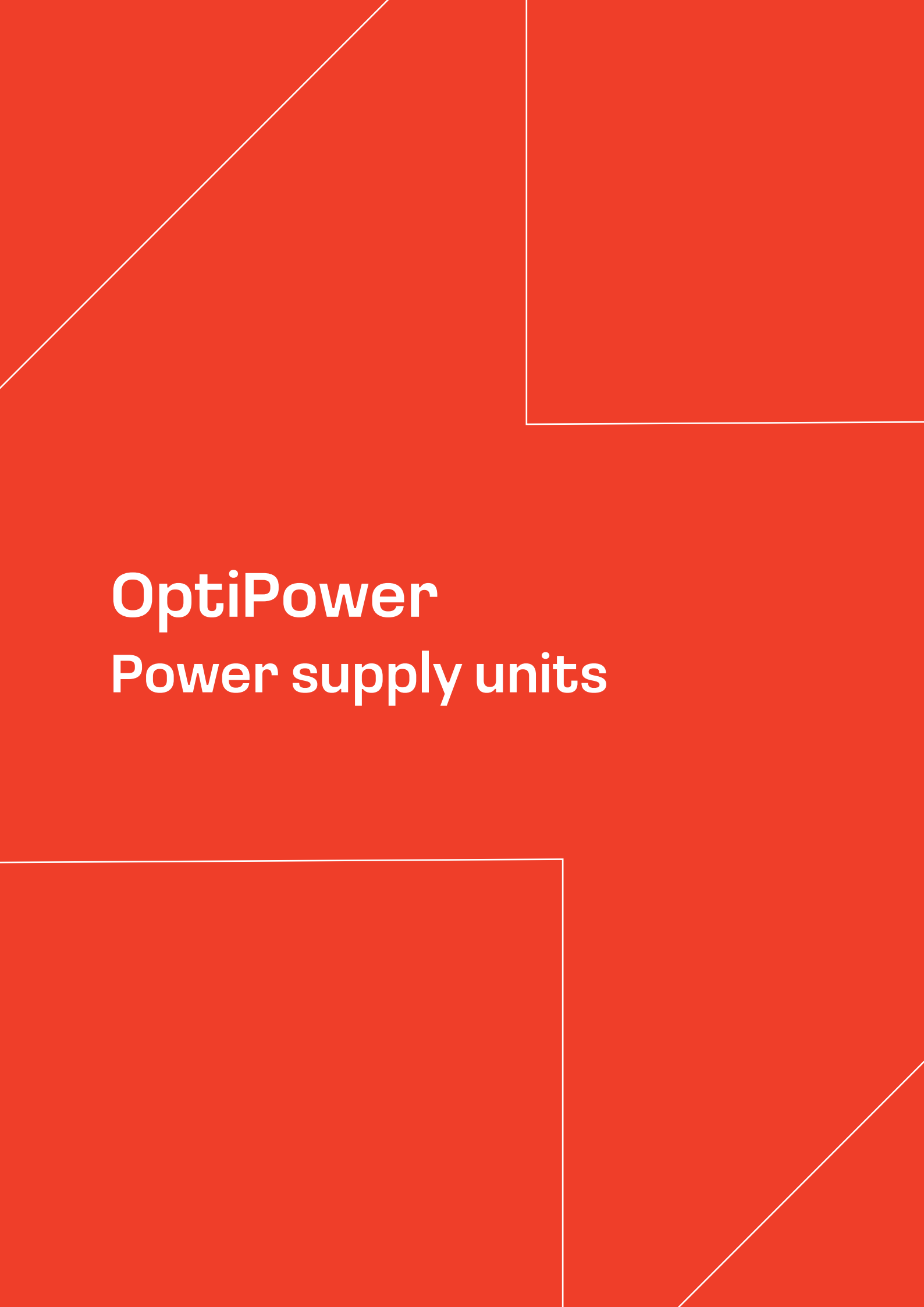




OptiPower

Power supply units

Universal single-phase OptiPower power supply units of DR, MDR and LRS series are pulsed AC/DC voltage converters mounted on a din-rail or circuit board. They provide power to various automation devices with a stabilized DC voltage of 12 V or 24 V and output overload, overvoltage and short circuit protection.

Din-rail power supply units

OptiPower DR



In (A): 0.63 to 2.5
Uin (V AC): 230
Uout (V, DC): 24
Power (W): 15 to 60

OptiPower DR, DRP



In (A): 3.1 to 210
Uin (V AC): 230
Uout (V, DC): 24
Power (W): 75 to 240

OptiPower MDR



In (A): 0.42 to 4
Uin (V AC): 230
Uout (V, DC): 24
Power (W): 10 to 100

Panel power supply units

OptiPower LRS



In (A): 1.5 to 33
Uin (V AC): 230
Uout (V, DC): 12, 24
Power (W): 35 to 400

OptiPower

➤ Power supply units



Universal single-phase OptiPower power supply units of DR, MDR and LRS series are pulsed AC/DC voltage converters mounted on a din-rail or circuit board. They provide power to various automation devices with a stabilized DC voltage of 12 V or 24 V and output overload, overvoltage and short circuit protection.

► Designation

OptiPower MDR - 100 - 24 - 1

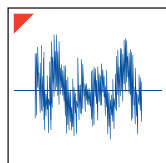
① ② ③ ④ ⑤

①	Series	OptiPower
②	Power supply unit type	DR, MDR, LRS
③	Output power, W	10–400
④	Output voltage, V	12, 24
⑤	Number of output phases	1 — single-phase

► Selection guide

Series	OptiPower DR	OptiPower MDR	OptiPower LRS
Appearance			
Power range, W	15–240	10–100	35–400
Output voltage, V	24 DC	24 DC	12 DC; 24 DC
Efficiency	Up to 85 %	Up to 87 %	Up to 89 %
Narrow case	-	+	-
Overload protection	+	+	+
Short-circuit protection	+	+	+
Overvoltage protection	+	+	+
Power good indication	+	+	+
Output voltage adjustment	+	+	+
Dry contact DC OK	-	+	-

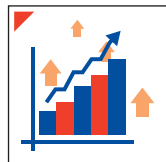
► Series advantages



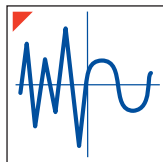
Interference resistance and low electromagnetic interference radiation.



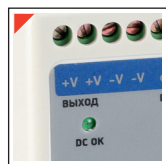
Wide range of power (10 to 240 W) and supply voltage (85 to 264 V AC and 124 to 370 V DC).



Efficiency up to 87 %



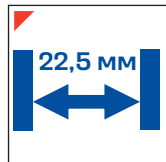
High stability of output voltage over the entire power supply range.



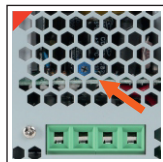
Output voltage status indication



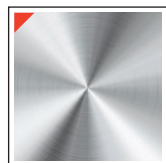
Output overload, overvoltage and short circuit protection.



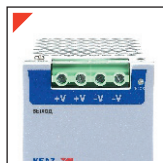
Narrow case (from 22.5 mm) and additional status contacts (for MDR series).



Output voltage adjustment +/- 10 %



Metal case from 75 W (for DR series)



Dual output terminals for easy connection.

► Technical specification

Parameter		Parameter values by model												
		DR						MDR						DRP
Output	Output power, W	15	30	45	60	75	120	10	20	40	60	100	240	
	Rated output voltage, V	24												
	Output voltage range, V	21,6~26,4						21,6~26,4						21,6~26,4
	Rated output current, A	0,63	1,5	2	2,5	3,2	5	0,42	1	1,7	2,5	4	10	
	Output current range, A	0–0,63	0–1,5	0–2	0–2,5	0–3,2	0–5	0–0,42	0–1	0–1,7	0–2,5	0–4	0–10	
	Output voltage setting time, ms 230 V	800		800	800	500	500	500		1000		3000	1000	
	Output voltage setting time, ms 115 V	1500		1500	1500	1000	500	500		1600		3000	3000	
	Output voltage holding time, ms 230 V	30		30	50	50	50	50		50		50	20	
	Output voltage holding time, ms 115 V	10		10	10	10	10	15		20		15	20	
	Maximum output voltage error, %	1												
Input	AC input voltage, V	85–264												
	DC input voltage, V	124–370												
	AC input voltage frequency, Hz	47–63												
	Efficiency, %	82	83	83	84	83	84	84		87	87	85	83	
	Network current consumption, A 230 V	0,48	0,4	0,5	0,8	0,9	2	0,35		0,7	1	0,8	1,8	
	Network current consumption, A 115 V	0,88		0,95	1,2	1,8	3,3	0,55		1,1	1,5	1,3	3,5	
	Starting current, A 230 V	65	56	56	60	60	60	40		60	60	60	70	
	Starting current, A 115 V	35	28	28	30	30	30	20		30	30	30	40	
	Protection	Current (power) protection, %	105–150											
Output overvoltage protection, V		29,0–36,0	27,6–33,6					27,6–33,6					30–36	
Environment	Operating temperature, °C	-10 ~ +50												
	Relative humidity, % (without condensation)	20–90												
	Temperature °C, humidity % (during storage)	-20 ~ +85, 10–95												
	Permissible vibration, Hz	10~500 Hz, 2G 10 min. / 1 cycle, 60 min. each along the X, Y, Z axes												
Electrical equipment safety	Breakdown voltage, I/P–O/P, kV	3	3	3	3	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	
	Breakdown voltages, I/P–FG, kV	1,5												
	Breakdown voltage, O/P–FG, kV	0,5												
	Minimum insulation resistance at 500 V DC, I/P–O/P, I/P–FG, O/P–FG, MOhm	100												
	Electromagnetic interference radiation	Complies with the requirements of EN55022 (CISPR22) Class B												
	Harmonic current components	Complies with the requirements of EN61000-3-2,-3												
	EMC resistance	Complies with the requirements of EN61000-4-2,-3,-4,-5; ENV50204, EN55024, application in industrial areas, conformity criterion A												
Other	Case protection degree ((from the front panel)	IP20												
	Minimum operating time for failure at a temperature of 25 °C, thousand hours	440	440	360	210	200	200	300	300	300	290	340	200	
	Power good indication	Yes												
	Output voltage adjustment (+V ADJ)	Yes												
	«Dry» contacts	No	No	No	No	No	No	Yes	Yes	Yes	Yes	Yes	No	

Power supply units meet the safety requirements against electric current in protection class I or II according to GOST IEC 60950-1-2014. The service life under normal operating conditions is at least 10 years.

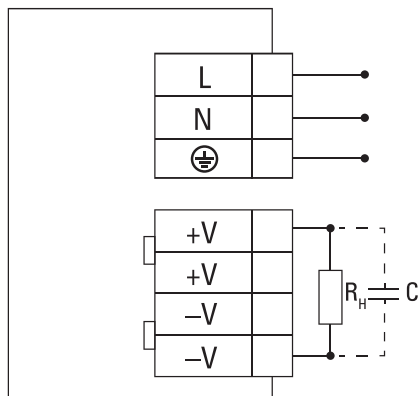
Parameter		Parameter values by model																							
		LRS-24												LRS-12											
Output	Output power, W	35	50	60	75	100	120	150	200	250	350	400	35	50	60	75	100	120	150	200	250	350	400		
	Rated output voltage, V	24												12											
	Output voltage range, V	21,6~26,4												10,8~13,2											
	Rated output current, A	1,5	2,2	2,5	3,2	4,5	5	6,5	8,5	10	14,6	16,6	3	4,2	5	6	8,5	10	12,5	17	20	29	33		
	Output current range, A	0-1,5	0-2,2	0-2,5	0-3,2	0-4,5	0-5	0-6,5	0-8,5	0-10	0-14,6	0-16,6	0-3	0-4,2	0-5	0-6	0-8,5	0-10	0-12,5	0-17	0-20	0-29	0-33		
	Output voltage setting time, ms 230 V	1000						1300						1000						1300					
	Output voltage setting time, ms 115 V	2000						1300						2000						1300					
	Output voltage holding time, ms 230 V	20	20	30	30	20	20	10	10	10	10	10	20	20	30	30	20	20	10	10	10	10			
	Output voltage holding time, ms 115 V	8	8	0	0	0	0	0	0	0	0	0	8	8	0	0	0	0	0	0	0	0			
	Maximum output voltage error, %	1																							
Input	AC input voltage, V	85-264																							
	DC input voltage, V	90-132																							
	AC input voltage frequency, Hz	47-63																							
	Efficiency, %	88	88	88,5	88,5	88,5	88,5	88	88	88	86	86	82	83	83	86	86	86	85	86	87	83,5	83,5		
	Network current consumption, A 230 V	0,42	0,56	0,56	0,85	1,3	1,3	1,6	2	2,3	3,4	3,4	0,42	0,56	0,56	0,85	1,3	1,3	1,6	2	2,3	3,4	3,4		
	Network current consumption, A 115 V	0,7	0,95	0,95	1,4	2,2	2,2	2,8	3,5	4	6,5	6,5	0,7	0,95	0,95	1,4	2,2	2,2	2,8	3,5	4	6,5	6,5		
	Starting current, A 230 V	45	45	45	50	50	50	60	60	60	60	60	45	45	45	50	50	50	60	60	60	60			
	Starting current, A 115 V	45	45	45	50	50	50	60	60	60	60	60	45	45	45	50	50	50	60	60	60	60			
Protection	Current (power) protection, %	105-150																							
	Output overvoltage protection, V	30-36																							
Environment	Operating temperature, °C	-20 ~ +70																							
	Relative humidity, % (without condensation)	20-90																							
	Temperature °C, humidity % (during storage)	-40 ~ +85 10-95																							
	Permissible vibration, Hz	10~500 Hz, 2G 10 min. / 1 cycle, 60 min. each along the X, Y, Z axes																							
Electrical equipment safety	Breakdown voltage, I/P-O/P, kV	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5			
	Breakdown voltages, I/P-FG, kV	1,5																							
	Breakdown voltage, O/P-FG, kV	0,5																							
	Minimum insulation resistance at 500 V DC, I/P-O/P, I/P-FG, O/P-FG, MOhm	100																							
	Electromagnetic interference radiation	Complies with the requirements of EN55022 (CISPR22) Class B																							
	Harmonic current components	Complies with the requirements of EN61000-3-2,-3																							
	EMC resistance	Complies with the requirements of EN61000-4-2,-3,-4,-5; ENV50204, EN55024, application in industrial areas, conformity criterion A																							
	Case protection degree (from the front panel)	IP20																							
Other	Minimum operating time for failure at a temperature of 25 °C, thousand hours	763	645	645	681	720	648	648	347	347	327	327	763	645	645	681	720	648	648	347	347	327	327		
	Power good indication	Yes																							
	Output voltage adjustment (+V ADJ)	Yes																							
	«Dry» contacts	No																							

► Items

Appearance	Product name	Output power, W	Output current, A	Code
	OptiPower DR-15-24-1	15	0,63	284543
	OptiPower DR-30-24-1	30	1,25	284544
	OptiPower DR-45-24-1	45	2	284545
	OptiPower DR-60-24-1	60	2,5	284546
	OptiPower DR-75-24-1	75	3,2	284547
	OptiPower DR-120-24-1	120	5	284548
	OptiPower DRP-240-24-1	240	0,42	284549
	OptiPower MDR-10-24-1	10	1	284538
	OptiPower MDR-20-24-1	20	1,7	284539
	OptiPower MDR-40-24-1	40	2,5	284540
	OptiPower MDR-60-24-1	60	4	284541
	OptiPower MDR-100-24-1	100	10	284542
	OptiPower LRS 35-24 1.5A	35	1,5	328865
	OptiPower LRS 50-24 2.2A	50	2,2	328872
	OptiPower LRS 60-24 2.5A	60	2,5	328875
	OptiPower LRS 75-24 3.5A	75	3,2	328877
	OptiPower LRS 100-24 4.5A	100	4,5	328879
	OptiPower LRS 120-24 5A	120	5	328881
	OptiPower LRS 150-24 6.5A	150	6,5	328883
	OptiPower LRS 200-24 8.8A	200	8,5	328885
	OptiPower LRS 250-24 10.4A	250	10	328887
	OptiPower LRS 350-24 14.6A	350	14,6	328889
	OptiPower LRS 400-24 16.6A	400	16,6	328891
	OptiPower LRS 35-12 3A	35	3	328864
	OptiPower LRS 50-12 4.2A	50	4,2	328868
	OptiPower LRS 60-12 5A	60	5	328873
	OptiPower LRS 75-12 6A	75	6	328876
	OptiPower LRS 100-12 8.5A	100	8,5	328878
	OptiPower LRS 120-12 10A	120	10	328880
	OptiPower LRS 150-12 12.5A	150	12,5	328882
	OptiPower LRS 200-12 17A	200	17	328884
	OptiPower LRS 250-12 21A	250	20	328886
	OptiPower LRS 350-12 29A	350	29	328888
	OptiPower LRS 400-12 33.3A	400	33	328890

► Mounting and connection

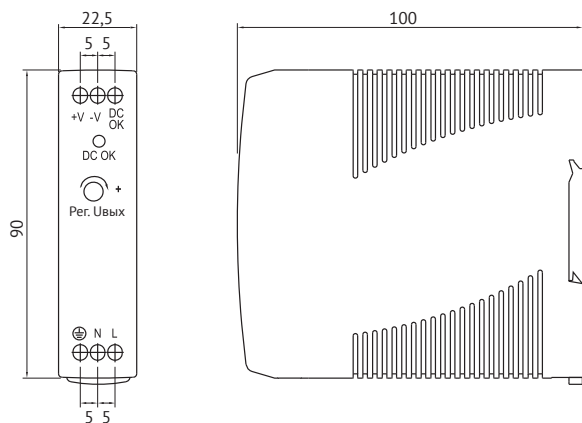
Power supply unit connection diagram



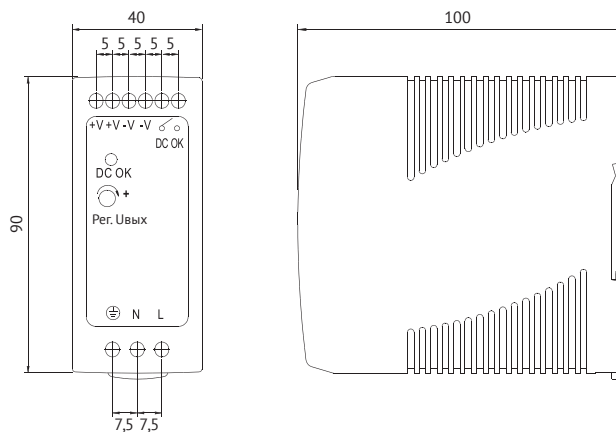
Power supply units can be mounted on standard din-rails of types TS-35/7.5 or TS-35/15.

► Overall dimensions (mm)

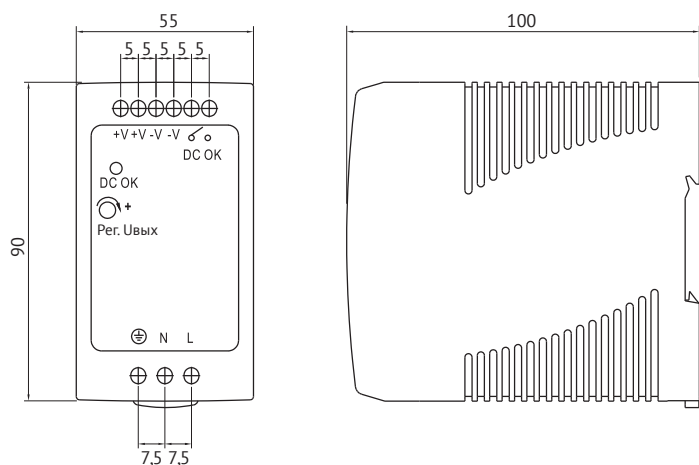
Power supply unit MDR-10, 20



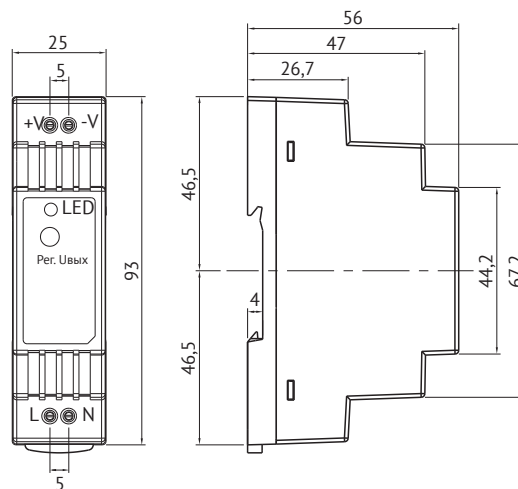
Power supply unit MDR-40, 60



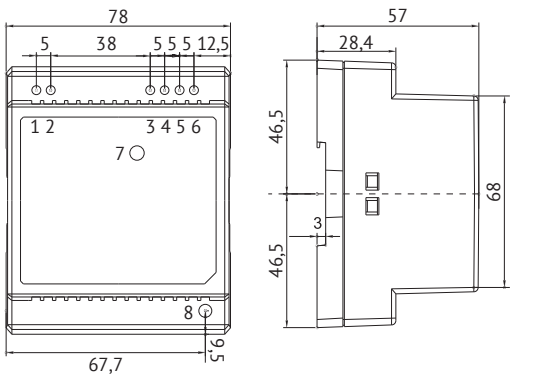
Power supply unit MDR-100



Power supply unit DR-15

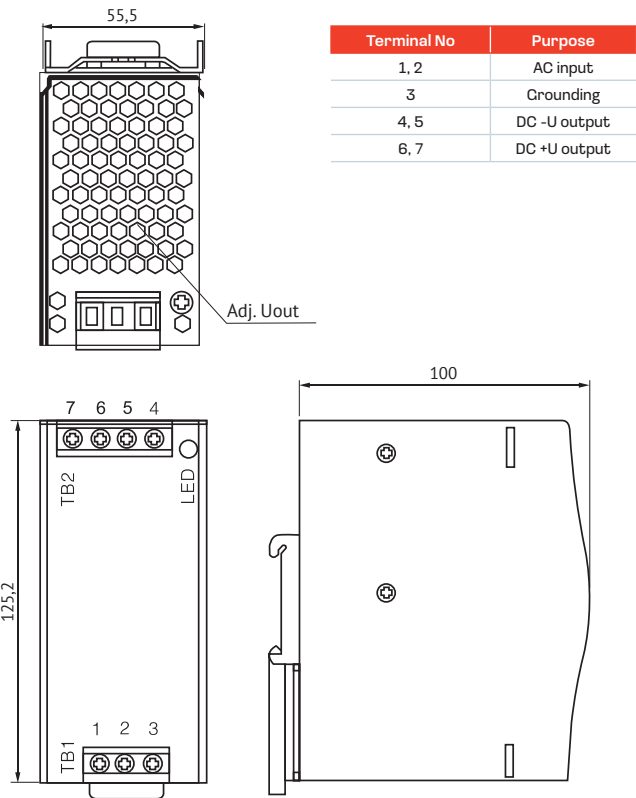


Power supply unit DR-30, 45, 60

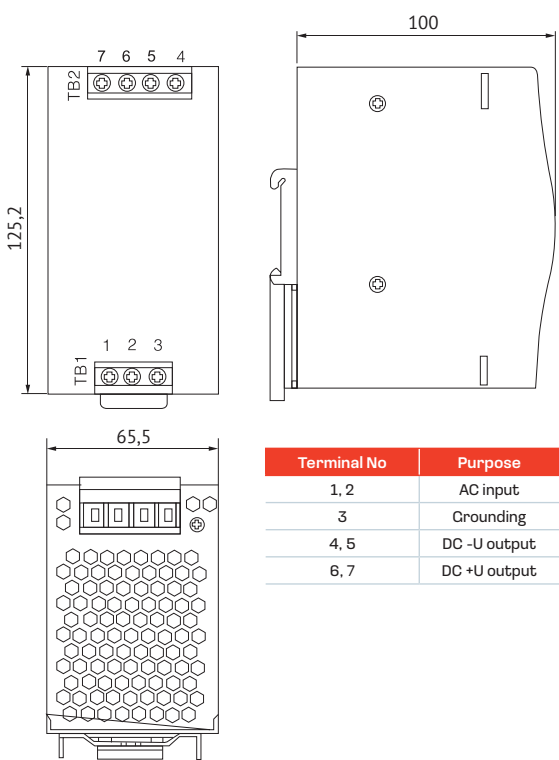


Terminal No	Purpose	Terminal No	Purpose
1	AC/N	5, 6	-V
2	AC/L	7	LED
3, 4	+V	8	Uout adj.

Power supply unit DR-75



Power supply unit DR-120



Power supply unit DR-240

