 fork terminal ends
Dimensions H x B x T	41 x 41 x 41 mm	40 x 15 x 43 mm
		approx. 500 mm single core 1 mm ²
		61 x 25 x 92 mm

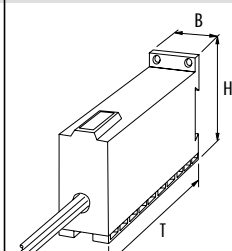
Dimension drawing



For DIN-rail mounting use
2 x Art.-No. 20900 adapter feet.



For DIN-rail mounting use
1 x Art.-No. 20900 adapter feet.



For DIN-rail mounting use
2 x Art.-No. 20900 adapter feet.

Notes

For other voltages, frequencies and motor ratings, please inquire. Do not use RC motor suppressors on variable frequency drives.
¹⁾ 1 x Art.-No. 23103 required per phase. ²⁾ Art.-No. 231428 has ferrule ends.

Motor suppressors

Mounting methods:

- with M16 x 1.5 and M20 x 1.5 PG 9 and PG 13.5 screw connector on body
- on motor terminal box with plug connectors



RC 3 R

with M16 x 1,5 screw



RC 3 R

with PG 9 screw

RC 3 R

with M16 x 1,5 screw

RC 3 R

with PG 9 screw

RC 3 RG

with M20 x 1,5 screw

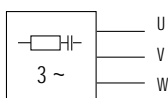


RC 3 RG

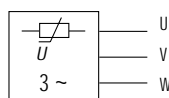
with PG 13,5 screw

Circuit diagram

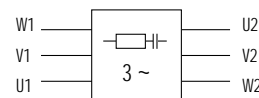
RC-suppression



Varistor-suppression (VDR)



6-wire



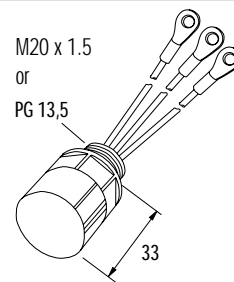
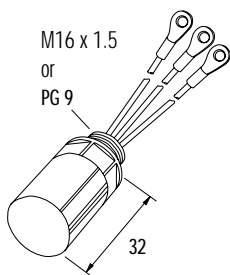
Wire numbering: U=1, V=2, W=3, U2=4, V2=5, W2=6

Ordering data		Art.-No.	Art.-No.	Art.-No.	Art.-No.	Art.-No.	Art.-No.
Voltage	Motor rating	suppression	suppression	suppression	suppression	suppression	suppression
3 x 400 V AC	4 kW	VDR 23170	VDR 23110	VDR 23175	VDR 23119	RC 23141	RC 23140
	4 kW						
	4 kW						
	7,5 kW	VDR 23171	VDR 23111				
	10 kW					VDR 23142	VDR 23120
	20 kW					VDR/6-wire 23143	VDR/6-wire 23125
3 x 575 V AC	4 kW	VDR 23172	VDR 23112				
	7,5 kW	VDR 23173	VDR 23113				
	10 kW					VDR 23145	VDR 23122
	20 kW					VDR 23146	VDR 23123
	20 kW					VDR/6-wire 23147	VDR/6-wire 23126
3 x 690 V AC	7,5 kW	VDR ¹⁾ 23174	VDR ¹⁾ 23114				
	20 kW					VDR/6-wire ²⁾ 23148	VDR/6-wire ²⁾ 23127
	20 kW					VDR 23149	VDR 23124

Technical data

Frequency	for RC: 50...60 Hz		for VDR: 10...400 Hz	
Material	flame retardant plastic			
Potting compound	2-component epoxy to UL 94			
Temperature range	-20...+60 °C			
Connection method	approx. 100 mm single core		approx. 150 mm approx	
	0,5 mm ²		1 mm ²	
Ring terminals	insulated M6		insulated M4	
Dimensions	40 mm, Ø 24,5 mm		44 mm, Ø 39 mm	

Dimension drawing



Notes

For other voltages, frequencies, motor ratings, resp. Cable/wire lengths please inquire.

Do not use RC motor suppressors on variable frequency drives. ¹⁾ wire diameter 1,5 mm² ²⁾ to max. 660 V AC.

Mounting methods:

- on motor terminal box with plug connectors

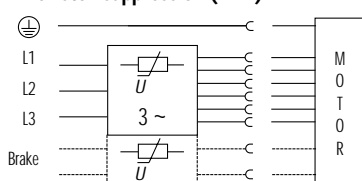
RC 3 ST

Connector with cable with or without suppression for the brake



Circuit diagram

Varistor-suppression (VDR)



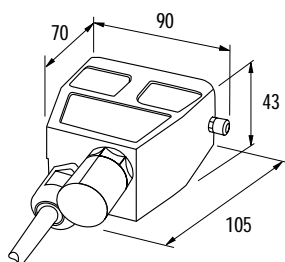
Ordering data

Ordering data		Art.-No.	Art.-No.
Voltage	Motor rating	without brake	with brake
3 x 400 V AC	4 kW		
	4 kW	VDR/star	23400
	4 kW	VDR/delta	23410
	7,5 kW		
	10 kW		
	10 kW		
3 x 575 V AC	4 kW		
	7,5 kW		
	10 kW		
	20 kW		
	20 kW		
3 x 690 V AC	7,5 kW		
	20 kW		
	20 kW		

Technical data

Frequency	for RC: 50...60 Hz	for VDR: 10...400 Hz
Plug connector	female, 10-pole + PE	
Housing	Aluminium pressure diecasting	
Temperature range	-20...+60 °C	
Connection method	3 m PUR cable, 4 x 1,5 mm ² ; numbered wires	3 m PUR cable, 7 x 1,5 mm ² ; numbered wires
Dimensions	see dimension drawing	

Dimension drawing



Notes

Pluggable motor connection to DESINA® with 5m PUR cable 4 x 1,5 mm² Art.-No. 236121 on request.
Do not use RC motor suppressors on variable frequency drives.

Mounting methods:

- on 35 mm DIN-rail to EN 50022
- bolted together, stacked
- DIN-rail mounted under the control gear



HRC 3



HRC 3 K



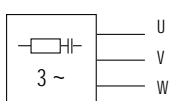
RC 3 BUR

Connects onto Siemens SIRIUS contactors
3 RT 10

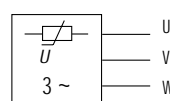


Circuit diagram

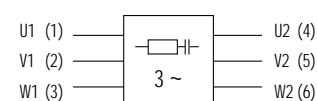
RC-suppression



Varistor-suppression (VDR)



6-wire



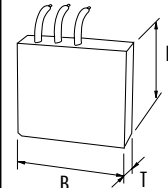
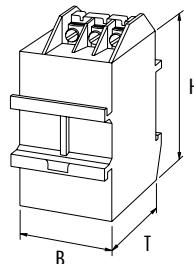
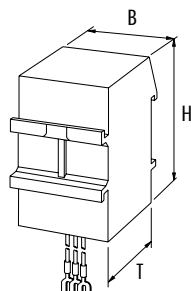
Ordering data

Voltage	Motor rating	suppression	Art.-No.	suppression	Art.-No.	suppression	Art.-No.
3 x 400 V AC	4 kW	RC	23000	RC	23001		
	4 kW	RC	²⁾ 23004	RC	²⁾ 23005		
	4 kW	RC	¹⁾ 233463				
	5,5 kW					RC	236082
	7,5 kW						
	10 kW	RC	23002	RC	23003		
	20 kW	RC/6-wire	23009				
3 x 575 V AC	20 kW	VDR	23015				
	7,5 kW	RC	23006	RC	23007		
	7,5 kW	RC	¹⁾ 230563				
	10 kW	VDR	23016				
3 x 660 V AC	20 kW			RC	23018		
	10 kW	RC	23017				

Technical data

Frequency	for RC: 50...60 Hz for VDR: 10...400 Hz	
Material	flame retardant plastic to UL 94	
Potting compound	2-component epoxy	
Temperature range	-20...+60 °C	
Connection method	250 mm single core (Art.-No. 23000; 300 mm) 0,5 mm ² (Art.-No. 23000; 1,5 mm ²) self-securing M4 fork terminal ends	3-pole terminal 2 x (0,75...2,5 mm ²) M4
Dimensions H x B x T	75 x 45 x 42 mm	40 x 15 x 43 mm

Dimension drawing



Notes

For other voltages, frequencies and motor ratings, please inquire. Do not use RC motor suppressors on variable frequency drives.
¹⁾has ferrule ends. ²⁾max. nominal voltage 3 x 450 V AC +10 %.

Mounting methods:

- DIN-rail mounted under the control gear
- fixes onto contactors
- available with integrated coil suppression



HRC 3 AS

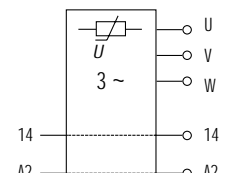
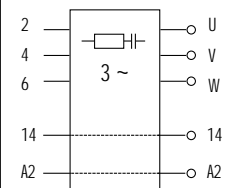
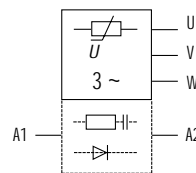
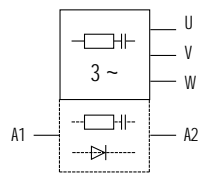


RC 3 RT

Connects onto Siemens SIRIUS contactors
3 RT 10



Circuit diagram



Wire numbering: U=1, V=2, W=3, U2=4, V2=5, W2=6

Appropriate contactors

Motor contactors up to 5,5 kW from Siemens, Moeller, Sprecher + Schuh etc.

Siemens 3 RT 10

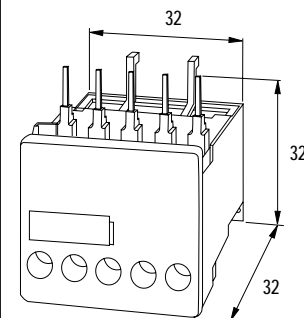
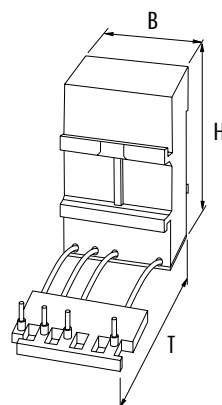
Ordering data

Voltage	Motor rating	Art.-No.		Art.-No.		Art.-No.			
		suppression	Art.-No.	suppression	Art.-No.	suppression	Art.-No.		
3 x 400 V AC	5,5 kW	RC	23160	VDR	23163	RC	23180	VDR	23183
	5,5 kW	RC + Diode	23151	VDR + Diode	23155	RC + Diode	23191	VDR + Diode	23194
	5,5 kW	RC + RC	23150	VDR + RC	23154	RC + RC	23190	VDR + RC	23197
3 x 575 V AC	5,5 kW	RC	23161	VDR	23164	RC	23181	VDR	23184
	5,5 kW	RC + Diode	23153	VDR + Diode	23157	RC + Diode	23193	VDR + Diode	23196
	5,5 kW	RC + RC	23152	VDR + RC	23156	RC + RC	23192	VDR + RC	23195
3 x 690 V AC	5,5 kW					RC	23182	VDR	23185

Technical data

Suppression Coil	for RC: 230 V AC/20 VA	for diode: 24...230 V DC/36 W
Frequency	for RC: 50...60 Hz, for VDR: 10...400 Hz	
Material	flame retardant plastic to UL 94	
Temperature range	-20...+60 °C	
Connection method	ferrules, load side securely fixed	fits directly into SIRIUS contactors, size 00
Dimensions H x B x T	75 x 45 x max. 100 mm (full stretch)	40 x 45 x 65,5 mm

Dimension drawing



Notes

For other voltages, frequencies and motor ratings, please inquire. Do not use RC motor suppressors on variable frequency drives.