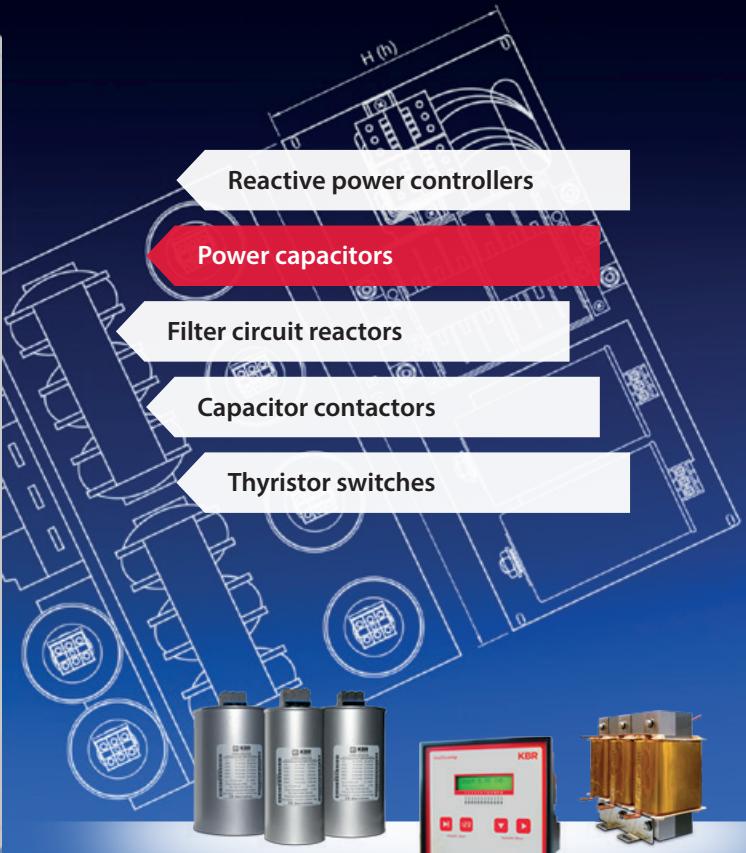


Power Quality  
Components for reactive power compensation

# MADE IN GERMANY

Components for reactive power compensation.



One System. Best Solutions.



**KBR**  
Energy Management

# Power capacitors



**Power capacitors for reactive current compensation in single-phase and 3-phase versions, developed for the highest requirements. Apart from a long operating life and high current and voltage load capacity, safety in case of overload (all-pole overpressure disconnector) is a crucial advantage of the compact dry technology components. Other features are good heat dissipation, low self-heating as well as reliable performance at high ambient temperatures.**



## multicond

rated  
voltage  $U_h$

280, 415, 440,  
480, 525, 690  
or 800 V

rated  
frequency  $f$

50/60 Hz



### Power capacitor for reactive current compensation

#### Highlights

- Power from 2.8 to 50 kvar
- Capacitor rated voltage of 280, 415, 440, 480, 525, 690 or 800 V
- High level of safety through dry technology and 3-phase internal overpressure disconnector
- Including compact discharge resistor
- Long operating life

A **construction diagram** is shown on page 11.

**multicond-UHPC** power capacitors stand out through their combined safety concept with a self-restoring effect and 3-phase internal overpressure disconnector.

In low voltage networks, inadmissibly high voltage peaks of up to 3 times the rated voltage can occur through switching operations. If these loads lead to flashovers in the dielectric, the self-restoring effect is triggered. The capacitor remains fully functional as this happens. The 3-phase internal overpressure disconnector is triggered if the amount of gas released by the many self-restoring procedures causes a

specific internal pressure. The lid of the aluminum casing bends slightly and the fuse disconnects all poles of the capacitor from the network.

**Note:** Depending on the network voltage and when used in detuned systems, a correspondingly higher capacitor rated voltage must be selected. Beyond this, we recommend using power capacitors of the multicond-premium series in networks with increased harmonic load.

Capacitor rated voltage: **280 V – 3-phase**

FREQUENCY	POWER ON NETWORK VOLTAGE												CONSTRUCTION TYPE	TYPE	Item no.	
	220V Hz	kvar	230V kvar	kvar	280V –	–	–	–	–	–	–	–				
	220V 50	4.6	5.0	7.4	–	–	–	–	–	–	–	–	15.3	3 x 100.1	2	premium UHPC-7.4-280-3P
	230V 60	5.5	6.0	8.9	–	–	–	–	–	–	–	–	18.4	1	basic UHPC-7.4-280-3P	
	280V 50	6.9	7.5	11.1	–	–	–	–	–	–	–	–	22.9	3 x 150.2	3	premium UHPC-11.1-280-3P
	380V 60	8.2	9.0	13.3	–	–	–	–	–	–	–	–	27.5	2	basic UHPC-11.1-280-3P	
	400V 50	9.1	10.0	14.8	–	–	–	–	–	–	–	–	30.5	3 x 200.3	3	premium UHPC-14.8-280-3P
	415V 60	11.0	12.0	17.8	–	–	–	–	–	–	–	–	36.6	3	basic UHPC-14.8-280-3P	

Capacitor rated voltage: **415 V – 3-phase**

FREQUENCY	POWER ON NETWORK VOLTAGE												CONSTRUCTION TYPE	TYPE	Item no.	
	220V Hz	kvar	230V kvar	kvar	280V kvar	380V kvar	400V kvar	415V kvar	–	–	–	–	–	A	μF	
	220V 50	14,1	15,4	22,8	41,9	46,4	50,0	–	–	–	–	–	65,6	3 x 308,0	5	UHPC-50.0-415-3P
	230V 60	16,9	18,4	27,3	50,3	55,7	60,0	–	–	–	–	–	78,7			23497

Capacitor rated voltage: **440 V – 3-phase**

FREQUENCY	POWER ON NETWORK VOLTAGE												CONSTRUCTION TYPE	TYPE	Item no.	
	220V Hz	kvar	230V kvar	kvar	280V kvar	380V kvar	400V kvar	415V kvar	440V kvar	–	–	–	–	A	μF	
	220V 50	0.7	0.8	1.1	2.1	2.3	2.5	2.8	–	–	–	–	4.4	3 x 15.4	4	UHPC-2.8-440-3P replaced by UHPC-4.0-525-3P
	230V 60	0.8	0.9	1.4	2.5	2.8	3.0	3.4	–	–	–	–	5.3			10516
	280V 50	1.4	1.5	2.3	4.2	4.6	5.0	5.6	–	–	–	–	8.8	3 x 30.8	4	UHPC-5.6-440-3P replaced by UHPC-8.0-525-3P
	380V 60	1.7	1.8	2.7	5.0	5.6	6.0	6.7	–	–	–	–	10.6			10517
	400V 50	2.5	2.7	4.0	7.5	8.3	8.9	10.0	–	–	–	–	13.1	3 x 54.8	1	premium UHPC-10.0-440-3P
	415V 60	3.0	3.3	4.9	8.9	9.9	10.7	12.0	–	–	–	–	15.7		1	light UHPC-10.0-440-3P
	440V 50	2.8	3.1	4.5	8.4	9.3	10.0	11.2	–	–	–	–	14.7	3 x 61.4	1	premium UHPC-11.2-440-3P
	440V 60	3.4	3.7	5.4	10.0	11.1	2.0	13.4	–	–	–	–	17.6		1	basic UHPC-11.2-440-3P
															10312	
															10318	
															21776	

Table continued on next page.

Construction types and dimensions at page 11

# Power capacitors

## multicond

Capacitor rated voltage: **440 V – 3-phase**

FREQUENCY Hz	POWER ON NETWORK VOLTAGE										CURRENT ON MAX. VOLTAGE A	RATED CAPACITANCE μF	CONSTRUCTION TYPE	TYPE	Item no.
	220V kvar	230V kvar	280V kvar	380V kvar	400V kvar	415V kvar	440V kvar	–	–	–					
														multicond...	
50	3.0	3.3	4.9	9.0	10.0	10.8	12.1	–	–	–	15.9	3 x 66.3	1	premium UHPC-12.1-440-3P	10313
60	3.6	4.0	5.9	10.8	12.0	12.9	14.5	–	–	–	19.1		1	basic UHPC-12.1-440-3P	10319
														light UHPC-12.1-440-3P	21769
50	3.5	3.9	5.7	10.5	11.7	12.5	14.1	–	–	–	18.5	3 x 77.3	1	premium UHPC-14.1-440-3P	10314
60	4.2	4.6	6.9	12.6	14.0	15.1	16.9	–	–	–	22.2		1	basic UHPC-14.1-440-3P	10320
														light UHPC-14.1-440-3P	21777
50	3.8	4.1	6.1	11.3	12.5	13.4	15.1	–	–	–	19.8	3 x 82.8	1	premium UHPC-15.1-440-3P	10315
60	4.5	5.0	7.3	13.5	15.0	16.1	18.1	–	–	–	23.8		1	basic UHPC-15.1-440-3P	10321
														light UHPC-15.1-440-3P	21778
50	4.3	4.7	6.9	12.8	14.1	15.2	17.1	–	–	–	22.4	3 x 93.7	2	premium UHPC-17.1-440-3P	10295
60	5.1	5.6	8.3	15.3	17.0	18.3	20.5	–	–	–	26.9		1	basic UHPC-17.1-440-3P	10323
														light UHPC-17.1-440-3P	21779
50	4.5	5.0	7.4	13.6	15.0	16.2	18.2	–	–	–	23.9	3 x 99.7	2	premium UHPC-18.2-440-3P	10296
60	5.5	6.0	8.8	16.3	18.0	19.4	21.8	–	–	–	28.7		1	basic UHPC-18.2-440-3P	10324
														light UHPC-18.2-440-3P	21770
50	5.0	5.5	8.1	14.9	16.5	17.8	20.0	–	–	–	26.2	3 x 109.6	2	premium UHPC-20.0-440-3P	10297
60	6.0	6.6	9.7	17.9	19.8	21.3	4.0	–	–	–	31.4		2	basic UHPC-20.0-440-3P	10325
														light UHPC-20.0-440-3P	21412
50	5.3	5.7	8.5	15.7	17.4	19.0	21.0	–	–	–	27.6	3 x 115.1	2	premium UHPC-21.0-440-3P	21422
60	6.3	6.9	10.2	18.9	20.8	22.0	25.2	–	–	–	33.1		2	basic UHPC-21.0-440-3P	10327
														light UHPC-21.0-440-3P	21413
50	5.3	5.8	8.6	15.8	17.5	18.9	21.2	–	–	–	27.8	3 x 116.2	2	premium UHPC-21.2-440-3P	10298
60	6.4	7.0	10.3	19.0	21.0	22.6	25.4	–	–	–	33.4		2	basic UHPC-21.2-440-3P	10328
														light UHPC-21.2-440-3P	21780
50	5.6	6.1	9.1	16.8	18.6	20.0	22.5	–	–	–	29.5	3 x 123.3	2	premium UHPC-22.5-440-3P	22975
60	6.7	7.4	10.9	20.1	22.3	24.0	27.0	–	–	–	35.4				
50	6.0	6.6	9.8	18.0	20.0	21.5	24.2	–	–	–	31.8	3 x 132.6	2	premium UHPC-24.2-440-3P	10299
60	7.3	7.9	11.8	21.7	24.0	25.8	29.0	–	–	–	38.2		2	basic UHPC-24.2-440-3P	10331
														light UHPC-24.2-440-3P	21772
50	6.2	6.8	10.1	18.6	20.7	22.2	25.0	–	–	–	32.8	3x 137.0	2	light UHPC-25.0-440-3P	21781
60	7.5	8.2	12.1	22.4	24.8	26.7	30.0	–	–	–	39.4				
50	6.8	7.4	11.0	20.3	22.5	24.2	27.2	–	–	–	35.7	3 x 149.1	3	premium UHPC-27.2-440-3P	10308
60	8.2	8.9	13.2	24.3	27.0	29.0	32.6	–	–	–	42.8		2	basic UHPC-27.2-440-3P	10334
														light UHPC-27.2-440-3P	21782
50	7.0	7.7	11.4	21.0	23.2	25.0	28.1	–	–	–	36.9	3 x 154.0	3	premium UHPC-28.1-440-3P	10300
60	8.4	9.2	13.7	25.2	27.9	30.0	33.7	–	–	–	44.3		2	basic UHPC-28.1-440-3P	10335
														light UHPC-28.1-440-3P	21783
50	7.6	8.3	12.3	22.6	25.0	27.0	30.3	–	–	–	39.8	3 x 166.1	3	premium UHPC-30.3-440-3P	10303
60	9.1	9.9	14.7	27.1	30.1	32.4	36.4	–	–	–	47.8		2	basic UHPC-30.3-440-3P	10336
														light UHPC-30.3-440-3P	21773
50	7.8	8.5	12.6	23.3	25.8	27.8	32.2	–	–	–	40.9	3x 171.0	2	light UHPC-31.2-440-3P	21784
60	9.4	10.2	15.2	27.9	30.9	33.3	37.4	–	–	–	49.1				
50	9.1	9.9	14.7	27.1	30.0	32.3	36.3	–	–	–	47.6	3 x 198.9	3	premium UHPC-36.3-440-3P	10305
60	10.9	11.9	17.6	32.5	36.0	38.7	43.6	–	–	–	57.1		3	basic UHPC-36.3-440-3P	10337
														light UHPC-36.3-440-3P	21774
50	10.0	10.9	16.2	29.8	33.1	35.6	40.0	–	–	–	52.5	3x 219.2	3	light UHPC-40.0-440-3P	21785
60	12.0	13.1	19.4	35.8	39.7	42.7	48.0	–	–	–	63.0				

Up to a power of 30.3 kvar, 440V capacitors are also available in single-phase version. Other capacitor powers on request.

Version: August 2022. Subject to change.

Capacitor rated voltage: **480 V – 3-phase**

FREQUENCY Hz	POWER ON NETWORK VOLTAGE												CONSTRUCTION TYPE	TYPE	Item no.	
	220V kvar	230V kvar	280V kvar	380V kvar	400V kvar	415V kvar	440V kvar	480V kvar	–	–	–	–				
														multicond...		
50	2.3	2.5	3.7	6.8	7.5	8.1	9.1	10.8	–	–	–	13.0	3 x 49.7	1	premium UHPC-10.8-480-3P	10377
60	2.7	3.0	4.4	8.1	9.0	9.7	10.9	13.0	–	–	–	15.6		1	basic UHPC-10.8-480-3P	10386
														1	light UHPC-10.8-480-3P	21786
50	2.5	2.7	4.0	7.5	8.3	8.9	10.0	11.9	–	–	–	14.3	3 x 54.8	1	premium UHPC-11.9-480-3P	10378
60	3.0	3.3	4.9	8.9	9.9	10.7	12.0	14.3	–	–	–	17.2		1	basic UHPC-11.9-480-3P	10387
														1	light UHPC-11.9-480-3P	21787
50	2.6	2.9	4.3	7.8	8.7	9.3	10.5	12.5	–	–	–	15.0	3 x 57.6	1	premium UHPC-12.5-480-3P	10379
60	3.2	3.4	5.1	9.4	10.4	11.2	12.6	15.0	–	–	–	18.0		1	basic UHPC-12.5-480-3P	10388
														1	light UHPC-12.5-480-3P	21788
50	3.0	3.3	4.9	9.0	9.9	10.7	12.0	14.3	–	–	–	17.2	3 x 65.9	1	premium UHPC-14.3-480-3P	10380
60	3.6	3.9	5.8	10.8	11.9	12.8	14.4	17.2	–	–	–	20.6		1	basic UHPC-14.3-480-3P	10389
														1	light UHPC-14.3-480-3P	21789
50	3.5	3.8	5.7	10.5	11.6	12.5	14.0	16.7	–	–	–	20.1	3 x 76.9	2	premium UHPC-16.7-480-3P	10365
60	4.2	4.6	6.8	12.6	13.9	15.0	16.8	20.0	–	–	–	24.1		1	basic UHPC-16.7-480-3P	10390
														1	light UHPC-16.7-480-3P	21790
50	3.8	4.1	6.1	11.2	12.4	13.4	15.0	17.9	–	–	–	21.5	3 x 82.4	2	premium UHPC-17.9-480-3P	10366
60	4.5	4.9	7.3	13.5	14.9	16.1	18.0	21.5	–	–	–	25.8		1	basic UHPC-17.9-480-3P	10391
														1	light UHPC-17.9-480-3P	21791
50	4.4	4.8	7.1	13.0	14.4	16.0	17.5	20.8	–	–	–	25.0	3 x 95.8	2	premium UHPC-20.8-480-3P	21425
60	5.2	5.7	8.5	15.6	17.3	19.0	21.0	25.0	–	–	–	30.0		1	basic UHPC-20.8-480-3P	10392
														1	light UHPC-20.8-480-3P	21414
50	5.0	5.5	8.1	14.9	16.5	17.8	20.0	23.8	–	–	–	28.6	3 x 109.6	2	premium UHPC-23.8-480-3P	10367
60	6.0	6.6	9.7	17.9	19.8	21.3	24.0	28.6	–	–	–	34.3		2	basic UHPC-23.8-480-3P	10393
														2	light UHPC-23.8-480-3P	21792
50	5.3	5.7	8.5	15.7	17.4	18.7	21.0	25.0	–	–	–	30.1	3 x 115.1	2	premium UHPC-25.0-480-3P	10368
60	6.3	6.9	10.2	18.8	20.8	22.4	25.2	30.0	–	–	–	36.1		2	basic UHPC-25.0-480-3P	10394
														2	light UHPC-25.0-480-3P	21794
50	5.8	6.4	9.5	17.4	19.3	20.8	23.4	27.8	–	–	–	33.4	3 x 128.0	2	light UHPC-27.8-480-3P	21795
60	7.0	7.7	11.3	20.9	23.2	24.9	28.0	33.4	–	–	–	40.2		2		
														2		
50	6.3	6.8	10.1	18.7	20.7	22.3	5.0	29.8	–	–	–	35.8	3 x 137.2	3	premium UHPC-29.8-480-3P	10369
60	7.5	8.2	12.2	22.4	24.8	26.7	30.0	35.8	–	–	–	43.0		2	basic UHPC-29.8-480-3P	10395
														2	light UHPC-29.8-480-3P	21797
50	7.0	7.7	11.4	20.9	23.2	25.0	28.1	33.4	–	–	–	40.2	3 x 153.8	3	premium UHPC-33.4-480-3P	10371
60	8.4	9.2	13.6	25.1	27.8	30.0	33.7	40.1	–	–	–	48.2		3	basic UHPC-33.4-480-3P	10396
														2	light UHPC-33.4-480-3P	21415
50	7.5	8.2	12.1	22.4	24.8	26.7	30.0	35.7	–	–	–	42.9	3 x 164.4	3	premium UHPC-35.7-480-3P	10374
60	9.0	9.8	14.6	26.8	29.7	32.0	36.0	42.8	–	–	–	51.5		3	basic UHPC-35.7-480-3P	10397
														2	light UHPC-35.7-480-3P	21416

Up to a power of 33.4 kvar, 480V capacitors are also available in single-phase version.

Other capacitor powers on request.

Construction types and dimensions at page 11

# Power capacitors

## multicond

Capacitor rated voltage: **525 V – 3-phase**

FREQUENCY Hz	POWER ON NETWORK VOLTAGE										CURRENT ON MAX.VOLTAGE A	RATED CAPACITANCE μF	CONSTRUCTION TYPE	TYPE	Item no.	
	220V kvar	230V kvar	280V kvar	380V kvar	400V kvar	415V kvar	440V kvar	480V kvar	525V kvar	–						
50	0.7	0.8	1.1	2.1	2.3	2.5	2.8	3.3	4.0	–	–	4.4	3 x 15.4	4	UHPC-4.0-525-3P	10516
60	0.8	0.9	1.4	2.5	2.8	3.0	3.4	4.0	4.8	–	–	5.3				
50	1.4	1.5	2.3	4.2	4.6	5.0	5.6	6.7	8.0	–	–	8.8	3 x 30.8	4	UHPC-8.0-525-3P	10517
60	1.7	1.8	2.7	5.0	5.6	6.0	6.7	8.0	9.6	–	–	10.6				
50	1.6	1.7	2.5	4.6	5.1	5.5	6.2	7.4	8.8	–	–	9.7	3 x 34.0	1	premium UHPC-8.8-525-3P	23728
60	1.9	2.0	3.0	5.6	6.2	6.6	7.4	8.9	10.6	–	–	11.7				
50	1.8	1.9	2.8	5.2	5.8	6.2	7.0	8.4	10.0	–	–	11.0	3 x 38.5	1	premium UHPC-10.0-525-3P	10435
60	2.1	2.3	3.4	6.3	7.0	7.5	8.4	10.0	12.8	–	–	13.2		1	basic UHPC-10.0-525-3P	10444
50	2.0	2.1	3.2	5.9	6.5	7.0	7.9	9.4	11.2	–	–	12.3	3 x 43.1	1	premium UHPC-11.2-525-3P	23755
60	2.4	2.6	3.8	7.0	7.8	8.4	9.4	11.2	13.4	–	–	14.7				
50	2.2	2.4	3.6	6.5	7.3	7.8	8.8	10.4	12.5	–	–	13.7	3 x 48.1	1	premium UHPC-12.5-525-3P	10436
60	2.6	2.9	4.3	7.9	8.7	9.4	10.5	12.5	15.0	–	–	16.4		1	basic UHPC-12.5-525-3P	10445
															light UHPC-12.5-525-3P	21800
50	2.3	2.5	3.7	6.8	7.5	8.1	9.1	10.9	13.0	–	–	14.3	3 x 50.0	1	premium UHPC-13.0-525-3P	10437
60	2.7	3.0	4.4	8.2	9.0	9.7	10.9	13.0	15.6	–	–	17.2		1	basic UHPC-13.0-525-3P	10446
															light UHPC-13.0-525-3P	21801
50	2.6	2.9	4.3	7.9	8.7	9.4	10.5	12.5	15.0	–	–	16.5	3 x 57.7	1	premium UHPC-15.0-525-3P	10438
60	3.2	3.5	5.1	9.4	10.4	11.2	12.6	15.0	18.0	–	–	19.8		1	basic UHPC-15.0-525-3P	10447
															light UHPC-15.0-525-3P	21802
50	3.0	3.3	4.8	8.9	9.9	10.6	11.9	14.2	17.0	–	–	18.7	3 x 65.4	2	premium UHPC-17.0-525-3P	10418
60	3.6	3.9	5.8	10.7	11.8	12.7	14.3	17.0	20.4	–	–	22.4		1	basic UHPC-17.0-525-3P	10448
															light UHPC-17.0-525-3P	21803
50	3.2	3.5	5.1	9.4	10.5	11.2	12.6	15.0	18.0	–	–	19.8	3 x 69.3	2	premium UHPC-18.0-525-3P	10430
60	3.8	4.1	6.1	11.3	12.5	13.5	15.	18.0	21.6	–	–	23.8		1	basic UHPC-18.0-525-3P	10449
															light UHPC-18.0-525-3P	21804
50	3.3	3.6	5.4	9.9	11.0	11.9	13.3	15.9	19.0	–	–	20.9	3 x 73.1	2	premium UHPC-19.0-525-3P	19867
60	4.0	4.4	6.5	11.9	13.2	14.2	16.0	19.0	22.8	–	–	25.1		1	basic UHPC-19.0-525-3P	10450
															light UHPC-19.0-525-3P	21805
50	3.5	3.8	5.7	10.5	11.6	12.5	14.0	16.7	20.0	–	–	22.0	3 x 77.0	2	premium UHPC-20.0-525-3P	10431
60	4.2	4.6	6.8	12.6	13.9	15.0	16.9	20.1	24.0	–	–	26.4		2	basic UHPC-20.0-525-3P	10451
															light UHPC-20.0-525-3P	21417
50	3.7	4.0	6.0	11.0	12.2	13.1	14.7	17.5	21.0	–	–	23.1	3 x 80.8	2	premium UHPC-21.0-525-3P	10419
60	4.4	4.8	7.2	13.2	14.6	15.7	17.7	21.1	25.2	–	–	27.7		1	basic UHPC-21.0-525-3P	10452
															light UHPC-21.0-525-3P	21420
50	4.4	4.8	7.1	13.1	14.5	15.6	17.6	20.9	25.0	–	–	27.5	3 x 96.2	2	premium UHPC-25.0-525-3P	10420
60	5.3	5.8	8.5	15.7	17.4	18.7	21.1	25.1	30.0	–	–	33.0		2	basic UHPC-25.0-525-3P	10453
															light UHPC-25.0-525-3P	21808
50	5.3	5.8	8.5	15.7	17.4	18.7	21.1	25.1	30.0	–	–	33.0	3 x 115.5	3	premium UHPC-30.0-525-3P	10421
60	6.3	6.9	10.2	18.9	20.9	22.5	25.3	30.1	36.0	–	–	39.6		2	basic UHPC-30.0-525-3P	10454
															light UHPC-30.0-525-3P	21810
50	6.0	6.5	9.7	17.8	19.7	21.2	23.9	28.4	34.0	–	–	37.4	3 x 130.9	3	premium UHPC-34.0-525-3P	21874
60	7.2	7.8	11.6	21.4	23.7	25.5	28.7	34.1	40.8	–	–	44.9				
50	6.5	7.1	10.5	19.4	21.5	23.1	26.0	30.9	37.0	–	–	40.7	3 x 142.4	3	premium UHPC-37.0-525-3P	10422
60	7.8	8.5	12.6	23.3	25.8	27.7	31.2	37.1	44.4	–	–	48.8		2	basic UHPC-37.0-525-3P	10455
															light UHPC-37.0-525-3P	21421

Capacitor rated voltage: **525 V – 3-phase**

FREQUENCY	POWER ON NETWORK VOLTAGE												CONSTRUCTION TYPE	TYPE	Item no.
	220V kvar	230V kvar	280V kvar	380V kvar	400V kvar	415V kvar	440V kvar	480V kvar	525V kvar	–	–	CURRENT ON MAX. VOLTAGE	RATED CAPACITANCE		
Hz										A	μF				
50	7.0	7.7	11.4	21.0	23.2	25.0	28.1	33.4	40.0	–	–	44.0			
60	8.4	9.2	13.7	25.2	27.9	30.0	33.7	40.1	48.0	–	–	52.8	3 x 154.0	3	premium UHPC-40.0-525-3P
															10440

Up to a power of 34.0 kvar, 525V capacitors are also available in single-phase version. Other capacitor powers on request

Capacitor rated voltage: **690 V – Basic and Premium Y-circuit**

FREQUENCY	POWER ON NETWORK VOLTAGE												CONSTRUCTION TYPE	TYPE	Item no.
	220V kvar	230V kvar	280V kvar	380V kvar	400V kvar	415V kvar	440V kvar	480V kvar	525V kvar	600V kvar	690V kvar	A	μF		
Hz															
50	1.0	1.1	1.6	3.0	3.4	3.6	4.1	4.8	5.8	7.6	10.0	8.4	3 x 22.3	1	premium UHPC-10.0-690-3S
60	1.2	1.3	2.0	3.6	4.0	4.3	4.9	5.8	7.0	9.1	12.0	10.		1	basic UHPC-10.0-690-3S
50	1.3	1.4	2.1	3.8	4.2	4.5	5.1	6.1	7.2	9.5	12.5	10.5	3 x 27.9	1	premium UHPC-12.5-690-3S
60	1.5	1.7	2.5	4.6	5.0	5.4	6.1	7.3	8.7	11.3	15.0	12.6		1	basic UHPC-12.5-690-3S
50	1.5	1.7	2.5	4.5	5.0	5.4	6.1	7.3	8.7	11.3	15.0	12.6	3 x 33.4	2	premium UHPC-15.0-690-3S
60	1.8	2.0	3.0	5.5	6.0	6.5	7.3	8.7	10.4	13.6	18.0	15.1		1	basic UHPC-15.0-690-3S
50	2.0	2.2	3.3	6.1	6.7	7.2	8.1	9.7	11.6	15.1	20.0	16.7	3 x 44.6	2	premium UHPC-20.0-690-3S
60	2.4	2.7	4.0	7.3	8.1	8.7	9.8	11.6	13.9	18.1	24.0	20.1		2	basic UHPC-20.0-690-3S
50	2.1	2.3	3.4	6.3	7.0	7.5	8.5	10.1	12.1	15.7	20.8	17.4	3 x 46.4	2	premium UHPC-20.8-690-3S
60	2.5	2.8	4.1	7.6	8.4	9.0	10.2	12.1	14.5	18.9	25.0	20.9		2	basic UHPC-20.8-690-3S
50	2.5	2.8	4.1	7.6	8.4	9.0	10.2	12.1	14.5	18.9	25.0	20.9	3 x 55.7	3	premium UHPC-25.0-690-3S
60	3.0	3.3	4.9	9.1	10.1	10.8	12.2	14.5	17.4	22.7	30.0	25.1		2	basic UHPC-25.0-690-3S
50	2.7	2.9	4.3	8.0	8.8	9.5	10.7	12.7	15.2	19.9	26.3	22.0	3 x 58.6	3	premium UHPC-26.3-690-3S
60	3.2	3.5	5.2	9.6	10.6	11.4	12.8	15.3	18.3	23.9	31.6	26.4		3	basic UHPC-26.3-690-3S
50	2.8	3.1	4.6	8.4	9.3	10.1	11.3	13.5	16.1	21.0	27.8	23.3	3 x 62.0	3	premium UHPC-27.8-690-3S
60	3.4	3.7	5.5	10.1	11.2	12.1	13.6	16.1	19.3	25.2	33.4	27.9		3	basic UHPC-27.8-690-3S
50	3.0	3.3	4.9	9.0	10.0	10.7	12.0	14.3	17.1	22.4	29.6	24.8	3 x 66.0	3	premium UHPC-29.6-690-3S
60	3.6	4.0	5.9	10.8	11.9	12.9	14.4	17.2	20.6	26.9	35.5	29.7		3	basic UHPC-29.6-690-3S
															10477
															10490

Construction types and dimensions at page 11

Performance data and sizes deviating from the standard are available on request.  
Misprints and printing errors as well as technical changes reserved.

**Example for order:** Power capacitor, 30.3 kvar to 440 V.

The corresponding order detail is as follows:**Type multicond premium UHPC-30.3-440-3P (3-phase version)** = item number 10303  
**Type multicond basic UHPC-30.3-440-3P (3-phase version)** = product number 10336

# Power capacitors

## multicond

Capacitor rated voltage: **800 V – Basic and Premium Y-circuit**

FREQUENCY Hz													CONSTRUCTION TYPE	TYPE	Item no.	
	280V kvar	380V kvar	400V kvar	415V kvar	440V kvar	480V kvar	525V kvar	600V kvar	660V kvar	690V kvar	800V kvar	CURRENT ON MAX. VOLTAGE A	RATED CAPACITANCE μF			
50	-	-	3,3	3,6	4,0	4,8	5,7	7,5	9,1	9,9	13,3	9,6	3 x 22,1	1	premium UHPC-13.3-800-3S basic UHPC-13.3-800-3S	21818
60	-	-	4,0	4,3	4,8	5,8	6,9	9,0	10,9	11,9	16,0	11,5		1	basic UHPC-13.3-800-3S	21806
50	-	-	4,2	4,5	5,0	6,0	7,2	9,4	11,3	12,4	16,6	12,0	3 x 27,6	2	premium UHPC-16.6-800-3S basic UHPC-16.6-800-3S	21819
60	-	-	5,0	5,4	6,0	7,2	8,6	11,2	13,6	14,9	20,0	14,4		1	basic UHPC-16.6-800-3S	21807
50	-	-	5,0	5,4	6,1	7,2	8,6	11,3	13,7	14,9	20,1	14,5	3 x 33,3	2	premium UHPC-20.1-800-3S basic UHPC-20.1-800-3S	21820
60	-	-	6,0	6,5	7,3	8,7	10,4	13,5	16,4	17,9	24,1	17,4		2	basic UHPC-20.1-800-3S	21809
50	-	-	5,7	6,2	6,9	8,2	9,8	12,9	15,6	17,0	22,9	16,5	3 x 37,9	2	premium UHPC-22.9-800-3S basic UHPC-22.9-800-3S	21821
60	-	-	6,9	7,4	8,3	9,9	11,8	15,4	18,7	20,4	27,4	19,8		2	basic UHPC-22.9-800-3S	21811
50	-	-	6,7	7,2	8,1	9,6	11,5	15,0	18,1	19,8	26,7	19,3	3 x 44,2	3	premium UHPC-26.7-800-3S basic UHPC-26.7-800-3S	21822
60	-	-	8,0	8,6	9,7	11,5	13,8	18,0	21,8	23,8	32,0	23,1		2	basic UHPC-26.7-800-3S	21812
50	-	-	7,0	7,5	8,4	10,0	12,0	15,7	19,0	20,7	27,9	20,1	3 x 46,2	3	premium UHPC-27.9-800-3S basic UHPC-27.9-800-S	21823
60	-	-	8,4	9,0	10,1	12,0	14,4	18,8	22,8	24,9	33,4	24,1		2	basic UHPC-27.9-800-S	21813
50	-	-	7,9	8,5	9,6	11,4	13,6	17,8	21,6	23,6	31,7	22,9	3 x 52,5	3	premium UHPC-31.7-800-3S basic UHPC-31.7-800-3S	21997
60	-	-	9,5	10,2	11,5	13,7	16,4	21,4	25,9	28,3	38,0	27,4		3	basic UHPC-31.7-800-3S	21996
50	-	-	8,3	9,0	10,1	12,0	14,4	18,8	22,7	24,8	33,4	24,1	3 x 55,4	3	premium UHPC-33.4-800-3S basic UHPC-33.4-800-3S	21824
60	-	-	10,0	10,8	12,1	14,4	17,3	22,5	27,3	29,8	40,1	28,9		3	basic UHPC-33.4-800-3S	21814
50	-	-	8,8	9,5	10,7	12,7	15,2	19,9	24,1	26,3	35,4	25,5	3 x 58,6	3	premium UHPC-35.4-800-3S basic UHPC-35.4-800-3S	21825
60	-	-	10,6	11,4	12,8	15,3	18,3	23,9	28,9	31,6	42,4	30,6		3	basic UHPC-35.4-800-3S	21815
50	-	-	9,1	9,8	11,0	13,1	15,6	20,4	24,7	27,0	36,3	26,2	3 x 60,2	3	premium UHPC-36.3-800-3S	21826
60	-	-	10,9	11,7	13,2	15,7	18,8	24,5	29,6	32,4	43,6	31,5				
50	-	-	9,3	10,1	11,3	13,4	16,1	21,0	25,4	27,8	37,4	27,0	3 x 61,9	3	basic UHPC-37.4-800-3S	21816
50	-	-	9,9	10,7	12,0	14,3	17,1	22,4	27,1	29,6	39,8	28,7	3 x 66,0	3	basic UHPC-39.8-800-3S	21817
60	-	-	11,9	12,8	14,4	17,2	20,6	26,9	32,5	35,5	47,7	34,4				

Construction types and dimensions at page 11

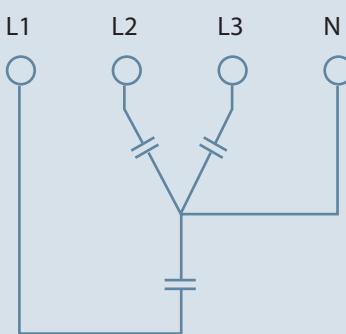
Other capacitor powers on request

**On request a 4 pole terminal with lead out neutral wire is available.**

(suitable for 3 phase controlled pfc units)

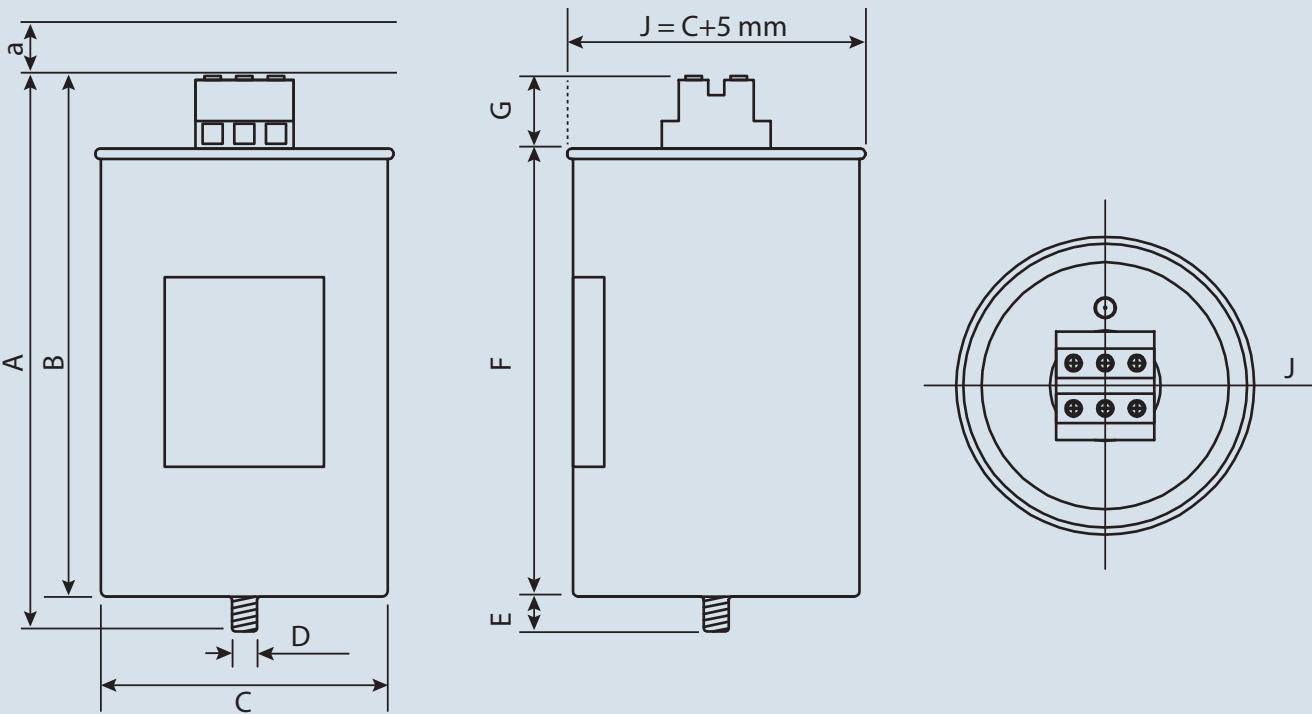
Those capacitors can also be used as 3 one phase capacitors in one can.

Only available with diameter of 136mm.



Version: August 2022. Subject to change.

## Construction diagram



All dimensions are in mm.

Not suitable for measurement purposes.

### General:

- Adapter box safe from finger-touch
- Expansion by 12 mm maximum
- Clearance above (a) 13 mm minimum

### Installation:

- M12 threaded bolts
- tightening torque T = 10 Nm
- serrated lock washer J12 DIN 6797
- hexagonal nut BM12 DIN 439

### Adapter box:

#### C 95/116/136 (25 mm<sup>2</sup>)

- M5 connection screw
- tightening torque T = 2.5 Nm
- C 75 (16 mm<sup>2</sup>)
- M4 connection screw
- tightening torque T = 1.3 Nm

Size Chart	A <sup>1</sup>	B <sup>1</sup>	C <sup>1</sup>	D <sup>2</sup>	E <sup>1</sup>	F <sup>1</sup>	G <sup>1</sup>	J <sup>1,3</sup>	
<b>Construction Type 1</b>	263	246,5	95	11,8 / M12	16,5	212	34,5	100	mm
<b>Construction Type 2</b>	263	246,5	116	11,8 / M12	16,5	212	34,5	121	mm
<b>Construction Type 3</b>	263	246,5	136	11,8 / M12	16,5	212	34,5	141	mm
<b>Construction Type 4</b>	260	243,5	75	11,8 / M12	16,5	212	31,5	79	mm
<b>Construction Type 5</b>	350	334,0	136	11,8 / M12	16,0	290	44,0	141	mm

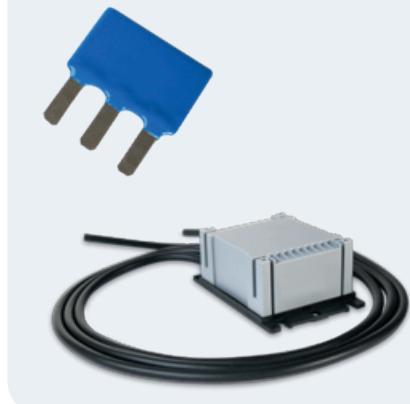
<sup>1</sup> tolerance +/- 3 mm

<sup>2</sup> mm / threaded bolts

<sup>3</sup> J = C + 5 mm

## multicond Technical details

	<b>multicond premium UHPC and multicond UHPC</b>	<b>multicond basic UHPC</b>	<b>multicond light UHPC</b>
<b>Rated voltage</b>	$U_n = 280, 415, 440, 480, 525, 690 \text{ or } 800 \text{ V}$	$U_n = 280, 440, 480, 525, 690 \text{ or } 800 \text{ V}$	$U_n = 280, 440, 480, 525 \text{ or } 690 \text{ V}$
<b>Frequency</b>	50/60 Hz	50/60 Hz	50/60 Hz
<b>Maximum permissible operating voltage</b>	1.0 x $U_n$ continuous   1.1 x $U_n$ 8 hours/day   1.15 x $U_n$ 30 minutes/day 1.2 x $U_n$ 200 x 5 minutes   1.3 x $U_n$ 200 x 1 minute		
<b>Maximum permissible operating current</b>	2.0 x $I_n$	2.0 x $I_n$	1.8 x $I_n$
<b>Maximum inrush current</b>	400 x $I_n$	400 x $I_n$	250 x $I_n$
<b>Capacitance tolerance</b>	+/- 5 %	+/- 5 %	+/- 5 %
<b>Power dissipation</b>	< 0.20 W/kvar, without discharge resistors	< 0.25 W/kvar, without discharge resistors	< 0.25 W/kvar, without discharge resistors
<b>Voltage test (terminal – terminal)</b>	$2.15 \times U_{\text{rated}} (\text{AC}), 10 \text{ sec}$	$2.15 \times U_{\text{rated}} (\text{AC}), 10 \text{ sec}$	$2.15 \times U_{\text{rated}} (\text{AC}), 10 \text{ sec}$
<b>Voltage test (terminal – housing)</b>	$\leq 690 \text{ V} : 3600 \text{ V (AC), 2.5 sec}   > 690 \text{ V} : 6000 \text{ V (AC), 10 sec - acc. to standard}$		
<b>Cooling</b>	Natural cooling	Natural cooling	Natural cooling
<b>Permissible humidity</b>	95 %	95 %	95 %
<b>Maximum altitude</b>	4000 m above sea level	4000 m above sea level	4000 m above sea level
<b>Installation site, installation position</b>	Indoors, anywhere	Indoors, anywhere	Indoors, anywhere
<b>Attachment</b>	M12 threaded bolts on the ground	M12 threaded bolts on the ground	M12 threaded bolts on the ground
<b>Safety features</b>	<ul style="list-style-type: none"> <li>→ Dry technology, resin-filled</li> <li>→ Self-restoring</li> <li>→ Overpressure disconnector (all-pole)</li> <li>→ SF6-free, PCB-free</li> </ul>	<ul style="list-style-type: none"> <li>→ Dry technology, resin-filled</li> <li>→ Self-restoring</li> <li>→ Overpressure disconnector (all-pole)</li> <li>→ SF6-free, PCB-free</li> </ul>	<ul style="list-style-type: none"> <li>→ Dry technology, resin-filled</li> <li>→ Self-restoring</li> <li>→ Overpressure disconnector (all-pole)</li> <li>→ SF6-free, PCB-free</li> </ul>
<b>Housing</b>	Aluminum		
<b>Protection type</b>	IP 20		
<b>Dielectric</b>	Polypropylene		
<b>Terminal strips</b>	double-sided terminal strip, safe from finger-touch		
<b>Discharge</b>	Discharge resistors on the outside of the strip		
<b>Standards</b>	IEC 60831-1 + 2, EN 60831-1 + 2, VDE 0560-46 + 47		



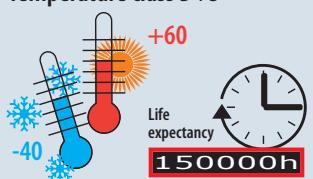
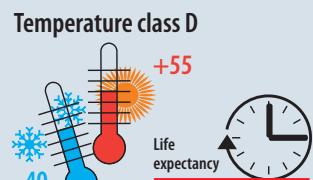
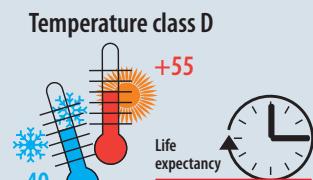
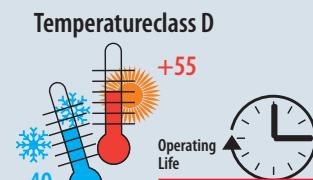
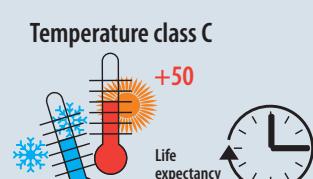
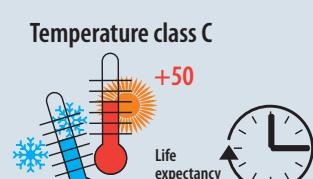
The discharge of the capacitors takes place via discharge resistors or discharge reactors.

The standard requires a discharge of the capacitor that, as a rule, is realized via discharge resistors.

If faster discharge is necessary, the capacitor can be discharged with a discharge reactor within a very short time.

The capacitor is thus available again for compensation after a short time.

Type	Item no.	Power	Dimensions (H x W x D) in mm	Connection
multidis-EW 120k-3P-5W	17141	5 W	4 x 39 x 30	Terminal lugs
multidis-EW 120k-3P-9W	19410	9 W	4 x 39 x 46	Terminal lugs
multidis-EW 300k-3P	17142	5W	4 x 39 x 30	Terminal lugs
multidis-EW 400k-3P	17143	9W	4 x 39 x 46	Terminal lugs
multidis-ED 100-900V	15464		35 x 60 x 90	cable 600 mm

	multicond premium UHPC und multicond UHPC	multicond basic UHPC	multicond light UHPC
<b>Temperature class D+5:</b> <b>Operating life*</b>	<p><b>Temperature class D+5</b></p>  <p><b>-40/60</b> <b>&gt; 150,000 h</b> max. ambient temperature: 60 °C max. average over 24 hours: 50 °C max. average over 1 year: 40 °C</p>		
<b>Temperature class D:</b> <b>Operating life*</b>	<p><b>Temperature class D</b></p>  <p><b>-40/55</b> <b>&gt; 250,000 h</b> max. ambient temperature: 55 °C max. average over 24 hours 45 °C max. average over 1 year: 35 °C</p>	<p><b>Temperature class D</b></p>  <p><b>-40/55</b> <b>&gt; 130,000 h</b> max. ambient temperature: 55 °C max. average over 24 hours: 45 °C max. average over 1 year: 35 °C</p>	<p><b>Temperature class D</b></p>  <p><b>-40/55</b> <b>&gt; 100,000 h</b> max. ambient temperature: 55 °C max. average over 24 hours 45 °C max. average over 1 year: 35 °C</p>
<b>Temperature class C:</b> <b>Operating life*</b>		<p><b>Temperature class C</b></p>  <p><b>-40/50</b> <b>&gt; 150,000 h</b> max. ambient temperature: 50 °C max. average over 24 hours: 40 °C max. average over 1 year: 30 °C</p>	<p><b>Temperature class C</b></p>  <p><b>-40/50</b> <b>&gt; 130,000 h</b> max. ambient temperature: 50 °C max. average over 24 hours: 40 °C max. average over 1 year: 30 °C</p>

\*The maximum operating life depends on the type of the application and the temperature class

#### Storage conditions for capacitors:

min. / max. temp.: -40 - +85 °C  
max. air humidity: <95% without condensation

Do not store in corrosive atmosphere containing aerosols, especially if chloride gas, sulfur compounds, salts (marine air) or similar is present.

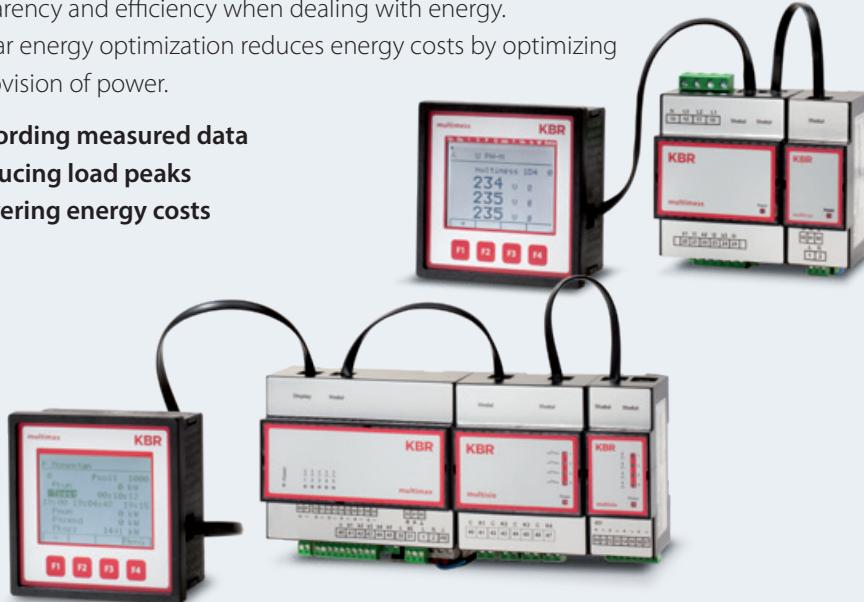
# Measurement optimization technology

The basis for contemporary energy management is the precise recording and processing of energy data.

With its sophisticated measuring devices, energy meters and signal components, KBR creates the best conditions for more transparency and efficiency when dealing with energy.

Modular energy optimization reduces energy costs by optimizing the provision of power.

- recording measured data
- reducing load peaks
- lowering energy costs



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## Software

The web-based energy data management software "visual energy" creates a ready-to-use system with the KBR hardware and our service package.

This makes the energy supply transparent, increases operating safety, helps identifying savings potentials and considerably reduces energy costs.

- analyzing energy data
- increasing operational safety
- recognizing savings potentials



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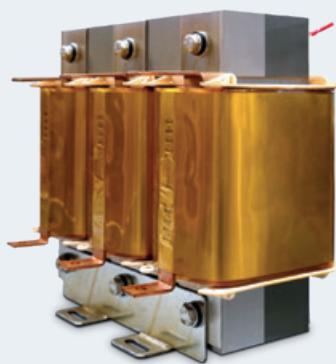


## Power capacitors

- power from 1.5 to 50 kvar
- capacitor rated voltage of 280, 415, 440, 480, 525, 690 or 800 V
- single-phase or 3-phase version
- high level of safety through dry technology and 3-phase internal overpressure disconnector.
- including compact discharge resistor
- long operating life
- increase operational safety

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## Compensation

Reactive power compensation and improvement of the network quality are essential aspects of KBR Power Quality. KBR develops and produces the components for the compensation systems in its own production facilities. Our Power Quality team offers network analyses, on-site troubleshooting and active power filters in order to improve network quality.

- reduction of reactive energy costs
- increasing supply safety
- increasing operational safety

**KBR is your reliable energy management partner.**

With precision technology, efficient solutions and a comprehensive range of services, the KBR system helps companies from the plant engineering, industry or craft sector maintain their technical edge.

For a sustainable and future-proof energy supply.

Our services:

- Planning and consulting
- Energy measuring devices
- Analysis software
- System integration
- Seminars & workshops
- First-class services from one source



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