

Toroidal 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.

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

Certifications

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



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Electrical data	Type	RTE 15/..	RTE 20/..	RTE 30/..	RTE 40/..	RTE 50/..	RTE 60/..
	Input						
	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
	Output						
	Rated output voltage: Order no.	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)	1.15	1.30	1.16	1.18	1.18	1.14
	No-load loss (typ.)	0.30 W	0.20 W	0.45 W	0.40 W	0.40 W	0.70 W
	Efficiency	83 %	74 %	82 %	84 %	83 %	86 %
Standards							
Classification	Safety isolating transformer	Safety isolating transformer **Mains 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
Approvals							
Approvals	cURus	cURus	cURus	cURus	cURus	cURus	cURus
Environment							
Ambient temperature max.	40 °C	40 °C	40 °C	40 °C	40 °C	40 °C	40 °C
Safety and protection							
Type	open type	open type	open type	open type	open type	open type	open type
Class of Insulation System	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	VDE=B, UL=class 105
Protection index	IP 00	IP 00	IP 00	IP 00	IP 00	IP 00	IP 00
Safety class (prepared)	II	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	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	4000 Vac, 50 Hz
Order numbers							
Order Number	refer to rated output voltage	refer to rated output voltage	refer to rated output voltage	refer to rated output voltage	refer to rated output voltage	refer to rated output voltage	refer to rated output voltage

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Toroidal transformer RTE

Electrical data	Type	RTE 80/..	RTE 100/..	RTE 120/..	RTE 160/..	RTE 200/..	RTE 225/..
	Input						
	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
	Output						
	Rated output voltage: Order no.	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	1.09	1.08	1.07	1.07
	No-load loss (typ.)	0.90 W	0.90 W	0.90 W	1.10 W	1.50 W	1.50 W
	Efficiency	88 %	89 %	91 %	91 %	92 %	93 %
Standards							
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	Safety isolating transformer *Isolating transformer
Approvals							
Approvals	cURus	cURus	cURus	cURus	cURus	cURus	cURus
Environment							
Ambient temperature max.	40 °C	40 °C	40 °C	40 °C	40 °C	40 °C	40 °C
Safety and protection							
Type	open type	open type	open type	open type	open type	open type	open type
Class of Insulation System	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	VDE=B, UL=class 105
Protection index	IP 00	IP 00	IP 00	IP 00	IP 00	IP 00	IP 00
Safety class (prepared)	II	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	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	4000 Vac, 50 Hz
Order numbers							
Order Number	refer to rated output voltage	refer to rated output voltage	refer to rated output voltage	refer to rated output voltage	refer to rated output voltage	refer to rated output voltage	refer to rated output voltage



Toroidal transformer

RTE

Electrical data	Type	RTE 250/..	RTE 300/..	RTE 330/..	RTE 400/..	RTE 500/..	RTE 625/..
	Input						
	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
	Output						
	Rated output voltage: Order no.	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	1.05	1.05	1.04	1.04
	No-load loss (typ.)	2.10 W	2.80 W	2.80 W	3.10 W	3.40 W	4.90 W
	Efficiency	93 %	93 %	94 %	94 %	95 %	95 %
Standards							
Classification		Safety isolating transformer *Isolating transformer	Safety isolating transformer *Isolating transformer	Safety isolating transformer	Safety isolating transformer *Isolating transformer	Isolating transformer	Isolating transformer
Approvals							
Approvals		cURus	cURus	cURus	cURus	cURus	cURus
Environment							
Ambient temperature max.		40 °C	40 °C	40 °C	40 °C	40 °C	40 °C
Safety and protection							
Type		open type	open type	open type	open type	open type	open type
Class of Insulation System		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
Order numbers							
Order Number		refer to rated output voltage	refer to rated output voltage	refer to rated output voltage	refer to rated output voltage	refer to rated output voltage	refer to rated output voltage

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30 Mechanical data							
	Typ	Fixing method	Terminals	Weight	Major diameter Ø	Outside diameter in the area of the wire lead	
	RTE 15/..	Mounting kit, M5 bolt	Connecting leads, 200 mm	0.32 kg	59 mm	62 mm	30 mm
	RTE 20/..	Mounting kit, M5 bolt	Connecting leads, 200 mm	0.35 kg	61 mm	62 mm	32 mm
	RTE 30/..	Mounting kit, M5 bolt	Connecting leads, 200 mm	0.47 kg	68 mm	70 mm	31 mm
	RTE 40/..	Mounting kit, M6 bolt	Connecting leads, 200 mm	0.56 kg	75 mm	77 mm	34 mm
	RTE 50/..	Mounting kit, M6 bolt	Connecting leads, 200 mm	0.70 kg	77 mm	79 mm	39 mm
	RTE 60/..	Mounting kit, M6 bolt	Connecting leads, 200 mm	0.75 kg	80 mm	83 mm	38 mm
	RTE 80/..	Mounting kit, M6 bolt	Connecting leads, 200 mm	1.08 kg	88 mm	91 mm	43 mm
	RTE 100/..	Mounting kit, M6 bolt	Connecting leads, 200 mm	1.20 kg	92 mm	94 mm	45 mm
	RTE 120/..	Mounting kit, M6 bolt	Connecting leads, 200 mm	1.41 kg	94 mm	96 mm	45 mm
	RTE 160/..	Mounting kit, M6 bolt	Connecting leads, 200 mm	1.73 kg	105 mm	107 mm	50 mm
	RTE 200/..	Mounting kit, M8 bolt	Connecting leads, 200 mm	2.16 kg	114 mm	116 mm	53 mm
	RTE 225/..	Mounting kit, M8 bolt	Connecting leads, 200 mm	2.35 kg	115 mm	117 mm	54 mm
	RTE 250/..	Mounting kit, M8 bolt	Connecting leads, 200 mm	2.52 kg	114 mm	117 mm	54 mm
	RTE 300/..	Mounting kit, M8 bolt	Connecting leads, 200 mm	3.10 kg	125 mm	127 mm	64 mm
	RTE 330/..	Mounting kit, M8 bolt	Connecting leads, 200 mm	3.30 kg	124 mm	127 mm	65 mm
	RTE 400/..	Mounting kit, M8 bolt	Connecting leads, 200 mm	4.05 kg	128 mm	131 mm	74 mm
	RTE 500/..	Mounting kit, M8 bolt	Connecting leads, 200 mm	4.80 kg	140 mm	143 mm	66 mm
	RTE 625/..	Mounting kit, M8 bolt	Connecting leads, 200 mm	6.10 kg	152 mm	154 mm	74 mm

