

Lamp Power Factor Capacitors KNF

Type KNF50xx

Safety device

Applications

The capacitors type KNF are used for improvement the power factor on fluorescent, mercury, metalhallogen and sodium lamps.

With the proper choice of the capacitor in accordance with the power and lamp type the right power factor correction can be obtained.



TECHNICAL DATA

Rated voltage U_n :	250 VAC, 450 VAC
Rated capacitance C_n :	see tables
Capacitance tolerance:	$\pm 4 \%$, $\pm 5 \%$, $\pm 10 \%$
Rated frequency f_n :	50 to 60 Hz
Loss angle $\tan\delta$:	max. 10×10^{-4} at U_n and 50 Hz
Test voltage terminal to terminal:	$2 \times U_n$, 50 Hz, 2 s
Test voltage terminal to case:	2500 V, 50 Hz, 2 s
Climate class:	see tables
Temperature range:	- 25 °C to + 85 °C - 40 °C to + 100 °C, - 40 °C to + 85 °C
Compliance with standards:	EN 61048, EN 61049

The Iskra capacitors type KNF do not contain any PCB or PCN

Design

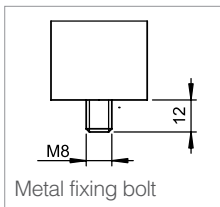
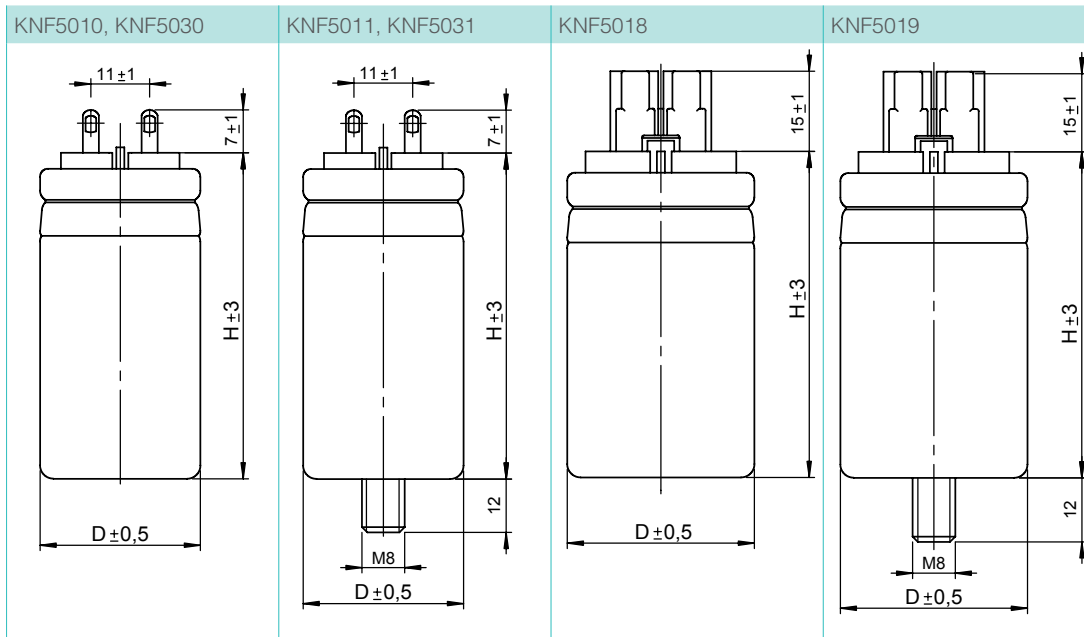
The KNF capacitors are made of metallized polypropylene film. The mechanical and climatic protection is provided by aluminium can and thermoplastic washer (type KNF50xx) or plastic can (type KNF61xx). The type KNF50xx is also protected with the mechanical disconnecter. The metallized version provides self-healing properties. This design assures long life and reliable operation.

The terminals are on the top of the capacitors in the form of soldering tags which can be used for soldering the contact wires or as the contact terminals for the screwless connector.

The following types of capacitors are available:

- with the incorporated discharging resistor
- with the fixing bolt on the bottom of the capacitor
- QUICK-FIT fixing lugs
- with the screwless connector

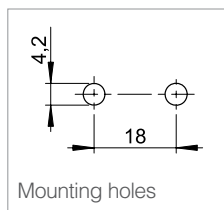
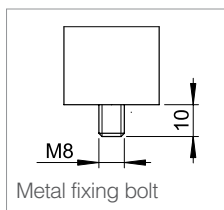
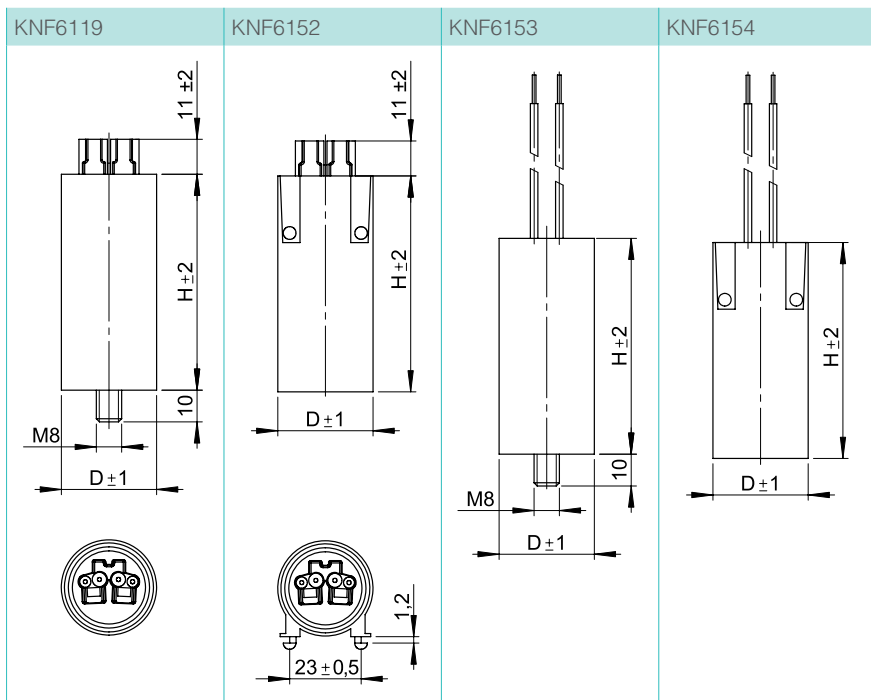
Standard designs of capacitor type KNF50xx



Standard values and dimensions of capacitors type KNF50xx, 250 VAC and 450 VAC

Capacitance	Voltage	250 VAC 50/60 Hz
	Climate class	40/100/21
	KNF5018, KNF5019 KNF5010, KNF5030 KNF5011, KNF5031	
C (µF)	D x H (mm)	
2	25 x 61	
2,5	25 x 61	
3	25 x 61	
3,5	25 x 61	
4	25 x 61	
4,5	25 x 88	
4,5	25 x 61	
4,5	30 x 61	
5	25 x 88	
6	25 x 88	
7	25 x 88	
7	30 x 61	
8	25 x 88	
8	30 x 88	
9	30 x 88	
10	30 x 88	
12	30 x 88	
12	35 x 76	
13,5	30 x 88	
13,5	35 x 88	
14	35 x 88	
15	35 x 88	
16	35 x 88	
18	35 x 88	
20	35 x 88	
20	40 x 88	
20	35 x 110	
21	35 x 110	
25	40 x 88	
30	45 x 88	
30	40 x 110	

Capacitance	Voltage	450 VAC 50 Hz
	Climate class	25/085/21
	KNF5018, KNF5019 KNF5010, KNF5030 KNF5011, KNF5031	
C (µF)	D x H (mm)	
2	25 x 61	
2	25 x 88	
2,4	25 x 88	
2,5	25 x 88	
2,7	25 x 88	
2,7	25 x 61	
2,8	25 x 88	
2,9	25 x 88	
3	25 x 88	
3,2	25 x 88	
3,2	30 x 61	
3,3	25 x 88	
3,4	25 x 88	
3,4	30 x 61	
3,5	25 x 88	
3,6	25 x 88	
3,7	25 x 88	
4	25 x 88	
4,4	30 x 88	
4,6	30 x 88	
5	30 x 88	
5,1	30 x 88	
5,2	30 x 88	
5,3	30 x 88	
5,4	30 x 88	
5,5	30 x 88	
5,7	30 x 88	
5,9	30 x 88	
6	30 x 88	
6,3	30 x 88	
6,8	30 x 88	
7,2	35 x 88	
7,8	35 x 88	
8,4	35 x 88	
8,7	35 x 88	
9	35 x 88	
10	35 x 88	



Standard values and dimensions of capacitors type KNF61xx

Capacitance	Voltage	250 VAC 50/60 Hz
	Climate class	40/85/21
	KNF6119, KNF6152 KNF6153, KNF6154	
C (µF)	D x H (mm)	
2	25 x 55	
2,5	25 x 55	
3	25 x 55	
3,15	25 x 55	
3,5	25 x 55	
4	25 x 55	
4,2	25 x 55	
4,5	25 x 68	
5	25 x 68	
5,5	25 x 68	
6	25 x 68	
6,3	25 x 68	

Capacitance	Voltage	250 VAC 50/60 Hz
	Climate class	40/85/21
	KNF6119, KNF6152 KNF6153, KNF6154	
C (µF)	D x H (mm)	
6,5	25 x 68	
6,8	30 x 68	
7	30 x 68	
7,2	30 x 68	
7,5	30 x 68	
8	30 x 68	
8,4	30 x 68	
9	30 x 68	
10	30 x 68	
11	35 x 68	
12	35 x 68	
12,5	35 x 68	

Capacitance	Voltage	250 VAC 50/60 Hz
	Climate class	40/85/21
	KNF6119, KNF6152 KNF6153, KNF6154	
C (µF)	D x H (mm)	
13	35 x 68	
13,5	35 x 68	
13,5	30 x 92	
14	35 x 68	
14	30 x 92	
15	35 x 68	
15	30 x 92	
16	35 x 68	
16	30 x 92	
18	35 x 92	
20	35 x 92	
22	35 x 92	
25	35 x 92	

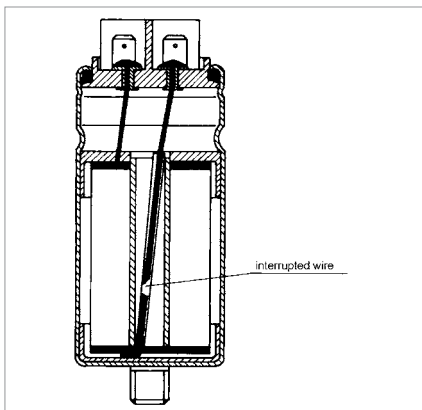
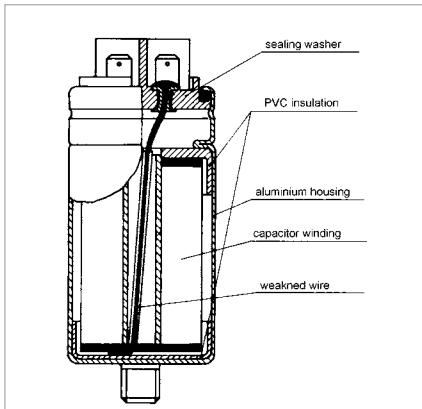
Type designation data:

	A1	A2	A3	A4	A5	A6	A7
K							
Dielectric							
Application							
Manufacture							
Case material and finish							
Design							

A1	K	capacitor
A2	N	Dielectric metallized polypropylene film
A3	F	power factor correction on lamps
A4	5	impregnated, closed with plastic washer, mechanical disconnecter incorporated
	6	closed with plastic washer, dry construction
A5	0	aluminium, cylindrical
	1	plastic, cylindrical
A6 A7	10	soldering tags 3.0 × 0.8 mm
	11	soldering tags 3.0 × 0.8 mm, fixing bolt
	18	screwless connector
	19	screwless connector, fixing bolt
	30	soldering tags 3 × 0.8 mm, discharging resistor
	31	soldering tags 3 × 0.8 mm, discharging resistor, fixing bolt
	52	screwless connector, QUICK-FIT fixing lugs
	53	solid wire with insulation, fixing bolt, discharging resistor
	54	solid wire with insulation, QUICK-FIT fixing lugs, discharging resistor

Operating of the Mechanical Disconnecter

After many breakdowns, the pressure inside the capacitor case begins to enlarge and the weaker (intended) areas of the case begin to expand. One internal terminal which is also weakened, cannot withstand the expansion and consequently breaks resulting in an interruption of the electrical circuit.



Other Markings

Temperature range:

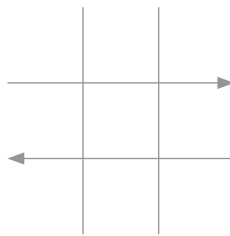
- first number: - 25 °C, - 40 °C = the lowest allowed ambient temperature
- second number: + 85 °C, + 100 °C = the highest allowed ambient temperature



Disconnecter incorporated



Discharging resistor incorporated



Self-healing capacitor version

Production programme

Capacitors for use in electronics

- polyester film capacitors, metallized and nonmetallized
- polypropylene film capacitors, metallized and nonmetallized

Capacitors and filters for radio interference suppression

Spark suppression capacitors for motor cars

Motor running & motor starting capacitors

Power factor capacitors for lamps

Power factor capacitors and automatic power factor banks

Electronic regulators for power factor banks

Capacitors for inductive heating

Tools and production equipment and machinery

Instructions for ordering

When ordering the following data are needed:

- the type designation of the capacitor
- the rated voltage and rated frequency
- the rated capacitance and capacitance tolerance
- the climate class
- the quantity and the required lead time