

# Toroidal safety isolating and isolating transformer

**RKD**



## General Data

Rated input voltage 2 x 115 Vac
Rated output voltage 2 x 6 - 2 x 115 Vac
Power 15 - 3000 VA
Insulation class B
Maximum ambient temperature 40 °C
Efficiency up to 98 %
Degree of protection IP 00

## Advantages

Minimum size at high power
Low weight
Double input voltage for series or parallel connection
Minimal no-load losses
Outstanding temperature behaviour thanks to low magnetic leakage field
Very low noise field

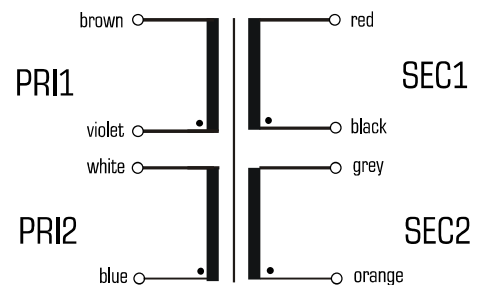
## Applications

As a mains transformer for adjustment of the voltage and simple electrical isolation.

As an isolating transformer for the safe electrical isolation of the input and output sides. The transformer may be used to set up protective separation as a protective measure in accordance with VDE 0100.

As a safety isolating transformer for the safe electrical isolation of the input and output sides. The transformer is suitable for creating SELV and PELV circuits because of the limit on the output voltage.

## Sample application



**PRI:**  
 Parallel connection (115V): brown with white/violet with blue  
 Series connection (230V): violet with white

**SEC:**  
 Parallel connection: red with grey/black with orange  
 Series connection: black with grey

## Standards



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

Isolating transformer  
 to: VDE 0570 Part 2-4, DIN EN 61558-2-4, EN 61558-2-4, IEC 61558-2-4, UL 5085-1/-2, CSA 22.2 No.66

Safety isolating transformer  
 to: VDE 0570 Part 2-6, DIN EN 61558-2-6, EN 61558-2-6, IEC 61558-2-6, UL 5085-1/-2, CSA 22.2 No.66

## Approvals



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



## Toroidal safety isolating and isolating transformer

### RKD



Electrical data	Type	RKD 15/..	RKD 20/..	RKD 30/..	RKD 40/..
<b>Input</b>					
Rated input voltage		2 x 115 Vac	2 x 115 Vac	2 x 115 Vac	2 x 115 Vac
Rated frequency		50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
<b>Output</b>					
<b>Rated output voltage: Order no.</b>		2x6 Vac: RKD 15/2x6 2x9 Vac: RKD 15/2x9 2x12 Vac: RKD 15/2x12 2x15 Vac: RKD 15/2x15 2x18 Vac: RKD 15/2x18	2x12 Vac: RKD 20/2x12 2x15 Vac: RKD 20/2x15 2x18 Vac: RKD 20/2x18 2x24 Vac: RKD 20/2x24*	2x6 Vac: RKD 30/2x6 2x9 Vac: RKD 30/2x9 2x12 Vac: RKD 30/2x12 2x15 Vac: RKD 30/2x15 2x18 Vac: RKD 30/2x18 2x24 Vac: RKD 30/2x24**	2x6 Vac: RKD 40/2x6 2x9 Vac: RKD 40/2x9 2x12 Vac: RKD 40/2x12 2x15 Vac: RKD 40/2x15 2x18 Vac: RKD 40/2x18 2x24 Vac: RKD 40/2x24**
Rated Power		15 VA	20 VA	30 VA	40 VA
No-load voltage (app. x factor)		1.35	1.29	1.20	1.20
No-load loss (typ.)		0.30 W	0.33 W	0.45 W	0.45 W
Efficiency		73.0 %	77.0 %	80.0 %	82.0 %
<b>Standards</b>					
Classification		Safety isolating transformer	Safety isolating transformer *Mains transformer	Safety isolating transformer *Mains transformer	Safety isolating transformer **Isolating transformer
<b>Approvals</b>					
Approvals		cURus	cURus	cURus	cURus
<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		VDE=B, UL=class 105	VDE=B, UL=class 105	VDE=B, UL=class 105	VDE=B, UL=class 105
Protection index		IP 00	IP 00	IP 00	IP 00
Safety class (prepared)		II	II	II	II
Short circuit strength		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
<b>Order numbers</b>					
Order Number		see rated output voltage	see rated output voltage	see rated output voltage	see rated output voltage

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## Toroidal safety isolating and isolating transformer

### RKD



Electrical data	Typ	RKD 50/..	RKD 60/..	RKD 80/..	RKD 100/..
<b>Input</b>					
Rated input voltage		2 x 115 Vac	2 x 115 Vac	2 x 115 Vac	2 x 115 Vac
Rated frequency		50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
<b>Output</b>					
<b>Rated output voltage: Order no.</b>		2x12 Vac: RKD 50/2x12 2x15 Vac: RKD 50/2x15 2x18 Vac: RKD 50/2x18 2x24 Vac: RKD 50/2x24**	2x6 Vac: RKD 60/2x6 2x9 Vac: RKD 60/2x9 2x12 Vac: RKD 60/2x12 2x15 Vac: RKD 60/2x15 2x18 Vac: RKD 60/2x18 2x24 Vac: RKD 60/2x24** 2x30 Vac: RKD 60/2x30**	2x12 Vac: RKD 80/2x12 2x15 Vac: RKD 80/2x15 2x18 Vac: RKD 80/2x18 2x24 Vac: RKD 80/2x24**	2x9 Vac: RKD 100/2x9 2x12 Vac: RKD 100/2x12 2x15 Vac: RKD 100/2x15 2x18 Vac: RKD 100/2x18 2x24 Vac: RKD 100/2x24** 2x30 Vac: RKD 100/2x30**
Rated Power		50 VA	60 VA	80 VA	100 VA
No-load voltage (app. x factor)		1.20	1.14	1.12	1.10
No-load loss (typ.)		0.40 W	0.70 W	1.00 W	0.90 W
Efficiency		82.5 %	85.0 %	86.0 %	88.0 %
<b>Standards</b>					
Classification		Safety isolating transformer **Isolating transformer	Safety isolating transformer **Isolating transformer	Safety isolating transformer **Isolating transformer	Safety isolating transformer **Isolating transformer
<b>Approvals</b>					
Approvals		cURus	cURus	cURus	cURus
<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		VDE=B, UL=class 105	VDE=B, UL=class 105	VDE=B, UL=class 105	VDE=B, UL=class 105
Protection index		IP 00	IP 00	IP 00	IP 00
Safety class (prepared)		II	II	II	II
Short circuit strength		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
<b>Order numbers</b>					
<b>Order Number</b>		<b>see rated output voltage</b>	<b>see rated output voltage</b>	<b>see rated output voltage</b>	<b>see rated output voltage</b>



## Toroidal safety isolating and isolating transformer

### RKD



Electrical data	Type	RKD 120/..	RKD 160/..	RKD 200/..	RKD 225/..
<b>Input</b>					
Rated input voltage		2 x 115 Vac	2 x 115 Vac	2 x 115 Vac	2 x 115 Vac
Rated frequency		50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
<b>Output</b>					
<b>Rated output voltage: Order no.</b>		2x9 Vac: RKD 120/2x9 2x12 Vac: RKD 120/2x12 2x15 Vac: RKD 120/2x15 2x18 Vac: RKD 120/2x18 2x24 Vac: RKD 120/2x24** 2x30 Vac: RKD 120/2x30	2x12 Vac: RKD 160/2x12 2x15 Vac: RKD 160/2x15 2x18 Vac: RKD 160/2x18 2x24 Vac: RKD 160/2x24** 2x30 Vac: RKD 160/2x30 2x35 Vac: RKD 160/2x35	2x12 Vac: RKD 200/2x12 2x15 Vac: RKD 200/2x15 2x18 Vac: RKD 200/2x18 2x24 Vac: RKD 200/2x24**	2x12 Vac: RKD 225/2x12 2x15 Vac: RKD 225/2x15 2x18 Vac: RKD 225/2x18 2x24 Vac: RKD 225/2x24** 2x30 Vac: RKD 225/2x30**
Rated Power		120 VA	160 VA	200 VA	225 VA
No-load voltage (app. x factor)		1.08	1.08	1.08	1.07
No-load loss (typ.)		1.00 W	1.10 W	1.50 W	1.50 W
Efficiency		91.0 %	91.0 %	91.5 %	92.0 %
<b>Standards</b>					
Classification		Safety isolating transformer **Isolating transformer	Safety isolating transformer **Isolating transformer	Safety isolating transformer **Isolating transformer	Safety isolating transformer **Isolating transformer
<b>Approvals</b>					
Approvals		cURus	cURus	cURus	cURus
<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		VDE=B, UL=class 105	VDE=B, UL=class 105	VDE=B, UL=class 105	VDE=B, UL=class 105
Protection index		IP 00	IP 00	IP 00	IP 00
Safety class (prepared)		II	II	II	II
Short circuit strength		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
<b>Order numbers</b>					
Order Number		see rated output voltage	see rated output voltage	see rated output voltage	see rated output voltage

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## Toroidal safety isolating and isolating transformer

### RKD



Type		RKD 250/..	RKD 300/..	RKD 330/..	RKD 400/..
Electrical data	<b>Input</b>				
	Rated input voltage	2 x 115 Vac	2 x 115 Vac	2 x 115 Vac	2 x 115 Vac
	Rated frequency	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
	<b>Output</b>				
	<b>Rated output voltage: Order no.</b>	2x12 Vac: RKD 250/2x12 2x18 Vac: RKD 250/2x18 2x24 Vac: RKD 250/2x24** 2x30 Vac: RKD 250/2x30**	2x12 Vac: RKD 300/2x12 2x18 Vac: RKD 300/2x18 2x24 Vac: RKD 300/2x24**	2x18 Vac: RKD 330/2x18	2x18 Vac: RKD 400/2x18 2x24 Vac: RKD 400/2x24** 2x30 Vac: RKD 400/2x30**
	Rated Power	250 VA	300 VA	330 VA	400 VA
	No-load voltage (app. x factor)	1.05	1.06	1.04	1.05
	No-load loss (typ.)	2.10 W	2.50 W	2.50 W	3.20 W
	Efficiency	93.0 %	92.5 %	94.0 %	93.5 %
	<b>Standards</b>				
Classification	Safety isolating transformer **Isolating transformer	Safety isolating transformer **Isolating transformer	Safety isolating transformer	Safety isolating transformer **Isolating transformer	
<b>Approvals</b>					
Approvals	cURus	cURus	cURus	cURus	
<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	VDE=B, UL=class 105	VDE=B, UL=class 105	VDE=B, UL=class 105	VDE=B, UL=class 105	
Protection index	IP 00	IP 00	IP 00	IP 00	
Safety class (prepared)	II	II	II	II	
Short circuit strength	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	
<b>Order numbers</b>					
<b>Order Number</b>	<b>see rated output voltage</b>	<b>see rated output voltage</b>	<b>see rated output voltage</b>	<b>see rated output voltage</b>	



## Toroidal safety isolating and isolating transformer

### RKD



Electrical data	Typ	RKD 500/..	RKD 625/..	RKD 800/..	RKD 1000/..
<b>Input</b>					
Rated input voltage		2 x 115 Vac	2 x 115 Vac	2 x 115 Vac	2 x 115 Vac
Rated frequency		50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
<b>Output</b>					
<b>Rated output voltage: Order no.</b>		2x24 Vac: RKD 500/2x24 2x30 Vac: RKD 500/2x30 2x35 Vac: RKD 500/2x35	2x30 Vac: RKD 625/2x30 2x115 Vac: RKD 625/2x115	2x40 Vac: RKD 800/2x40 2x115 Vac: RKD 800/2x115	2x50 Vac: RKD 1000/2x50 2x115 Vac: RKD 1000/2x115
Rated Power		500 VA	625 VA	800 VA	1000 VA
No-load voltage (app. x factor)		1.04	1.04	1.04	1.02
No-load loss (typ.)		3.40 W	4.90 W	5.30 W	6.50 W
Efficiency		95.0 %	95.0 %	96.0 %	96.0 %
<b>Standards</b>					
Classification		Isolating transformer	Isolating transformer	Isolating transformer	Isolating transformer
<b>Approvals</b>					
Approvals		cURus	cURus	cURus	cURus
<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		VDE=B, UL=class 105	VDE=B, UL=class 105	VDE=B, UL=class 105	VDE=B, UL=class 105
Protection index		IP 00	IP 00	IP 00	IP 00
Safety class (prepared)		II	II	II	II
Short circuit strength		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
<b>Order numbers</b>					
<b>Order Number</b>		<b>see rated output voltage</b>	<b>see rated output voltage</b>	<b>see rated output voltage</b>	<b>see rated output voltage</b>

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## Toroidal safety isolating and isolating transformer

### RKD



		RKD 1200/..	RKD 1600/..	RKD 2000/..	RKD 3000/..
Electrical data	<b>Typ</b>				
	<b>Input</b>				
	Rated input voltage	2 x 115 Vac	2 x 115 Vac	2 x 115 Vac	2 x 115 Vac
	Rated frequency	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
	<b>Output</b>				
	<b>Rated output voltage: Order no.</b>	2x115 Vac: RKD 1200/2x115	2x115 Vac: RKD 1600/2x115	2x115 Vac: RKD 2000/2x115	2x115 Vac: RKD 3000/2x115
	Rated Power	1200 VA	1600 VA	2000 VA	3000 VA
	No-load voltage (app. x factor)	1.03	1.02	1.02	1.01
	No-load loss (typ.)	7.50 W	9.60 W	10.40 W	12.70 W
	Efficiency	96.0 %	97.0 %	97.0 %	98.0 %
<b>Standards</b>					
Classification	Isolating transformer	Isolating transformer	Isolating transformer	Isolating transformer	
<b>Approvals</b>					
Approvals	cURus	cURus	cURus	cURus	
<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	VDE=B, UL=class 105	VDE=B, UL=class 105	VDE=B, UL=class 105	VDE=B, UL=class 105	
Protection index	IP 00	IP 00	IP 00	IP 00	
Safety class (prepared)	II	II	II	II	
Short circuit strength	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	
<b>Order numbers</b>					
<b>Order Number</b>	<b>see rated output voltage</b>	<b>see rated output voltage</b>	<b>see rated output voltage</b>	<b>see rated output voltage</b>	<b>see rated output voltage</b>



## Toroidal safety isolating and isolating transformer

### RKD



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30 Mechanical data	30						
	Typ	Fixing method	Terminals	Major diameter Ø	Outside diameter in the area of the wire lead Ø	Height without mounting	Weight
RKD 15/..	Mounting kit, M4 bolt	Connecting leads, 200 mm	58 mm	60 mm	27 mm	0.29 kg	
RKD 20/..	Mounting kit, M4 bolt	Connecting leads, 200 mm	60 mm	62 mm	31 mm	0.32 kg	
RKD 30/..	Mounting kit, M4 bolt	Connecting leads, 200 mm	68 mm	71 mm	31 mm	0.46 kg	
RKD 40/..	Mounting kit, M6 bolt	Connecting leads, 200 mm	74 mm	77 mm	33 mm	0.52 kg	
RKD 50/..	Mounting kit, M6 bolt	Connecting leads, 200 mm	77 mm	79 mm	39 mm	0.68 kg	
RKD 60/..	Mounting kit, M6 bolt	Connecting leads, 200 mm	80 mm	83 mm	38 mm	0.75 kg	
RKD 80/..	Mounting kit, M6 bolt	Connecting leads, 200 mm	88 mm	91 mm	43 mm	1.10 kg	
RKD 100/..	Mounting kit, M6 bolt	Connecting leads, 200 mm	92 mm	94 mm	45 mm	1.20 kg	
RKD 120/..	Mounting kit, M6 bolt	Connecting leads, 200 mm	94 mm	96 mm	46 mm	1.40 kg	
RKD 160/..	Mounting kit, M6 bolt	Connecting leads, 200 mm	105 mm	107 mm	50 mm	1.70 kg	
RKD 200/..	Mounting kit, M8 bolt	Connecting leads, 200 mm	113 mm	115 mm	51 mm	2.10 kg	
RKD 225/..	Mounting kit, M8 bolt	Connecting leads, 200 mm	115 mm	117 mm	54 mm	2.30 kg	
RKD 250/..	Mounting kit, M8 bolt	Connecting leads, 200 mm	114 mm	117 mm	54 mm	2.50 kg	
RKD 300/..	Mounting kit, M8 bolt	Connecting leads, 200 mm	122 mm	126 mm	64 mm	3.10 kg	
RKD 330/..	Mounting kit, M8 bolt	Connecting leads, 200 mm	124 mm	127 mm	65 mm	3.20 kg	
RKD 400/..	Mounting kit, M8 bolt	Connecting leads, 200 mm	128 mm	131 mm	73 mm	4.10 kg	
RKD 500/..	Mounting kit, M8 bolt	Connecting leads, 200 mm	140 mm	143 mm	68 mm	4.80 kg	
RKD 625/..	Mounting kit, M8 bolt	Connecting leads, 200 mm	152 mm	154 mm	74 mm	6.10 kg	
RKD 800/..	Mounting kit, M8 bolt	Connecting leads, 200 mm	170 mm	172 mm	72 mm	7.00 kg	
RKD 1000/..	Mounting kit, M8 bolt	Connecting leads, 200 mm	168 mm	170 mm	85 mm	8.30 kg	
RKD 1200/..	Remaining hole casting, with integrated mounting holes	Connecting leads, 200 mm	167 mm	170 mm	100 mm	9.80 kg	
RKD 1600/..	Remaining hole casting, with integrated mounting holes	Connecting leads, 200 mm	202 mm	205 mm	105 mm	12.70 kg	
RKD 2000/..	Remaining hole casting, with integrated mounting holes	Connecting leads, 200 mm	203 mm	206 mm	110 mm	15.00 kg	
RKD 3000/..	Remaining hole casting, with integrated mounting holes	Connecting leads, 200 mm	216 mm	221 mm	125 mm	20.90 kg	



## Toroidal safety isolating and isolating transformer

**RTE**



### General Data

Rated input voltage 230 Vac
Rated output voltage 2 x 12 - 2 x 35 Vac
Power 15 - 625 VA
Insulation class B
Maximum ambient temperature 40 °C
Efficiency up to 95 %
Degree of protection IP 00

### Advantages

Minimum size at high output
Low weight
Double output voltage for series or parallel connection
Protected against overload by integral temperature fuse
Minimal no-load losses
Outstanding temperature behaviour thanks to low magnetic leakage field
Very low noise field

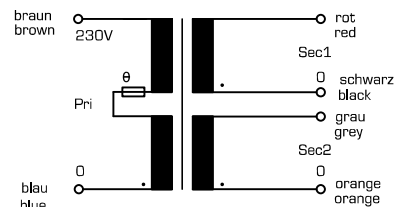
### Applications

As a mains transformer for adjustment of the voltage and simple electrical isolation.

As an isolating transformer as specified in EN 61558-2-6 for the safe electrical isolation of the input and output sides. The transformer may be used to set up protective separation as a protective measure in accordance with VDE 0100.

As a safety isolating transformer as specified in EN 61558-2-6 for the safe electrical isolation of the input and output sides. The transformer is suitable for creating SELV and PELV circuits because of the limit on the output voltage.

### Sample application



Parallelschaltung: rot mit grau / schwarz mit orange  
Parallel connection: red with grey / black with orange

Reihenschaltung: schwarz mit grau  
Series connection: black with grey

### Standards



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

Safety isolating transformer  
to: VDE 0570 Teil 2-6, DIN EN 61558-2-6, EN 61558-2-6, IEC 61558-2-6, UL 5085-1/-2, CSA 22.2 No.66

Isolating transformer  
to: VDE 0570 Part 2-4, DIN EN 61558-2-4, EN 61558-2-4, IEC 61558-2-4, UL 5085-1/-2, CSA 22.2 No.66

### Approvals



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



## Toroidal safety isolating and isolating transformer

### RTE



Electrical data	Typ	RTE 15/..	RTE 20/..	RTE 30/..	RTE 40/..	RTE 50/..	RTE 60/..
<b>Input</b>							
Rated input voltage		230 Vac	230 Vac	230 Vac	230 Vac	230 Vac	230 Vac
Rated frequency		50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
<b>Output</b>							
<b>Rated output voltage: Order no.</b>		2x12 Vac: RTE 15/2x12 2x15 Vac: RTE 15/2x15 2x18 Vac: RTE 15/2x18	2x12 Vac: RTE 20/2x12 2x15 Vac: RTE 20/2x15 2x18 Vac: RTE 20/2x18 2x24 Vac: RTE 20/2x24*	2x12 Vac: RTE 30/2x12 2x15 Vac: RTE 30/2x15 2x18 Vac: RTE 30/2x18 2x24 Vac: RTE 30/2x24*	2x12 Vac: RTE 40/2x12 2x15 Vac: RTE 40/2x15 2x18 Vac: RTE 40/2x18 2x24 Vac: RTE 40/2x24**	2x12 Vac: RTE 50/2x12 2x15 Vac: RTE 50/2x15 2x18 Vac: RTE 50/2x18 2x24 Vac: RTE 50/2x24**	2x12 Vac: RTE 60/2x12 2x15 Vac: RTE 60/2x15 2x18 Vac: RTE 60/2x18 2x24 Vac: RTE 60/2x24**
Rated Power		15 VA	20 VA	30 VA	40 VA	50 VA	60 VA
No-load voltage (app. x factor)		1.35	1.29	1.20	1.20	1.20	1.14
No-load loss (typ.)		0.30 W	0.33 W	0.45 W	0.45 W	0.40 W	0.70 W
Efficiency		73.0 %	77.0 %	80.0 %	82.0 %	82.5 %	85.0 %
<b>Standards</b>							
Classification		Safety isolating transformer	Safety isolating transformer *Mains transformer	Safety isolating transformer *Mains transformer	Safety isolating transformer **Isolating transformer	Safety isolating transformer **Isolating transformer	Safety isolating transformer **Isolating transformer
<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		VDE=B, UL=class 105	VDE=B, UL=class 105	VDE=B, UL=class 105	VDE=B, UL=class 105	VDE=B, UL=class 105	VDE=B, UL=class 105
Protection index		IP 00	IP 00	IP 00	IP 00	IP 00	IP 00
Safety class (prepared)		II	II	II	II	II	II
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>							
Order Number		see rated output voltage	see rated output voltage	see rated output voltage	see rated output voltage	see rated output voltage	see rated output voltage

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## Toroidal safety isolating and isolating transformer

### RTE



Typ	RTE 80/..	RTE 100/..	RTE 120/..	RTE 160/..	RTE 200/..	RTE 225/..
<b>Electrical data</b>						
<b>Input</b>						
Rated input voltage	230 Vac	230 Vac	230 Vac	230 Vac	230 Vac	230 Vac
Rated frequency	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
<b>Output</b>						
<b>Rated output voltage: Order no.</b>	2x12 Vac: RTE 80/2x12 2x15 Vac: RTE 80/2x15 2x18 Vac: RTE 80/2x18 2x24 Vac: RTE 80/2x24**	2x12 Vac: RTE 100/2x12 2x15 Vac: RTE 100/2x15 2x18 Vac: RTE 100/2x18 2x24 Vac: RTE 100/2x24**	2x12 Vac: RTE 120/2x12 2x15 Vac: RTE 120/2x15 2x18 Vac: RTE 120/2x18 2x24 Vac: RTE 120/2x24**	2x12 Vac: RTE 160/2x12 2x15 Vac: RTE 160/2x15 2x18 Vac: RTE 160/2x18 2x24 Vac: RTE 160/2x24**	2x12 Vac: RTE 200/2x12 2x15 Vac: RTE 200/2x15 2x18 Vac: RTE 200/2x18 2x24 Vac: RTE 200/2x24**	2x12 Vac: RTE 225/2x12 2x15 Vac: RTE 225/2x15 2x18 Vac: RTE 225/2x18 2x24 Vac: RTE 225/2x24**
Rated Power	80 VA	100 VA	120 VA	160 VA	200 VA	225 VA
No-load voltage (app. x factor)	1.12	1.10	1.08	1.08	1.08	1.07
No-load loss (typ.)	1.00 W	0.90 W	1.00 W	1.10 W	1.50 W	1.50 W
Efficiency	86.0 %	88.0 %	91.0 %	91.0 %	91.5 %	92.0 %
<b>Standards</b>						
Classification	Safety isolating transformer **Isolating transformer	Safety isolating transformer **Isolating transformer	Safety isolating transformer **Isolating transformer	Safety isolating transformer **Isolating transformer	Safety isolating transformer **Isolating transformer	Safety isolating transformer **Isolating transformer
<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	VDE=B, UL=class 105	VDE=B, UL=class 105	VDE=B, UL=class 105	VDE=B, UL=class 105	VDE=B, UL=class 105	VDE=B, UL=class 105
Protection index	IP 00	IP 00	IP 00	IP 00	IP 00	IP 00
Safety class (prepared)	II	II	II	II	II	II
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>						
Order Number	see rated output voltage	see rated output voltage	see rated output voltage	see rated output voltage	see rated output voltage	see rated output voltage



## Toroidal safety isolating and isolating transformer

### RTE



Typ	RTE 250/..	RTE 300/..	RTE 330/..	RTE 400/..	RTE 500/..	RTE 625/..
<b>Electrical data</b>						
<b>Input</b>						
Rated input voltage	230 Vac	230 Vac	230 Vac	230 Vac	230 Vac	230 Vac
Rated frequency	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
<b>Output</b>						
<b>Rated output voltage: Order no.</b>	2x12 Vac: RTE 250/2x12 2x18 Vac: RTE 250/2x18 2x24 Vac: RTE 250/2x24** 2x30 Vac: RTE 250/2x30**	2x18 Vac: RTE 300/2x18 2x24 Vac: RTE 300/2x24**	2x18 Vac: RTE 330/2x18	2x18 Vac: RTE 400/2x18 2x24 Vac: RTE 400/2x24** 2x30 Vac: RTE 400/2x30**	2x24 Vac: RTE 500/2x24 2x30 Vac: RTE 500/2x30 2x35 Vac: RTE 500/2x35	2x30 Vac: RTE 625/2x30
Rated Power	250 VA	300 VA	330 VA	400 VA	500 VA	625 VA
No-load voltage (app. x factor)	1.05	1.06	1.04	1.05	1.04	1.04
No-load loss (typ.)	2.10 W	2.50 W	2.50 W	3.20 W	3.40 W	4.90 W
Efficiency	93.0 %	92.5 %	94.0 %	93.5 %	95.0 %	95.0 %
<b>Standards</b>						
Classification	Safety isolating transformer **Isolating transformer	Safety isolating transformer **Isolating transformer	Safety isolating transformer	Safety isolating transformer **Isolating transformer	Isolating transformer	Isolating transformer
<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	VDE=B, UL=class 105	VDE=B, UL=class 105	VDE=B, UL=class 105	VDE=B, UL=class 105	VDE=B, UL=class 105	VDE=B, UL=class 105
Protection index	IP 00	IP 00	IP 00	IP 00	IP 00	IP 00
Safety class (prepared)	II	II	II	II	II	II
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>						
<b>Order Number</b>	<b>see rated output voltage</b>	<b>see rated output voltage</b>	<b>see rated output voltage</b>	<b>see rated output voltage</b>	<b>see rated output voltage</b>	<b>see rated output voltage</b>

1.1

1.2

1.3

2.1

2.2

3.1

3.2

3.3

4.0

5.1

5.2



## Toroidal safety isolating and isolating transformer

### RTE



Mechanical data	30						
	Typ	Fixing method	Terminals	Major diameter Ø	Outside diameter in the area of the wire lead Ø	Height without mounting	Weight
	RTE 15/..	Mounting kit, M4 bolt	Connecting leads, 200 mm	58 mm	60 mm	27 mm	0.29 kg
	RTE 20/..	Mounting kit, M4 bolt	Connecting leads, 200 mm	60 mm	62 mm	31 mm	0.32 kg
	RTE 30/..	Mounting kit, M4 bolt	Connecting leads, 200 mm	68 mm	70 mm	31 mm	0.46 kg
	RTE 40/..	Mounting kit, M6 bolt	Connecting leads, 200 mm	74 mm	77 mm	33 mm	0.52 kg
	RTE 50/..	Mounting kit, M6 bolt	Connecting leads, 200 mm	77 mm	79 mm	39 mm	0.68 kg
	RTE 60/..	Mounting kit, M6 bolt	Connecting leads, 200 mm	80 mm	83 mm	38 mm	0.75 kg
	RTE 80/..	Mounting kit, M6 bolt	Connecting leads, 200 mm	88 mm	91 mm	43 mm	1.10 kg
	RTE 100/..	Mounting kit, M6 bolt	Connecting leads, 200 mm	92 mm	94 mm	45 mm	1.20 kg
	RTE 120/..	Mounting kit, M6 bolt	Connecting leads, 200 mm	94 mm	96 mm	46 mm	1.40 kg
	RTE 160/..	Mounting kit, M6 bolt	Connecting leads, 200 mm	105 mm	107 mm	50 mm	1.70 kg
	RTE 200/..	Mounting kit, M8 bolt	Connecting leads, 200 mm	113 mm	115 mm	51 mm	2.10 kg
	RTE 225/..	Mounting kit, M8 bolt	Connecting leads, 200 mm	115 mm	117 mm	54 mm	2.30 kg
	RTE 250/..	Mounting kit, M8 bolt	Connecting leads, 200 mm	114 mm	117 mm	54 mm	2.52 kg
	RTE 300/..	Mounting kit, M8 bolt	Connecting leads, 200 mm	122 mm	126 mm	64 mm	3.10 kg
	RTE 330/..	Mounting kit, M8 bolt	Connecting leads, 200 mm	124 mm	127 mm	65 mm	3.20 kg
	RTE 400/..	Mounting kit, M8 bolt	Connecting leads, 200 mm	128 mm	131 mm	73 mm	4.10 kg
	RTE 500/..	Mounting kit, M8 bolt	Connecting leads, 200 mm	140 mm	143 mm	68 mm	4.80 kg
	RTE 625/..	Mounting kit, M8 bolt	Connecting leads, 200 mm	152 mm	154 mm	74 mm	6.10 kg