



AMKASYN

Device Description

External Brake Resistor

AR 45

Version: 2023/25

Part no.: 25240

Translation of the "Original Dokumentation"

AMK*motion*

MEMBER OF THE ARBURG FAMILY

Imprint

Name:

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Version:

Version	Change	Letter symbol
2023/25	<ul style="list-style-type: none"> AMKmotion Design 	LeS

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We reserve the right to modify the content of the documentation as well as the delivery options for the product.

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For fast and reliable troubleshooting, you can help us by informing our Customer Service about the following:

- Type plate data for each unit
- Software version
- Device configuration and application
- Type of fault/problem and suspected cause
- Diagnostic messages (error messages)

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Content

Imprint	2
1 Safety instructions	4
2 Product presentation	4
3 Technical data	4
3.1 Dimensions	5
4 Assembly	5
5 Wiring	5
5.1 Parallel circuit AR 45	5
Your opinion is important!	6

1 Safety instructions

 WARNING	
	<p>Risk of burns when touching hot surfaces!</p> <p>The casing temperature, for example of the line filter, the choke or the brake resistor, can be more than 70 °C during and even after operation. Contact causes burns.</p> <p>Steps to prevent:</p> <ul style="list-style-type: none"> • Make sure that the surfaces have cooled down before you touch. • Wear protective clothing such as gloves if hot parts need to be touched. • Fit a warning sign with warning hot surface. • Do not mount any flammable objects near the device.

2 Product presentation

A servo motor creates generative energy during braking, which is fed into the DC intermediate circuit. This brake energy is available to motorically running servo motors that are connected to the same intermediate circuit.

Excessive brake energy is fed back into the supply network by the supply module. No feedback is possible for supply modules without regenerative feedback or during line failure.

In this case, the supply module requires an external brake resistor by which the generative energy is converted into heat.

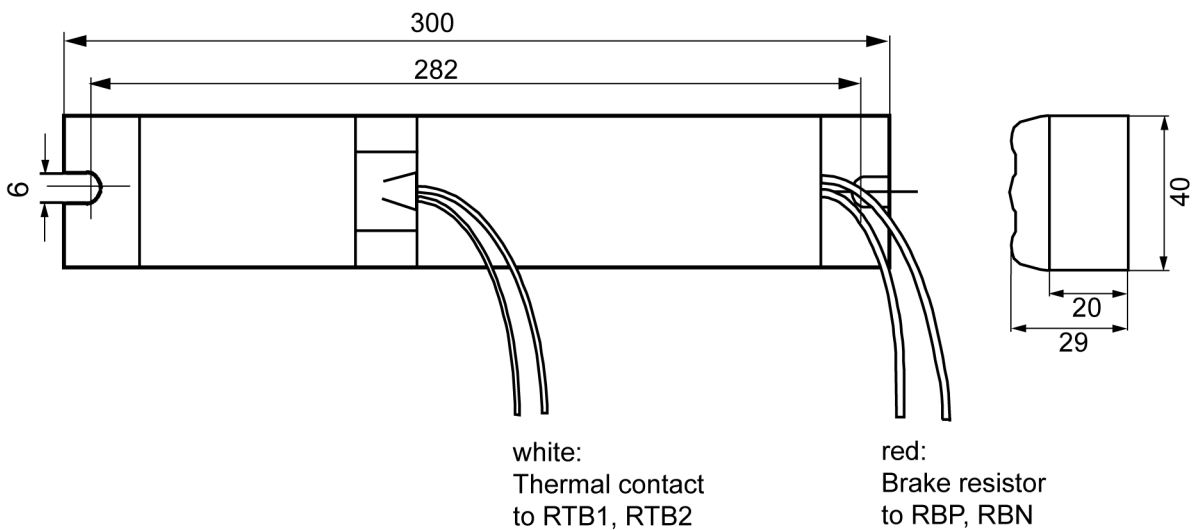
All AMK supply modules feature an internal brake transistor control and terminals for connecting an external brake resistor with temperature monitoring.

The braking resistance needs to be selected application-specific depending on the occurring brake energy.

3 Technical data

	AR 45
Order number	O536
Resistor	
Nominal resistance	110 Ω
Continuous braking power	45 W
Peak braking power	5 kW for 1s
Lifetime	40000 h
Cable cross-section	1.5 mm ² / AWG 16
Cable length	approx. 250 mm
Protection class	IP 67
Weight	approx. 0,5 kg
Thermal protector	
Temperature switch	nc
Cut-off temperature	approx. 130 C°
Cable cross-section	0.75 mm ² / AWG 18
Cable length	approx. 500 mm

3.1 Dimensions



4 Assembly

Avoid heat build-up.

The brake resistor must not be mounted in the cooling air flow of any electronic equipment!

The brake resistor is fixed directly on the mounting plate without distance!

The mounting panel must not have any cutout > 2.4 mm in the area of the brake resistor.

Attach a warning label: "Caution against contact".

5 Wiring

Connect the brake resistor to power supply module KE, terminals RBP, RBN. Use a shielded cable. Shield connection at both ends

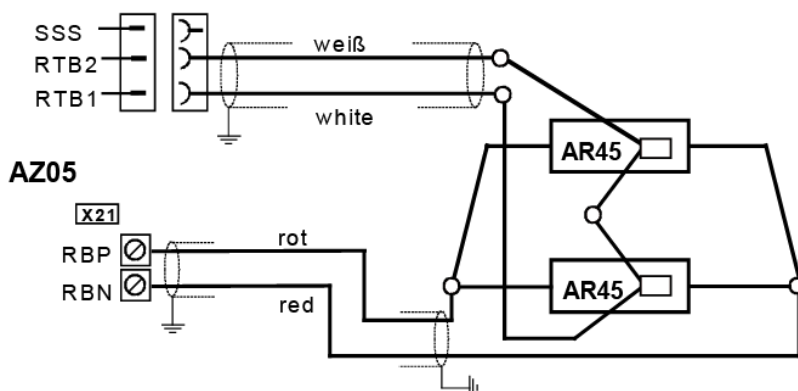
Connect the thermal protector to power supply module KE, terminals RT1, RT. Use a shielded cable. Only one shield connection at the power supply module.

You will find the cross-sections of the recommended cables at the chapter technical data.

5.1 Parallel circuit AR 45

Only for AZ 05:

For increase of the peak braking power at most 2 brake resistors can be connected to the AZ module. The resistors (red leads) must be connected in parallel, the thermal protectors (white leads) must be connected in series.



Your opinion is important!

With our documentation we want to offer you the highest quality support in handling the AMKmotion products.

That is why we are now working on optimizing our documentation.

Your comments or suggestions are always of interest to us.

We would be grateful if you take a bit of time and answer our questions. Please return a copy of this page to us.



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Thank you for your assistance.

Your AMKmotion documentation team

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(1) very good (2) good (3) satisfactory (4) less than satisfactory (5) poor

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