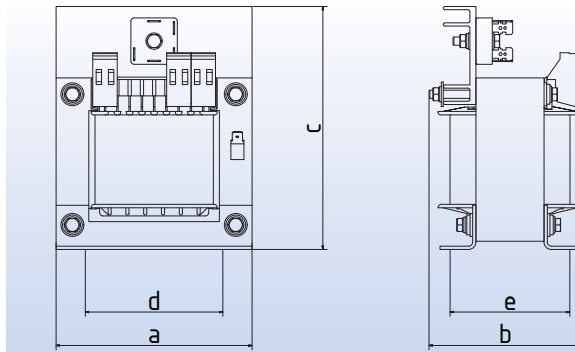
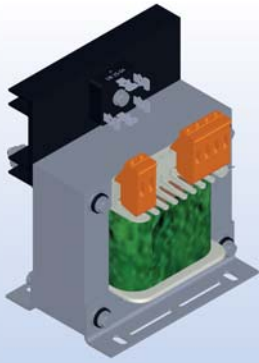
A blue-tinted photograph of industrial machinery, likely a robotic arm or assembly line, serves as the background for the top half of the page. The machinery is complex, with various components, cables, and structural elements visible. The overall scene is dimly lit, emphasizing the mechanical forms.

DC SUPPLIES BATTERY CHARGERS

- 34 | GGT / GGTN
- 35 | RNTU
- 36 | RNTG
- 37 | RSNT S
- 38 | RSNT G
- 39 | RPL
- 41 | REP
- 42 | RLG
- 43 | RDRK / RDRK K
- 44 | RDRKL / RDRKL K
- 45 | RDRKU
- 46 | RDRKN
- 47 | RDRKS



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



Fig. GGT 320

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 terminals are protected against back of hand and finger contact according to accident prevention regulations (BGV A3). All types are designed for use with bridge rectifiers with ohmic loads.

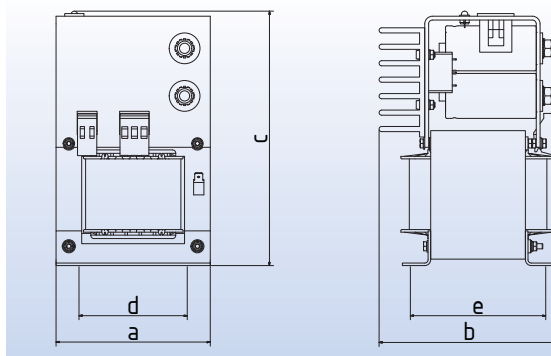
With load-side (downstream) rectifier and varistor

Ripple: 48%; retrofitting with capacitor is not possible.

Pri: AC 220/230/240V or 380/400/420V, sec.: DC 24V

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

Type	Power VA	Watts for DC 24V	Current A	Item no. Pri: AC 400V	Item no. Pri: AC 230V	Copper kg	Total kg	Dimensions approx. in mm					Mounting
								a	b	c	d	e	
GGT 100	100	72	3	0170-00000100	0171-00000100	0,35	2,30	84	76	100	64	61	M4
GGT 130	130	96	4	0170-00000130	0171-00000130	0,53	3,30	100	77	104	84	61	M5
GGT 200	200	144	6	0170-00000200	0171-00000200	0,63	3,70	100	87	150	84	71	M5
GGT 320	320	216	9	0170-00000320	0171-00000320	1,03	5,60	120	93	150	90	70	M5
GGT 400	400	288	12	0170-00000400	0171-00000400	1,10	7,60	120	108	160	90	82	M5
GGT 500	500	360	15	0170-00000500	0171-00000500	1,68	9,00	120	125	160	90	102	M5
GGT 630	630	432	18	0170-00000630	0171-00000630	1,77	11,80	135	138	175	104	97	M5



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



Fig. GGTN 360

Design:

Covered design, stationary, for device installation and assembly in dry rooms, separate windings. Connection to leakage current-resistant transformer terminals with screw fastening. The terminals are protected against back of hand and finger contact according to accident prevention regulations (BGV A3). All types are designed for use with bridge rectifiers with ohmic loads.

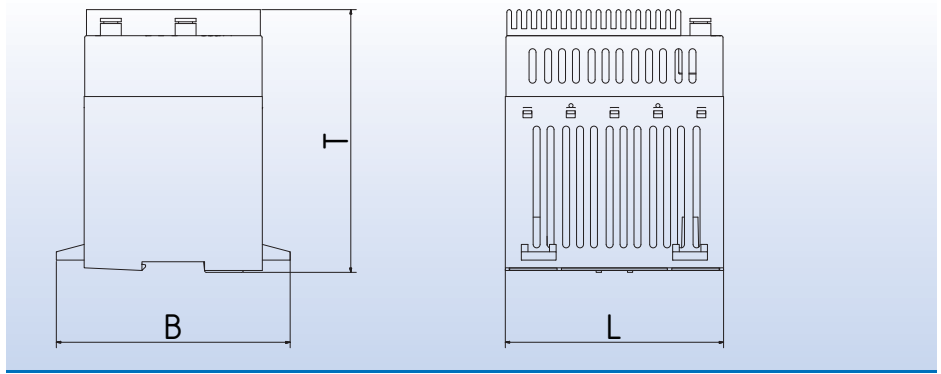
With load-side (downstream) rectifier, capacitor and protection circuit, LED status display, DIN 72581/3C tab connector protection

Ripple < 5%,

Pri: AC 230/400V, sec.: DC 24V

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

Type	Power VA	Watts for DC 24V	Current A	Item no.	Copper kg	Total kg	Dimensions approx. in mm					Mounting
							a	b	c	d	e	
GGTN 72	100	72	3	0172-00000072	0,34	2,20	96	93	135	64	61	M4
GGTN 144	200	144	6	0172-00000144	0,58	3,20	96	93	146	84	70	M5
GGTN 240	333	240	10	0172-00000240	1,00	5,10	120	130	196	90	70	M5
GGTN 360	500	360	15	0172-00000360	1,10	8,20	120	141	196	90	102	M5



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



Unregulated

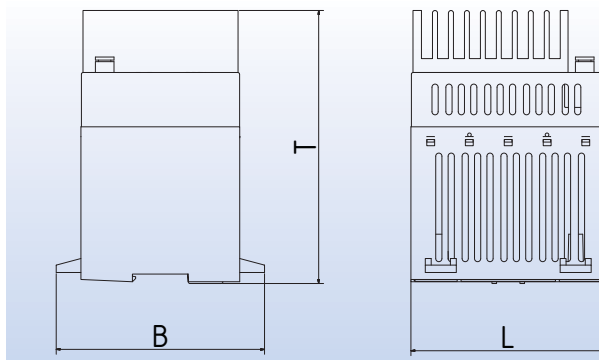
General information:

The compact, space-saving power supply units with modern industrial designs in the RNTU series offer extensive protection against contact through the closed construction. The power supply units meet the requirements for protection against dangerous currents flowing through the body according to VDE 0106 part 101 and can be quickly and easily snapped on to a support rail in a modular manner (DC 5A and higher: should be additionally fixed by screws). Devices of the same type can be connected in parallel at max. 90% loading per device. The built-in fuses (see table) serve solely towards short-circuit protection and guarantee safe operation even in worst-case conditions. The devices may only be loaded with the given nominal current.

Brief dips in grid voltage are bypassed through generously sized capacitors.

The RNTU series can be supplied with the specifications given below as well as with various primary voltages to max. 400VAC and secondary voltages from 10VDC to 60VDC at extra charge. The specified currents must not be exceeded.

Technical data for type	RNTU 24S	RNTU 48S	RNTU 72S	RNTU120S	RNTU 180S	RNTU 240S	
Grid input voltage	230VAC or 400VAC						
Input fuse	5x20mm 0.4Atr. external	5x20mm 0.8Atr. external	5x20mm 1.25Atr. external	5x20mm 2.0A slow external	6.3x32mm 2.5Atr. 1.6Atr.	6.3x32mm 4.0A slow 2.5Atr.	
Frequency	50 / 60Hz						
Output voltage	24VDC or 12VDC						
Output fuse	5x20mm 1.25Atr.	5x20mm 2.5Atr.	5x20mm 4.0A slow	5x20mm 6.3Atr.	6.3x32mm 10Atr.	6.3x32mm 12Atr.	
Power	24W	48W	72W	120W	180W	240W	
Allowable continuous output current	DC 1A	DC 2A	DC 3A	DC 5A	DC 7.5A	DC 10A	
Ripple	< 5%						
Ambient temperature range	-10°C / +60°C						
Installation position	any						
Connection type	screw connection, protected against finger contact according to accident prevention regulations (BGV A3)						
Connection data	fine-strand max. 2.5 mm ²						
Installation	Support rail mounting (DIN EN 60715), from RNTU 120S with additional screw fastening, can be mounted in rows with separation distance > 8mm						
Protection class	IP 20						
Protection class	Protection class II						
Insulation class	E						
Dimensions approx. in mm	Length L	77	77	82	134	157	
	Width W	62,5	62,5	90	125	175	
	Installation depth D	122	122	128	153	185	
Item no.	AC 230V / DC 12V	0223-000024S	0223-000048S	0223-000072S	0223-0000120S	0223-0000180S	0223-0000240S
Item no.	AC 230V / DC 24V	0224-0000024S	0224-0000048S	0224-0000072S	0224-0000120S	0224-0000180S	0224-0000240S
Item no.	AC 400V / DC 24V	0226-0000024S	0226-0000048S	0226-0000072S	0226-0000120S	0226-0000180S	0226-0000240S
Copper weight in kg	0,12	0,2	0,36	0,6	0,97	1,18	
Total weight in kg	0,95	1,2	2,35	3,9	5,2	6,3	



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



regulated

General information:

High-precision, discrete-design series regulator, with fine adjustment.

The compact, space-saving power supply units with modern industrial designs in the RNTG series offer extensive protection against contact through the closed construction. The power supply units meet the requirements for protection against dangerous currents flowing through the body according to VDE 0106 part 101 and can be quickly and easily snapped on to a support rail in a modular manner (DC 5A and higher: should be additionally fixed by screws).

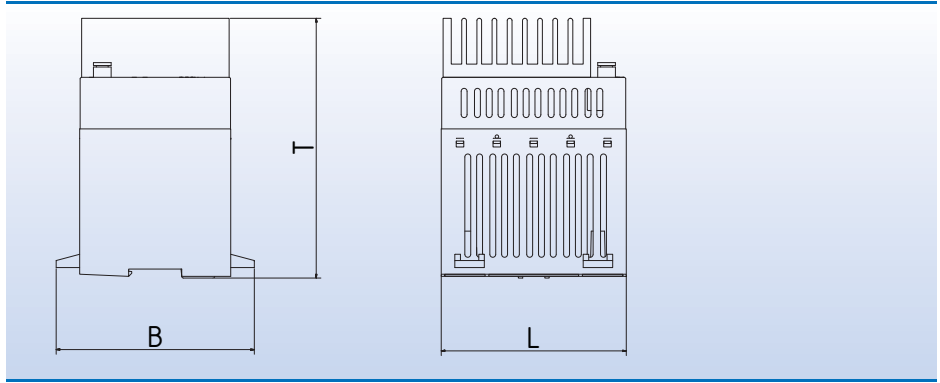
Devices of the same type can be connected in parallel at max. 80% loading per device.

The built-in fuses (see table) serve solely towards short-circuit protection and guarantee safe operation even in worst-case conditions. The devices may only be loaded with the given nominal current.

Brief dips in grid voltage are bypassed for up to 10ms at nominal operating conditions.

The RNTG series can be supplied with the specifications given below as well as with various primary voltages to max. 400VAC and secondary voltages from 5VDC to 30VDC at extra charge. The specified currents must not be exceeded.

Technical data for type	RNTG 12S	RNTG 24S	RNTG 48S	RNTG 72S	RNTG 120S	
Grid input voltage	AC 230V					
Input fuse	5x20mm 0.2Atr.	5x20mm 0.4Atr.	5x20mm 0.8Atr.	5x20mm 1.25Atr.	5x20mm 2.0A slow	
Frequency	50 / 60Hz					
Output voltage	24VDC, duplicated, adjustment range: +/- 2 V					
Output fuse	5x20mm 0.7A fast-acting	5x20mm 1.25A fast-acting	5x20mm 2.5A fast-acting	5x20mm 3.15A fast-acting	6.3x32mm 5.0A fast-acting	
Power	12W	24W	48W	72W	120W	
Allowable continuous output current	DC 0.5A	DC 1A	DC 2A	DC 3A	DC 5A	
Ripple	< 2mV eff.					
Load regulation	< 0,1%					
Stability under constant conditions	< 0,1%					
Ambient temperature range	-10°C / +40°C					
Decrease in output	from 40°C > 1.5% / degree					
Installation position	any					
Connection type	screw connection, protected against finger contact according to accident prevention regulations (BGV A3)					
Connection data	fine-strand max. 2.5 mm ²					
Installation	Support rail mounting (DIN EN 60715), from RNTG 120S with additional screw fastening, can be mounted in rows with separation distance > 8mm					
Protection class	IP 20					
Protection class	Protection class II					
Insulation class	E					
Dimensions approx. in mm	Length L	77	77	82	82	134
	Width W	62,5	62,5	90	90	125
	Installation depth D	122	122	138	153	178
Item no.	0225-0000012S	0225-0000024S	0225-0000048S	0225-0000072S	0225-0000120S	
Copper weight in kg	0,12	0,36	0,6	0,97	1,18	
Total weight in kg	0,9	0,95	1,9	2,6	4,3	



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



regulated

General information:

Our secondary side-controlled switched-mode power supplies feature high stability and long life. The patent-protected switching concept provides for an extremely low interference level, thereby enabling operation without filters or shields. The interference level is significantly lower than the allowable interference limits according to EN 55011 class B. Thus this series is also very suitable for laboratory applications.

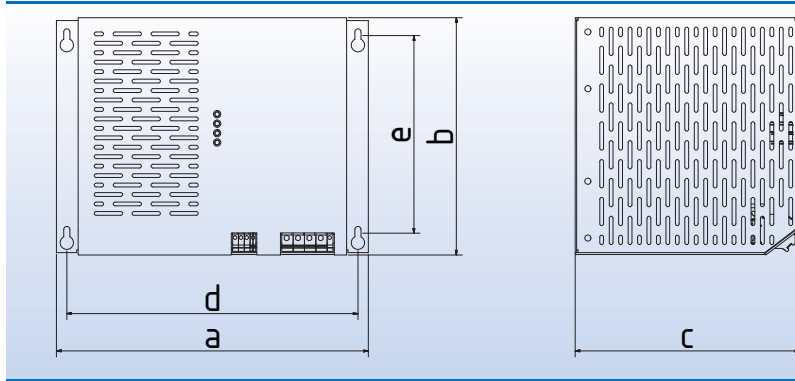
Through internal electronic fusing the devices are always operated in the safe operating area (SOA protection).

Design

Closed construction, hence full protection against contact; also available with various primary voltages to max. 400VAC available at extra charge, secondary voltage: max. 0-60VDC.

Devices can be freely combined as masters and slaves ($V_{max} = 200VDC$)

Technical data for type	RSNT 5S	RSNT 10S	RSNT 15S
Grid input voltage	230VAC or 400VAC		
Grid input voltage range	+15% to -15%		
Frequency	50Hz / 60Hz		
Input fuses	5 x 20mm 2.5Atr. external	5 x 20mm 4.0A slow external	6.3 x 32mm 6.3Atr. external
Output voltage	24VDC stabilised, duplicated, adjustable in range 0-30VDC, real low drop		
Adjustable output current adjustable	0...5A	0...10A	0...15A
Ripple	< 30m Veff.		
Short-circuit protection	Constant current mode		
Dynamic load control	< 100mVss / 500us.		
Stability under constant conditions	< 0,05%		
Line regulation	< 0,05%		
Overtemperature protection	thermal switch-off if device temperature > 85°C		
Ambient temperature	-10... +40°C		
Installation position	vertical installation		
Connection type	screw connection, protected against finger contact according to accident prevention regulations (BGV A3)		
Connection data	fine-strand max. 2.5mm ²		
Installation	on support rail, with additional screw fastening		
Protection class	IP 20		
Protection class	I		
Dimensions approx. in mm (LxWxD)	134x125x150	134x125x180	157x175x197
Mounting hole pattern dimensions in approx. mm	87x120	87x120	130x154x154
Item number:	AC 230V AC 400V	0219-0000005S 0319-0000005S	0219-0000010S 0319-0000010S
Copper insert weight in kg	0,5	0,75	1,2
Total weight in kg	4,0	5,0	9,2
Options			
Remote control 0-10V	for V/ I		
Remote control 4mA-20mA	for V/ I		
Switch-off input	yes		
'Ready' signal contact	yes		



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



regulated

General information:

The switched-mode power supplies in the RSNT 20–60 G series are equipped with a three-phase isolation transformer and a load-side (downstream) switching controller. The interference level is significantly below the allowable interference limits specified in VDE 0875 part 11, EN 55011 limit curve B.

The patent-protected switching concept developed in-house achieves an extremely low interference level. No filters or shields are necessary.

The switched-mode power supplies have overload and short-circuit protection and can be connected in parallel without limitations. Through internal electronic fusing the devices are always operated in the safe operating area (SOA protection).

Via two light diodes the current operating status is displayed: green indicates constant voltage mode and yellow indicates constant current mode.

Design

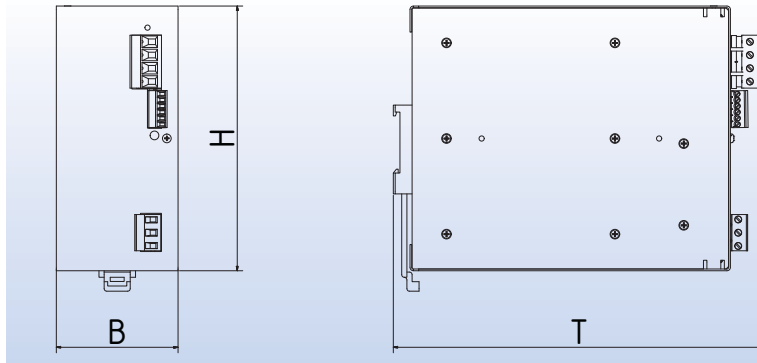
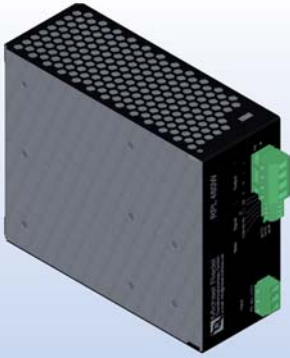
Stable sheet metal steel enclosure with integrated mounting holes for device installation and assembly in dry rooms,

Pri., sec. connection and PE via terminal blocks with screw connection. The terminals are protected against back of hand and finger contact according to accident prevention regulations (BGV A3).

Secondary voltage: max. 0-60VDC.

Devices can be freely combined as masters and slaves (Vmax = 200VDC)

Technical data for type	RSNT 20G	RSNT 30G	RSNT 40G	RSNT 50G	RSNT 60G
Grid input voltage	3AC 400V				
Grid input voltage range	+15% to -15%				
Frequency	50Hz / 60Hz				
Input current	1.3A	2.0A	2.6A	3.2A	3.7A
Output voltage	24VDC, stabilised, duplicated, externally adjustable in range 0-30VDC, real low drop				
Adjustable output current adjustable	0...20A	0...30A	0...40A	0...50A	0...60A
Ripple	< 30m Veff.				
Short-circuit protection	Constant current mode				
Dynamic load control	< 100mVss / 500us.				
Stability under constant conditions	< 0,05%				
Line regulation	< 0,05%				
Overtemperature protection	thermal switch-off if device temperature > 85°C				
Ambient temperature	-10... +40°C				
Installation position	vertical installation				
Cooling	convection		forced cooling		
Connection type	screw connection, protected against finger contact according to accident prevention regulations (BGV A3)				
Connection data	fine-strand max. 4/10mm ²		fine-strand max. 4/16mm ²		
Installation	enclosure base keyhole mounting brackets				
Protection class	IP 20				
Protection class	I				
Dimensions approx. in mm (a x b x c)	250 x 202 x 200		300 x 220 x 222	330 x 250 x 237	
Mounting hole pattern dimensions in approx. mm (d x e)	228 x 161		278 x 179	308 x 209	
Item number:	0229-00000020	0229-00000030	0229-00000040	0229-00000050	0229-00000060
Copper insert weight in kg	3,4	3,8	5,8	8,5	8,5
Total weight in kg	13,0	21,0	22,5	25,0	26,5
Options	for V/ I				
Remote control 0-10V	for V/ I				
Remote control 4mA-20mA	for V/ I				
Switch-off input	yes, for shutdown connect terminal to 0V				
Potential-free group fault signal contact	for errors (overtemperature, undervoltage and overload)				



Primary side-controlled switched-mode power supplies



Fig. RPL 2420W

General information:

RPL Riedel Pri Line

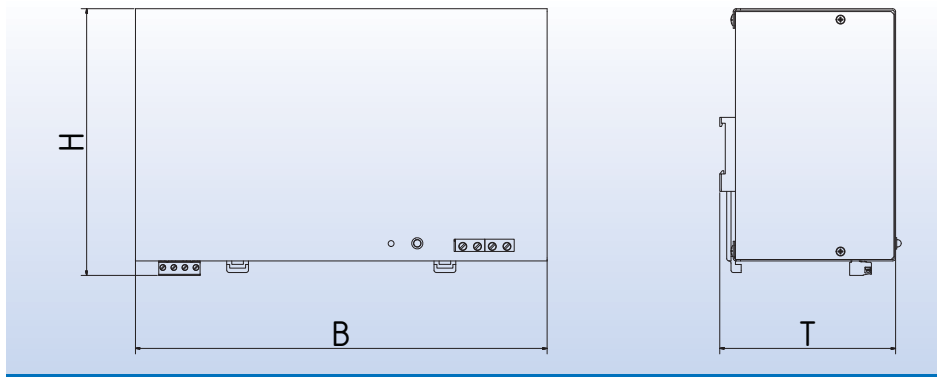
Primary side-controlled power supplies do not require grid transformers and are compact and light.

Special features of the RPL series:

- Universal input (AC or DC for 1-phase or 3AC or DC for 3-phase units) with wide input voltage range
- Wide output voltage range with adjustment via potentiometer on front side
- RPL series power supply units can be used as chargers (type ...WL)
- Temperature-controlled battery charging can be accomplished through simple repositioning of the jumper for 250W alternating current, 480W alternating current or 480W 3-phase alternating current or implementation of the -T option for other chargers combined with attachment of a temperature sensor (NTC resistance: 10kΩ) to the battery. This leads to optimised battery charging if there are large fluctuations in ambient temperature and a higher battery life expectancy, among other things
- Can be connected in series and in parallel
- 25% peak power boost for 4s
- Overload, short-circuit, overvoltage and overtemperature protection
- Three-colour status LED, for devices with 125W and higher:
 - green – voltage stabilisation,
 - red - current limitation,
 - yellow – device connected to grid, output voltage switched off
- Potential-free fault signal contact (changeover)

Overview of basic equipment in RPL series

Output power		Power supplies with nominal output voltage			Chargers with nominal output voltage		
		DC 12V	DC 24V	DC 48V	13.7VDC	27.4VDC	54.8VDC
Single-phase units for connection to grids with voltages of 100-240VAC							
30W	Type Item no.	RPL 122.5W 0500-0000122.5W	RPL 241.25W 0500-0000241.25W	RPL 480.65W 0500-000480.65W	RPL 122.5WL 0520-000122.5WL	RPL 241.25WL 0520-00241.25WL	RPL 480.65WL 0520-00480.65WL
60W	Type Item no.	RPL 1205W 0500-000001205W	RPL 242.5W 0500-0000242.5W	RPL 481.25W 0500-000481.25W	RPL 1205WL 0520-00001205WL	RPL 242.5WL 0520-000242.5WL	RPL 481.25WL 0520-00481.25WL
125W	Type Item no.	RPL 1210W 0500-000001210W	RPL 2405W 0500-000002405W		RPL 1210WL 0520-00001210WL	RPL 2405WL 0520-00002405WL	
250W	Type Item no.	RPL 1220W 0500-000001220W	RPL 2410W 0500-000002410W	RPL 4805W 0500-000004805W	RPL 1220WL 0520-00001220WL	RPL 2410WL 0520-00002410WL	RPL 4805WL 0520-00004805WL
480W	Type Item no.		RPL 2420W 0500-000002420W	RPL 4810W 0500-000004810W		RPL 2420WL 0500-00002420WL	RPL 4810WL 0500-00004810WL
960W	Type Item no.		RPL 2440W 0500-000002440W			RPL 2440WL 0520-00002440WL	
Single-phase units for connection to grids with voltages of 220-400VAC							
30W	Type Item no.	RPL 122.5W1 0500-000122.5W1	RPL 241.25W1 0500-00241.25W1		RPL 122.5W1L 0520-00122.5W1L	RPL 241.25W1L 0520-0241.25W1L	
3-phase AC units for connection to grids with nominal voltages of 3AC 380-480V							
250W	Type Item no.		RPL 2410WD 0505-00002410WD			RPL 2410WDL 0525-0002410WDL	
480W	Type Item no.		RPL 2420WD 0505-00002420WD			RPL 2420WDL 0525-0002420WDL	
960W	Type Item no.		RPL 2440D 0505-000002440D			RPL 2440DL 0525-00002440DL	



Primary side-controlled switched-mode power supplies

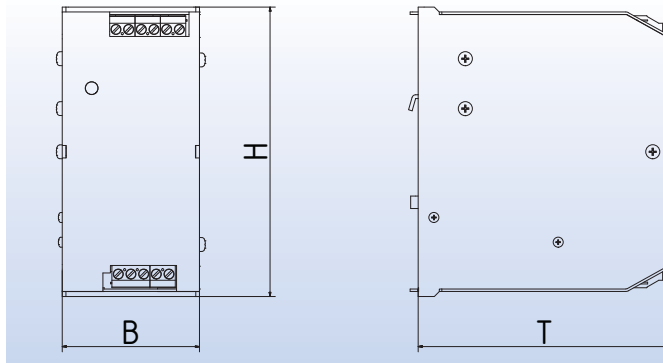
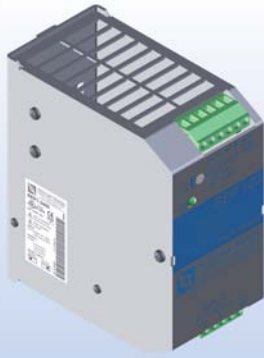


Fig. RPL 2440D

Options:

- S: Decoupling diode (series diode) on output for easy construction of redundant and UPS systems;
- U: 0-10VDC analogue input for adjustment of output voltage from 0 to Vout max;
- D: Overload shutdown, saving shutdown in case of overload;
- P: Symmetric power distribution in parallel operation;
- T: Temperature-controlled charging;
- F: Remote switch-on / switch-off;
- A: Fault signal contact (alarm);
- M: Minus temperature range.
only relevant for RPL 2440D because other units are designed for minus temperature ranges as a standard feature;
- C: Grid upper wave limit according to EN 61000-3-2 class C (lighting equipment).

Type	Input	Output		Special features	Options (see above)	Dimensions (WxHxD)/Weight	
		Nominal voltage / current	Adjustment range				
RPL 1-phase units							
30W	RPL 122.5W	AC 85-264V DC 100-375V	DC 12V/2,5A	DC 10-15V	plastic enclosure, 1-colour status LED	S	
	RPL 241.25W		DC 24V/1.25A	DC 21-29V		S	
	RPL 480.65W		DC 48V/0.65A	DC 45-58V		S	
30W1	RPL 122.5W1	AC 196-460V DC 230-650V	DC 12V/2,5A	DC 10-15V	plastic enclosure, 1-colour status LED	S	
	RPL 241.25W1		DC 24V/1.25A	DC 21-29V		S	
60W	RPL 1205W	AC 90-264V DC 100-375V	DC 12V/5A	DC 11-15V	Fault signal contact, 1-colour status LED	S, T, F	
	RPL 242.5W		DC 24V/2.5A	DC 21-29V		S, T1, F	
	RPL 481.25W		DC 48V/1.25A	DC 45-58V		S, T1, F	
125W	RPL 1210W	AC 90-264V DC 100-375V	DC 12V/10A	DC 9-15V	power boost: 20%, 4s bonus time, remote on/ off, fault signal contact, 3-colour status LED	S1, U1, D1, T1	
	RPL 2405W		DC 24V/5A	DC 21-29V		S, U, D, T	
250W	RPL 1220W	AC 85-264V DC 88-375V	DC 12V/20A	DC 9-15V	active PFC, power boost: 20%, 4s bonus time, remote on/off, fault signal contact, temperature- controlled charging possible, 3-colour status LED	S, U, D, P, C	
	RPL 2410W		DC 24V/10A	DC 21-29V		S, U, D, P, C	
	RPL 4805W		DC 48V/5A	DC 45-58V		S, U, D, P, C	
480W	RPL 2420W	AC 85-264V DC 88-375V	DC 24V/20A	DC 21-29V	active PFC, power boost: 20%, 4s bonus time, remote on/off, fault signal contact, temperature- controlled charging possible, 3-colour status LED	S, U, D, P	
	RPL 4810W		DC 48V/10A	DC 45-58V		S, U, D, P	
960W	RPL 2440W	AC 90-264V DC 120-375V	DC 24V/40A	DC 21-29V	active PFC, fault signal contact, remote on/off, 3-colour status LED	285x174x110mm 3.3kg	
RPL 3-phase units							
250W	RPL 2410WD	3AC 340-575V DC 450-820V	DC 24V/10A	DC 21-29V	passive PFC, power boost: 20%, 4s bonus time, remote on/off, fault signal contact, 3-colour status LED	S, D, P, T	67x157x141mm 1.1kg
480W	RPL 2420WD	3AC 340-575V DC 450-820V	DC 24V/20A	DC 21-29V	passive PFC, power boost: 20%, 4s bonus time, remote on/off, fault signal contact, temperature-controlled charging possible, 3-col- our status LED	S, U, D, P	70x152x185mm 1.5kg
960W	RPL 2440D	3AC 340-460V DC 450-650V	DC 24V/40A	DC 23-28V	passive PFC, 3-colour status LED	A, T, M	285x174x110mm 3.35kg



Primary side-controlled switched-mode power supplies



Fig. REP1-2405

General information:

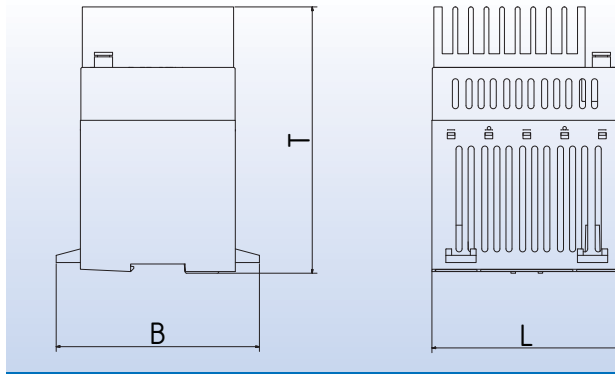
REP power supplies are high-quality switched-mode power supplies for top-hat rail mounting. They feature a compact, smart design and a robust metal enclosure.

The output voltage can be adjusted quickly and easily (DC 22V to DC 27V) and exhibits high stability even when there are temperature fluctuations and load changes. Apart from short-circuit protection with 3 different output protection modes, overload and overvoltage protection on the output ensure a high degree of safety.

Special features of the REP series:

- Parallel connection of additional REP power supplies of the same design is an easy way of increasing the output power (max. 4 units / 280-500W version)
- Series connection possible to DC 110V
- 1.5 times nominal current for 3min.
- 3 times nominal current for 300ms.

Type	REP1-2403	REP1-2405	REP1-247.5	REP1-2414	REP1-2425	REP2-2405	REP2-247.5	REP2-2414	REP3-2425
Power	40-70W	95-120W	120-180W	240-336W	480-600W	95-120W	120-180W	240-330W	480-600W
INPUT	1-phase					2-phase			3-phase
Nominal voltage	AC 115-230V	AC 115/230V input selectable				AC 230/400/500V input selectable			3AC 400-500V
Voltage range	AC 90-264V	AC 90 - 135V AC 180 - 264V				AC 187 - 264V AC 330 - 550V			3AC 330-550V
Internal fuse	4A	4A	4A	6.3A	10A	4A	4A	4A	6.3A
Recommended external fuse	6A	10A	10A	16A	16A	10A	10A	16A	16A
Nominal voltage	DC 24V								
Adjustment range (Vadj)	DC 22 - 27V								
Continuous current at 24V < 40°C (In)	2.0A (115) - 3.0A (230)	5.0A	7.5A	14A	25A	5.0A	7.5A	14A	25A
Continuous current at 24V < 50°C (In)	1.5A (115) - 2.5A (230)	4.5A	6.0A	12A	22A	4.5A	6.0A	12A	22A
Continuous current at 24V < 60°C (In)	-	4.0A	5.0A	10A	20A	4.0A	5.0A	10A	20A
Power boost current (at 24VDC 60°C ≥ 3min.)	3.5A	5.0A	7.5A	14A	25A	5.0A	7.5A	14A	25A
Grid failure bypass time (min. VAC) 24VDC	typically 20msec								
Ripple	≤ 80mVpp								
Efficiency (50% of In)	≥ 88%	≥ 91%	≥ 91%	≥ 91%	≥ 92%	≥ 91%	≥ 91%	≥ 91%	≥ 92%
Power loss at max. load (W)	6	11	17	28	54	11	17	28	54
Ambient temperature during operation	-25 - +70°C								
Reduction in power at Ta > / (In)	> 50° 2.5% °C	> 60° 2.5% °C							
Protection class (EN/IEC 60529)	IP 20								
Connection data, fine-strand	2.5mm				4mm	2.5mm			4mm
Protection class (PE connected)	I								
Dimensions approx. in mm (WxHxD)	50x120x50	55x110x105		72x115x135	85x120x140	55x110x105		72x115x135	85x120x140
Item number:	0540-00016024	0540-00019024	0540-00117024	0540-00128024	0540-00150024	0541-00029024	0541-00217024	0541-00228024	0542-00350024
Total weight in kg	approx. 0.30	approx. 0.50	approx. 0.60	approx. 0.72	approx. 1.10	approx. 0.50	approx. 0.60	approx. 0.72	approx. 1.00



Chargers



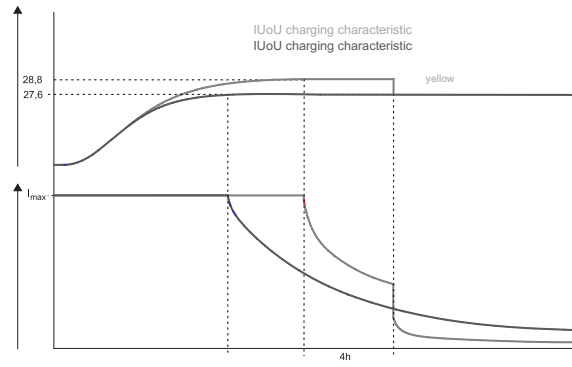
Fig. RPL 2405

General information:

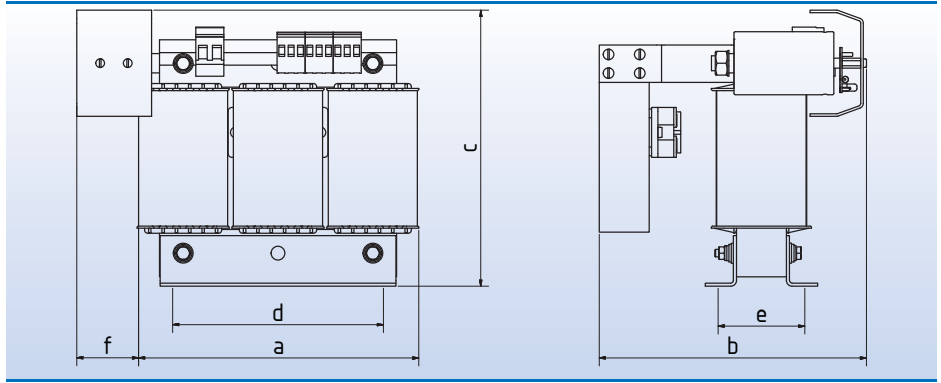
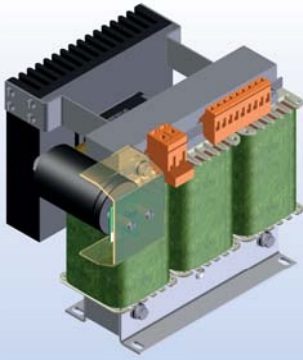
The chargers in the RLG..S series enable fast and gentle charging of maintenance-free rechargeable lead acid batteries due to the IV characteristic curve used.

The chargers from RLG 1205S to RLG 2415S are designed with IVOV charging characteristics. Here the battery is charged with a constant current to just below the gassing voltage. This value of output voltage is then kept constant over a factory-set time period (see diagram). After this time has elapsed the constant voltage is reduced to the trickle charge voltage. There is an additional yellow display LED which lights up as soon as the unit reduces the output voltage to the trickle charge voltage. This signals the end of the charging process.

With this characteristic curve lead acid batteries are charged optimally, resulting in a high capacity and maximum protection of the connected rechargeable battery as well as avoidance of sulfation. The units are built into compact plastic enclosures guaranteeing complete contact protection.



Type	RLG 1203S RLG 2403S	RLG 1205S RLG 2405S	RLG 1208S -	RLG 1210S RLG 2410S	RLG 1215S RLG 2415S	
Grid input voltage	230VAC or 400VAC					
Frequency	50 Hz / 60 Hz					
Input fuses	5 x 20mm 0.80Atr	5 x 20mm 1.25Atr	5 x 20mm 2.0 Atr	5 x 20mm 2.0Atr	6.3 x 32 mm 4.0Atr	
AC 230V / DC 12V	1.25Atr	2.50Atr	-	4.0Atr	6.3Atr	
AC 230V / DC 24V	external	external	external	external	external	
AC 400V / DC 12V	external	external	-	external	external	
AC 400V / DC 24V	-	-	-	-	-	
Battery nominal voltage	DC 12V DC 24V	DC 12V DC 24V	DC 12V -	DC 12V DC 24V	DC 12V DC 24V	
Max. charging current	DC 3 A	DC 5 A	DC 8 A	DC 10 A	DC 15 A	
Battery type	lead acid batteries					
Ripple voltage	< 0,5%					
Characteristic curve - charging process	IU	IVOV; time constant: 4 h				
Overload protection	through internal electronic current limitation					
Rreturn current	with grid off, I = < 1 mA					
Reverse polarity protection	integrated (reverse polarity current < 1 mA)					
Ambient temperature	0... +40°C					
Installation position	vertical installation					
Cooling	convection					
Connection data	fine-strand max. 2.5 mm ²					
Installation	support rail mounting (DIN EN 60715), can be mounted in rows with separation distance > 8 mm			support rail mounting with additional screw fastening		
Protection class	IP 20					
Protection class	prepared for protection class II					
Dimensions approx. mm (L x W x D)	82 x 90 x 135	134 x 125 x 175		157 x 175 x 210		
Mounting hole pattern dimensions in approx. mm	-	87 x 120		130 x 154 x 154		
Item number	AC 230V / DC 12V AC 230V / DC 24V AC 400V / DC 12V AC 400V / DC 24V	0235-0001203S 0235-0001203S 0245-0001203S 0245-0002403S	0235-0001205S 0235-0002405S 0245-000 1205S 0245-0002405S	0235-0001208S - 0245-0001208S -	0235-0001210S 0235-0002410S 0245-0001210S 0245-0002410S	0235-0001215S 0235-0002415S 0245-0001215S 0245-0002415S
Copper insert weight in kg	0,97	1, 18	1,18	1, 18	1,30	
Total weight in kg	2,50	4,30	4,30	4,50	6,60	



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



Fig. RDRK 40K

General information:

Standard design:

3-phase AC isolation transformer with load-side (downstream) 3-phase AC bridge rectifier, Input 3AC 380/400/420V
Output: 24VDC, ripple < 5%

Capacitor version (K):

3-phase AC isolation transformer with load-side (downstream) 3-phase AC bridge rectifier and capacitor input 3AC 380/400/420V
Output: 24VDC, ripple < 2%

The RDRK series has been developed especially for use of programmable logic controllers (PLCs). The transformers are very well-sized and exhibit voltage stability. This produces an especially flat characteristic curve between no load and load so that no overvoltages or undervoltages critical for PLC occur even if grid voltage fluctuations occur.

The rectifiers are protected from temporary current surges and voltage spikes.

The protective circuit of the capacitor version is achieved via a protective circuit board which contains the corresponding varistor, film capacitor and discharge resistor.

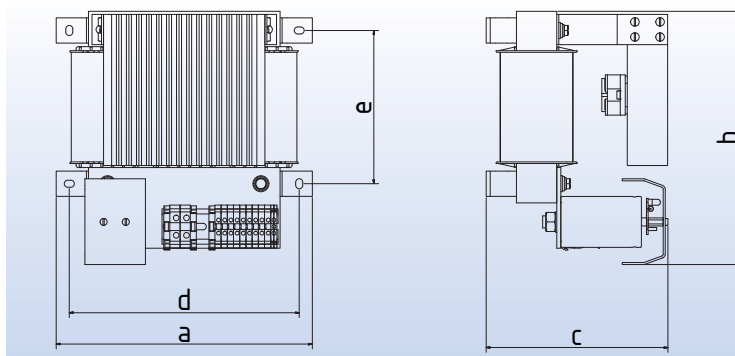
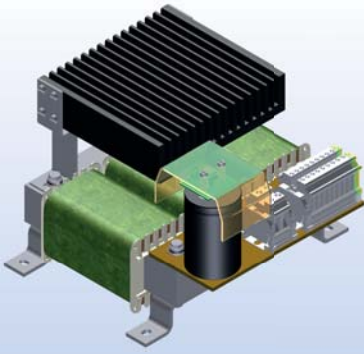
Design:

Open frame, upright design, stationary, for device installation and assembly in dry rooms, separate windings, all connections via leakage current-resistant screw terminal blocks. 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)

For design with capacitor the dimensions are slightly different. The mounting dimensions remain unchanged.

Other designs upon request (fuses, voltages, connections, etc.)

Type	Current ADC	Article no. without capacitor	Article no. with capacitor	Copper kg	Total kg	Dimensions approx. in mm						
						a	b	c	d	e	f	Mounting
RDRK 2,5 (K)	2,5	0177-000002,5	0177-00002,5K	0,7	2,5	130	75	160	84	46	45	M5
RDRK 5 (K)	5	0177-00000005	0177-00000005K	0,8	3,0	130	85	165	84	56	45	M5
RDRK 7.5 (K)	7,5	0177-000007,5	0177-00007,5K	1,2	4,4	155	70	195	90	55	55	M5
RDRK 10 (K)	10	0177-00000010	0177-0000010K	1,4	6,0	155	85	195	90	70	55	M5
RDRK 16 (K)	16	0177-00000016	0177-0000016K	2,3	7,0	190	170	165	128	72	60	M6
RDRK 20 (K)	20	0177-00000020	0177-0000020K	2,5	8,4	190	180	165	128	82	60	M6
RDRK 25 (K)	25	0177-00000025	0177-0000025K	3,0	11,3	190	190	165	128	92	70	M6
RDRK 30 (K)	30	0177-00000030	0177-0000030K	4,0	11,4	190	190	165	128	92	70	M6
RDRK 40 (K)	40	0177-00000040	0177-0000040K	5,8	16,6	230	190	210	176	71	70	M6
RDRK 60 (K)	60	0177-00000060	0177-0000060K	7,2	26,3	290	200	240	190	120	85	M10



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



Fig. RDRKL 40K

General information:

Standard design:

3-phase AC isolation transformer with load-side (downstream) 3-phase AC bridge rectifier, Input 3AC 380/400/420V

Output: 24VDC, ripple < 5%

Capacitor version (K):

3-phase AC isolation transformer with load-side (downstream) 3-phase AC bridge rectifier and capacitor Input 3AC 380/400/420V

Output: 24VDC, ripple < 2%

Like the RDRK series, the RDRKL series has been developed especially for use of programmable logic controllers (PLCs). The transformers are very well-sized and exhibit voltage stability. This produces an especially flat characteristic curve between no load and load so that no overvoltages or undervoltages critical for PLC occur even if grid voltage fluctuations occur.

The rectifiers are protected from temporary current surges and voltage spikes.

The protective circuit of the capacitor version is achieved via a protective circuit board which contains the corresponding varistor, film capacitor and discharge resistor.

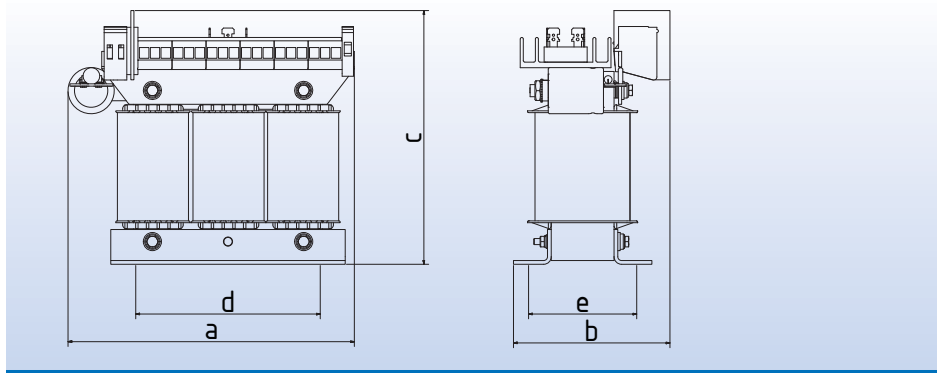
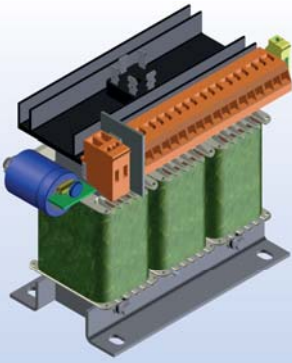
Design:

Open frame, horizontal design, stationary, for device installation and assembly in dry rooms, separate windings, all connections via leakage current-resistant screw terminal blocks. 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)

For design with capacitor the dimensions are slightly different. The mounting dimensions remain unchanged.

Other designs upon request (fuses, voltages, connections, etc.)

Type	Current ADC	Article no. without capacitor	Article no. with capacitor	Copper kg	Total kg	Dimensions approx. in mm					Mounting
						a	b	c	d	e	
RDRKL 10 (K)	10	0178-0000010	0178-0000010K	1,4	6,0	156	165	160	140	100	M5
RDRKL 16 (K)	16	0178-0000016	0178-0000016K	2,5	8,6	206	200	190	184	120	M6
RDRKL 20 (K)	20	0178-0000020	0178-0000020K	2,8	10,4	206	200	200	184	120	M6
RDRKL 25 (K)	25	0178-0000025	0178-0000025K	3,0	10,8	206	200	200	184	120	M6
RDRKL 30 (K)	30	0178-0000030	0178-0000030K	4,0	11,0	206	220	200	184	120	M6
RDRKL 40 (K)	40	0178-0000040	0178-0000040K	5,8	17,0	254	240	230	228	152	M6
RDRKL 60 (K)	60	0178-0000060	0178-0000060K	7,2	26,1	290	260	230	258	160	M8
RDRKL 90 (K)	90	0178-0000090	0178-0000090K	10,5	38,0	300	300	240	258	176	M8
RDRKL 120 (K)	120	0178-0000120	0178-0000120K	13,5	43,0	380	325	240	298	200	M8



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



Fig. RDRKU 5

General information:

3-phase AC isolation transformer with load-side (downstream) 3-phase AC bridge rectifier and capacitor

Interchangeable inputs: 3AC 210/220/230/240/255/265/275/290/300/360/380/400/420/440/460/480/500/520V

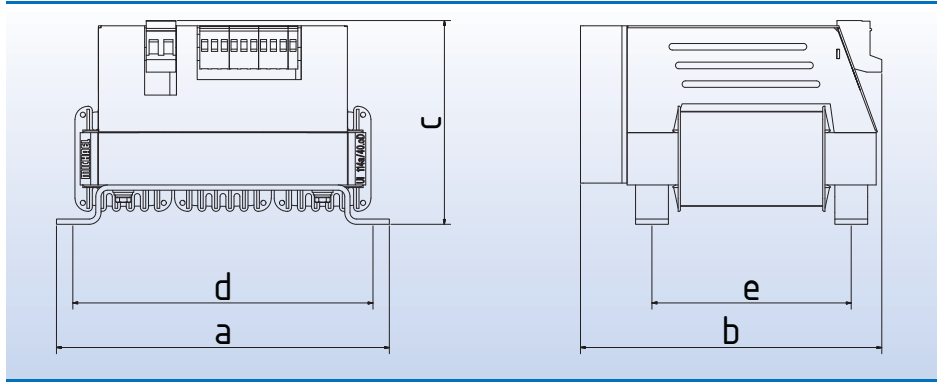
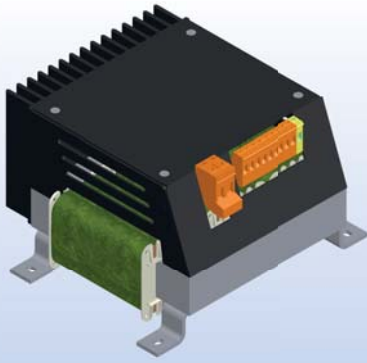
Output: 24VDC, ripple < 2%

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	Current ADC	Size	Item no.	Copper kg	Total kg	Dimensions approx. in mm					Mounting
						a	b	c	d	e	
RDRKU 5	5	3UI 75/26	0062-00000005	1,5	4,9	200	90	195	130	57	M6
RDRKU 10	10	3UI 75/41	0062-00000010	2,0	7,0	200	115	195	130	72	M6
RDRKU 15	15	3UI 90/41	0062-00000015	3,0	8,0	230	175	195	170	68	M6
RDRKU 20	20	3UI 90/51	0062-00000020	3,5	11,5	230	195	195	170	78	M6
RDRKU 25	25	3UI 90/51	0062-00000025	4,0	12,0	230	195	195	170	78	M6



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



Fig. RDRKN 40

General information:

Standard design:

3-phase AC isolation transformer with load-side (downstream) 3-phase AC bridge rectifier,
 Input 3AC 380/400/420V
 Output: 24VDC, ripple < 5%

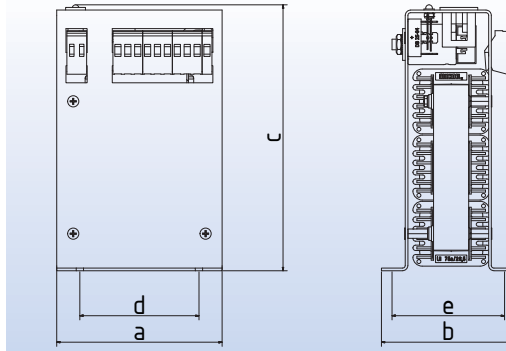
Capacitor version (K):

3-phase AC isolation transformer with load-side (downstream) 3-phase AC bridge rectifier and capacitor
 Input 3AC 380/400/420V
 Output: 24VDC, ripple < 2%

Design:

Closed frame, stationary, for device installation and assembly in dry rooms, separate windings. Connection to leakage current-resistant transformer terminals with screw fastening. 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	Current ADC	Article no. without capacitor	Article no. with capacitor	Copper kg	Total kg	Dimensions approx. in mm					Mounting
						a	b	c	d	e	
RDRKN 10 (K)	10	0227-0000010	0228-0000010K	1,6	4,9	156	165	110	140	100	M5
RDRKN 16 (K)	16	0227-0000016	0228-0000016K	1,9	6,5	156	165	125	140	100	M5
RDRKN 20 (K)	20	0227-0000020	0228-0000020K	2,4	9,8	206	190	140	184	120	M6
RDRKN 25 (K)	25	0227-0000025	0228-0000025K	3,2	10,7	206	200	160	184	120	M6
RDRKN 30 (K)	30	0227-0000030	0228-0000030K	3,9	11,5	206	200	160	184	120	M6
RDRKN 40 (K)	40	0227-0000040	0228-0000040K	5,8	16,3	254	235	155	228	152	M6
RDRKN 60 (K)	60	0227-0000060	0228-0000060K	7,2	23,8	254	235	180	228	152	M6



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



Fig. RDRKS 7,5

General information:

The RDRKS series with modern industrial design was developed in consideration of the following aspects:

- Optimal layout for minimal footprint
- Easy installation via open slot
- Compact, low-weight design
- High reliability and long life
- Favourable price-to-performance ratio
- Low overall losses

Input: 3AC 380/400/420V

Output: 24VDC, with load-side (downstream) 3-phase AC bridge rectifier, varistor, resistor, LED, universal car tab connect fuse, ripple < 5%

or

24VDC, with load-side (downstream) 3-phase AC bridge rectifier, varistor, resistor, LED, universal car tab connect fuse, electrolyte capacitor, ripple < 2% (capacitor version).

Design:

Covered design, stationary, for device installation and assembly in dry rooms, separate windings, mounting via open slot integrated into cover. Connection to leakage current-resistant transformer terminals with screw fastening. 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).

Other voltages available upon request.

Type	Current ADC	Article no. without capacitor	Article no. with capacitor	Copper kg	Total kg	Dimensions approx. in mm					Mounting
						a	b	c	d	e	
RDRKS 7,5 (K)	7,5	0256-000007,5	0257-00007,5K	1,2	3,8	125	105	200	90	90	M5
RDRKS 10 (K)	10	0256-0000010	0257-0000010K	1,6	4,4	125	105	200	90	90	M5
RDRKS 15 (K)	15	0256-0000015	0257-0000015K	1,8	6,3	125	130	200	90	115	M5
RDRKS 20 (K)	20	0256-0000020	0257-0000020K	2,4	9,0	190	130	200	150	115	M6
RDRKS 25 (K)	25	0256-0000025	0257-0000025K	3,2	10,8	190	165	200	150	135	M6
RDRKS 30 (K)	30	0256-0000030	0257-0000030K	3,9	11,5	190	165	200	150	135	M6

