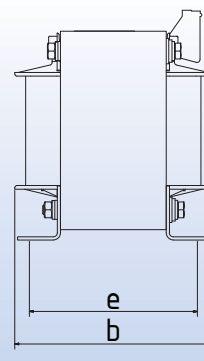
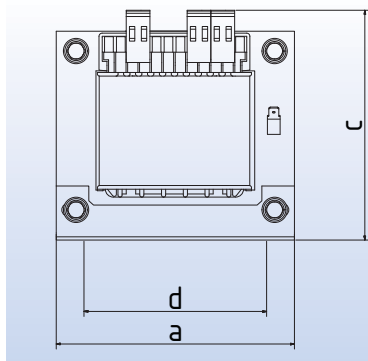
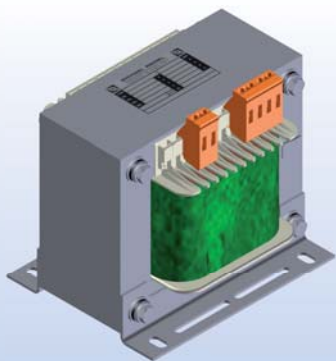




SINGLE-PHASE TRANSFORMERS

- 12 | RSTN
- 13 | RSTN UL-CSA
- 14 | RSTS
- 15 | RSTS UL-CSA
- 16 | RSTL
- 17 | REIA
- 18 | URST
- 19 | RUE
- 20 | REST
- 21 | RLTS
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Single-phase control transformers according to VDE 0570 part 2-2, EN 61558-2-2

Single-phase isolation transformers according to VDE 0570 part 2-4, EN 61558-2-4

Single-phase safety transformers according to VDE 0570 part 2-6, EN 61558-2-6



Only available with the given voltages; for other voltages please see identical design type REIA

General information:

- Voltage adaptation through $\pm 5\%$ taps on the primary side
- Compact, low-weight design
- High reliability and long life
- Low overall losses, high efficiency
- Above-averagely high power for short-time operation (S3)
- Temperature reserves, can also be loaded with full current at T_a of 60°C and class B
- High output voltage stability

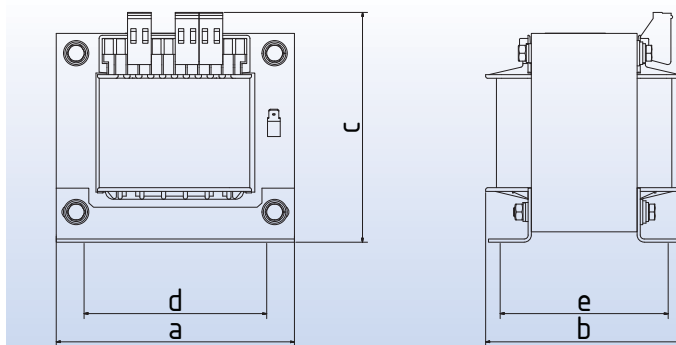
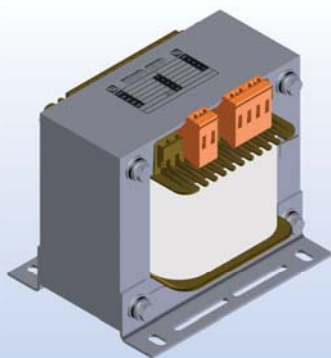
Design:

Open frame, stationary, for device installation and assembly in dry rooms, separate windings. Connection to leakage current-resistant transformer terminals with screw fastening. The transformer terminals are protected against back of hand and finger contact according to accident prevention regulations (BGV A3). PE connection as 6.3x0.8mm tab connector.

IP 00, insulation class E, max. ambient temperature of 40°C ($t_{a40^\circ\text{C}/\text{E}}$).

Type	Power VA	500//230 V Item no:	400//230 V Item no:	230//230 V Item no:	500//24 V Item no:	400//24 V Item no:	230//24 V Item no:
RSTN 50	50	0311-00000050	0312-00000050	0313-00000050	0314-00000050	0315-00000050	0316-00000050
RSTN 75	75	0311-00000075	0312-00000075	0313-00000075	0314-00000075	0315-00000075	0316-00000075
RSTN 100	100	0311-00000100	0312-00000100	0313-00000100	0314-00000100	0315-00000100	0316-00000100
RSTN 130	130	0311-00000130	0312-00000130	0313-00000130	0314-00000130	0315-00000130	0316-00000130
RSTN 200	200	0311-00000200	0312-00000200	0313-00000200	0314-00000200	0315-00000200	0316-00000200
RSTN 250	250	0311-00000250	0312-00000250	0313-00000250	0314-00000250	0315-00000250	0316-00000250
RSTN 320	320	0311-00000320	0312-00000320	0313-00000320	0314-00000320	0315-00000320	0316-00000320
RSTN 400	400	0311-00000400	0312-00000400	0313-00000400	0314-00000400	0315-00000400	0316-00000400
RSTN 500	500	0311-00000500	0312-00000500	0313-00000500	0314-00000500	0315-00000500	0316-00000500
RSTN 630	630	0311-00000630	0312-00000630	0313-00000630	0314-00000630	0315-00000630	0316-00000630
RSTN 800	800	0311-00000800	0312-00000800	0313-00000800	0314-00000800	0315-00000800	0316-00000800
RSTN 1000	1000	0311-00001000	0312-00001000	0313-00001000	—	—	—
RSTN 1100	1100	0311-00001100	0312-00001100	0313-00001100	—	—	—
RSTN 1300	1300	0311-00001300	0312-00001300	0313-00001300	—	—	—
RSTN 1600	1600	0311-00001600	0312-00001600	0313-00001600	—	—	—
RSTN 2000	2000	0311-00002000	0312-00002000	0313-00002000	—	—	—
RSTN 2500	2500	0311-00002500	0312-00002500	0313-00002500	—	—	—
RSTN 3000	3000	0311-00003000	0312-00003000	0313-00003000	—	—	—

Type	Copper kg	Total kg	Dimensions approx. in mm					Mounting
			a	b	c	d	e	
RSTN 50	0,27	1,2	78	71	89	56	46	M4
RSTN 75	0,29	1,5	85	68	93	64	47	M4
RSTN 100	0,34	2,1	85	82	93	64	61	M4
RSTN 130	0,45	2,3	96	78	104	84	60	M5
RSTN 200	0,58	2,9	96	88	104	84	70	M5
RSTN 250	0,66	3,6	96	102	104	84	84	M5
RSTN 320	0,73	4,3	105	104	110	84	85	M5
RSTN 400	1,03	5,2	120	100	120	90	82	M5
RSTN 500	1,10	6,9	120	120	120	90	102	M5
RSTN 630	1,68	7,8	150	107	145	122	84	M6
RSTN 800	2,50	10,0	150	124	145	122	101	M6
RSTN 1000	2,60	12,8	150	150	145	122	127	M6
RSTN 1100	2,80	12,7	174	128	157	135	96	M6
RSTN 1300	3,13	14,7	174	138	157	135	106	M6
RSTN 1600	3,40	16,7	174	148	157	135	116	M6
RSTN 2000	5,00	20,1	195	154	178	150	122	M8
RSTN 2500	6,00	24,0	195	176	178	150	144	M8
RSTN 3000	6,60	26,6	195	182	178	150	150	M8



Single-phase grid transformers according to VDE 0570 part 2-1, EN 61558-2-1

Single-phase control transformers according to VDE 0570 part 2-2, EN 61558-2-2

Single-phase isolation transformers according to VDE 0570 part 2-4, EN 61558-2-4

Single-phase safety transformers according to VDE 0570 part 2-6, EN 61558-2-6

Industrial control transformers UL 506 / CSA 22.2



UL-file No.: E164203

Category: XPTQ2/8

(not „Construction only“ or „Insulating System“)

General information:

Transformers of the series RSTN UL-CSA meet national and international requirements for worldwide use. They can be delivered upon request with approval as

Industrial control transformers UL 506 / CSA 22.2 (sum of all idle secondary voltages: max. 250V)

Grid transformers according to VDE 0570 part 2-1, EN 61558-2-1,

Control transformers according to VDE 0570 part 2-2, EN 61558-2-2,

Isolation transformers according to VDE 0570 part 2-4, EN 61558-2-4,

Safety transformers according to VDE 0570 part 2-6, EN 61558-2-6, (sum of all idle secondary voltages: max. 50V)

The respective version must be given with the order.

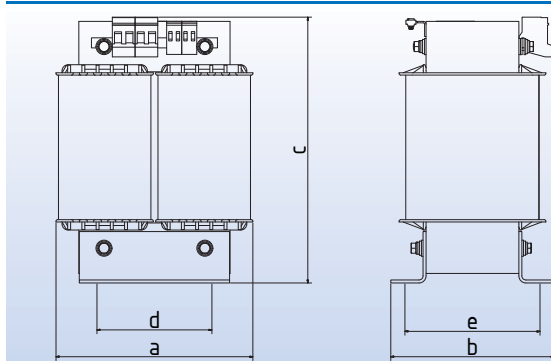
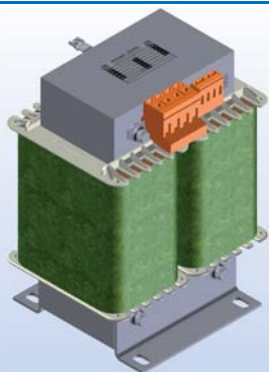
The particular advantages of the RSTN UL-CSA series

- **Variable voltages selectable** by customer
Pri. 110V...600V incl. $\pm 5\%$ tap
sec. 12V...230V (50-130VA), 24V...230V (145-800VA), 110V...230V (1000-3000VA),
- High reliability and long life
- Compact, low-weight design
- Low overall losses, high efficiency
(e.g. lowering of core losses through alternating layering)
- Above-averagely high power for short-time operation
- High power yield in relation to volume
- For control transformers: insulation system of higher quality than that specified in the standard
- High voltage stability due to lower voltage drop between no-load and load periods
- 130VA and higher-power transformers protected against bolted short circuits via insulating bushes
- Optional: PE screw terminal connector, PE shield and 2nd secondary winding

Design:

Like RSTN series

Type	Power VA	Item no:	Copper kg	Total kg	Dimensions approx. in mm					Mounting
					a	b	c	d	e	
RSTN 50 UL-CSA	50	0317-00000050	0,27	1,20	78	71	89	56	45	M4
RSTN 63 UL-CSA	63	0317-00000063	0,28	1,47	78	80	89	56	54	M4
RSTN 75 UL-CSA	75	0317-00000075	0,29	1,60	85	68	93	64	47	M4
RSTN 100 UL-CSA	100	0317-00000100	0,34	2,10	85	82	93	64	61	M4
RSTN 130 UL-CSA	130	0317-00000130	0,45	2,30	96	78	104	84	60	M5
RSTN 145 UL-CSA	145	0317-00000145	0,52	2,20	85	90	93	64	69	M4
RSTN 180 UL-CSA	180	0317-00000180	0,53	3,00	105	80	110	84	62	M5
RSTN 200 UL-CSA	200	0317-00000200	0,58	2,90	96	88	104	84	70	M5
RSTN 250 UL-CSA	250	0317-00000250	0,66	3,70	96	102	104	84	84	M5
RSTN 270 UL-CSA	270	0317-00000270	0,63	3,50	105	88	110	84	69	M5
RSTN 320 UL-CSA	320	0317-00000320	0,73	4,50	105	104	110	84	85	M5
RSTN 330 UL-CSA	330	0317-00000330	1,00	4,15	120	88	120	90	70	M5
RSTN 400 UL-CSA	400	0317-00000400	1,03	5,20	120	100	120	90	82	M5
RSTN 460 UL-CSA	460	0317-00000460	1,10	6,00	120	108	120	90	90	M5
RSTN 500 UL-CSA	500	0317-00000500	1,10	6,90	120	120	120	90	102	M5
RSTN 510 UL-CSA	510	0317-00000510	1,60	6,45	135	105	131	104	86	M5
RSTN 600 UL-CSA	600	0317-00000600	1,70	7,00	135	115	131	104	96	M5
RSTN 630 UL-CSA	630	0317-00000630	1,68	7,80	150	107	145	122	84	M6
RSTN 700 UL-CSA	700	0317-00000700	1,80	7,90	135	125	131	104	106	M5
RSTN 800 UL-CSA	800	0317-00000800	2,50	10,00	150	124	145	122	101	M6
RSTN 1000 UL-CSA	1000	0317-00001000	2,60	12,80	150	150	145	122	127	M6
RSTN 1100 UL-CSA	1100	0317-00001100	2,80	12,70	174	128	157	135	96	M6
RSTN 1300 UL-CSA	1300	0317-00001300	3,13	14,70	174	138	157	135	106	M6
RSTN 1600 UL-CSA	1600	0317-00001600	3,40	16,70	174	148	156	135	116	M6
RSTN 1900 UL-CSA	1900	0317-00001900	4,00	21,10	174	168	156	135	136	M6
RSTN 2000 UL-CSA	2000	0317-00002000	4,50	22,50	195	154	178	150	122	M8
RSTN 2500 UL-CSA	2500	0317-00002500	6,00	24,60	195	176	178	150	144	M8
RSTN 3000 UL-CSA	3000	0317-00003000	6,60	26,90	195	182	178	150	150	M8



Single-phase control transformers according to VDE 0570 part 2-2, EN 61558-2-2

Single-phase isolation transformers according to VDE 0570 part 2-4, EN 61558-2-4



Fig. Upright design with transformer terminals

Only available with the given voltages; for other voltages please see identical design type RUE

Design:

Open frame, stationary, for device installation and assembly in dry rooms, separate windings. The secondary bridge can be connected with 6.3x0.8mm tab connector to 20A. The transformer terminals are protected against back of hand and finger contact according to accident prevention regulations (BGV A3). From 6.3kVA with terminal blocks on top bracket.

IP 00, insulation class E, max. ambient temperature 40°C (ta40°C/E).

Fuse recommendation:

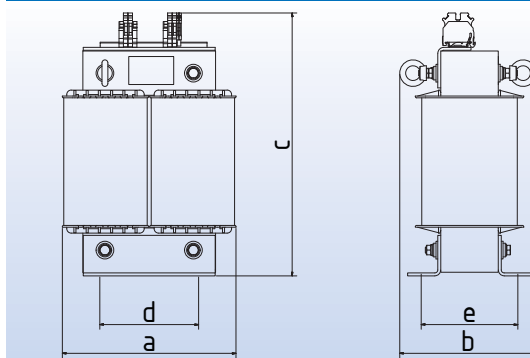
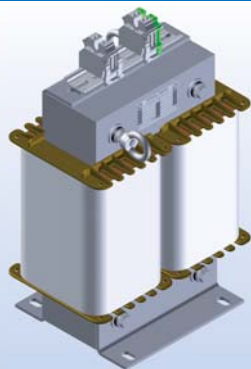
The fuse recommendations stated below apply to the secondary side of the transformer and fuse inserts according to IEC 127 / EN 60127 (At) or IEC 60269 (AgL). For this and for primary fusing please refer to the 'Fuse' section in the 'General information' part of the catalogue.

Type	I 1 max. in A 230V	I 1 max. in A 400V	I 1 max. in A 500V
RSTS 1200	5,72	3,30	2,65
RSTS 1500	7,00	4,00	3,30
RSTS 1800	8,18	4,94	3,95
RSTS 2000	9,50	5,50	4,35
RSTS 2200	10,30	5,98	4,78
RSTS 2500	11,70	6,70	5,43
RSTS 3000	14,00	7,90	6,49
RSTS 4200	19,70	11,40	9,12
RSTS 5000	23,70	13,70	10,90
RSTS 6300	30,00	17,50	13,80
RSTS 8000	38,20	22,10	17,60

Type	I 2 in A 230V	Fuse A	I 2 in A 115V	Fuse A
RSTS 1200	5,21	4 At	10,40	8 At
RSTS 1500	6,54	5 At	13,00	10 AgL
RSTS 1800	7,82	6.3 At	15,60	16 AgL
RSTS 2000	8,70	8 At	17,40	16 AgL
RSTS 2200	9,56	8 At	19,10	16 AgL
RSTS 2500	10,80	8 At	21,70	20 AgL
RSTS 3000	13,00	10 AgL	26,00	20 AgL
RSTS 4200	18,20	16 AgL	36,50	35 AgL
RSTS 5000	21,70	20 AgL	43,40	50 AgL
RSTS 6300	27,30	25 AgL	54,70	50 AgL
RSTS 8000	34,70	35 AgL	69,50	63 AgL

Type	Power VA	KB cos φ 0.5 VA	Efficiency η < %	500//230 V Item no:	400//230 V Item no:	230//230 V Item no:
RSTS 1200	1200	3340	94,1	0021-00001200	0022-00001200	0023-00001200
RSTS 1500	1500	4640	95,0	0021-00001500	0022-00001500	0023-00001500
RSTS 1800	1800	6000	95,5	0021-00001800	0022-00001800	0023-00001800
RSTS 2000	2000	6450	95,5	0021-00002000	0022-00002000	0023-00002000
RSTS 2200	2200	7000	95,6	0021-00002200	0022-00002200	0023-00002200
RSTS 2500	2500	9075	95,8	0021-00002500	0022-00002500	0023-00002500
RSTS 3000	3000	10720	95,8	0021-00003000	0022-00003000	0023-00003000
RSTS 4200	4200	16720	96,4	0021-00004200	0022-00004200	0023-00004200
RSTS 5000	5000	20330	96,8	0021-00005000	0022-00005000	0023-00005000
RSTS 6300	6300	23450	97,0	0021-00006300	0022-00006300	0023-00006300
RSTS 8000	8000	25390	97,2	0021-00008000	0022-00008000	0023-00008000

Type	Size	Copper kg	Total kg	Dimensions approx. in mm					Mounting
				a	b	c	d	e	
RSTS 1200	UI 120/51	4,4	13,6	158	105	213	100	79	M6
RSTS 1500	UI 120/61	4,5	15,0	158	122	213	100	89	M6
RSTS 1800	UI 120/75	5,5	17,0	158	135	213	100	103	M6
RSTS 2000	UI 132/72	5,9	20,0	172	132	231	112	102	M8
RSTS 2200	UI 150/52	6,6	21,0	195	122	257	124	94	M10
RSTS 2500	UI 150/65	7,2	24,8	195	135	264	124	107	M10
RSTS 3000	UI 150/77	7,6	28,0	195	147	264	124	119	M10
RSTS 4200	UI 150/92	9,2	31,0	195	165	264	124	134	M10
RSTS 5000	UI 150/103	12,9	38,5	195	176	264	124	145	M10
RSTS 6300	UI 180/78	16,8	48,0	236	168	364	144	140	M10
RSTS 8000	UI 180/93	20,7	57,0	236	183	372	144	155	M10



Single-phase grid transformers according to VDE 0570 part 2-1, EN 61558-2-1

Single-phase control transformers according to VDE 0570 part 2-2, EN 61558-2-2

Single-phase isolation transformers according to VDE 0570 part 2-4, EN 61558-2-4

Single-phase safety transformers according to VDE 0570 part 2-6, EN 61558-2-6

Single-phase autotransformers *1 according to VDE 0570 part 2-13, EN 61558-2-13

Industrial control transformers UL 5085 / CSA 22.2 allowed



Fig. Upright design with top bracket
UL-file No.: E164203

Category: XPTQ2/8

(not „Construction only“ or
„Insulating System“)

***1) Suffix -A (RSTS-A) = Autotransformer**

General information:

The transformers in the RSTS UL-CSA series are specially approved for the North American market. They also meet the requirements of EN 61558

Industrial control transformers UL 5085 / CSA 22.2 allowed (sum of all idle secondary voltages: max. 600V)

Grid transformers according to VDE 0570 part 2-1, EN 61558-2-1,

Isolation transformers according to VDE 0570 part 2-4, EN 61558-2-4,

Safety transformers according to VDE 0570 part 2-6, EN 61558-2-6, (sum of all idle secondary voltages: max. 50V)

Autotransformers *1 adapted in terms of installed capacity (current intensity max. 360A per connection terminal)

The respective version must be given with the order.

The particular advantages of the RSTS UL-CSA series

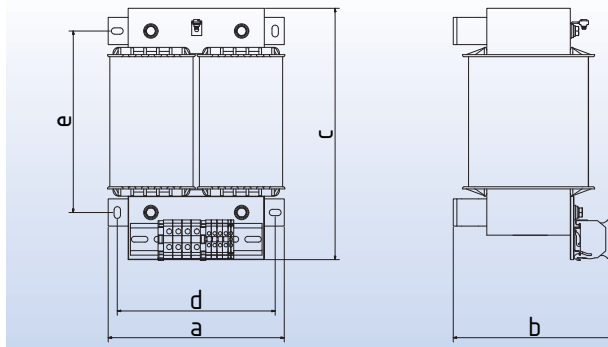
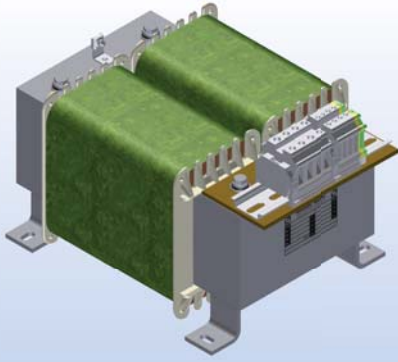
- **Variable voltages selectable** by customer
Pri. 110-600V optionally with $\pm 5\%$ tap
sec. 10V...600V (500-3000VA), 19V...600V (4200-6300VA), 40V...600V (8000-13000VA), 80V...600V (16000-25000VA)
- Maximum 4 voltage taps, e.g. $\pm 5\%$ in given voltage range optional
- Maximum 4 separate windings with a sum lying inside the voltage range window, maximum current: 360A each
- Copper shield / magnetic shield between windings (optional)
- Temperature-bimetal switch for temperature monitoring optional
- Selection of mechanical terminal mounting (front or top mounting) optional
- Upon request by the customer for secondary voltage to 50VAC (V no-load) non-isolated cable connection (optional)
- Optional: PE screw terminal connector, PE shield and 2nd secondary winding

Design:

Open frame, stationary, for device installation and assembly in dry rooms, separate windings. Connection to leakage current-resistant transformer terminals with screw fastening. The transformer terminals are protected against back of hand and finger contact according to accident prevention regulations (BGV A3). From 50A with terminal blocks on top bracket.

IP 00, insulation class A, max. ambient temperature of 40°C (ta40°C/A).

Type	Power VA	Size	Item no:	Copper kg	Total kg	Dimensions approx. in mm						Mounting
						a	b	c	d	e		
RSTS 500 UL-CSA	500	UI 90/41	0055-00000500	1,50	5,2	120	85	157	66	76	M6	
RSTS 630 UL-CSA	630	UI 90/51	0055-00000630	1,80	6,3	120	95	157	76	76	M6	
RSTS 800 UL-CSA	800	UI 114/40	0055-00000800	2,20	7,7	154	90	198	100	95	M6	
RSTS 1000 UL-CSA	1000	UI 102/57	0055-00001000	2,75	7,9	140	103	177	76	87	M6	
RSTS 1200 UL-CSA	1200	UI 120/51	0055-00001200	4,85	13,6	160	105	208	100	79	M6	
RSTS 1400 UL-CSA	1400	UI 114/64	0055-00001400	3,85	13,0	154	114	198	100	95	M6	
RSTS 1500 UL-CSA	1500	UI 120/61	0055-00001500	4,95	15,0	160	115	208	100	89	M6	
RSTS 1800 UL-CSA	1800	UI 120/75	0055-00001800	6,05	17,0	160	129	208	100	103	M6	
RSTS 2000 UL-CSA	2000	UI 132/72	0055-00002000	6,45	20,0	178	132	228	112	102	M8	
RSTS 2200 UL-CSA	2200	UI 150/52	0055-00002200	7,25	21,0	200	122	260	124	94	M8	
RSTS 2500 UL-CSA	2500	UI 150/65	0055-00002500	7,90	24,8	200	135	260	124	107	M8	
RSTS 3000 UL-CSA	3000	UI 150/77	0055-00003000	8,35	28,0	200	147	260	124	119	M8	
RSTS 4200 UL-CSA	4200	UI 150/92	0055-00004200	10,10	31,0	200	162	260	124	134	M8	
RSTS 5000 UL-CSA	5000	UI 150/103	0055-00005000	14,20	38,5	200	173	260	124	145	M8	
RSTS 6000 UL-CSA	6000	UI 168/92	0055-00006000	16,50	42,0	228	172	287	136	144	M8	
RSTS 6300 UL-CSA	6300	UI 180/78	0055-00006300	18,50	48,0	240	168	305	144	140	M8	
RSTS 8000 UL-CSA	8000	UI 180/93	0055-00008000	22,75	57,0	240	183	305	144	155	M8	
RSTS 10000 UL-CSA	10000	UI 210/88	0055-00010000	32,00	78,0	280	188	360	176	158	M10	
RSTS 13000 UL-CSA	13000	UI 210/103	0055-00013000	36,30	89,0	280	203	360	176	173	M10	
RSTS 16000 UL-CSA	16000	UI 210/133	0055-00016000	46,10	112,0	280	233	360	176	203	M10	
RSTS 20000 UL-CSA	20000	UI 240/140	0055-00020000	46,20	129,0	320	250	410	196	214	M14	
RSTS 25000 UL-CSA	25000	UI 240/140	0055-00025000	49,05	136,0	320	250	410	196	214	M14	



Single-phase control transformers according to VDE 0570 part 2-2, EN 61558-2-2

Single-phase isolation transformers according to VDE 0570 part 2-4, EN 61558-2-4



Fig. Horizontal design with terminal blocks

Only available with the given voltages; for other voltages please see identical design type RUE

Design:

Open frame, stationary, for device installation and assembly in dry rooms, separate windings. Connection to leakage current-resistant terminal blocks with screw connection. The terminals are protected against back of hand and finger contact according to accident prevention regulations (BGV A3).

IP 00, insulation class E, max. ambient temperature 40°C (ta40°C/E).

Fuse recommendation:

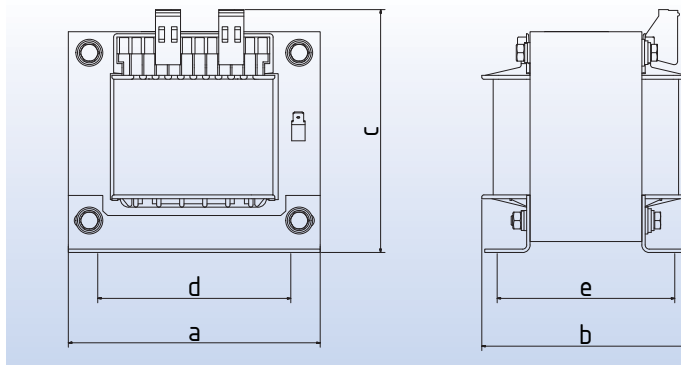
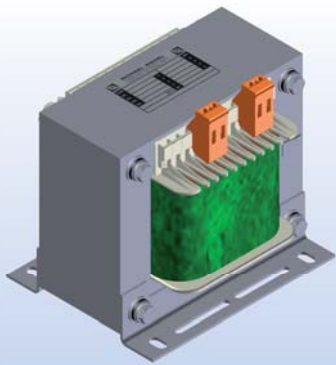
The fuse recommendations stated below apply to the secondary side of the transformer and fuse inserts according to IEC 127 / EN 60127 (At) or IEC 60269 (AgL). For this and for primary fusing please refer to the 'Fuse' section in the 'General information' part of the catalogue.

Type	Primary voltage ±5%	I 1 max. in A 230V	I 1 max. in A 400V	I 1 max. in A 500V
RSTL 1200		5,72	3,30	2,65
RSTL 1500		7,00	4,00	3,30
RSTL 1800		8,18	4,94	3,95
RSTL 2000		9,50	5,50	4,35
RSTL 2200		10,30	5,98	4,78
RSTL 2500		11,70	6,70	5,43
RSTL 3000		14,00	7,90	6,49
RSTL 4200		19,70	11,40	9,12
RSTL 5000		23,70	13,70	10,90
RSTL 6300		30,00	17,50	13,80
RSTL 8000		38,20	22,10	17,60

Type	Secondary voltage	I 2 in A 230V	Fuse A 230V	I 2 in A 115V	Fuse A 115V
RSTL 1200		5,21	4 At	10,40	8 At
RSTL 1500		6,54	5 At	13,00	10 AgL
RSTL 1800		7,82	6.3 At	15,60	16 AgL
RSTL 2000		8,70	8 At	17,40	16 AgL
RSTL 2200		9,56	8 At	19,10	16 AgL
RSTL 2500		10,80	8 At	21,70	20 AgL
RSTL 3000		13,00	10 AgL	26,00	20 AgL
RSTL 4200		18,20	16 AgL	36,50	35 AgL
RSTL 5000		21,70	20 AgL	43,40	50 AgL
RSTL 6300		27,30	25 AgL	54,70	50 AgL
RSTL 8000		34,70	35 AgL	69,50	63 AgL

Type	Power VA	KB cos φ 0.5 VA	Efficiency η < %	500//230 V Item no:	400//230 V Item no:	230//230 V Item no:
RSTL 1200	1200	3340	94,1	0024-00001200	0025-00001200	0026-00001200
RSTL 1500	1500	4640	95,0	0024-00001500	0025-00001500	0026-00001500
RSTL 1800	1800	6000	95,5	0024-00001800	0025-00001800	0026-00001800
RSTL 2000	2000	6450	95,5	0024-00002000	0025-00002000	0026-00002000
RSTL 2200	2200	7000	95,6	0024-00002200	0025-00002200	0026-00002200
RSTL 2500	2500	9075	95,8	0024-00002500	0025-00002500	0026-00002500
RSTL 3000	3000	10720	95,8	0024-00003000	0025-00003000	0026-00003000
RSTL 4200	4200	16720	96,4	0024-00004200	0025-00004200	0026-00004200
RSTL 5000	5000	20330	96,8	0024-00005000	0025-00005000	0026-00005000
RSTL 6300	6300	23450	97,0	0024-00006300	0025-00006300	0026-00006300
RSTL 8000	8000	25390	97,2	0024-00008000	0025-00008000	0026-00008000

Type	Size	Copper kg	Total kg	Dimensions approx. in mm					Mounting
				a	b	c	d	e	
RSTL 1200	UI 120/51	4,4	13,6	166	136	232	146	160	M6
RSTL 1500	UI 120/61	4,5	15,0	166	146	232	146	160	M6
RSTL 1800	UI 120/75	5,5	17,0	166	160	232	146	160	M6
RSTL 2000	UI 132/72	5,9	20,0	166	160	250	146	176	M6
RSTL 2200	UI 150/52	6,6	21,0	194	140	278	174	200	M6
RSTL 2500	UI 150/65	7,2	24,8	194	153	278	174	200	M6
RSTL 3000	UI 150/77	7,6	28,0	194	165	278	174	200	M6
RSTL 4200	UI 150/92	9,2	31,0	194	180	278	174	200	M6
RSTL 5000	UI 150/103	12,9	38,5	194	191	278	174	200	M6
RSTL 6300	UI 180/78	16,8	48,0	236	181	331	204	240	M8
RSTL 8000	UI 180/93	20,7	57,0	236	204	331	204	240	M8



Single-phase grid transformers according to VDE 0570 part 2-1, EN 61558-2-1

Single-phase control transformers according to VDE 0570 part 2-2, EN 61558-2-2

Single-phase isolation transformers according to VDE 0570 part 2-4, EN 61558-2-4

Single-phase safety transformers according to VDE 0570 part 2-6, EN 61558-2-6



UL/CSA - see version RSTN UL-CSA and RSTS UL-CSA

Available as accessories at extra charge: PE screw terminal connection completely integrated.

General information:

The transformers in the REIA series meet national, international and prepared future requirements for worldwide use. They can be delivered upon request with approval as

Grid transformers according to VDE 0570 part 2-1, EN 61558-2-1,

Control transformers according to VDE 0570 part 2-2, EN 61558-2-2, (from 30VA)

Isolation transformers according to VDE 0570 part 2-4, EN 61558-2-4,

Safety transformers according to VDE 0570 part 2-6, EN 61558-2-6, (sum of all idle secondary voltages: max. 50V)

The respective version must be given with the order.

The particular advantages of the REIA series

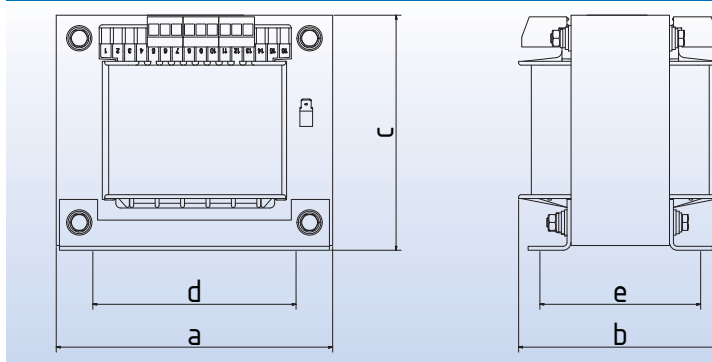
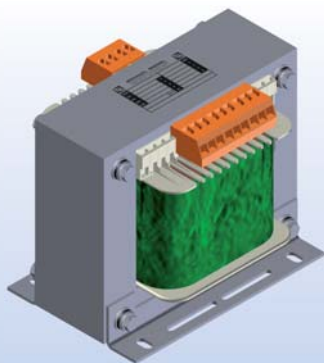
- **Variable voltages selectable** by customer
- High reliability and long life
- Compact, low-weight design
- Low overall losses, high efficiency
- Above-averagely high power for short-time operation
- High power yield in relation to volume
- High voltage stability due to lower voltage drop between no-load and load periods
- 130VA and higher-power transformers protected against bolted short circuits via insulating bushes
- Temperature reserves, can also be loaded with full current at Ta of 60°C/B

Design

Like RSTN series, normal design for transformation to max. 690V or 50A.

Other designs upon request (voltages, currents, connections, mounting etc.)

Type	Power VA	Size *)	Item no:	Copper kg	Total kg	Dimensions approx. in mm					Mounting
						a	b	c	d	e	
REIA 15	15	EI 54/18*	0053-00000015	0,07	0,35	55	76	60	44	34	M3
REIA 18	18	EI 60/21	0053-00000018	0,08	0,45	60	65	76	44	36	M3
REIA 30	30	EI 66/23	0053-00000030	0,12	0,60	66	67	80	50	40	M4
REIA 40	40	EI 66/34	0053-00000040	0,15	0,90	66	78	80	50	52	M4
REIA 50	50	EI 78/27	0053-00000050	0,27	1,20	78	71	89	56	45	M4
REIA 63	63	EI 78/36	0053-00000063	0,28	1,47	78	80	89	56	54	M4
REIA 75	75	EI 84/29	0053-00000075	0,29	1,60	85	68	93	64	47	M4
REIA 100	100	EI 84/43	0053-00000100	0,34	2,10	85	82	93	64	61	M4
REIA 140	140	EI 96/35	0053-00000140	0,45	2,30	96	78	104	84	60	M5
REIA 145	145	EI 84/52	0053-00000145	0,52	2,20	85	90	93	64	69	M4
REIA 180	180	EI 105/37	0053-00000180	0,53	3,00	105	80	110	84	62	M5
REIA 200	200	EI 96/45	0053-00000200	0,58	2,90	96	88	104	84	70	M5
REIA 250	250	EI 96/59	0053-00000250	0,66	3,70	96	102	104	84	84	M5
REIA 270	270	EI 105/45	0053-00000270	0,63	3,50	105	88	110	84	69	M5
REIA 320	320	EI 105/60	0053-00000320	0,73	4,50	105	104	110	84	85	M5
REIA 330	330	EI 120/41	0053-00000330	1,00	4,15	120	88	121	90	70	M5
REIA 400	400	EI 120/53	0053-00000400	1,03	5,20	120	100	120	90	82	M5
REIA 460	460	EI 120/61	0053-00000460	1,10	6,00	120	108	120	90	90	M5
REIA 500	500	EI 120/73	0053-00000500	1,10	6,90	120	120	120	90	102	M5
REIA 510	510	EI 135/52	0053-00000510	1,60	6,45	135	105	131	104	86	M5
REIA 600	600	EI 135/62	0053-00000600	1,70	7,00	135	115	131	104	96	M5
REIA 630	630	EI 150N/49	0053-00000630	1,68	7,80	150	107	145	122	84	M6
REIA 700	700	EI 135/72	0053-00000700	1,80	7,90	135	125	131	104	106	M5
REIA 800	800	EI 150N/66	0053-00000800	2,50	10,00	150	124	145	122	101	M6
REIA 1000	1000	EI 150N/92	0053-00001000	2,60	12,80	150	150	145	122	127	M6
REIA 1100	1100	EI 174/62	0053-00001100	2,80	12,70	174	128	157	135	96	M6
REIA 1300	1300	EI 174/72	0053-00001300	3,13	14,70	174	138	157	135	106	M6
REIA 1600	1600	EI 174/82	0053-00001600	3,40	16,70	174	148	157	135	116	M6
REIA 1900	1900	EI 174/102	0053-00001900	4,00	21,10	174	168	157	135	136	M6
REIA 2000	2000	EI 192/82	0053-00002000	4,50	22,50	195	154	178	150	122	M8
REIA 2500	2500	EI 192/104	0053-00002500	6,00	24,60	195	176	178	150	144	M8
REIA 3000	3000	EI 192/110	0053-00003000	6,60	26,90	195	182	178	150	150	M8



**Single-phase control transformers
according to VDE 0570 part 2-2,
EN 61558-2-2**



Universal control transformers

General information:

The use of universal control transformers is recommended in cases in which the 'normal' single-phase control transformers are not used due to the demand for minimum storage requirements and maximum variability.

Voltage series:

Interchangeable input voltage connections:

AC 200/220/230/250/270/280/330/350/370/380/390/400/420/430/440/450/470/490/500/550V

Interchangeable output voltage connections:

AC 115/230V or AC 21/24/30//42/48/60V

The transformers must be operated partially in parallel or in series according to the connection diagram on the rating plate.

The particular advantages of the URST series

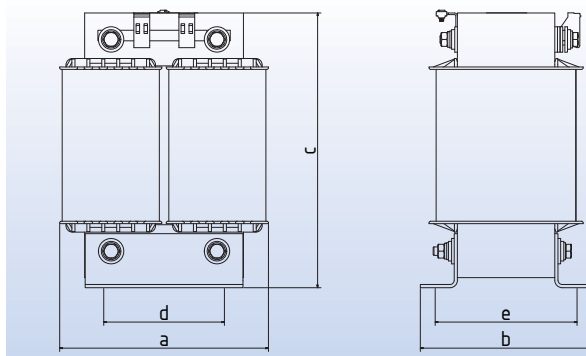
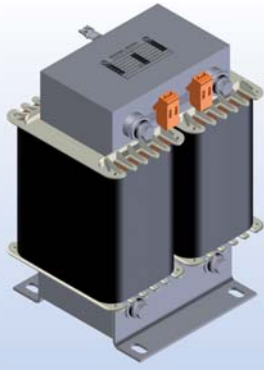
- High reliability and long life
- Variable input voltage (200...550V)
- Extended secondary range
- Compact, low-weight design
- Low overall losses, high efficiency
- Above-averagely high power for short-time operation
- High power yield in relation to volume
- High voltage stability due to lower voltage drop between no-load and load periods
- 130VA and higher-power transformers protected against bolted short circuits via insulating bushes
- Temperature reserves, can also be loaded with full current at Ta of 60°C/B

Design:

Design: Open frame, stationary, for device installation and assembly in dry rooms, separate windings. Connection to leakage current-resistant transformer terminals with screw and tab connectors 2.8x0.8mm to 5A, 6.3x0.8mm to 20A. The 2.8x0.8mm tab connector must only be loaded to 5A in accordance with DIN 46249 and 6.3x0.8mm to 20A. The terminals are protected against back of hand and finger contact according to accident prevention regulations (BGV A3).

IP 00, insulation class E, max. ambient temperature 40°C (ta40°C/E).

Type	Power VA	Copper kg	Total kg	Item no: 200...550V//230V	Item no: 200...550V//24V	Dimensions approx. in mm					Mounting
						a	b	c	d	e	
URST 100	100	0,45	2,0	0147-00000100	0038-00000100	85	104	83	64	61	M4
URST 160	160	0,75	3,8	0147-00000160	0038-00000160	105	107	101	84	69	M5
URST 250	250	0,80	4,5	0147-00000250	0038-00000250	120	103	112	90	70	M5
URST 320	320	1,30	5,3	0147-00000320	0038-00000320	120	115	112	90	82	M5
URST 400	400	1,50	6,0	0147-00000400	0038-00000400	120	123	112	90	90	M5
URST 500	500	1,90	7,8	0147-00000500	0038-00000500	150	111	135	122	84	M6
URST 630	630	2,80	10,1	0147-00000630	0038-00000630	150	128	136	122	101	M6
URST 800	800	2,90	14,3	0147-00000800	0038-00000800	174	128	148	135	96	M6
URST 1000	1000	3,20	15,7	0147-00001000	0038-00001000	174	138	148	135	106	M6
URST 1600	1600	7,00	25,0	0147-00001600	-	195	154	169	150	122	M8
URST 2500	2500	10,00	32,4	0147-00002500	-	195	176	170	150	144	M8



Single-phase grid transformers according to VDE 0570 part 2-1, EN 61558-2-1

Single-phase control transformers according to VDE 0570 part 2-2, EN 61558-2-2

Single-phase isolation transformers according to VDE 0570 part 2-4, EN 61558-2-4

Single-phase safety transformers according to VDE 0570 part 2-6, EN 61558-2-6

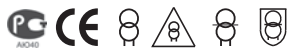


Fig. RUE 4200

General information:

The transformers in the RUE series meet national, international and prepared future requirements for worldwide use. They can be delivered upon request with approval as

Grid transformers according to VDE 0570 part 2-1, EN 61558-2-1,

Control transformers according to VDE 0570 part 2-2, EN 61558-2-2,

Isolation transformers according to VDE 0570 part 2-4, EN 61558-2-4,

Safety transformers according to VDE 0570 part 2-6, EN 61558-2-6, (sum of all idle secondary voltages: max. 50V)

The respective version must be given with the order.

Design:

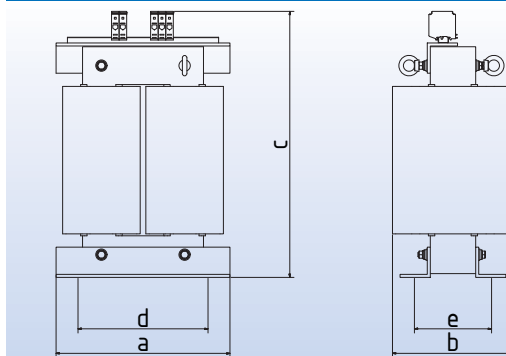
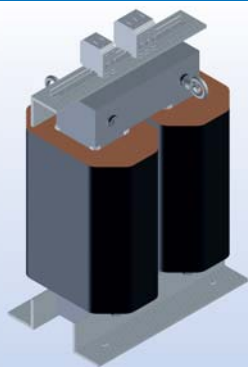
Open frame, stationary, for device installation and assembly in dry rooms, separate windings. **Variable voltages selectable** by customer. Normal design for transformation to max. 690V or 50A on transformer terminals, to 360A terminal blocks. The dimensions b and c are enlarged by this. The terminals are protected against back of hand contact according to accident prevention regulations (BGV A3).

Other designs upon request (voltages, currents, connections, mounting etc.)

IP 00, insulation class E, max. ambient temperature T_a of 40°C ($t_a 40^\circ\text{C}/E$).

The dimensions and weights given below represent the currently valid status. Subject to change without notice.

Type	Power VA	Size	Item no:	Copper kg	Total kg	Dimensions approx. in mm					Mounting
						a	b	c	d	e	
RUE 280	280	UI 75/41	0059-00000280	0,95	3,6	100	81	132	63	64	M5
RUE 630	630	UI 90/51	0059-00000630	1,65	6,3	120	95	157	76	76	M6
RUE 980	980	UI 102/57	0059-00000980	2,50	7,7	140	103	177	76	87	M6
RUE 1200	1200	UI 120/51	0059-00001200	4,40	13,6	160	105	208	100	79	M6
RUE 1400	1400	UI 114/64	0059-00001400	3,50	13,0	154	114	198	100	95	M6
RUE 1500	1500	UI 120/61	0059-00001500	4,50	15,0	160	115	208	100	89	M6
RUE 1800	1800	UI 120/75	0059-00001800	5,50	17,0	160	129	208	100	103	M6
RUE 2000	2000	UI 132/72	0059-00002000	5,85	20,0	178	132	228	112	102	M8
RUE 2200	2200	UI 150/52	0059-00002200	6,60	21,0	200	122	260	124	94	M8
RUE 2500	2500	UI 150/65	0059-00002500	7,20	24,8	200	135	260	124	107	M8
RUE 3000	3000	UI 150/77	0059-00003000	7,60	28,0	200	147	260	124	119	M8
RUE 4200	4200	UI 150/92	0059-00004200	9,20	31,0	200	162	260	124	134	M8
RUE 5000	5000	UI 150/103	0059-00005000	12,90	38,5	200	173	260	124	145	M8
RUE 6000	6000	UI 168/92	0059-00006000	15,00	42,0	228	172	287	136	144	M8
RUE 6300	6300	UI 180/78	0059-00006300	16,80	48,0	240	168	305	144	140	M8
RUE 8000	8000	UI 180/93	0059-00008000	20,70	57,0	240	183	305	144	155	M8
RUE 10000	10000	UI 210/88	0059-00010000	29,10	78,0	280	188	360	176	158	M10
RUE 13000	13000	UI 210/103	0059-00013000	33,00	89,0	280	203	360	176	173	M10
RUE 16000	16000	UI 210/133	0059-00016000	41,90	112,0	280	233	360	176	203	M10
RUE 20000	20000	UI 240/140	0059-00020000	42,00	129,0	320	250	410	196	214	M14



Single-phase core transformers according to VDE 0570 part 2-1, EN 61558-2-1,



Available in accordance with VDE 0532 upon request

General information:

The delta core packages in our single-phase core transformers of higher power are composed of alternating grain-oriented low-loss strip sections. The windings are vacuum-impregnated with the core and then fired for several hours in the drying kiln.

The electrical design of the transformers ensures the highest efficiency and a much lower extent of transformer heating than permitted according to VDE. The solid planning guarantees the nearly unlimited life of our transformers even if overload occurs.

Design:

Open frame, upright design, stationary, for device installation and assembly in dry rooms, separate windings, connections via robust terminal blocks (to 360A), bus bars or cable lugs (non-dimensioned). IP 00, insulation class F, max. ambient temperature 40°C (ta40°C/F).

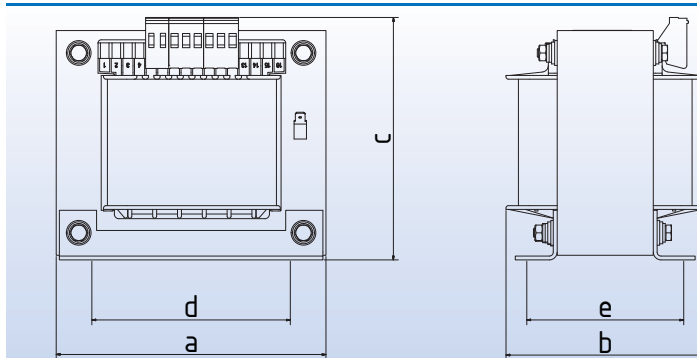
Because every higher-power transformer is planned individually, the dimensions and weights given below only represent the currently valid status.

Subject to change without notice.

All types are also available as single-phase autotransformers (for calculation please see 'Transformers with autotransformer windings' in the section containing general information).

* Depending on the design and winding type for special currents all dimensions, particularly the dimension b, can be enlarged by up to 100mm! Hole pattern upon request! This can vary in terms of the thickness dimension due to production conditions.

Type	Power kVA	Item no:	Copper kg	Total kg	Dimensions approx. in mm			
					a	b*	c	c1 from 63A
REST 20	20	0058-00000020	Upon request	140	360	240	420	c+100
REST 25	25	0058-00000025	Upon request	170	360	260	420	c+100
REST 30	30	0058-00000030	Upon request	200	360	265	420	c+100
REST 40	40	0058-00000040	Upon request	250	360	265	460	c+100
REST 50	50	0058-00000050	Upon request	300	400	260	570	c+150
REST 63	63	0058-00000063	Upon request	340	400	290	570	c+150
REST 80	80	0058-00000080	Upon request	380	400	300	570	c+150
REST 100	100	0058-00000100	Upon request	440	440	320	620	c+150
REST 120	120	0058-00000120	Upon request	480	520	360	660	c+150
REST 160	160	0058-00000160	Upon request	620	520	400	660	c+150
REST 200	200	0058-00000200	Upon request	650	650	360	900	c+150
REST 250	250	0058-00000250	Upon request	860	650	420	900	c+150
REST 315	315	0058-00000315	Upon request	1040	650	470	900	c+150
REST 400	400	0058-00000400	Upon request	1150	650	500	900	c+150
REST 500	500	0058-00000500	Upon request	1350	650	550	900	c+150



Single-phase autotransformers according to VDE 0570 part 2-13, EN 61558-2-13



Single-phase autotransformers for single-phase fan motors

General information:

The transformers in the RLTS series are single-phase autotransformers with 7 steps and are specially designed for air conditioning and ventilation. They are designed as Autotransformers according to VDE 0570

Design:

Open frame, stationary, for device installation and assembly in dry rooms, windings. Connection to leakage current-resistant transformer terminals with screw and tab connectors 2.8x0.8mm to 5A, 6.3x0.8mm to 20A. The 2.8x0.8mm tab connector must only be loaded to 5A in accordance with DIN 46249 and 6.3x0.8mm to 20A. The 0V and 230V connections are each provided only once on terminal. The terminals are protected against back of hand and finger contact according to accident prevention regulations (BGV A3).

PE connection as 6.3x0.8mm tab connector.

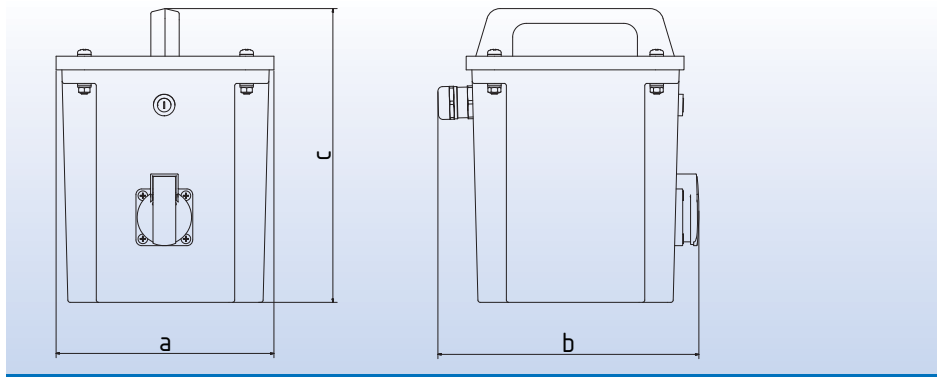
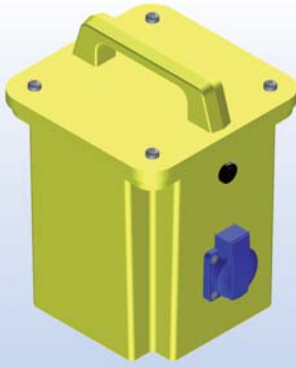
IP 00, insulation class E, max. ambient temperature T_a of 40°C (t_a 40°C/E).

Voltage range: Input voltage: AC 230 V
Output voltages: AC 80/100/125/150/175/190/230 V

Special version: The RLTS series can also be supplied in an IP 23 enclosure with the following option.
Tap changer, operation signal lamps, enclosure etc. (prices upon request).

Other designs upon request (voltages, currents, connections, mounting etc.)

Type	Current A	Item no:	Copper kg	Total kg	Dimensions approx. in mm					Mounting
					a	b	c	d	e	
RLTS80	1,45	0096-00000080	0,28	1,47	78	74	89	56	54	M4
RLTS115	2,10	0096-00000115	0,35	2,00	85	82	93	64	61	M4
RLTS220	4,00	0096-00000220	0,63	3,50	105	89	110	84	69	M5
RLTS410	7,50	0096-00000410	1,10	5,50	120	100	121	90	82	M5
RLTS600	11,00	0096-00000600	1,80	8,00	150	107	145	122	84	M6
RLTS710	13,00	0096-00000710	2,60	10,00	150	125	145	122	101	M6
RLTS900	16,50	0096-00000900	2,80	13,50	150	150	145	122	127	M6
RLTS1090	20,00	0096-00001090	2,90	13,10	174	128	156	135	96	M6
RLTS1310	24,00	0096-00001310	3,50	17,50	174	148	156	135	116	M6
RLTS1745	32,00	0096-00001745	4,00	21,10	174	168	156	135	136	M6



Single-phase isolation transformers according to VDE 0570 part 2-4, EN 61558-2-4

Single-phase safety transformers according to VDE 0570 part 2-6, EN 61558-2-6



Non-stationary transformers

General information:

The single-phase isolation transformers in the RGTT series are cast in impact-resistant, self-extinguishing and non-hygroscopic plastic enclosures specially designed for electrical engineering applications. On the input side the device is equipped with a 2m mains cord (230V) with 2-pin earthed (Schuko) or CEE connector and inrush current limitation via a fuse that can be replaced externally. Special connector (e.g. UL) available upon request.

On the output side a 2-pin earthed (Schuko) socket (230V) or a surface-mount socket of type CEE (2-pin according to isolation transformer) is mounted. Other socket quantities or special forms available upon request.

Caution: Earthing contact not connected on primary or secondary side!

Design secondary to 25V 50/60Hz max. 32A

Design secondary to 110V 50/60Hz max. 32A

Design secondary to 230V 50/60Hz max. 16A

Please specify the secondary voltage when ordering.

Design:

IP 44 for 2-pin earthed (Schuko) socket, IP 65 for CEE socket, protection class II, max. Ambient temperature 40°C (ta 40°C).

Type	Sec. to 25V	Sec. to 50V	Sec. to 110V	Sec. 230V	Sec. 230V
RGTT 250	1 x CEE 32A	1 x CEE 16A	1 x CEE 16A	1 x CEE 16A	1 x Schuko 16A
RGTT 500	1 x CEE 32A	1 x CEE 16A	1 x CEE 16A	1 x CEE 16A	1 x Schuko 16A
RGTT 800	1 x CEE 32A	1 x CEE 16A	1 x CEE 16A	1 x CEE 16A	1 x Schuko 16A
RGTT 1000	2 x CEE 32A	1 x CEE 32A	1 x CEE 16A	1 x CEE 16A	1 x Schuko 16A
RGTT 1600	–	2 x CEE 32A	1 x CEE 16A	1 x CEE 16A	1 x Schuko 16A
RGTT 2000	–	2 x CEE 32A	1 x CEE 32A	1 x CEE 16A	1 x Schuko 16A
RGTT 2500	–	2 x CEE 32A	1 x CEE 32A	1 x CEE 16A	1 x Schuko 16A
RGTT 3000	–	2 x CEE 32A	1 x CEE 32A	1 x CEE 16A	1 x Schuko 16A

Type	Power VA	Item no: 24-230V (CEE)	Item no: 230V (Schuko)	Copper kg	Total kg	Dimensions approx. in mm		
						a	b	c
RGTT 250	250	0010-00000250	0011-00000250	0,9	7,5	166	250	219
RGTT 500	500	0010-00000500	0011-00000500	1,3	10,0	166	250	219
RGTT 800	800	0010-00000800	0011-00000800	2,8	14,5	192	276	259
RGTT 1000	1000	0010-00001000	0011-00001000	2,9	17,5	192	276	259
RGTT 1600	1600	0010-00001600	0011-00001600	3,8	23,0	340	265	280
RGTT 2000	2000	0010-00002000	0011-00002000	5,0	31,5	340	265	280
RGTT 2500	2500	0010-00002500	0011-00002500	6,6	34,0	340	265	280
RGTT 3000	3000	0010-00003000	0011-00003000	7,0	37,5	340	265	280

