

PFC Capacitors in sheet steel cases

Power Factor Correction Capacitors in sheet steel cases



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Power Factor Correction Capacitors in sheet steel cases

Power Capacitors type LKN and LKSLT for fixed compensation of, for example, motors and transformers.

	LKN	LKSLT
		
Sheet steel case	•	•
With terminal block	•	
Ingress protection IP54	•	
With fuse switch		•
Ingress protection IP 20		•
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LKN / LKSLT

Power Factor Correction Capacitors in sheet steel cases

Power Capacitors type LKN and LKSLT for fixed compensation of, for example, motors and transformers.

- Power range: 7.5 to 100 kvar per case
- Ready for connection
- For floor installation or wall mounting
- Power Factor Correction Capacitors LKT dry-type with four safety features

Application Recommendations

Power Factor Correction Capacitors in sheet steel cases are mainly used for fixed compensation of motors and transformers. They are suitable for power factor correction in supply networks without harmonic distortion.

Attention: Even low harmonic levels can be amplified by network resonances. High harmonic levels can overload or damage all electrical devices and machines in the network.

Today, networks without harmonic distortion are quite rare. Therefore we generally recommend installing fixed capacitors with harmonic filter reactors (page 59 ff.).

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Power Range

Power Factor Correction Capacitors in sheet steel case:

- **LKN:** 7.5 to 100 kvar
- **LKSLT:** 7.5 to 60 kvar

Construction

Sheet steel case with plinth for floor mounting and lugs for wall mounting.

The case contains:

- Self-healing LKT type power capacitors with low loss self-healing dielectric made from segmented metallised polypropylene film. Filled with a PCB-free filler. With discharge resistors, as per EN 60831-1 and -2 as well as IEC 60831-1 and -2
- Fuse switch disconnecter size NH00 (only available for **LKSLT**)

Installation Site

The place of installation must comply with the requirements of the ingress protection and ambient temperature concerned.

Regulations

For installation and connection of Power Factor Correction Capacitors in Germany the following regulations must be complied with: VDE 0100, VDE 0105, VDE 0560 Part 46 and VDE 0106 Part 100 (German Association of Electrical Engineers). In other countries the equivalent local regulations must be followed.

Connection

The supply cable enters the cabinet through a cable gland and is connected to the studs on the junction plate (**LKN**). In case of an **LKSLT** it is directly connected at the fuse switch disconnecter.

Technical Data

Rated voltage	400 V/50 Hz
Rated voltage of capacitors	440 V/50 Hz
Ambient temperature	-10 °C to +45 °C
Humidity	Max. 90 %, no condensation
Case colour	RAL 7035
Standards	EN 60831-1 and -2 IEC 60831-1 and -2 EN 61921 IEC 61921 EN 61439-1 and -2 IEC 61439-1 and 2

Important Notes

The presence of inductive and capacitive reactances in the low voltage network means that the harmonics generated there, together with those fed in from the medium voltage network, can be amplified many times over due to resonance. Particularly in industrial networks with loads that generate harmonics, the use of conventional power factor correction systems without Harmonic Filter Reactors is not advisable. Instead, detuned systems should be installed. See the LKNS and LKND series of detuned power capacitors.

For further information on power factor correction and harmonics please refer to our "Manual of Power Factor Correction".

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Power Factor Correction Capacitors in sheet steel cases

Article- No.	Type	Rated power [kvar]	Rated capacity [μF]	Dimensions			Gland	Weight approx. [kg]	Protection IP
				Width [mm]	Height [mm]	Depth [mm]			

Power Factor Correction Capacitors in sheet steel cases, rated mains voltage: 400 V / 50 Hz

Type series: LKN

31-30075	LKN 7.5-400-D32	7.5	3 x 49.7	150	380	80	PG 16	5	54
31-30100	LKN 10-400-D32	10	3 x 66.3	150	380	80	PG 16	6	54
31-30125	LKN 12.5-400-D32	12.5	3 x 82.9	220	380	80	PG 29	6	54
31-30150	LKN 15-400-D32	15	3 x 99.5	220	380	80	PG 29	7	54
31-30200	LKN 20-400-D32	20	3 x 132.6	250	450	150	PG 36	10	54
31-30250	LKN 25-400-D32	25	3 x 165.8	250	450	150	PG 36	10	54
31-30300	LKN 30-400-D32	30	3 x 198.9	250	450	150	PG 36	11	54
31-30400	LKN 40-400-D32	40	3 x 265.3	410	450	150	PG 42	15	54
31-30500	LKN 50-400-D32	50	3 x 331.6	410	450	150	PG 42	15	54
31-30600	LKN 60-400-D32	60	3 x 397.9	410	450	150	PG 42	16	54
31-30603	LKN 75-400-D32	75	3 x 497.4	525	500	195	PG 42	22	54
31-30604	LKN 80-400-D32	80	3 x 530.5	525	500	195	PG 42	23	54
31-30606	LKN 85-400-D32	85	3 x 563.7	525	500	195	PG 42	23	54
31-30605	LKN 100-400-D32	100	3 x 663.2	525	500	195	PG 42	25	54

Power Factor Correction Capacitors in sheet steel cases, with switch disconnecter, rated mains voltage: 400 V / 50 Hz

Type series: LKSLT

31-21075	LKSLT 7.5-400-D30	7.5	3 x 49.7	410	410	184	PG 16	12	20
31-21100	LKSLT 10-400-D30	10	3 x 66.3	410	410	184	PG 16	15	20
31-21125	LKSLT 12.5-400-D30	12.5	3 x 82.9	410	410	184	PG 29	13	20
31-21150	LKSLT 15-400-D30	15	3 x 99.5	410	410	184	PG 29	15	20
31-21200	LKSLT 20-400-D30	20	3 x 132.6	410	410	184	PG 36	14	20
31-21250	LKSLT 25-400-D30	25	3 x 165.8	410	410	184	PG 36	16	20
31-21300	LKSLT 30-400-D30	30	3 x 198.9	410	410	184	PG 36	17	20
31-21400	LKSLT 40-400-D30	40	3 x 265.3	410	410	184	PG 42	17	20
31-21500	LKSLT 50-400-D30	50	3 x 331.6	560	410	184	PG 42	18	20
31-21761	LKSLT 55-400-D30	55	3 x 364.7	560	410	184	PG 42	20	20
31-21600	LKSLT 60-400-D30	60	3 x 397.9	560	410	184	PG 42	20	20

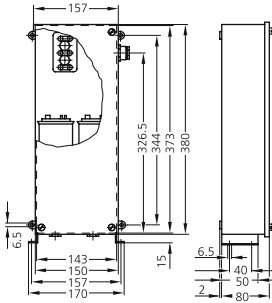
Other rated voltages, frequencies and power ratings on request

Recommended supply lead cross sections: please refer to the technical annex (page 141 ff.)

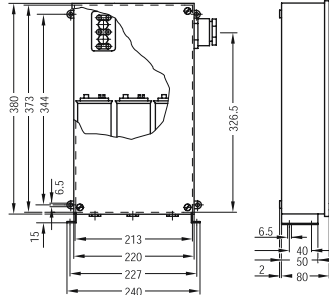
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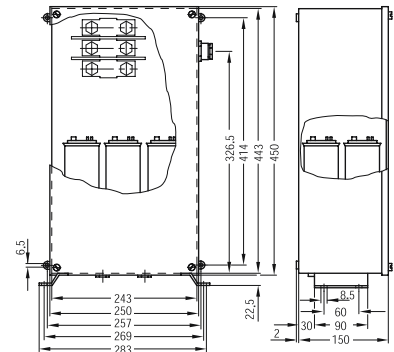
Dimensions



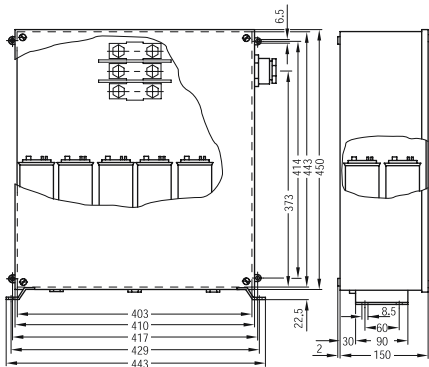
Dimensional drawing LKN
Case type 1
(7.5 to 10 kvar)



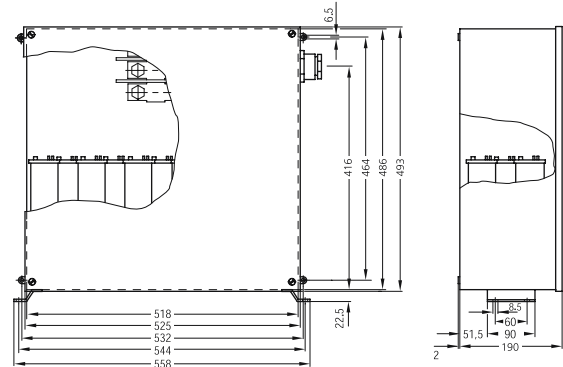
Dimensional drawing LKN
Case type 2
(12.5 to 15 kvar)



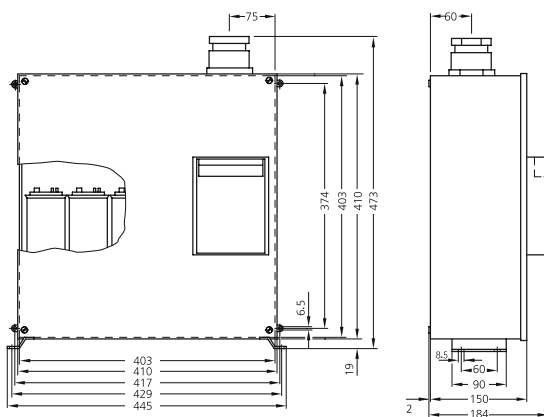
Dimensional drawing LKN
Case type 3
(20 to 30 kvar)



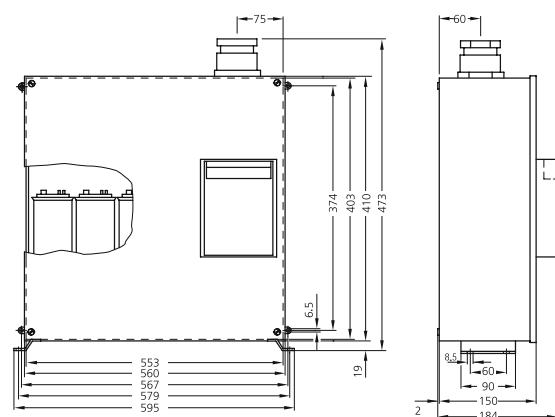
Dimensional drawing LKN
Case type 4
(40 to 60 kvar)



Dimensional drawing LKN
Case type 5
(75 to 100 kvar)



Dimensional drawing LKSLT
Case type 1 (7.5 to 40 kvar)



Dimensional drawing LKSLT
Case type 2 (50 to 60 kvar)

All dimensions in mm