AMKASYN
Device Description
External Brake Resistor
AR 140

Version: 2021/42
Part no.: 200776
Translation of the "Original Dokumentation"

AMKmotion
MEMBER OF THE ARBURG FAMILY

Imprint

Name: PDK_200776_BW_AR140

Version:

Version	Change	Letter symbol
2021/42	• AMKmotion Design, Mail and Web Adresses	LeS
2021/15	• new design AMK motion	LeS

Previous version: 2017/04

Product version:

Product	Firmware Version (Part no.)	Hardware Version
AR 140	-	-

Reservation: 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)

E-mail service@amk-motion.com

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Content

1 Safety instructions

⚠ WARNING	
	**Risk of burns when touching hot surfaces!** 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. **Steps to prevent:** • 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.

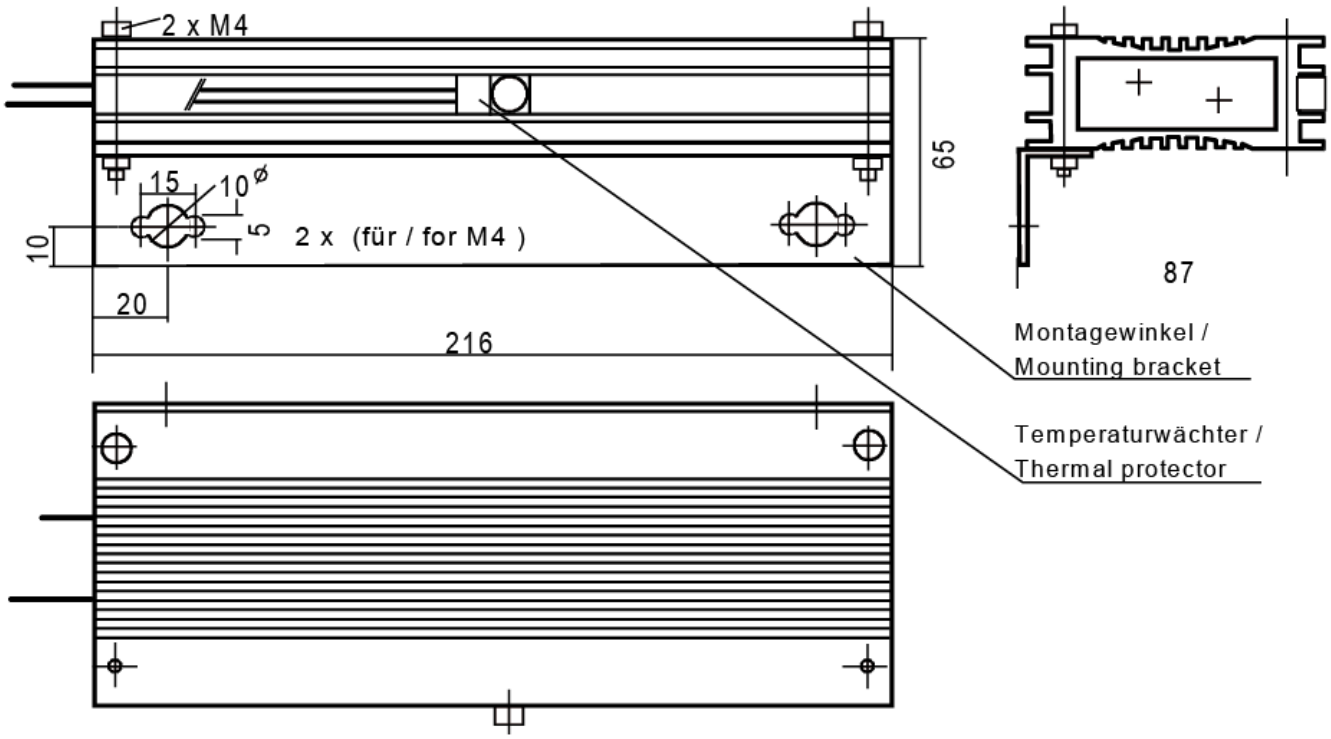
The braking resistance needs to be selected application-specific depending on the occurring brake energy.

3 Technical data

	AR 140
Order number	O746
Resistor	
Nominal resistance	47 Ω
Continuous braking power	140 W 1)
Peak braking power	10 kW for 1s
Lifetime	n.a
Cable cross-section	2.5 mm^2 / AWG 14
Cable length	approx. 510 mm
Protection class	IP 65
Weight	approx. 1,3 kg
Thermal protector	
Temperature switch	nc
Cut-off temperature	approx. 160 C°
Cable cross-section	0.61 mm^2 / AWG 20
Cable length	approx. 600 mm
Protection class	IP 00

1) By suitable ventilation respectively resistor installation on a heat sink, the continuous braking power can be increased to max. 400 W.

3.1 Dimensions



4 Assembly

In order to increase the degree of protection, install the brake resistor so that the connections of the temperature switch point downwards.

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

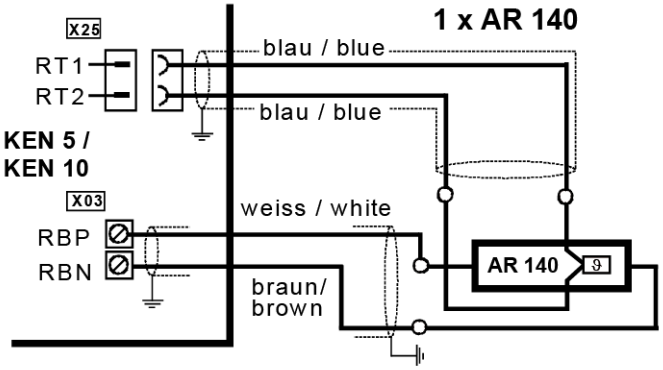
Connect the brake resistor to power supply module KE, terminals RBP, RBN. Use a shielded cable. Shield connection at both ends

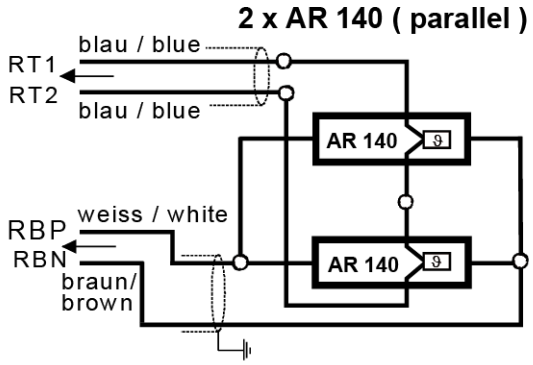
Connect the thermal protector to power supply module KE, terminals RT1, RT. Use a shielded cable. Only one shield connection at the power supply module.

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

5.1 Parallel circuit AR 140

From KEN 5 / KEN 10 Rev. 1.01 at most 2 brake resistors AR 140 can be connected to the KEN 5 / KEN 10 to increase the peak braking power. For this the resistors must be connected in parallel, the thermal protectors must be connected in series:





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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

1. How would you rate the layout of our AMKmotion documentation?

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

2. Is the content structured well?

   (1) very good (2) good (3) moderate (4) hardly (5) not at all

3. How easy is it to understand the documentation?

   (1) very easy (2) easy (3) moderately easy (4) difficult (5) extremely difficult

4. Did you miss any topics in the documentation?

   (1) no (2) if yes, which ones:

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