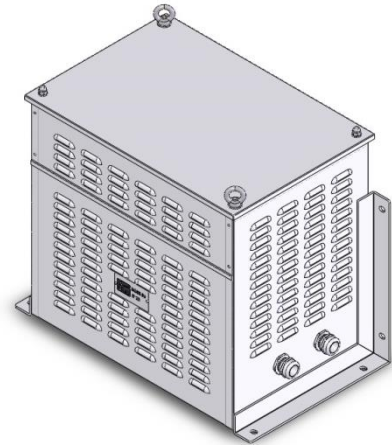


# Operation manual BGUK- Enclosures

**Order Number: BGUK 1**  
**BGUK 2**  
**BGUK 3**  
**BGUK 10**  
**BGUK 20**  
**BGUK 30**  
**BGUK 40**  
**BGUK 50**  
**BGUK 60**



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## 1. General Information

The housings of the BGUK series are designed to increase protection of electrical components that are built into it. The housings are made from sheet steel and are powder coated. Inbuilt fins allow self-cooling. Lead connection via entry glands are allocated on one side of the housing. On the following pages information on the selection and further processing of the enclosure are given. Further information is available from [info@blockusa.com](mailto:info@blockusa.com)

### 1.1 Choice of model

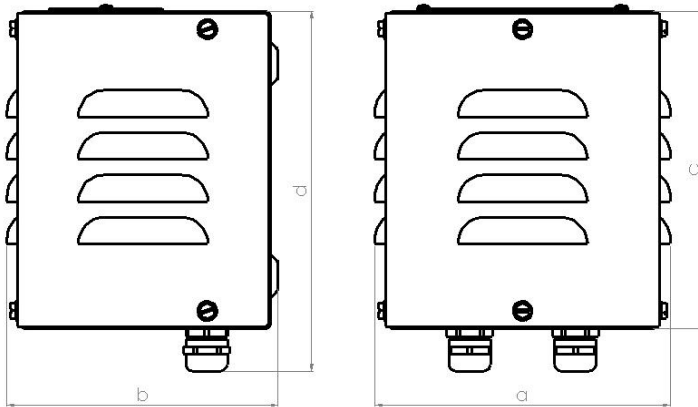
The housings are available in different sizes. For the selection of housing various criteria are to be considered:

- a) Dimensions of housing
  - b) Dimensions of the components to be integrated in the housing
  - c) Maximum power loss of the components to be integrated
  - d) Dimensions of the leads
  - e) Installation Site
- Dimension data are to be found in the following table.

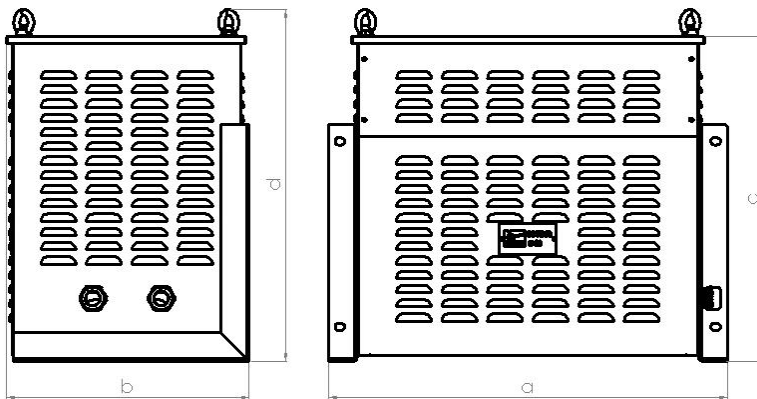
## 1.2 Dimensions/ installation site/Degree of protection IP

	a		b		c		d		Approx. Weight		Degree of protection Wall mounting	Degree of protection ground mounting
	mm	Inch	mm	Inch	mm	Inch	mm	Inch	kg	Lbs		
BGUK 1	140	5.51	130	5.12	150	5.91	170	6.69	1.5	3.3	IP 23	IP 20
BGUK 2	190	7.48	170	6.69	200	7.87	220	8.66	2.7	6.0	IP 23	IP 20
BGUK 3	230	9.06	210	8.27	250	9.84	270	10.63	4	8.8	IP 23	IP 20
BGUK 10	320	12.60	200	7.87	250	9.84	265	10.43	7	15.4	IP 23	IP 23
BGUK 20	420	16.54	230	9.06	325	12.80	365	14.37	12	26.5	IP 23	IP 23
BGUK 30	470	18.50	270	10.63	425	16.73	465	18.31	16	35.3	IP 23	IP 23
BGUK 40	580	22.83	325	12.80	475	18.70	515	20.28	22	48.5	IP 23	IP 23
BGUK 50	700	27.56	425	16.73	570	22.44	615	24.21	32	70.6	IP 23	IP 23
BGUK 60	950	37.40	575	22.64	745	29.33	795	31.30	65	143.3	IP 23	IP 23


### BGUK 1 – BGUK 3:



### BGUK 10 – BGUK 60:



## 1.3 Effective inside dimension / Max. Power loss / cable gland

	a		b		c		Power loss in Watt*	Power loss [Watt]**	Integrated glands	wire diameter 	
	mm	Inch	mm	Inch	mm	Inch				mm	Inch
BGUK 1	120	4.72	115	4.53	120	4.72	16	-	2x M 20	7 – 12	0.28 - 0.47
BGUK 2	170	6.69	155	6.10	170	6.69	29	-	2x M 20	7 – 12	0.28 - 0.47
BGUK 3	210	8.27	195	7.68	220	8.66	48	-	2x M 20	7 – 12	0.28 - 0.47
BGUK 10	235	9.25	155	6.10	220	8.66	110	100	2x M 25	9 – 14	0.35 - 0.55
BGUK 20	305	12.01	185	7.28	290	11.42	240	225	2x M 25	9 – 14	0.35 - 0.55
BGUK 30	355	13.98	225	8.86	370	14.57	260	240	2x M 25	9 – 14	0.35 - 0.55
BGUK 40	455	17.91	275	10.83	420	16.54	340	320	2x M 32	13 – 17	0.51 - 0.67
BGUK 50	555	21.85	375	14.76	520	20.47	760	720	2x M 40	17 – 24	0.67 - 0.94
BGUK 60	805	31.69	525	20.67	690	27.17	1000	950	2x M 50	23 – 32	0.91 - 1.26

\* based on an ambient temperature of 104°F (40°C)

\*\* fully enclosed with no ventilation openings in the front cover

## 2. Installation

### 2.1 Important points to remember before installation

Installation must be in accordance with the relevant standards and by a qualified electrical engineer. All exposed metal parts must be electrically interconnected. For this purpose pre-assembled cables (yellow / green) are included and have to be installed.

The lines are to be properly connected to the existing blade terminals (BGUK1 BGUK-3) or are to be fixed correctly to the existing studs using the included mounting hardware (BGUK10-BGUK60). The removable lid and front plates (10-BGUK BGUK 60) are to be connected to the central ground point at the bottom of the housing by lines. The cross section of the enclosed lines are based on typical applications for each case determined (BGUK1-3 = 14 AWG / 2.081 mm<sup>2</sup>; BGUK10 = AWG 12 / 3,309 mm<sup>2</sup>; BGUK 20-50 = AWG 10 / 5,262 mm<sup>2</sup>; BGUK 60 = 8 AWG / 8,368 mm<sup>2</sup>). Depending on the application and the standards to be followed a change of lines to another cross section may be required. It is important to ensure that the ground wires are not damaged during the assembly of the components into the housing.

In addition to the available effective inside dimension when installing the components it is important to maintain clearance and creepage distances in accordance with DIN norms and the distances to active parts. Furthermore, positioning within the housing must not affect the heat dissipation of other components. For example inside concealed cooling fins may have an impact on the dissipation of heat.

### 2.2 Installation site

The housing is designed for either wall or ground mounting and must be installed by a qualified engineer. When installing, make sure that the cooling fins are mounted with the opening downwards. If this is not the case, a protection index of only IP 20 is fulfilled.

For quick fastening easily accessible mounting holes are integrated in the base plate or on the sides. When installing, make sure that the space beneath and beside the integrated cooling fins is not obstructed by objects and the dissipation of the heat loss is prevented during operation. The required minimum distance of 30mm from adjacent parts must be maintained so as not to interfere with the cooling system!

## 3. Transport

Two lifting eyes mounted on the top of the housings BGUK 20 to 60 are for transport by a qualified operator to the installation site using the appropriate means. If components are already installed within the housing these eyelets are only recommended for further use / transport with consideration of the below max gross weight table

Type	Max Gross Weight
BGUK 20	132.3lbs (60kg)
BGUK 30	132.3lbs (60kg)
BGUK 40	220.5lbs (100kg)
BGUK 50	374.8lbs (170kg)
BGUK 60	374.8lbs (170kg)

## 4. Storage

Ambient storage temperature : -25...+85°C // -13...+185F

Ambient permitted humidity : 30...80% relative humidity

## 5. Accessory

As accessories for housing BGUK 10 to 60 a removable front panel without cooling fins may be ordered. This panel is suitable to be provided with additional holes to mount additional components such as switches. By using these front panels, the maximum heat loss will decrease. Please compare with table in section 1.3).

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