

# Autotransformer AIM



## General Data

Rated input voltage 115/220/230/240 Vac
Rated output voltage 115/220/230/240 Vac
Rated output current 0.8 - 16 A
Insulation class A or B
Maximum ambient temperature 40 °C
Degree of protection IP 20

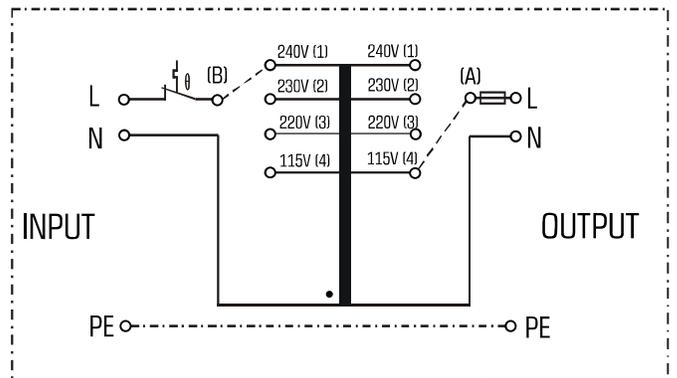
## Advantages

Low weight and small size (compared to isolating transformers)
Integrated short-circuit and overload protection
Very high efficiency
Very good moisture protection and low noise thanks to XtraDenseFill resin encapsulation (AIM 1,8/8 - AIM 5,0/2,5)
Screw terminals under cover with strain relief

## Applications

Autotransformer for adjustment of the voltage on the input and output sides with no requirement for electrical isolation.

## Sample application



## Standards



Autotransformer  
to: VDE 0570 Part 2-13, DIN EN 61558-2-13, EN 61558-2-13,  
IEC 61558-2-13

## Approvals





## Autotransformer AIM



1.1

Typ	AIM 1,6/0,8	AIM 3,2/1,6	AIM 5,0/2,5	AIM 10/5	AIM 16/8
<b>Electrical data</b>					
<b>Input</b>					
Rated input voltage	115 Vac/220 Vac 230 Vac/240 Vac	115 Vac/220 Vac 230 Vac/240 Vac	115 Vac/220 Vac 230 Vac/240 Vac	115 Vac/220 Vac 230 Vac/240 Vac	115 Vac/220 Vac 230 Vac/240 Vac
Frequency range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
<b>Output</b>					
Rated output voltage	115 Vac/220 Vac 230 Vac/240 Vac	115 Vac/220 Vac 230 Vac/240 Vac	115 Vac/220 Vac 230 Vac/240 Vac	115 Vac/220 Vac 230 Vac/240 Vac	115 Vac/220 Vac 230 Vac/240 Vac
Rated output current	0,80 (PRI 115 / SEC 220, 230, 240); 1,60 (PRI 115 / SEC 115); 1,60 (PRI 220, 230, 240 / SEC 115, 220, 230, 240)	1,60 (PRI 115 / SEC 220, 230, 240); 3,20 (PRI 115 / SEC 115); 3,20 (PRI 220, 230, 240 / SEC 115, 220, 230, 240)	2,50 (PRI 115 / SEC 220, 230, 240); 5,00 (PRI 115 / SEC 115); 5,00 (PRI 220, 230, 240 / SEC 115, 220, 230, 240)	5,00 (PRI 115 / SEC 220, 230, 240); 10,00 (PRI 115 / SEC 115); 10,00 (PRI 220, 230, 240 / SEC 115, 220, 230, 240)	8,00 (PRI 115 / SEC 220, 230, 240); 16,00 (PRI 115 / SEC 115); 16,00 (PRI 220, 230, 240 / SEC 115, 220, 230, 240)
No-load loss (typ.)	4.70 W	6.70 W	11.80 W	18.00 W	21.00 W
<b>Environment</b>					
Ambient temperature max.	40 °C	40 °C	40 °C	40 °C	40 °C
<b>Safety and protection</b>					
Type	Resin encapsulated transformer	Resin encapsulated transformer	Resin encapsulated transformer	Enclosed	Enclosed
Insulation class	A	A	A	B	B
Protection index	IP 20	IP 20	IP 20	IP 20	IP 20
Safety class	May be used in protection category I and II. When protection category I devices are equipped the protective conductor in the output must be connected with the lead-in protective conductor.	May be used in protection category I and II. When protection category I devices are equipped the protective conductor in the output must be connected with the lead-in protective conductor.	May be used in protection category I and II. When protection category I devices are equipped the protective conductor in the output must be connected with the lead-in protective conductor.	I	I
Short circuit strength	non-inherently short-circuit proof	non-inherently short-circuit proof	non-inherently short-circuit proof	non-inherently short-circuit proof	non-inherently short-circuit proof

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Order numbers

Order Number	AIM 1,6/0,8	AIM 3,2/1,6	AIM 5,0/2,5	AIM 10/5	AIM 16/8
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**30** Terminal and mounting

Terminals	Screw-type terminal	Screw-type terminal	Screw-type terminal	Screw-type terminal	Screw-type terminal
Fixing method	Fixing holes in the terminal connection compartment	Fixing holes in the terminal connection compartment	Fixing holes in the terminal connection compartment	Fixing holes in the housing	Fixing holes in the housing

3.2

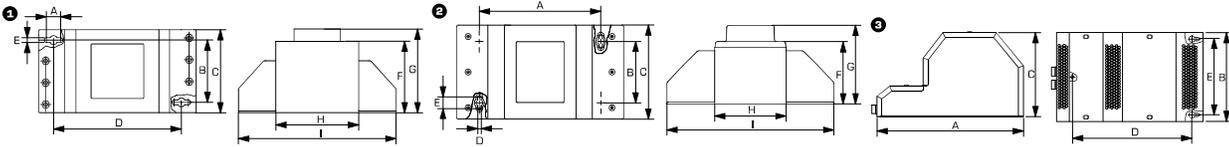
**Mechanical data** Measures and weights

Weight	2.1 kg	3.6 kg	5.0 kg	12.1 kg	16.5 kg
Dimension picture (in mm)	1	2	2	3	3
A	142	167	167	283	283
B	58	76	76	200	200
C	77	117	117	166	165
D	135	43	43	245	245
E	4.3	14	14	148	148
F	65	77	100	-	-
G	76	97	117	-	-
H	90	97	97	-	-
I	166	223	223	-	-

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4.0

### Dimension pictures



5.1

5.2

## Autotransformer VT-EN



### General Data

Rated input voltage 110/125/230/240 Vac
Rated output voltage 110/125/230/240 Vac
Rated power 150 - 3000 VA
Insulation class B or E
Maximum ambient temperature 40 °C
Degree of protection IP 00

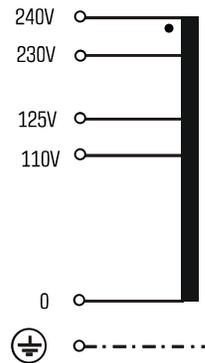
### Advantages

Low weight and small size (compared to isolating transformers)
Very high efficiency
Very good moisture protection and low noise thanks to vacuum impregnation
Contact protected screw connection terminals complying with UVV BGV A3
Simple mounting thanks to robust metal fixing rail with oval slots

### Applications

Autotransformer for adjustment of the voltage on the input and output sides with no requirement for electrical isolation.

### Sample application



### Standards

Autotransformer  
to: VDE 0570 Teil 2-13, DIN EN 61558-2-13, EN 61558-2-13,  
IEC 61558-2-13, UL 5085-1/-2, CSA 22.2 No.66

### Approvals

UL 5085-1/-2, CSA 22.2 No.66



## Autotransformer VT-EN



1.1

Typ	VT 15-EN	VT 35-EN	VT 50-EN	VT 100-EN	VT 200-EN	VT 300-EN
<b>Electrical data</b>						
<b>Input</b>						
Rated input voltage	110 Vac/125 Vac 230 Vac/240 Vac	110 Vac/125 Vac 230 Vac/240 Vac	110 Vac/125 Vac 230 Vac/240 Vac	110 Vac/125 Vac 230 Vac/240 Vac	110 Vac/125 Vac 230 Vac/240 Vac	110 Vac/125 Vac 230 Vac/240 Vac
Frequency range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
<b>Output</b>						
Rated output voltage	110 Vac/125 Vac 230 Vac/240 Vac	110 Vac/125 Vac 230 Vac/240 Vac	110 Vac/125 Vac 230 Vac/240 Vac	110 Vac/125 Vac 230 Vac/240 Vac	110 Vac/125 Vac 230 Vac/240 Vac	110 Vac/125 Vac 230 Vac/240 Vac
Rated Power	150 VA	350 VA	500 VA	1.000 VA	2.000 VA	3.000 VA
<b>Approvals</b>						
Approvals	cURus	cURus	cURus	cURus	cURus	cURus
<b>Environment</b>						
Ambient temperature max.	40 °C	40 °C	40 °C	40 °C	40 °C	40 °C
<b>Safety and protection</b>						
Type	Open type	Open type	Open type	Open type	Open type	Open type
Insulation class	E	B	E	E	B	B
Protection index	IP 00	IP 00	IP 00	IP 00	IP 00	IP 00
Safety class (prepared)	I	I	I	I	I	I
Short circuit strength	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof
Test voltage	2500 Vac, 50 Hz	2500 Vac, 50 Hz	2500 Vac, 50 Hz	2500 Vac, 50 Hz	2500 Vac, 50 Hz	2500 Vac, 50 Hz
<b>Order numbers</b>						
<b>Order Number</b>	<b>VT 15-EN</b>	<b>VT 35-EN</b>	<b>VT 50-EN</b>	<b>VT 100-EN</b>	<b>VT 200-EN</b>	<b>VT 300-EN</b>

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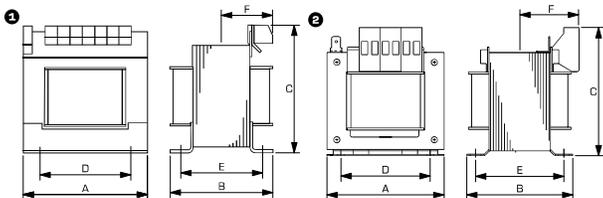
Order Number	VT 15-EN	VT 35-EN	VT 50-EN	VT 100-EN	VT 200-EN	VT 300-EN
<b>Mechanical data</b>						
<b>Terminal and mounting</b>						
Terminals	Screw-type terminal, PE 6.3 x 0.8	Screw-type terminal, PE 6.3 x 0.8	Screw-type terminal, PE 6.3 x 0.8	Screw-type terminal, PE 6.3 x 0.8	Screw-type terminal, PE 6.3 x 0.8	Screw-type terminal, PE 6.3 x 0.8
Fixing method	Base plate	Fixing rail	Base plate	Base plate	Fixing rail	Fixing rail
<b>Measures and weights</b>						
Weight	1.90 kg	3.30 kg	4.20 kg	7.80 kg	14.10 kg	19.40 kg
Dimension picture (in mm)	2	1	2	2	1	1
A	84	105	120	150	174	174
B	75	87	86	104	126	155
C	100	120	130	140	150	150
D	54	84	90	122	135	135
E	63	70	70	84	106	134
F	50	50	50	60	70	90

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### Dimension pictures



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# Autotransformer ESP



## General Data

Rated input voltage 230 or 400 Vac
Rated output voltage 80 - 310 Vac
Rated output current 0.8 - 18 A
Insulation class B
Maximum ambient temperature 40 °C
Degree of protection IP 00

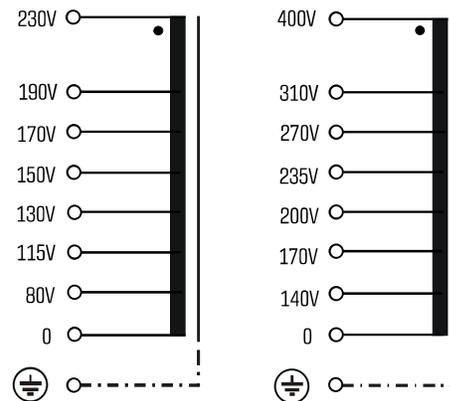
## Advantages

Low weight and small size (compared to isolating transformers)
Very high efficiency
Very good moisture protection and low noise thanks to vacuum impregnation
Contact protected screw connection terminals complying with UVV BGV A3
Simple mounting thanks to robust metal footplate with oval slots

## Applications

Autotransformer for example for setting the speed of single-phase fan motors.

## Sample application



## Standards

Autotransformer  
to: VDE 0570 Teil 2-13, DIN EN 61558-2-13, EN 61558-2-13,  
IEC 61558-2-13

## Approvals



## Autotransformer ESP



1.1

Typ	ESP 230/1,5	ESP 230/2,8	ESP 230/5,8	ESP 230/10	ESP 230/18	ESP 400/0,8
<b>Electrical data</b>						
<b>Input</b>						
Rated input voltage	230 Vac	230 Vac	230 Vac	230 Vac	230 Vac	400 Vac
Frequency range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
<b>Output</b>						
Rated output voltage	80 Vac/115 Vac/130 Vac 150 Vac/170 Vac/190 Vac	80 Vac/115 Vac/130 Vac 150 Vac/170 Vac/190 Vac	80 Vac/115 Vac/130 Vac 150 Vac/170 Vac/190 Vac	80 Vac/115 Vac/130 Vac 150 Vac/170 Vac/190 Vac	80 Vac/115 Vac/130 Vac/ 150 Vac/170 Vac/190 Vac	140 Vac/170 Vac/200 Vac/ 235 Vac/270 Vac/310 Vac
Rated output current	1.50 A	2.80 A	5.80 A	10.00 A	18.00 A	0.80 A
<b>Environment</b>						
Ambient temperature max.	40 °C	40 °C	40 °C	40 °C	40 °C	40 °C
<b>Safety and protection</b>						
Type	Open type	Open type	Open type	Open type	Open type	Open type
Insulation class	B	B	B	B	B	B
Protection index	IP 00	IP 00	IP 00	IP 00	IP 00	IP 00
Safety class (prepared)	I	I	I	I	I	I
Short circuit strength	non-short-circuit, proof	non-short-circuit, proof	non-short-circuit, proof	non-short-circuit, proof	non-short-circuit, proof	non-short-circuit, proof
<b>Order numbers</b>						
<b>Order Number</b>	<b>ESP 230/1,5</b>	<b>ESP 230/2,8</b>	<b>ESP 230/5,8</b>	<b>ESP 230/10</b>	<b>ESP 230/18</b>	<b>ESP 400/0,8</b>

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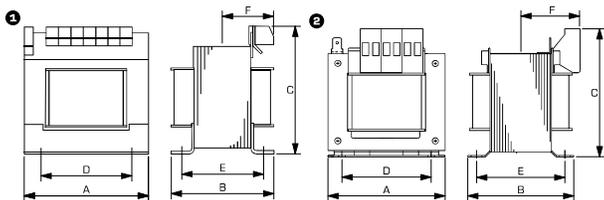
Terminal and mounting	ESP 230/1,5	ESP 230/2,8	ESP 230/5,8	ESP 230/10	ESP 230/18	ESP 400/0,8
<b>Mechanical data</b>						
Terminals	Screw-type terminals, PE 6.3 x 0.8	Screw-type terminals, PE 6.3 x 0.8	Screw-type terminals, PE 6.3 x 0.8	Screw-type terminals, PE 6.3 x 0.8	Screw-type terminals, PE 6.3 x 0.8	Screw-type terminals, PE 6.3 x 0.8
Fixing method	Fixing rail	Fixing rail	Base plate	Base plate	Fixing rail	Fixing rail
Fixing screws	M4	M5	M5	M6	M6	M4
<b>Measures and weights</b>						
Weight	1.5 kg	3.0 kg	4.3 kg	7.8 kg	11.5 kg	1.5 kg
Dimension picture (in mm)	①	①	②	②	①	①
A	84	105	120	150	174	84
B	75	85	91	112	120	75
C	100	118	130	135	150	100
D	64	84	90	122	135	64
E	50	62	70	84	85	50
F	42	45	48	58	60	42

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### Dimension pictures



3.3

4.0

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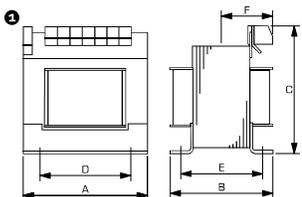
## Autotransformer ESP



Type		ESP 400/1,6	ESP 400/3,6	ESP 400/5,4	ESP 400/10	
Electrical data	<b>Input</b>					
	Rated input voltage	400 Vac	400 Vac	400 Vac	400 Vac	
	Frequency range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	
	<b>Output</b>					
	Rated output voltage	140 Vac/170 Vac/200 Vac 235 Vac/270 Vac/310 Vac	140 Vac/170 Vac/200 Vac 235 Vac/270 Vac/310 Vac	140 Vac/170 Vac/200 Vac 235 Vac/270 Vac/310 Vac	140 Vac/170 Vac/200 Vac 235 Vac/270 Vac/310 Vac	
	Rated output current	1.60 A	3.60 A	5.40 A	10.00 A	
	<b>Environment</b>					
	Ambient temperature max.	40 °C	40 °C	40 °C	40 °C	
	<b>Safety and protection</b>					
	Type	Open type	Open type	Open type	Open type	
Insulation class	B	B	B	B		
Protection index	IP 00	IP 00	IP 00	IP 00		
Safety class (prepared)	I	I	I	I		
Short circuit strength	non-short-circuit, proof	non-short-circuit, proof	non-short-circuit, proof	non-short-circuit, proof		
<b>Order numbers</b>						
<b>Order Number</b>	<b>ESP 400/1,6</b>	<b>ESP 400/3,6</b>	<b>ESP 400/5,4</b>	<b>ESP 400/10</b>		

Terminal and mounting		ESP 400/1,6	ESP 400/3,6	ESP 400/5,4	ESP 400/10
Mechanical data	Terminals	Screw-type terminals, PE 6.3 x 0.8	Screw-type terminals, PE 6.3 x 0.8	Screw-type terminals, PE 6.3 x 0.8	Screw-type terminals, PE 6.3 x 0.8
	Fixing method	Fixing rail	Fixing rail	Fixing rail	Fixing rail
	Fixing screws	M5	M5	M6	M6
<b>Measures and weights</b>					
Weight	3.0 kg	4.3 kg	7.8 kg	11.5 kg	
Dimension picture (in mm)	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	
A	105	120	150	174	
B	85	91	112	120	
C	118	130	135	150	
D	84	90	122	135	
E	62	70	84	85	
F	45	48	58	60	

### Dimension pictures



# Autotransformer E-JET



1.1



## General Data

Rated input voltage 230 Vac
Rated output voltage 110 Vac
Rated power 250 - 1000 VA
Insulation class A
Maximum ambient temperature 40 °C
Efficiency up to 96 %
Degree of protection IP 22

1.2

1.3

## Advantages

- Electronic potential monitoring by not connecting the output voltage until the protected contact plug is inserted correctly
- Integrated short-circuit and overload protection
- Very high efficiency
- Very good moisture protection and low noise thanks to XtraDenseFill resin encapsulation
- Carry handle, mains cable with safety plug, socket NEMA5-15 (USA) for portable application

2.1

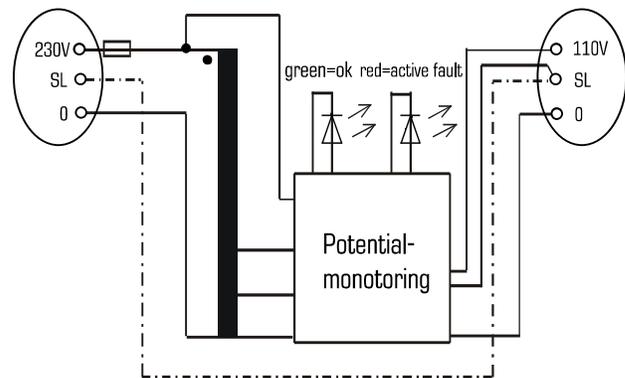
2.2

## Applications

Autotransformer for mobile use for the adjustment of the voltage in 230 Vac networks to 110 Vac equipment when no electrical isolation is required.

3.1

## Sample application



3.2

3.3

4.0

## Standards

Autotransformer  
to: VDE 0570 Teil 2-13, DIN EN 61558-2-13, EN 61558-2-13,  
IEC 61558-2-13

## Approvals **EAC**

5.1

5.2



## Autotransformer E-JET



Type		E-JET 250	E-JET 500	E-JET 1000
Electrical data	<b>Input</b>			
	Rated input voltage	230 Vac	230 Vac	230 Vac
	Frequency range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
	<b>Output</b>			
	Rated output voltage	110 Vac	110 Vac	110 Vac
	Rated Power	250 VA	500 VA	1,000 VA
	No-load voltage (app. x factor)	1.04	1.04	1.03
	Efficiency	94.0 %	94.0 %	96.0 %
	<b>Environment</b>			
	Ambient temperature max.	40 °C	40 °C	40 °C
<b>Safety and protection</b>				
Type	Resin encapsulated transformer	Resin encapsulated transformer	Resin encapsulated transformer	
Insulation class	A	A	A	
Protection index	IP 22	IP 22	IP 22	
Safety class	I	I	I	
Short circuit strength	non-inherently short-circuit proof	non-inherently short-circuit proof	non-inherently short-circuit proof	
<b>Order numbers</b>				
<b>Order Number</b>	<b>E-JET 250</b>	<b>E-JET 500</b>	<b>E-JET 1000</b>	
Mechanical data	<b>Terminal and mounting</b>			
	Terminals Input	Connecting cable with safety plug	Connecting cable with safety plug	Connecting cable with safety plug
	Terminals Output	NEMA5-15 socket (USA)	NEMA5-15 socket (USA)	NEMA5-15 socket (USA)
	<b>Measures and weights</b>			
	Weight	3.10 kg	6.80 kg	9.90 kg
Dimension (W x H x D)	95 x 155 x 160 mm	126 x 192 x 180 mm	143 x 197 x 244 mm	

# Autotransformer JET



1.1



## General Data

Rated input voltage 110 Vac
Rated output voltage 230 Vac
Rated power 250 - 1000 VA
Insulation class A
Maximum ambient temperature 40 °C
Efficiency up to 96 %
Degree of protection IP 22

1.2

1.3

## Advantages

- Integrated short-circuit and overload protection
- Very high efficiency
- Very good moisture protection and low noise thanks to XtraDenseFill resin encapsulation
- Carrying handle, mains connecting lead NEMA5-15 (USA) and socket for portable application

2.1

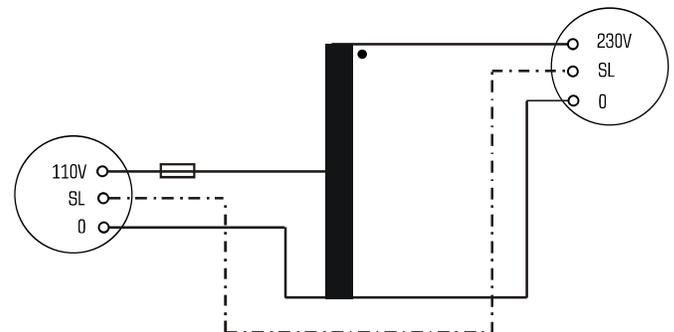
2.2

## Applications

Autotransformer for portable application for the adjustment of the voltage in 110 Vac networks to 230 Vac equipment when no electrical isolation is required.

## Sample application

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3.3

## Standards

Autotransformer  
to: VDE 0570 Teil 2-13, DIN EN 61558-2-13, EN 61558-2-13,  
IEC 61558-2-13

## Approvals **EAC**

4.0

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## Autotransformer JET



Type		JET 250	JET 500	JET 1000
Electrical data	Input			
	Rated input voltage	110 Vac	110 Vac	110 Vac
	Frequency range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
	Output			
	Rated output voltage	230 Vac	230 Vac	230 Vac
	Rated Power	250 VA	500 VA	1.000 VA
	No-load voltage (app. x factor)	1.04	1.04	1.03
	Efficiency	94.0 %	91.0 %	96.0 %
	Environment			
	Ambient temperature max.	40 °C	40 °C	40 °C
Safety and protection				
Type	Resin encapsulated transformer	Resin encapsulated transformer	Resin encapsulated transformer	
Insulation class	A	A	A	
Protection index	IP 22	IP 22	IP 22	
Safety class	I	I	I	
Short circuit strength	non-inherently short-circuit proof	non-inherently short-circuit proof	non-inherently short-circuit proof	
Order numbers				
Order Number	JET 250	JET 500	JET 1000	



## Autotransformer JET



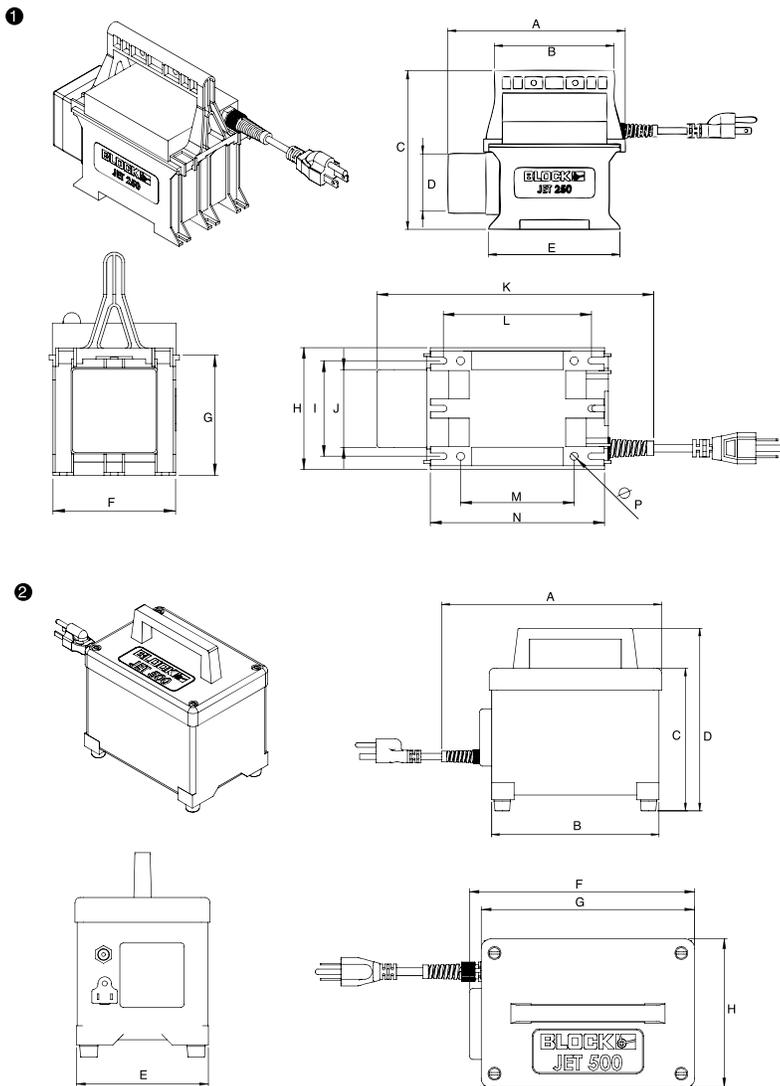
1.1

Mechanical data	Typ	Terminals Input	Terminals Output	Weight	Dimension picture (in mm)	A	B	C	D	E	F	G	H	I	J	K	L	M	N	P
						JET 250	Connecting cable with NEMAS-15 plug (USA)	Protective contact socket	3.1 kg	1	180	119	160	56.8	130.8	86.5	85.1	92	72	58.8
JET 500	Connecting cable with NEMAS-15 plug (USA)	Protective contact socket	6.7 kg	2	230	175	150	195	123	90	180	126	-	-	-	-	-	-	-	-
JET 1000	Connecting cable with NEMAS-15 plug (USA)	Protective contact socket	9.7 kg	2	295	240	155	195	142	255	245	143	-	-	-	-	-	-	-	-

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1.3

### Dimension pictures



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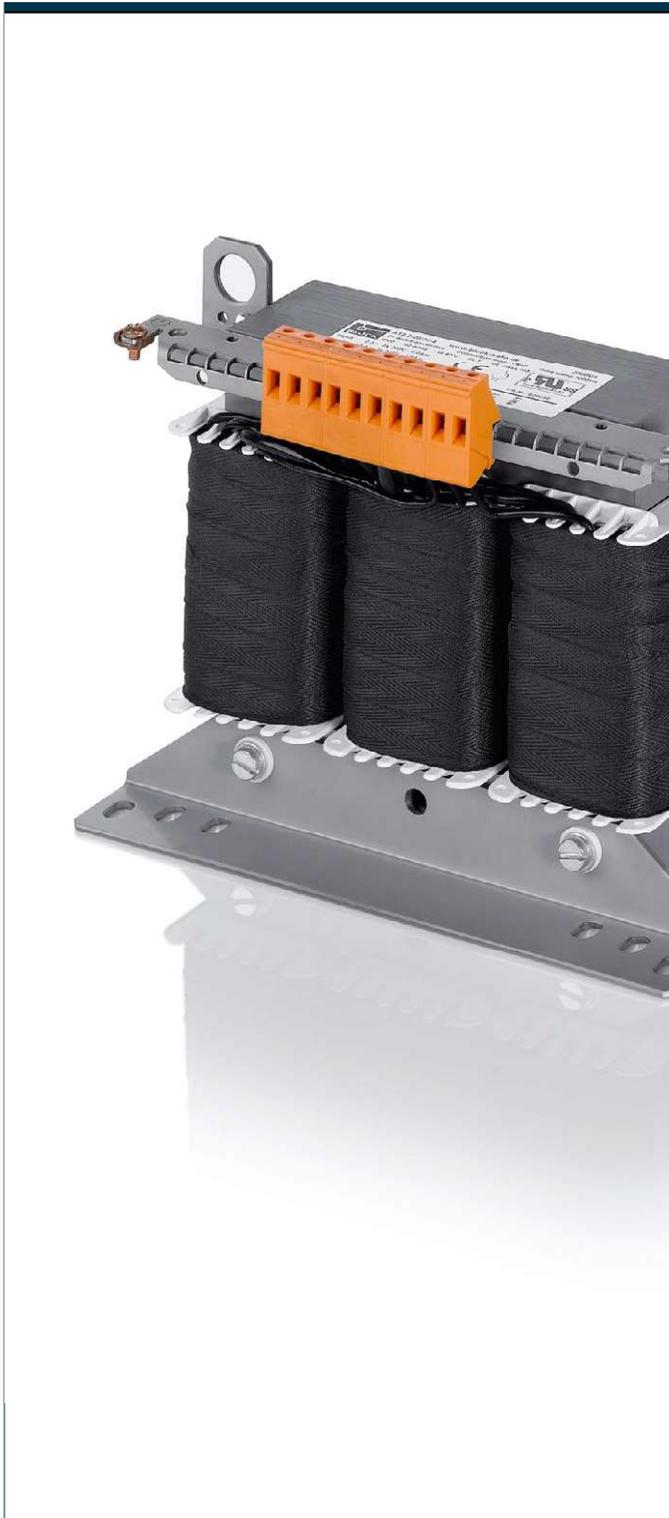
3.3

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# Autotransformer AT3



## General Data

Rated input voltage 3 x 200/208 - 3 x 690 Vac
Rated output voltage 3 x 400 Vac
Rated power 2000 - 250000 VA
Insulation class F
Maximum ambient temperature 40 °C
Efficiency up to 98 %
Degree of protection IP 00
Optionally adapted package for higher degrees of protection

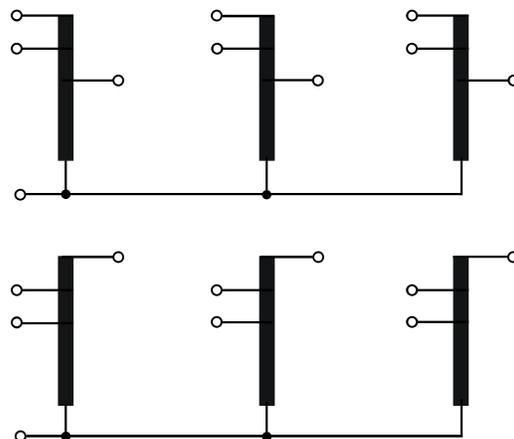
## Advantages

Low weight and small size (compared to isolating transformers)
Very high efficiency
Patented assembly technology to lower heat losses
Very good corrosion protection and low noise thanks to vacuum impregnation
Fixed, contact protected screw connection terminals complying with UVV BGV A3
Multifunctional fixing rails with 12 oval slots
Enlarged fixing rail for easy installation from above
Integrated crane eyes

## Applications

Autotransformer for adjustment of the voltage on the input and output sides with no requirement for electrical isolation.

## Sample application



## Standards



Autotransformer  
to: VDE 0570 Teil 2-13, DIN EN 61558-2-13, EN 61558-2-13,  
IEC 61558-2-13, UL 5085-1/-2, CSA 22.2 No.66

## Approvals



UL 5085-1/-2, CSA 22.2 No.66



## Autotransformer AT3



Typ	AT3 2-20/21-4	AT3 2-22/23-4	AT3 2-24/35-4	AT3 2-38/42-4	AT3 2-44/46-4	AT3 2-48/50-4
<b>Electrical data</b>						
<b>Input</b>						
Rated input voltage	3 x 200/208 Vac	3 x 220/230 Vac	3 x 240/346 Vac	3 x 380/415 Vac	3 x 440/460 Vac	3 x 480/500 Vac
Frequency range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
<b>Output</b>						
Rated output voltage	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac
Rated Power	2.000 VA	2.000 VA	2.000 VA	2.000 VA	2.000 VA	2.000 VA
Vector group	YNa0	YNa0	YNa0	YNa0	YNa0	YNa0
Efficiency	91.0 %	90.0 %	90.0 %	78.0 %	87.0 %	90.0 %
<b>Approvals</b>						
Approvals	cURus	cURus	cURus	cURus	cURus	cURus
<b>Environment</b>						
Ambient temperature max.	40 °C	40 °C	40 °C	40 °C	40 °C	40 °C
<b>Safety and protection</b>						
Type	Open type	Open type	Open type	Open type	Open type	Open type
Insulation class	F	F	F	F	F	F
Protection index	IP 00	IP 00	IP 00	IP 00	IP 00	IP 00
Safety class (prepared)	I	I	I	I	I	I
Short circuit strength	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof
Test voltage	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz
<b>Order numbers</b>						
Recommended enclosure	BGUK 10	BGUK 10	BGUK 10	BGUK 3	BGUK 10	BGUK 10
<b>Order Number</b>	<b>AT3 2-20/21-4</b>	<b>AT3 2-22/23-4</b>	<b>AT3 2-24/35-4</b>	<b>AT3 2-38/42-4</b>	<b>AT3 2-44/46-4</b>	<b>AT3 2-48/50-4</b>

Typ	AT3 2-58/60-4	AT3 2-69-4	AT3 3,5-20/21-4	AT3 3,5-22/23-4	AT3 3,5-24/35-4	AT3 3,5-38/42-4
<b>Electrical data</b>						
<b>Input</b>						
Rated input voltage	3 x 575/600 Vac	3 x 600/690 Vac	3 x 200/208 Vac	3 x 220/230 Vac	3 x 240/346 Vac	3 x 380/415 Vac
Frequency range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
<b>Output</b>						
Rated output voltage	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac
Rated Power	2.000 VA	2.000 VA	3.500 VA	3.500 VA	3.500 VA	3.500 VA
Vector group	YNa0	YNa0	YNa0	YNa0	YNa0	YNa0
Efficiency	88.0 %	90.0 %	93.0 %	93.0 %	91.0 %	86.0 %
<b>Approvals</b>						
Approvals	cURus	cURus	cURus	cURus	cURus	cURus
<b>Environment</b>						
Ambient temperature max.	40 °C	40 °C	40 °C	40 °C	40 °C	40 °C
<b>Safety and protection</b>						
Type	Open type	Open type	Open type	Open type	Open type	Open type
Insulation class	F	F	F	F	F	F
Protection index	IP 00	IP 00	IP 00	IP 00	IP 00	IP 00
Safety class (prepared)	I	I	I	I	I	I
Short circuit strength	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof
Test voltage	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz
<b>Order numbers</b>						
Recommended enclosure	BGUK 10	BGUK 10	BGUK 20	BGUK 20	BGUK 20	BGUK 10
<b>Order Number</b>	<b>AT3 2-58/60-4</b>	<b>AT3 2-69-4</b>	<b>AT3 3,5-20/21-4</b>	<b>AT3 3,5-22/23-4</b>	<b>AT3 3,5-24/35-4</b>	<b>AT3 3,5-38/42-4</b>

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## Autotransformer AT3



Typ	AT3 3,5-44/46-4	AT3 3,5-48/50-4	AT3 3,5-58/60-4	AT3 3,5-69-4	AT3 10-20/21-4	AT3 10-22/23-4
<b>Electrical data</b>						
<b>Input</b>						
Rated input voltage	3 x 440/460 Vac	3 x 480/500 Vac	3 x 575/600 Vac	3 x 600/690 Vac	3 x 200/208 Vac	3 x 220/230 Vac
Frequency range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
<b>Output</b>						
Rated output voltage	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac
Rated Power	3.500 VA	3.500 VA	3.500 VA	3.500 VA	10.000 VA	10.000 VA
Vector group	YNa0	YNa0	YNa0	YNa0	YNa0	YNa0
Efficiency	88,0 %	90,0 %	92,0 %	92,0 %	95,0 %	94,0 %
<b>Approvals</b>						
Approvals	cURus	cURus	cURus	cURus	cURus	cURus
<b>Environment</b>						
Ambient temperature max.	40 °C	40 °C	40 °C	40 °C	40 °C	40 °C
<b>Safety and protection</b>						
Type	Open type	Open type	Open type	Open type	Open type	Open type
Insulation class	F	F	F	F	F	F
Protection index	IP 00	IP 00	IP 00	IP 00	IP 00	IP 00
Safety class (prepared)	I	I	I	I	I	I
Short circuit strength	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof
Test voltage	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz
<b>Order numbers</b>						
Recommended enclosure	BGUK 10	BGUK 10	BGUK 20	BGUK 20	BGE-065	BGE-065
<b>Order Number</b>	<b>AT3 3,5-44/46-4</b>	<b>AT3 3,5-48/50-4</b>	<b>AT3 3,5-58/60-4</b>	<b>AT3 3,5-69-4</b>	<b>AT3 10-20/21-4</b>	<b>AT3 10-22/23-4</b>

Typ	AT3 10-24/35-4	AT3 10-38/42-4	AT3 10-44/46-4	AT3 10-48/50-4	AT3 10-58/60-4	AT3 10-69-4
<b>Electrical data</b>						
<b>Input</b>						
Rated input voltage	3 x 240/346 Vac	3 x 380/415 Vac	3 x 440/460 Vac	3 x 480/500 Vac	3 x 575/600 Vac	3 x 600/690 Vac
Frequency range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
<b>Output</b>						
Rated output voltage	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac
Rated Power	10.000 VA	10.000 VA	10.000 VA	10.000 VA	10.000 VA	10.000 VA
Vector group	YNa0	YNa0	YNa0	YNa0	YNa0	YNa0
Efficiency	95,0 %	84,0 %	91,0 %	93,0 %	94,0 %	95,0 %
<b>Approvals</b>						
Approvals	cURus	cURus	cURus	cURus	cURus	cURus
<b>Environment</b>						
Ambient temperature max.	40 °C	40 °C	40 °C	40 °C	40 °C	40 °C
<b>Safety and protection</b>						
Type	Open type	Open type	Open type	Open type	Open type	Open type
Insulation class	F	F	F	F	F	F
Protection index	IP 00	IP 00	IP 00	IP 00	IP 00	IP 00
Safety class (prepared)	I	I	I	I	I	I
Short circuit strength	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof
Test voltage	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz
<b>Order numbers</b>						
Recommended enclosure	BGE-065	BGUK 10	BGUK 20	BGUK 20	BGE-050	BGE-065
<b>Order Number</b>	<b>AT3 10-24/35-4</b>	<b>AT3 10-38/42-4</b>	<b>AT3 10-44/46-4</b>	<b>AT3 10-48/50-4</b>	<b>AT3 10-58/60-4</b>	<b>AT3 10-69-4</b>



## Autotransformer AT3



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Typ	AT3 15-20/21-4	AT3 15-22/23-4	AT3 15-24/35-4	AT3 15-38/42-4	AT3 15-44/46-4	AT3 15-48/50-4
<b>Electrical data</b>						
<b>Input</b>						
Rated input voltage	3 x 200/208 Vac	3 x 220/230 Vac	3 x 240/346 Vac	3 x 380/415 Vac	3 x 440/460 Vac	3 x 480/500 Vac
Frequency range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
<b>Output</b>						
Rated output voltage	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac
Rated Power	15.000 VA	15.000 VA	15.000 VA	15.000 VA	15.000 VA	15.000 VA
Vector group	YNa0	YNa0	YNa0	YNa0	YNa0	YNa0
Efficiency	96.0 %	96.0 %	95.0 %	89.0 %	93.0 %	93.0 %
<b>Approvals</b>						
Approvals	cURus	cURus	cURus	cURus	cURus	cURus
<b>Environment</b>						
Ambient temperature max.	40 °C	40 °C	40 °C	40 °C	40 °C	40 °C
<b>Safety and protection</b>						
Type	Open type	Open type	Open type	Open type	Open type	Open type
Insulation class	F	F	F	F	F	F
Protection index	IP 00	IP 00	IP 00	IP 00	IP 00	IP 00
Safety class (prepared)	I	I	I	I	I	I
Short circuit strength	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof
Test voltage	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz
<b>Order numbers</b>						
Recommended enclosure	BGE-065	BGE-065	BGE-065	BGUK 10	BGUK 20	BGE-050
<b>Order Number</b>	<b>AT3 15-20/21-4</b>	<b>AT3 15-22/23-4</b>	<b>AT3 15-24/35-4</b>	<b>AT3 15-38/42-4</b>	<b>AT3 15-44/46-4</b>	<b>AT3 15-48/50-4</b>

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Typ	AT3 15-58/60-4	AT3 15-69-4	AT3 25-20/21-4	AT3 25-22/23-4	AT3 25-24/35-4	AT3 25-38/42-4
<b>Electrical data</b>						
<b>Input</b>						
Rated input voltage	3 x 575/600 Vac	3 x 600/690 Vac	3 x 200/208 Vac	3 x 220/230 Vac	3 x 240/346 Vac	3 x 380/415 Vac
Frequency range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
<b>Output</b>						
Rated output voltage	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac
Rated Power	15.000 VA	15.000 VA	25.000 VA	25.000 VA	25.000 VA	25.000 VA
Vector group	YNa0	YNa0	YNa0	YNa0	YNa0	YNa0
Efficiency	95.0 %	95.0 %	97.0 %	96.0 %	96.0 %	90.0 %
<b>Approvals</b>						
Approvals	cURus	cURus	cURus	cURus	cURus	cURus
<b>Environment</b>						
Ambient temperature max.	40 °C	40 °C	40 °C	40 °C	40 °C	40 °C
<b>Safety and protection</b>						
Type	Open type	Open type	Open type	Open type	Open type	Open type
Insulation class	F	F	F	F	F	F
Protection index	IP 00	IP 00	IP 00	IP 00	IP 00	IP 00
Safety class (prepared)	I	I	I	I	I	I
Short circuit strength	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof
Test voltage	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz
<b>Order numbers</b>						
Recommended enclosure	BGE-065	BGE-065				BGUK 20
<b>Order Number</b>	<b>AT3 15-58/60-4</b>	<b>AT3 15-69-4</b>	<b>AT3 25-20/21-4</b>	<b>AT3 25-22/23-4</b>	<b>AT3 25-24/35-4</b>	<b>AT3 25-38/42-4</b>

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## Autotransformer AT3



Typ	AT3 25-44/46-4	AT3 25-48/50-4	AT3 25-58/60-4	AT3 25-69-4	AT3 45-20/21-4	AT3 45-22/23-4
<b>Electrical data</b>						
<b>Input</b>						
Rated input voltage	3 x 440/460 Vac	3 x 480/500 Vac	3 x 575/600 Vac	3 x 600/690 Vac	3 x 200/208 Vac	3 x 220/230 Vac
Frequency range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
<b>Output</b>						
Rated output voltage	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac
Rated Power	25.000 VA	25.000 VA	25.000 VA	25.000 VA	45.000 VA	45.000 VA
Vector group	YNaO	YNaO	YNaO	YNaO	YNaO	YNaO
Efficiency	94.0 %	95.0 %	96.0 %	96.0 %	97.0 %	97.0 %
<b>Approvals</b>						
Approvals	cURus	cURus	cURus	cURus	cURus	cURus
<b>Environment</b>						
Ambient temperature max.	40 °C	40 °C	40 °C	40 °C	40 °C	40 °C
<b>Safety and protection</b>						
Type	Open type	Open type	Open type	Open type	Open type	Open type
Insulation class	F	F	F	F	F	F
Protection index	IP 00	IP 00	IP 00	IP 00	IP 00	IP 00
Safety class (prepared)	I	I	I	I	I	I
Short circuit strength	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof
Test voltage	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz
<b>Order numbers</b>						
Recommended enclosure	BGE-050	BGE-065			BGE-080	BGE-080
<b>Order Number</b>	<b>AT3 25-44/46-4</b>	<b>AT3 25-48/50-4</b>	<b>AT3 25-58/60-4</b>	<b>AT3 25-69-4</b>	<b>AT3 45-20/21-4</b>	<b>AT3 45-22/23-4</b>

Typ	AT3 45-24/35-4	AT3 45-38/42-4	AT3 45-44/46-4	AT3 45-48/50-4	AT3 45-58/60-4	AT3 45-69-4
<b>Electrical data</b>						
<b>Input</b>						
Rated input voltage	3 x 240/346 Vac	3 x 380/415 Vac	3 x 440/460 Vac	3 x 480/500 Vac	3 x 575/600 Vac	3 x 600/690 Vac
Frequency range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
<b>Output</b>						
Rated output voltage	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac
Rated Power	45.000 VA	45.000 VA	45.000 VA	45.000 VA	45.000 VA	45.000 VA
Vector group	YNaO	YNaO	YNaO	YNaO	YNaO	YNaO
Efficiency	97.0 %	92.0 %	95.0 %	96.0 %	97.0 %	97.0 %
<b>Approvals</b>						
Approvals	cURus	cURus	cURus	cURus	cURus	-
<b>Environment</b>						
Ambient temperature max.	40 °C	40 °C	40 °C	40 °C	40 °C	40 °C
<b>Safety and protection</b>						
Type	Open type	Open type	Open type	Open type	Open type	Open type
Insulation class	F	F	F	F	F	F
Protection index	IP 00	IP 00	IP 00	IP 00	IP 00	IP 00
Safety class (prepared)	I	I	I	I	I	I
Short circuit strength	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof
Test voltage	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz
<b>Order numbers</b>						
Recommended enclosure	BGE-080	BGE-050	BGE-065		BGE-080	BGE-080
<b>Order Number</b>	<b>AT3 45-24/35-4</b>	<b>AT3 45-38/42-4</b>	<b>AT3 45-44/46-4</b>	<b>AT3 45-48/50-4</b>	<b>AT3 45-58/60-4</b>	<b>AT3 45-69-4</b>



## Autotransformer AT3



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Typ	AT3 70-20/21-4	AT3 70-22/23-4	AT3 70-24/35-4	AT3 70-38/42-4	AT3 70-44/46-4	AT3 70-48/50-4
<b>Electrical data</b>						
<b>Input</b>						
Rated input voltage	3 x 200/208 Vac	3 x 220/230 Vac	3 x 240/346 Vac	3 x 380/415 Vac	3 x 440/460 Vac	3 x 480/500 Vac
Frequency range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
<b>Output</b>						
Rated output voltage	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac
Rated Power	70.000 VA	70.000 VA	70.000 VA	70.000 VA	70.000 VA	70.000 VA
Vector group	YNaO	YNaO	YNaO	YNaO	YNaO	YNaO
Efficiency	98.0 %	97.0 %	97.0 %	93.0 %	96.0 %	96.0 %
<b>Approvals</b>						
Approvals	cURus	cURus	cURus	cURus	cURus	cURus
<b>Environment</b>						
Ambient temperature max.	40 °C	40 °C	40 °C	40 °C	40 °C	40 °C
<b>Safety and protection</b>						
Type	Open type	Open type	Open type	Open type	Open type	Open type
Insulation class	F	F	F	F	F	F
Protection index	IP 00	IP 00	IP 00	IP 00	IP 00	IP 00
Safety class (prepared)	I	I	I	I	I	I
Short circuit strength	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof
Test voltage	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz
<b>Order numbers</b>						
Recommended enclosure	BGE-085	BGE-085	BGE-085	BGE-065		BGE-080
<b>Order Number</b>	<b>AT3 70-20/21-4</b>	<b>AT3 70-22/23-4</b>	<b>AT3 70-24/35-4</b>	<b>AT3 70-38/42-4</b>	<b>AT3 70-44/46-4</b>	<b>AT3 70-48/50-4</b>

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Typ	AT3 70-58/60-4	AT3 70-69-4	AT3 110-20/21-4	AT3 110-22/23-4	AT3 110-24/35-4	AT3 110-38/42-4
<b>Electrical data</b>						
<b>Input</b>						
Rated input voltage	3 x 575/600 Vac	3 x 690 Vac	3 x 200/208 Vac	3 x 220/230 Vac	3 x 240/346 Vac	3 x 380/415 Vac
Frequency range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
<b>Output</b>						
Rated output voltage	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac
Rated Power	70.000 VA	70.000 VA	110.000 VA	110.000 VA	110.000 VA	110.000 VA
Vector group	YNaO	YNaO	YNaO	YNaO	YNaO	YNaO
Efficiency	97.0 %	97.0 %	98.0 %	98.0 %	98.0 %	94.0 %
<b>Approvals</b>						
Approvals	cURus	-	cURus	cURus	cURus	cURus
<b>Environment</b>						
Ambient temperature max.	40 °C	40 °C	40 °C	40 °C	40 °C	40 °C
<b>Safety and protection</b>						
Type	Open type	Open type	Open type	Open type	Open type	Open type
Insulation class	F	F	F	F	F	F
Protection index	IP 00	IP 00	IP 00	IP 00	IP 00	IP 00
Safety class (prepared)	I	I	I	I	I	I
Short circuit strength	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof
Test voltage	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz
<b>Order numbers</b>						
Recommended enclosure	BGE-080	BGE-080	BGE-085	BGE-085	BGE-085	BGE-065
<b>Order Number</b>	<b>AT3 70-58/60-4</b>	<b>AT3 70-69-4</b>	<b>AT3 110-20/21-4</b>	<b>AT3 110-22/23-4</b>	<b>AT3 110-24/35-4</b>	<b>AT3 110-38/42-4</b>

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## Autotransformer AT3



Typ	AT3 110-44/46-4	AT3 110-48/50-4	AT3 110-58/60-4	AT3 110-69-4	AT3 160-20/21-4	AT3 160-22/23-4
<b>Electrical data</b>						
<b>Input</b>						
Rated input voltage	3 x 440/460 Vac	3 x 480/500 Vac	3 x 575/600 Vac	3 x 690 Vac	3 x 200/208 Vac	3 x 220/230 Vac
Frequency range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
<b>Output</b>						
Rated output voltage	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac
Rated Power	110.000 VA	110.000 VA	110.000 VA	110.000 VA	160.000 VA	160.000 VA
Vector group	YNaO	YNaO	YNaO	YNaO	YNaO	YNaO
Efficiency	96.0 %	97.0 %	97.0 %	98.0 %	98.0 %	98.0 %
<b>Approvals</b>						
Approvals	cURus	cURus	cURus	-	cURus	cURus
<b>Environment</b>						
Ambient temperature max.	40 °C	40 °C	40 °C	40 °C	40 °C	40 °C
<b>Safety and protection</b>						
Type	Open type	Open type	Open type	Open type	Open type	Open type
Insulation class	F	F	F	F	F	F
Protection index	IP 00	IP 00	IP 00	IP 00	IP 00	IP 00
Safety class (prepared)	I	I	I	I	I	I
Short circuit strength	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof
Test voltage	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz
<b>Order numbers</b>						
Recommended enclosure	BGE-080	BGE-080	BGE-085	BGE-085	BGE-095	BGE-095
<b>Order Number</b>	<b>AT3 110-44/46-4</b>	<b>AT3 110-48/50-4</b>	<b>AT3 110-58/60-4</b>	<b>AT3 110-69-4</b>	<b>AT3 160-20/21-4</b>	<b>AT3 160-22/23-4</b>

Typ	AT3 160-24/35-4	AT3 160-38/42-4	AT3 160-44/46-4	AT3 160-48/50-4	AT3 160-58/60-4	AT3 160-69-4
<b>Electrical data</b>						
<b>Input</b>						
Rated input voltage	3 x 240/346 Vac	3 x 380/415 Vac	3 x 440/460 Vac	3 x 480/500 Vac	3 x 575/600 Vac	3 x 690 Vac
Frequency range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
<b>Output</b>						
Rated output voltage	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac
Rated Power	160.000 VA	160.000 VA	160.000 VA	160.000 VA	160.000 VA	160.000 VA
Vector group	YNaO	YNaO	YNaO	YNaO	YNaO	YNaO
Efficiency	98.0 %	94.0 %	96.0 %	97.0 %	98.0 %	98.0 %
<b>Approvals</b>						
Approvals	cURus	cURus	cURus	cURus	cURus	-
<b>Environment</b>						
Ambient temperature max.	40 °C	40 °C	40 °C	40 °C	40 °C	40 °C
<b>Safety and protection</b>						
Type	Open type	Open type	Open type	Open type	Open type	Open type
Insulation class	F	F	F	F	F	F
Protection index	IP 00	IP 00	IP 00	IP 00	IP 00	IP 00
Safety class (prepared)	I	I	I	I	I	I
Short circuit strength	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof
Test voltage	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz
<b>Order numbers</b>						
Recommended enclosure	BGE-095	BGE-085	BGE-085	BGE-085	BGE-085	BGE-095
<b>Order Number</b>	<b>AT3 160-24/35-4</b>	<b>AT3 160-38/42-4</b>	<b>AT3 160-44/46-4</b>	<b>AT3 160-48/50-4</b>	<b>AT3 160-58/60-4</b>	<b>AT3 160-69-4</b>



## Autotransformer AT3



1.1

+	Typ	AT3 250-20/21-4	AT3 250-22/23-4	AT3 250-24/35-4	AT3 250-38/42-4	AT3 250-44/46-4	AT3 250-48/50-4
Electrical data	<b>Input</b>						
	Rated input voltage	3 x 200/208 Vac	3 x 220/230 Vac	3 x 240/346 Vac	3 x 380/415 Vac	3 x 440/460 Vac	3 x 480/500 Vac
	Frequency range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
	<b>Output</b>						
	Rated output voltage	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac
	Rated Power	250.000 VA	250.000 VA	250.000 VA	250.000 VA	250.000 VA	250.000 VA
	Vector group	YNa0	YNa0	YNa0	YNa0	YNa0	YNa0
	Efficiency	98,0 %	98,0 %	98,0 %	95,0 %	96,0 %	98,0 %
	<b>Approvals</b>						
	Approvals	cURus	cURus	cURus	cURus	cURus	cURus
<b>Environment</b>							
Ambient temperature max.	40 °C	40 °C	40 °C	40 °C	40 °C	40 °C	
<b>Safety and protection</b>							
Type	Open type	Open type	Open type	Open type	Open type	Open type	
Insulation class	F	F	F	F	F	F	
Protection index	IP 00	IP 00	IP 00	IP 00	IP 00	IP 00	
Safety class (prepared)	I	I	I	I	I	I	
Short circuit strength	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	
Test voltage	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz	
<b>Order numbers</b>							
Recommended enclosure	BGE-130	BGE-130	BGE-095		BGE-095	BGE-095	
<b>Order Number</b>	<b>AT3 250-20/21-4</b>	<b>AT3 250-22/23-4</b>	<b>AT3 250-24/35-4</b>	<b>AT3 250-38/42-4</b>	<b>AT3 250-44/46-4</b>	<b>AT3 250-48/50-4</b>	

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+	Typ	AT3 250-58/60-4	AT3 250-69-4			
Electrical data	<b>Input</b>					
	Rated input voltage	3 x 575/600 Vac	3 x 690 Vac			
	Frequency range	50 - 60 Hz	50 - 60 Hz			
	<b>Output</b>					
	Rated output voltage	3 x 400 Vac	3 x 400 Vac			
	Rated Power	250.000 VA	250.000 VA			
	Vector group	YNa0	YNa0			
	Efficiency	98,0 %	98,0 %			
	<b>Approvals</b>					
	Approvals	cURus	-			
<b>Environment</b>						
Ambient temperature max.	40 °C	40 °C				
<b>Safety and protection</b>						
Type	Open type	Open type				
Insulation class	F	F				
Protection index	IP 00	IP 00				
Safety class (prepared)	I	I				
Short circuit strength	non-short-circuit proof	non-short-circuit proof				
Test voltage	4000 Vac, 50 Hz	4000 Vac, 50 Hz				
<b>Order numbers</b>						
Recommended enclosure	BGE-095	BGE-130				
<b>Order Number</b>	<b>AT3 250-58/60-4</b>	<b>AT3 250-69-4</b>				

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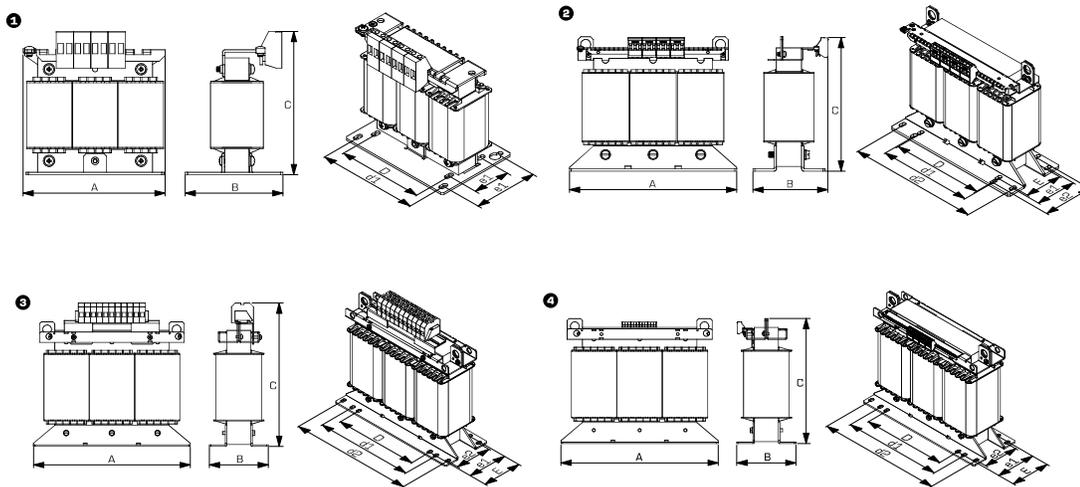


# Autotransformer AT3



Typ	Terminals	Fixing method	Fixing screws	Core type	Weight	Dimension picture (in mm)	A	B	C	D	d1	d2	E	e1	e2	F	G	H	I	J	K	
							AT3 2-20/21-4	Screw-type terminals	Fixing rail	M6	3 UI 90/51,5	10.5 kg	2	220	125	175	136	170	201	77	78	91
AT3 2-22/23-4	Screw-type terminals	Fixing rail	M6	3 UI 90/51,5	10.5 kg	2	220	125	175	136	170	201	77	78	91	-	-	-	-	-	-	-
AT3 2-24/35-4	Screw-type terminals	Fixing rail	M6	3 UI 90/41,5	9.8 kg	2	220	115	175	136	170	201	67	68	81	-	-	-	-	-	-	-
AT3 2-38/42-4	Screw-type terminals	Fixing rail	M4	3 UI 60/21	2.2 kg	1	125	85	125	90	105	-	39	70	-	-	-	-	-	-	-	-
AT3 2-44/46-4	Screw-type terminals	Fixing rail	M5	3 UI 75/26,5	4.1 kg	1	155	95	155	113	135	-	50	80	-	-	-	-	-	-	-	-
AT3 2-48/50-4	Screw-type terminals	Fixing rail	M5	3 UI 75/41,5	6.1 kg	2	155	110	155	113	135	-	65	95	-	-	-	-	-	-	-	-
AT3 2-58/60-4	Screw-type terminals	Fixing rail	M6	3 UI 90/31,5	7.5 kg	2	220	105	175	136	170	201	57	58	71	-	-	-	-	-	-	-
AT3 2-69-4	Screw-type terminals	Fixing rail	M6	3 UI 90/41,5	10.0 kg	2	220	115	175	136	170	201	67	68	81	-	-	-	-	-	-	-
AT3 3,5-20/21-4	Screw-type terminals	Fixing rail	M6	3 UI 114/64	20.0 kg	2	267	150	220	176	180	249	95	103	122	-	-	-	-	-	-	-
AT3 3,5-22/23-4	Screw-type terminals	Fixing rail	M6	3 UI 114/64	20.7 kg	2	267	150	220	176	180	249	95	103	122	-	-	-	-	-	-	-
AT3 3,5-24/35-4	Screw-type terminals	Fixing rail	M6	3 UI 114/40	14.5 kg	2	267	125	215	176	180	249	71	79	98	-	-	-	-	-	-	-
AT3 3,5-38/42-4	Screw-type terminals	Fixing rail	M5	3 UI 75/26,5	4.3 kg	1	155	95	155	113	135	-	50	80	-	-	-	-	-	-	-	-
AT3 3,5-44/46-4	Screw-type terminals	Fixing rail	M5	3 UI 75/41,5	6.1 kg	1	155	110	155	113	135	-	65	95	-	-	-	-	-	-	-	-
AT3 3,5-48/50-4	Screw-type terminals	Fixing rail	M6	3 UI 90/41,5	8.7 kg	2	220	115	175	136	170	201	67	68	81	-	-	-	-	-	-	-
AT3 3,5-58/60-4	Screw-type terminals	Fixing rail	M6	3 UI 114/40	14.2 kg	2	267	125	215	176	180	249	71	79	98	-	-	-	-	-	-	-
AT3 3,5-69-4	Screw-type terminals	Fixing rail	M6	3 UI 114/40	15.0 kg	2	267	125	215	176	180	249	71	79	98	-	-	-	-	-	-	-
AT3 10-20/21-4	Screw-type terminals	Fixing rail	M8	3 UI 150/77	47.6 kg	2	350	192	280	224	240	328	119	129	145	-	-	-	-	-	-	-
AT3 10-22/23-4	Screw-type terminals	Fixing rail	M8	3 UI 150/77	42.4 kg	2	350	192	280	224	240	328	119	129	145	-	-	-	-	-	-	-
AT3 10-24/35-4	Screw-type terminals	Fixing rail	M8	3 UI 150/65	39.3 kg	2	350	162	280	224	240	328	107	117	133	-	-	-	-	-	-	-
AT3 10-38/42-4	Screw-type terminals	Fixing rail	M6	3 UI 90/31,5	7.0 kg	2	220	105	175	136	170	201	57	58	71	-	-	-	-	-	-	-
AT3 10-44/46-4	Screw-type terminals	Fixing rail	M6	3 UI 114/40	14.4 kg	2	267	125	215	176	180	249	71	79	98	-	-	-	-	-	-	-
AT3 10-48/50-4	Screw-type terminals	Fixing rail	M6	3 UI 114/64	20.8 kg	2	267	150	220	176	180	249	95	103	122	-	-	-	-	-	-	-
AT3 10-58/60-4	Screw-type terminals	Fixing rail	M8	3 UI 132/72	32.1 kg	2	315	165	250	200	215	292	102	124	126	-	-	-	-	-	-	-
AT3 10-69-4	Screw-type terminals	Fixing rail	M8	3 UI 150/65	38.0 kg	2	350	162	280	224	240	328	107	117	133	-	-	-	-	-	-	-
AT3 15-20/21-4	Screw-type terminals	Fixing rail	M8	3 UI 180/78	67.6 kg	3	410	180	380	264	310	388	140	140	130	-	-	-	-	-	-	-
AT3 15-22/23-4	Screw-type terminals	Fixing rail	M8	3 UI 180/78	64.9 kg	4	410	195	345	264	310	388	140	140	130	-	-	-	-	-	-	-
AT3 15-24/35-4	Screw-type terminals	Fixing rail	M8	3 UI 180/63	54.4 kg	4	410	175	345	264	310	388	125	125	115	-	-	-	-	-	-	-

## Dimension pictures



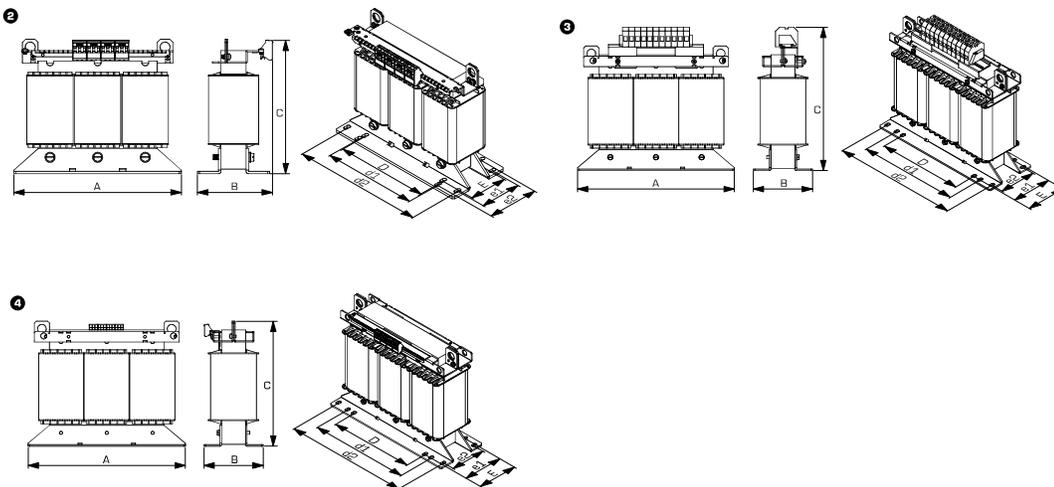


## Autotransformer AT3



Typ	Terminals	Fixing method	Fixing screws	Core type	Weight	Dimension picture (in mm)	A	B	C	D	d1	d2	E	e1	e2	F	G	H	I	J	K
							30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
AT3 15-38/42-4	Screw-type terminals	Fixing rail	M6	3 UI 90/51,1	10.0 kg	2	220	125	175	136	170	201	77	78	91	-	-	-	-	-	-
AT3 15-44/46-4	Screw-type terminals	Fixing rail	M6	3 UI 114/64	20.1 kg	2	267	150	215	176	180	249	95	103	122	-	-	-	-	-	-
AT3 15-48/50-4	Screw-type terminals	Fixing rail	M8	3 UI 132/72	29.4 kg	2	315	165	250	200	215	292	102	104	126	-	-	-	-	-	-
AT3 15-58/60-4	Screw-type terminals	Fixing rail	M8	3 UI 150/77	44.0 kg	2	350	177	280	224	240	328	119	129	145	-	-	-	-	-	-
AT3 15-69-4	Screw-type terminals	Fixing rail	M8	3 UI 180/63	58.0 kg	4	410	155	340	264	310	388	125	125	115	-	-	-	-	-	-
AT3 25-20/21-4	Screw-type terminals	Fixing rail	M10	3 UI 210/88	103.0 kg	3	480	220	440	316	370	450	158	166	148	-	-	-	-	-	-
AT3 25-22/23-4	Screw-type terminals	Fixing rail	M10	3 UI 210/88	99.3 kg	3	480	220	440	316	370	450	158	166	148	-	-	-	-	-	-
AT3 25-24/35-4	Screw-type terminals	Fixing rail	M10	3 UI 210/73	83.4 kg	3	480	180	430	316	370	450	143	151	133	-	-	-	-	-	-
AT3 25-38/42-4	Screw-type terminals	Fixing rail	M6	3 UI 114/40	15.0 kg	2	267	145	220	176	180	249	71	79	98	-	-	-	-	-	-
AT3 25-44/46-4	Screw-type terminals	Fixing rail	M8	3 UI 132/72	30.3 kg	2	315	185	255	200	215	292	102	124	126	-	-	-	-	-	-
AT3 25-48/50-4	Screw-type terminals	Fixing rail	M8	3 UI 150/77	44.0 kg	2	350	192	280	224	240	328	119	129	145	-	-	-	-	-	-
AT3 25-58/60-4	Screw-type terminals	Fixing rail	M10	3 UI 210/63	75.6 kg	4	480	182	395	316	370	450	133	141	123	-	-	-	-	-	-
AT3 25-69-4	Screw-type terminals	Fixing rail	M10	3 UI 210/73	83.0 kg	4	480	192	395	316	370	450	143	151	133	-	-	-	-	-	-
AT3 45-20/21-4	Screw-type terminals	Fixing rail	M12	3 UI 240/140	197.0 kg	3	550	290	510	356	430	516	214	240	212	-	-	-	-	-	-
AT3 45-22/23-4	Screw-type terminals	Fixing rail	M12	3 UI 240/110	162.0 kg	3	550	260	510	356	430	516	184	210	182	-	-	-	-	-	-
AT3 45-24/35-4	Screw-type terminals	Fixing rail	M12	3 UI 240/110	149.0 kg	3	550	260	510	356	430	516	184	210	182	-	-	-	-	-	-
AT3 45-38/42-4	Screw-type terminals	Fixing rail	M8	3 UI 132/46	23.9 kg	3	315	170	295	200	215	292	76	78	100	-	-	-	-	-	-
AT3 45-44/46-4	Screw-type terminals	Fixing rail	M8	3 UI 180/63	59.9 kg	3	410	155	380	264	310	388	125	125	115	-	-	-	-	-	-
AT3 45-48/50-4	Screw-type terminals	Fixing rail	M10	3 UI 210/63	77.3 kg	3	480	170	425	316	370	450	133	141	123	-	-	-	-	-	-
AT3 45-58/60-4	Screw-type terminals	Fixing rail	M12	3 UI 240/83	125.0 kg	3	550	240	480	356	430	516	157	183	155	-	-	-	-	-	-
AT3 45-69-4	Screw-type terminals	Fixing rail	M12	3 UI 240/110	116.0 kg	3	550	260	485	356	430	516	184	210	182	-	-	-	-	-	-
AT3 70-20/21-4	Screw-type terminals	Fixing rail	M12	3 UI 240/140	239.0 kg	3	550	290	520	356	430	516	214	240	212	-	-	-	-	-	-

### Dimension pictures



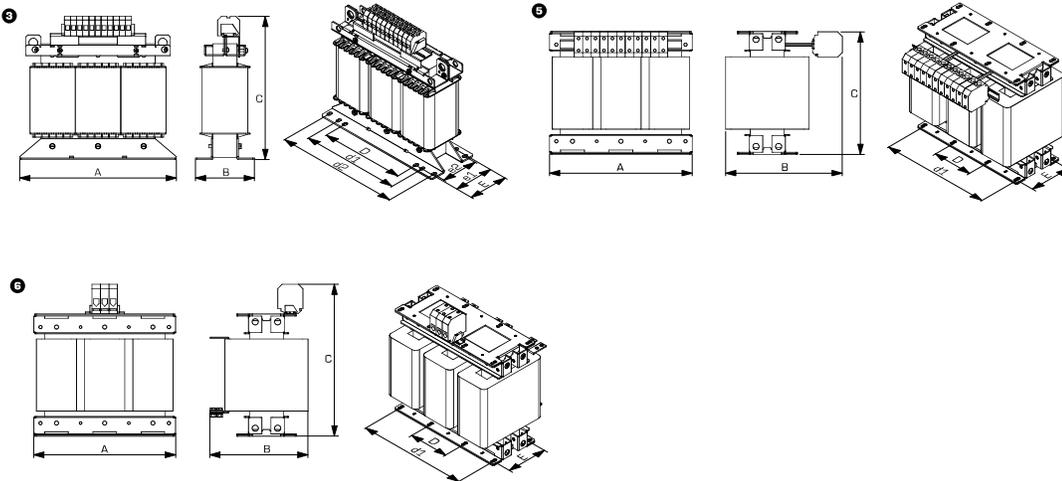


## Autotransformer AT3



Mechanical data	Typ	Terminals	Fixing method	Fixing screws	Core type	Weight	Dimension picture (in mm)																
								A	B	C	D	d1	d2	E	e1	e2	F	G	H	I	J	K	
	AT3 70-22/23-4	Screw-type terminals	Fixing rail	M12	3 UI 240/140	218.0 kg	3	550	290	520	356	430	516	214	240	212	-	-	-	-	-	-	-
	AT3 70-24/35-4	Screw-type terminals	Fixing rail	M12	3 UI 240/140	212.0 kg	3	550	290	520	356	430	516	214	240	212	-	-	-	-	-	-	-
	AT3 70-38/42-4	Screw-type terminals	Fixing rail	M8	3 UI 150/65	38.9 kg	3	350	185	320	224	240	328	107	117	133	-	-	-	-	-	-	-
	AT3 70-44/46-4	Screw-type terminals	Fixing rail	M10	3 UI 210/63	83.2 kg	3	480	195	440	316	370	450	133	141	123	-	-	-	-	-	-	-
	AT3 70-48/50-4	Screw-type terminals	Fixing rail	M12	3 UI 240/83	123.0 kg	3	550	240	485	356	430	516	157	183	155	-	-	-	-	-	-	-
	AT3 70-58/60-4	Screw-type terminals	Fixing rail	M12	3 UI 240/140	192.0 kg	3	550	290	485	356	430	516	214	240	212	-	-	-	-	-	-	-
	AT3 70-69-4	Screw-type terminals	Fixing rail	M12	3 UI 240/140	199.0 kg	3	550	290	485	356	430	516	214	240	212	-	-	-	-	-	-	-
	AT3 110-20/21-4	Screw-type terminals	Fixing rail	M12	3 UI 270/135	264.0 kg	5	530	430	500	180	490	-	200	-	-	-	-	-	-	-	-	-
	AT3 110-22/23-4	Screw-type terminals	Fixing rail	M12	3 UI 270/120	258.0 kg	5	530	415	500	180	490	-	185	-	-	-	-	-	-	-	-	-
	AT3 110-24/35-4	Screw-type terminals	Fixing rail	M12	3 UI 270/120	243.0 kg	5	530	400	500	180	490	-	185	-	-	-	-	-	-	-	-	-
	AT3 110-38/42-4	Screw-type terminals	Fixing rail	M8	3 UI 180/63	54.4 kg	3	410	165	415	264	310	388	125	115	-	-	-	-	-	-	-	-
	AT3 110-44/46-4	Screw-type terminals	Fixing rail	M12	3 UI 240/83	123.0 kg	3	550	240	520	356	430	516	157	183	155	-	-	-	-	-	-	-
	AT3 110-48/50-4	Screw-type terminals	Fixing rail	M12	3 UI 240/110	166.0 kg	3	550	260	520	356	430	516	184	210	182	-	-	-	-	-	-	-
	AT3 110-58/60-4	Screw-type terminals	Fixing rail	M12	3 UI 270/120	220.0 kg	5	530	380	500	180	490	-	185	-	-	-	-	-	-	-	-	-
	AT3 110-69-4	Screw-type terminals	Fixing rail	M12	3 UI 270/120	251.0 kg	5	530	380	500	180	490	-	185	-	-	-	-	-	-	-	-	-
	AT3 160-20/21-4	Screw-type terminals	Fixing rail	M12	3 UI 300/150	380.0 kg	6	600	420	635	200	540	-	215	-	-	-	-	-	-	-	-	-
	AT3 160-22/23-4	Screw-type terminals	Fixing rail	M12	3 UI 300/125	336.0 kg	6	600	390	635	200	540	-	190	-	-	-	-	-	-	-	-	-
	AT3 160-24/35-4	Screw-type terminals	Fixing rail	M12	3 UI 300/125	310.0 kg	6	600	390	635	200	540	-	190	-	-	-	-	-	-	-	-	-
	AT3 160-38/42-4	Screw-type terminals	Fixing rail	M10	3 UI 210/63	82.0 kg	3	480	235	490	316	370	450	133	141	123	-	-	-	-	-	-	-
	AT3 160-44/46-4	Screw-type terminals	Fixing rail	M12	3 UI 240/110	166.0 kg	3	550	260	545	356	430	516	184	210	182	-	-	-	-	-	-	-
	AT3 160-48/50-4	Screw-type terminals	Fixing rail	M12	3 UI 240/140	213.0 kg	3	550	290	520	356	430	516	214	240	212	-	-	-	-	-	-	-
	AT3 160-58/60-4	Screw-type terminals	Fixing rail	M12	3 UI 270/120	269.0 kg	5	545	400	500	180	490	-	185	-	-	-	-	-	-	-	-	-

### Dimension pictures





## Autotransformer AT3



1.1

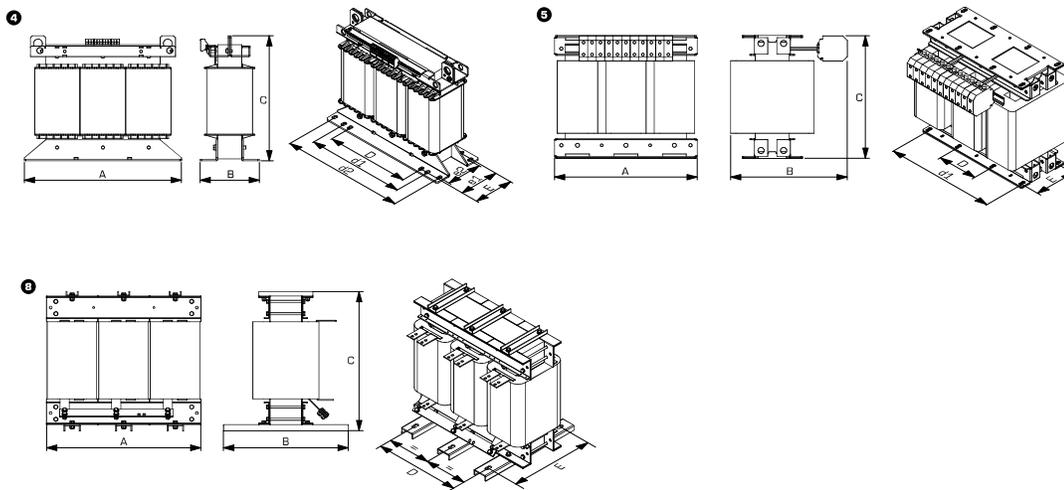
Typ	Terminals	Fixing method	Fixing screws	Core type	Weight	Dimension picture (in mm)	A	B	C	D	d1	d2	E	e1	e2	F	G	H	I	J	K	
AT3 160-69-4	Screw-type terminals	Fixing rail	M12	3 UI 300/125	334.0 kg	5	600	480	550	200	540	-	190	-	-	-	-	-	-	-	-	-
AT3 250-20/21-4	Screw-type terminals	Fixing rail	M16	3 UI 375/150	545.0 kg	6	750	605	730	500	-	-	490	-	-	-	-	-	-	-	-	-
AT3 250-22/23-4	Screw-type terminals	Fixing rail	M16	3 UI 375/150	550.0 kg	6	750	605	730	500	-	-	490	-	-	-	-	-	-	-	-	-
AT3 250-24/35-4	Screw-type terminals	Fixing rail	M12	3 UI 300/175	439.0 kg	6	600	510	550	200	540	-	240	-	-	-	-	-	-	-	-	-
AT3 250-38/42-4	Screw-type terminals	Fixing rail	M10	3 UI 210/88	104.0 kg	4	480	270	395	316	370	450	158	166	148	-	-	-	-	-	-	-
AT3 250-44/46-4	Screw-type terminals	Fixing rail	M12	3 UI 270/120	210.0 kg	5	530	415	500	180	490	-	185	-	-	-	-	-	-	-	-	-
AT3 250-48/50-4	Screw-type terminals	Fixing rail	M12	3 UI 270/120	266.0 kg	5	530	415	500	180	490	-	185	-	-	-	-	-	-	-	-	-
AT3 250-58/60-4	Screw-type terminals	Fixing rail	M12	3 UI 300/150	390.0 kg	5	600	505	550	200	540	-	215	-	-	-	-	-	-	-	-	-
AT3 250-69-4	Screw-type terminals	Fixing rail	M16	3 UI 375/150	510.0 kg	6	750	605	730	500	-	-	490	-	-	-	-	-	-	-	-	-

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### Dimension pictures



2.2

3.1

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# Autotransformer DSP



## General Data

Rated input voltage 3 x 400 Vac
Rated output voltage 3 x 130 - 3 x 240 Vac (5 stages)
Rated current 3 x 1.5 - 3 x 15 A
Insulation class E
Maximum ambient temperature 40 °C
Degree of protection IP 00

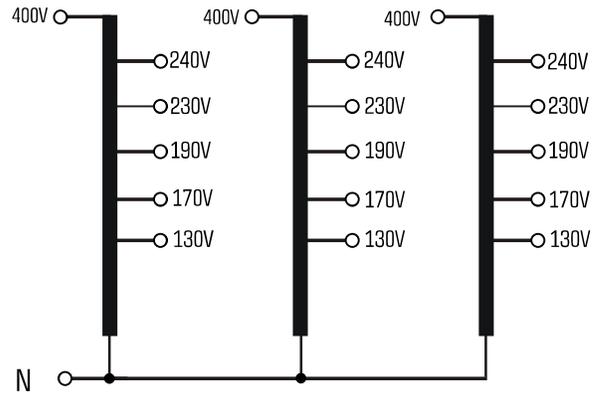
## Advantages

Low weight and small size (compared to isolating transformers)
Very high efficiency
Very good moisture protection and low noise thanks to vacuum impregnation
Contact protected screw connection terminals complying with UVV BGV A3
Simple mounting thanks to robust metal fixing rail with oval slots

## Applications

Autotransformer for example for setting the speed of single-phase fan motors.

## Sample application



## Standards

Autotransformer  
to: VDE 0570 Teil 2-13, DIN EN 61558-2-13, EN 61558-2-13,  
IEC 61558-2-13

## Approvals



## Autotransformer DSP



1.1

Typ	DSP 400/1,5	DSP 400/3	DSP 400/6	DSP 400/9	DSP 400/15
<b>Electrical data</b>					
<b>Input</b>					
Rated input voltage	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac
Frequency range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
<b>Output</b>					
Rated output voltage	3 x 240 Vac/3 x 230 Vac 3 x 190 Vac/3 x 170 Vac/3	3 x 240 Vac/3 x 230 Vac 3 x 190 Vac/3 x 170 Vac/3	3 x 240 Vac/3 x 230 Vac 3 x 190 Vac/3 x 170 Vac/3	3 x 240 Vac/3 x 230 Vac 3 x 190 Vac/3 x 170 Vac/3	3 x 240 Vac/3 x 230 Vac 3 x 190 Vac/3 x 170 Vac/3
Rated output current	3 x 1.5 A	3 x 3 A	3 x 6 A	3 x 9 A	3 x 15 A
Vector group	YNa0	YNa0	YNa0	YNa0	YNa0
<b>Environment</b>					
Ambient temperature max.	40 °C	40 °C	40 °C	40 °C	40 °C
<b>Safety and protection</b>					
Insulation class	E	E	E	E	E
Protection index	IP 00	IP 00	IP 00	IP 00	IP 00
Safety class (prepared)	I	I	I	I	I
Short circuit strength	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof
<b>Order numbers</b>					
<b>Order Number</b>	<b>DSP 400/1,5</b>	<b>DSP 400/3</b>	<b>DSP 400/6</b>	<b>DSP 400/9</b>	<b>DSP 400/15</b>

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Order Number	DSP 400/1,5	DSP 400/3	DSP 400/6	DSP 400/9	DSP 400/15
<b>Mechanical data</b>					
<b>Safety and protection</b>					
Type	Open type	Open type	Open type	Open type	Open type
<b>Terminal and mounting</b>					
Terminals	Screw-type terminals	Screw-type terminals	Screw-type terminals	Screw-type terminals	Screw-type terminals
Fixing method	Fixing rail	Fixing rail	Fixing rail	Fixing rail	Fixing rail
Fixing screws	M5	M6	M6	M8	M8
<b>Measures and weights</b>					
Weight	3.80 kg	6.50 kg	13.50 kg	17.80 kg	30.00 kg
Dimension picture (in mm)	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>
A	150	179	238	263	263
B	90	97	112	110	137
C	160	180	220	243	243
D	113	136	140	200	200
E	49	56	82	75	101
F	133	158	202	230	230
G	67	76	112	107	133
H	9	10	15.5	16	16

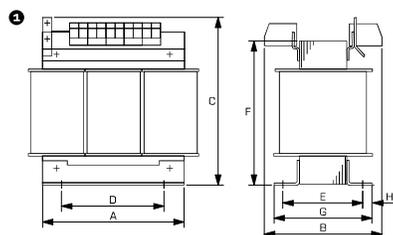
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### Dimension pictures



4.0

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Variable transformer  
**ESS**



**General Data**

Rated input voltage 230 Vac
Rated output voltage 0 - 250 Vac
Rated current 0.8 - 20 A
Insulation class B
Maximum ambient temperature 45 °C
Degree of protection IP 00

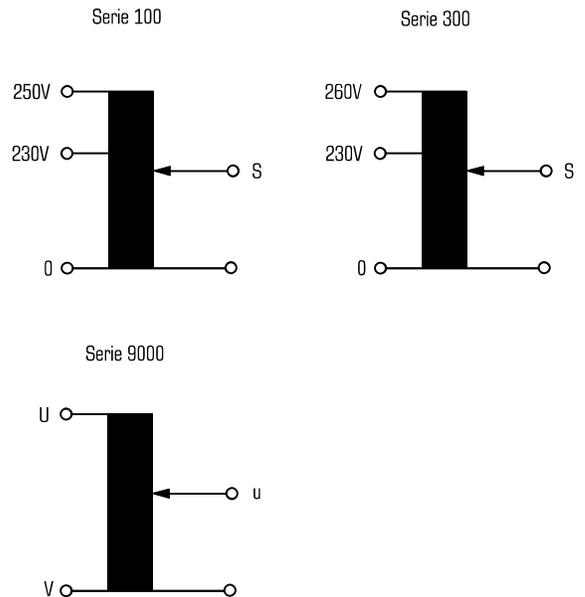
**Advantages**

Stepless adjustment of the AC voltage from zero to the maximum value
Self-cleaning of the exposed contact tracks
4-point flange mounting
Rotary knobs and scales optionally available

**Applications**

Variable auto transformer for continuous adjustment of AC voltages or currents under load.

**Sample application**



**Standards**



Variable transformer  
to: VDE 0552

**Approvals**





## Variable transformer ESS



1.1

Typ	ESS 102	ESS 103	ESS 104	ESS 106	ESS 108	ESS 110
<b>Electrical data</b>						
<b>Input</b>						
Rated input voltage	230 Vac	230 Vac	230 Vac	230 Vac	230 Vac	230 Vac
Frequency range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
<b>Output</b>						
Angle of rotation	320 °	320 °	320 °	320 °	320 °	320 °
Rated output voltage	0...230/250 Vac	0...230/250 Vac	0...230/250 Vac	0...230/250 Vac	0...230/250 Vac	0...230/250 Vac
Rated output current	2.00 A	3.15 A	4.00 A	6.30 A	8.00 A	10.00 A
<b>Environment</b>						
Ambient temperature max.	45 °C	45 °C	45 °C	45 °C	45 °C	45 °C
<b>Safety and protection</b>						
Insulation class	B	B	B	B	B	B
Protection index	IP 00	IP 00	IP 00	IP 00	IP 00	IP 00
Test voltage control spindle	4 kV	4 kV	4 kV	4 kV	4 kV	4 kV
<b>Order numbers</b>						
<b>Order Number</b>	<b>ESS 102</b>	<b>ESS 103</b>	<b>ESS 104</b>	<b>ESS 106</b>	<b>ESS 108</b>	<b>ESS 110</b>

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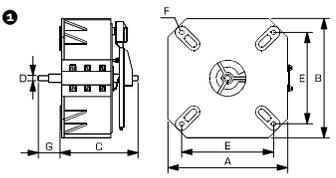
Order Number	ESS 102	ESS 103	ESS 104	ESS 106	ESS 108	ESS 110
<b>Mechanical data</b>						
<b>Terminal and mounting</b>						
Terminals	Screw-type terminals	Screw-type terminals	Screw-type terminals	Screw-type terminals	Screw-type terminals	Screw-type terminals
Fixing method	4-point bolted flange joint	4-point bolted flange joint	4-point bolted flange joint	4-point bolted flange joint	4-point bolted flange joint	4-point bolted flange joint
<b>Measures and weights</b>						
Weight	2.60 kg	3.80 kg	3.80 kg	5.20 kg	7.80 kg	7.80 kg
<b>Accessory</b>						
Rotary knob (optional)	AZ 50/6-1	AZ 50/6-1	AZ 50/6-1	AZ 50/6-1	AZ 50/8-1	AZ 50/8-1
Scale (optional)	SK/120	SK/120	SK/120	SK/120	SK/120	SK/120
Dimension picture (in mm)	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>
A	137	159	159	159	197	197
B	125	147	147	147	185	185
C	84	84	84	103	118	118
D	6	6	6	6	8	8
E	96	112	112	112	142	142
F	5.8	5.8	5.8	7	7	7
G	32	32	32	32	32	32

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### Dimension pictures



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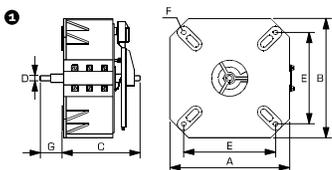
## Variable transformer ESS



Typ	ESS 118	ESS 120	ESS 302	ESS 303	ESS 305	ESS 308
<b>Electrical data</b>						
<b>Input</b>						
Rated input voltage	230 Vac	230 Vac	230 Vac	230 Vac	230 Vac	230 Vac
Frequency range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
<b>Output</b>						
Angle of rotation	320 °	320 °	320 °	320 °	320 °	320 °
Rated output voltage	0...230/250 Vac	0...230/250 Vac	0...230/260 Vac	0...230/260 Vac	0...230/260 Vac	0...230/260 Vac
Rated output current	18.00 A	20.00 A	1.80 A	3.15 A	5.00 A	8.00 A
<b>Environment</b>						
Ambient temperature max.	45 °C	45 °C	45 °C	45 °C	45 °C	45 °C
<b>Safety and protection</b>						
Insulation class	B	B	B	B	B	B
Protection index	IP 00	IP 00	IP 00	IP 00	IP 00	IP 00
Test voltage control spindle	4 kV	4 kV	4 kV	4 kV	4 kV	4 kV
<b>Order numbers</b>						
<b>Order Number</b>	<b>ESS 118</b>	<b>ESS 120</b>	<b>ESS 302</b>	<b>ESS 303</b>	<b>ESS 305</b>	<b>ESS 308</b>

30	Order Number	ESS 118	ESS 120	ESS 302	ESS 303	ESS 305	ESS 308
<b>Mechanical data</b>							
<b>Terminal and mounting</b>							
Terminals	Screw-type terminals	Screw-type terminals	Screw-type terminals	Screw-type terminals	Screw-type terminals	Screw-type terminals	Screw-type terminals
Fixing method	4-point bolted flange joint	4-point bolted flange joint	4-point bolted flange joint	4-point bolted flange joint	4-point bolted flange joint	4-point bolted flange joint	4-point bolted flange joint
<b>Measures and weights</b>							
Weight	14.00 kg	14.00 kg	2.60 kg	3.80 kg	5.20 kg	7.80 kg	
<b>Accessory</b>							
Rotary knob (optional)	AZ 50/8-1	AZ 50/8-1	AZ 50/6-1	AZ 50/6-1	AZ 50/6-1	AZ 50/8-1	
Scale (optional)	SK/120	SK/120	SK/120	SK/120	SK/120	SK/120	
Dimension picture (in mm)	1	1	1	1	1	1	
A	243	243	137	159	159	197	
B	231	231	125	147	147	185	
C	121	121	84	84	103	118	
D	8	8	6	6	6	8	
E	180	180	96	112	112	142	
F	11	11	5.8	5.8	7	7	
G	32	32	32	32	32	32	

### Dimension pictures





## Variable transformer ESS



1.1

Type		ESS 318	ESS 9008	ESS 9013
Electrical data	<b>Input</b>			
	Rated input voltage	230 Vac	230 Vac	230 Vac
	Frequency range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
	<b>Output</b>			
	Angle of rotation	320 °	320 °	320 °
	Rated output voltage	0...230/260 Vac	0...230 Vac	0...230 Vac
	Rated output current	18.00 A	0.80 A	1.25 A
	<b>Environment</b>			
	Ambient temperature max.	45 °C	45 °C	45 °C
	<b>Safety and protection</b>			
Insulation class	B	B	B	
Protection index	IP 00	IP 00	IP 00	
Test voltage control spindle	4 kV	4 kV	4 kV	
<b>Order numbers</b>				
<b>Order Number</b>	<b>ESS 318</b>	<b>ESS 9008</b>	<b>ESS 9013</b>	

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Terminal and mounting		ESS 318	ESS 9008	ESS 9013
Terminals	Screw-type terminals	Screw-type terminals	Screw-type terminals	
Fixing method	4-point bolted flange joint	Fixing hole	Fixing hole	
<b>Measures and weights</b>				
Weight	14.00 kg	1.40 kg	1.40 kg	
<b>Accessory</b>				
Rotary knob (optional)	AZ 50/8-1	AZ 50/6-1	AZ 50/6-1	
Scale (optional)	SK/120	SK/85	SK/120	
Dimension picture (in mm)	<b>1</b>	<b>2</b>	<b>2</b>	
A	243	94.5	94.5	
B	231	98	95	
C	121	58	58	
D	8	6	6	
E	180	-	-	
F	11	3	3	
G	32	23	28	

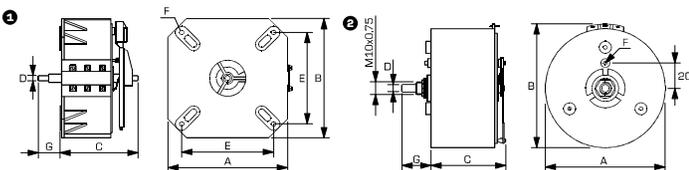
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### Dimension pictures



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