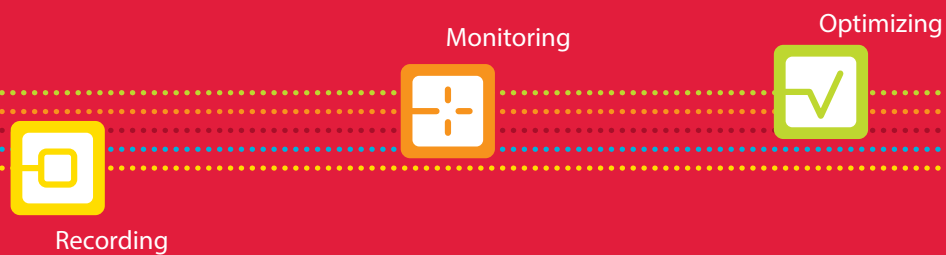


# Filter circuit reactors



To prevent resonance phenomena caused by harmonic content in the power supply system, filter circuit reactors are required to set up detuned compensation systems. Here, high linearities guarantee the necessary functional stability even in the overload range.



# multiind 50Hz

Power **2.5 – 75 kvar**

Detuning factors  
**5.5, 7 or 8 %**  
**12.5 or 14 %**



## Filter circuit reactors for reactive current compensation

- Highlights**
- Power from 2.5 to 75 kvar
  - High linearity, low power dissipation
  - Overload protection through temperature switch
  - Low-noise through impregnation
  - Long operating life
  - Improved impedance behavior

An overview of the **technical details** is provided on pages 44-45.  
**Construction diagrams** are provided on page 43.

### Note on the temperature switch

For smooth operation and a long operating life, the integrated temperature sensor must interrupt the main circuit of the filter circuit reactor in case of overload.

### Notes on installation

- Observe the applicable DIN / VDE regulations.
- Power supply connection, setup and device operation must be performed by qualified personnel only.
- Maintain maximum current, voltage and temperature ranges.
- Ensure sufficient ventilation.
- Tighten connections with the right torque.

## Specifications multiind-basic ... 5.5 %

Detuning factor: **5.5 %** Resonance frequency: **214 Hz**

POWER kvar	TYPE multiind-basic ... 5.5 %	INDUCTIVITY		RATED CURRENT A	DIMENSIONS in mm							CONNECTION			DIA-GRAM	WEIGHT kg	CAPACITANCE µF	CAPACITOR multicond UHPC ... -440-3P
		Cu	Al		mH	H	B	T	W1	W2	LL	L	AW	RK				
2.5	multiind-basic 400-02.5-5.5-Cu-L-S	x		12.11	3.5	165	180	86	95	62.5	9	x			A	5.3	3 x 15.4	4.0 / 525
5	multiind-basic 400-05.0-5.5-Cu-L-S	x		6.06	7.2	165	180	106	95	82.5	9	x			A	8.1	3 x 30.8	8.0 / 525
7.5	multiind-basic 400-07.5-5.5-Cu-L-S	x		3.74	11.4	165	180	106	95	83	9	x			A	9.5	3 x 50.0	13.0 / 525
10	multiind-basic 400-10.0-5.5-Cu-L-S	x		2.80	15.3	195	210	109	95	86	9	x			A	12.9	3 x 66.3	12.1
12.5	multiind-basic 400-12.5-5.5-Cu-L-S	x		2.24	19.1	220	240	95	95	71	9	x			A	14.5	3 x 82.8	15.1
15	multiind-basic 400-15.0-5.5-Cu-L-S	x		1.98	21.6	220	240	105	95	81	9	x			A	17.0	3 x 93.7	17.1
20	multiind-basic 400-20.0-5.5-Cu-L-S	x		1.40	30.6	220	240	125	95	81	9	x			A	18.5	3 x 132.6	24.2
25	multiind-basic 400-25.0-5.5-Cu-L-S	x		1.21	35.5	220	240	135	95	91	9	x			A	21.0	3 x 154.0	28.1
30	multiind-basic 400-30.0-5.5-Cu-L-S	x		0.99	43.2	220	240	125	95	81	9	x			A	19.4	3 x 187.4	2 x 17.1
40	multiind-basic 400-40.0-5.5-Cu-L-S	x		0.75	57.4	220	240	135	95	91	9	x			A	20.8	3 x 248.8	1 x 21.1 + 1 x 24.2
50	multiind-basic 400-50.0-5.5-Cu-L-S	x		0.60	71.0	220	240	155	95	82	9	x			A	26.6	3 x 308.0	2 x 28.1
60	multiind-basic 400-60.0-5.5-Cu-L-S	x		0.51	84.0	270	300	145	95	145	9	x			A	31.5	3 x 364.7	1 x 10.0 / 525 + 2 x 3 0.3 / 120
75	multiind-basic 400-75.0-5.5-Cu-L-S	x		0.40	106.3	270	300	150	95	107	9	x			A	38.0	3 x 461.7	3 x 28.1

## Specifications multiind-light ... 7 %

Detuning factor: **7 %** Resonance frequency: **189 Hz**

POWER kvar	TYPE multiind-light... 7 %	INDUCTIVITY		RATED CURRENT A	DIMENSIONS IN MM in mm							CONNECTION			DIA-GRAM	WEIGHT kg	CAPACITANCE µF	CAPACITOR multicond UHPC ... -440-3P
		Cu	Al		mH	H	B	T	W1	W2	LL	L	AW	RK				
2.5	multiind-light 400-02.5-7-Cu-L-S	x		15.42	3.6	165	180	86	95	62.5	9	x			A	5.1	3 x 15.4	4.0 / 525
5	multiind-light 400-05.0-7-Cu-L-S	x		7.71	7.8	165	180	86	95	62.5	9	x			A	6.1	3 x 30.8	8.0 / 525
7.5	multiind-light 400-07.5-7-Cu-L-S	x		4.76	11.6	165	180	96	95	72.5	9	x			A	7.8	3 x 50.0	13.0 / 525
10	multiind-light 400-10.0-7-Cu-L-S	x		3.56	15.5	165	180	106	95	82.5	9	x			A	9.2	3 x 66.3	12.1
12.5	multiind-light 400-12.5-7-Cu-L-S	x		2.85	18.0	195	210	109	95	86	9	x			A	12.4	3 x 83.0	15.1
15	multiind-light 400-15.0-7-Cu-L-S	x		2.52	21.9	195	210	109	95	86	9	x			A	12.9	3 x 93.7	17.1
20	multiind-light 400-20.0-7-Cu-L-S	x		1.78	28.8	195	210	109	95	86	9	x			A	14.0	3 x 132.7	24.2
25	multiind-light 400-25.0-7-Cu-L-S	x		1.54	36.0	220	240	115	95	91	9	x			A	19.1	3 x 154.0	25.0
25	multiind-light 400-25.0-7-Al-AW-S		x	1.54	36.0	220	240	145	95	91	9		x		C	17.4	3 x 154.0	25.0
30	multiind-light 400-30.0-7-Cu-L-S	x		1.26	43.2	220	240	135	95	91	9	x			A	20.2	3 x 187.3	2 x 17.1
30	multiind-light 400-30.0-7-Al-AW-S		x	1.26	43.2	220	240	145	95	91	9		x		C	17.4	3 x 187.3	2 x 17.1
40	multiind-light 400-40.0-7-Cu-L-S	x		0.95	57.6	220	240	145	95	101	9	x			A	35.0	3 x 248.7	1 x 21.2 + 1 x 24.2
40	multiind-light 400-40.0-7-Al-AW-S		x	0.95	57.6	240	260	167	95	112	9		x		C	27.0	3 x 248.7	1 x 21.2 + 1 x 24.2
50	multiind-light 400-50.0-7-Cu-L-S	x		0.77	72.0	270	300	145	95	95	9	x			A	32.0	3 x 308.0	2 x 28.1
50	multiind-light 400-50.0-7-Al-AW-S		x	0.77	72.0	240	260	167	95	112	9		x		C	26.0	3 x 308.0	2 x 28.1
60	multiind-light 400-60.0-7-Cu-L-S	x		0.65	86.4	270	300	145	95	95	9	x			A	39.4	3 x 364.7	1 x 6.1 + 2 x 30.3
60	multiind-light 400-60.0-7-Al-AW-S		x	0.65	86.4	270	300	180	95	95	9		x		C	36.0	3 x 364.7	1 x 6.1 + 2 x 30.3
75	multiind-light 400-75.0-7-Cu-L-S	x		0.51	108.0	270	300	180	95	122	9	x			A	47.1	3 x 461.7	3 x 28.1
75	multiind-light 400-75.0-7-Al-AW-S		x	0.51	108.0	270	300	180	95	122	9		x		C	36.0	3 x 461.7	3 x 28.1

# Filter circuit reactors

## multiind 50Hz

### Specifications multiind-basic ... 7 %

Detuning factor: **7 %** Resonance frequency: **189 Hz**

POWER kvar	TYPE multiind-basic ... 7 %	INDUC-TIVITY		RATED CUR-RENT A	DIMENSIONS in mm						CONNECTION			DIA-GRAM	WEIGHT kg	CAPACI-TANCE µF	CAPACITOR multicond UHPC ... -440-3P	
		Cu	Al		mH	H	B	T	W1	W2	LL	L	AW					RK
2.5	multiind-basic 400-02.5-7-Cu-L-S	x		15.42	3.6	165	180	86	95	62.5	9	x			A	5.2	3 x 15.4	4.0 / 525
5	multiind-basic 400-05.0-7-Cu-L-S	x		7.709	7.2	165	180	86	95	62.5	9	x			A	6.4	3 x 30.8	8.0 / 525
7.5	multiind-basic 400-07.5-7-Cu-L-S	x		4.76	11.6	165	180	96	95	72.5	9	x			A	8.1	3 x 50.0	13.0 / 525
10	multiind-basic 400-10.0-7-Cu-L-S	x		3.56	15.5	165	180	106	95	82.5	9	x			A	9.2	3 x 66.3	12.1
12.5	multiind-basic 400-12.5-7-Cu-L-S	x		2.85	19.4	195	210	109	95	86	9	x			A	12.5	3 x 82.8	15.1
15	multiind-basic 400-15.0-7-Cu-L-S	x		2.52	21.9	195	210	109	95	86	9	x			A	13.0	3 x 93.7	17.1
20	multiind-basic 400-20.0-7-Cu-L-S	x		1.78	31.1	195	210	109	95	86	9	x			A	14.0	3 x 132.7	24.2
25	multiind-basic 400-25.0-7-Cu-L-S	x		1.54	36	220	240	115	95	91	9	x			A	20.0	3 x 154.0	28.1
25	multiind-basic 400-25.0-7-Al-AW-S		x	1.54	36	220	240	145	95	91	9		x		C	17.1	3 x 154.0	28.1
30	multiind-basic 400-30.0-7-Cu-L-S	x		1.26	43.2	220	240	135	95	91	9	x			A	20.2	3 x 187.4	2 x 17.1
30	multiind-basic 400-30.0-7-Al-AW-S		x	1.26	43.2	220	240	145	95	91	9		x		C	17.8	3 x 187.3	2 x 17.1
40	multiind-basic 400-40.0-7-Cu-L-S	x		0.95	58.2	220	240	145	95	101	9	x			A	26.5	3 x 248.8	1 x 21.2 + 1 x 24.2
40	multiind-basic 400-40.0-7-Al-AW-S		x	0.95	58.2	240	260	167	95	112	9		x		C	26.0	3 x 248.7	1 x 21.2 + 1 x 24.2
50	multiind-basic 400-50.0-7-Cu-L-S	x		0.77	72	270	300	145	95	95	9	x			A	32.5	3 x 308.0	2 x 28.1
50	multiind-basic 400-50.0-7-Al-AW-S		x	0.77	72	240	260	167	95	112	9		x		C	26.0	3 x 308.0	2 x 28.1
60	multiind-basic 400-60.0-7-Cu-L-S	x		0.65	86.8	270	300	145	95	95	9	x			A	35.0	3 x 364.7	1 x 10 / 525 + 2 x 30.3 / 440
60	multiind-basic 400-60.0-7-Al-AW-S		x	0.65	86.8	270	300	180	95	95	9		x		C	35.0	3 x 364.7	1 x 10 / 525 + 2 x 30.3 / 440
75	multiind-basic 400-75.0-7-Cu-L-S	x		0.51	108	270	300	180	95	122	9	x			A	47.1	3 x 461.7	3 x 28.1
75	multiind-basic 400-75.0-7-Al-AW-S		x	0.51	108	270	300	180	95	122	9		x		C	37.5	3 x 461.7	3 x 28.1

### Specifications multiind-light ... 8 %

Detuning factor: **8 %** Resonance frequency: **177 Hz**

POWER kvar	TYPE multiind-light... 8 %	INDUC-TIVITY		RATED CUR-RENT A	DIMENSIONS in mm						CONNECTION			DIA-GRAM	WEIGHT kg	CAPACI-TANCE µF	CAPACITOR multicond UHPC ... -440-3P	
		Cu	Al		mH	H	B	T	W1	W2	LL	L	AW					RK
2.5	multiind-light 400-02.5-8-Cu-L-S	x		17.62	3.6	165	180	86	95	62.5	9	x			A	5.1	3 x 15.4	4.0 / 525
5	multiind-light 400-05.0-8-Cu-L-S	x		8.811	7.3	165	180	86	95	62.5	9	x			A	6.1	3 x 30.8	8.0 / 525
7.5	multiind-light 400-07.5-8-Cu-L-S	x		5.44	11.8	165	180	96	95	72.5	9	x			A	7.8	3 x 50.0	13.0 / 525
10	multiind-light 400-10.0-8-Cu-L-S	x		4.073	15.7	195	210	92	95	68.5	9	x			A	9.2	3 x 66.3	12.1
12.5	multiind-light 400-12.5-8-Cu-L-S	x		3.26	19.6	195	210	109	95	86	9	x			A	12.4	3 x 82.8	15.1
15	multiind-light 400-15.0-8-Cu-L-S	x		2.88	22.2	195	210	109	95	86	9	x			A	12.7	3 x 93.7	17.1
20	multiind-light 400-20.0-8-Cu-L-S	x		2.04	31.4	220	240	105	95	81	9	x			A	14.0	3 x 132.7	24.2
25	multiind-light 400-25.0-8-Cu-L-S	x		1.75	36.4	220	240	115	95	91	9	x			A	19.1	3 x 154.0	28.1
30	multiind-light 400-30.0-8-Cu-L-S	x		1.44	44.3	220	240	135	95	91	9	x			A	20.3	3 x 187.4	2 x 17.1
30	multiind-light 400-30.0-8-Al-AW-S		x	1.44	43.2	220	240	145	95	91	9		x		C	18.1	3 x 187.3	2 x 17.1
40	multiind-light 400-40.0-8-Cu-L-S	x		1.09	58.8	220	240	155	95	105	9	x			A	25.0	3 x 248.8	1 x 21.2 + 1 x 24.2
40	multiind-light 400-40.0-8-Al-AW-S		x	1.09	57.6	220	240	185	95	105	9		x		C	27.0	3 x 248.7	1 x 21.2 + 1 x 24.2
50	multiind-light 400-50.0-8-Cu-L-S	x		0.88	72.9	270	300	145	95	95	9	x			A	32.0	3 x 308.0	2 x 28.1
50	multiind-light 400-50.0-8-Al-AW-S		x	0.88	72.0	240	260	167	95	112	9		x		C	26.0	3 x 308.0	2 x 28.1
60	multiind-light 400-60.0-8-Cu-L-S	x		0.74	86.4	270	300	145	95	95	9	x			A	39.4	3 x 364.7	1 x 10 / 525 + 2 x 30.3 / 440
60	multiind-light 400-60.0-8-Al-AW-S		x	0.74	86.4	270	300	210	95	122	9		x		C	36.0	3 x 364.7	1 x 10 / 525 + 2 x 30.3 / 440
75	multiind-light 400-75.0-8-Cu-L-S	x		0.59	109.2	270	300	180	95	122	9	x			A	47.1	3 x 461.7	3 x 28.1
75	multiind-light 400-75.0-8-Al-AW-S		x	0.59	108.0	270	300	210	95	122	9		x		C	36.0	3 x 461.7	3 x 28.1

## Specifications multiind-basic ... 8%

Detuning factor: **8%** Resonance frequency: **177 Hz**

POWER kvar	TYPE multiind-basic ... 8%	INDUCTIVITY		RATED CURRENT A	DIMENSIONS in mm							CONNECTION			DIA-GRAM	WEIGHT kg	CAPACITANCE μF	CAPACITOR multicond UHPC ... -440-3P
		Cu	Al		mH	H	B	T	W1	W2	LL	L	AW	RK				
2.5	multiind-basic 400-02.5-8-Cu-L-S	x		17.62	3.6	165	180	86	95	62.5	9	x			A	5.2	3 x 15.4	4.0 / 525
5	multiind-basic 400-05.0-8-Cu-L-S	x		8.811	7.3	165	180	96	95	72.5	9	x			A	7.6	3 x 30.8	8.0 / 525
7.5	multiind-basic 400-07.5-8-Cu-L-S	x		5.44	11.8	165	180	96	95	72.5	9	x			A	8.3	3 x 50.0	13.0 / 525
10	multiind-basic 400-10.0-8-Cu-L-S	x		4.07	15.7	195	210	92	95	68.5	9	x			A	10.0	3 x 66.3	12.1
12.5	multiind-basic 400-12.5-8-Cu-L-S	x		3.26	19.6	195	210	109	95	86	9	x			A	13.0	3 x 82.8	15.1
15	multiind-basic 400-15.0-8-Cu-L-S	x		2.88	22.2	195	210	109	95	86	9	x			A	14.0	3 x 93.7	17.1
20	multiind-basic 400-20.0-8-Cu-L-S	x		2.04	31.4	220	240	105	95	86	9	x			A	19.0	3 x 132.7	24.2
25	multiind-basic 400-25.0-8-Cu-L-S	x		1.75	36.4	220	240	115	95	91	9	x			A	20.5	3 x 154.0	28.1
30	multiind-basic 400-30.0-8-Cu-L-S	x		1.44	44.3	220	240	135	95	91	9	x			A	21.0	3 x 187.4	2 x 17.1
30	multiind-basic 400-30.0-8-Al-AW-S		x	1.44	44.3	220	240	145	95	91	9		x		C	17.8	3 x 187.3	2 x 17.1
40	multiind-basic 400-40.0-8-Cu-L-S	x		1.09	58.8	220	240	155	95	105	9	x			A	25.5	3 x 248.8	1 x 21.2 + 1 x 24.2
40	multiind-basic 400-40.0-8-Al-AW-S		x	1.09	58.8	220	240	167	95	105	9		x		C	26.0	3 x 248.7	1 x 21.2 + 1 x 24.2
50	multiind-basic 400-50.0-8-Cu-L-S	x		0.88	72.9	270	300	145	95	95	9	x			A	33.0	3 x 308.0	2 x 28.1
50	multiind-basic 400-50.0-8-Al-AW-S		x	0.88	72.9	220	240	167	95	112	9		x		C	26.0	3 x 308.0	2 x 28.1
60	multiind-basic 400-60.0-8-Cu-L-S	x		0.74	86.4	270	300	145	95	95	9	x			A	37.0	3 x 364.7	1 x 10 / 525 + 2 x 30.3 / 440
60	multiind-basic 400-60.0-8-Al-AW-S		x	0.74	86.4	270	300	210	95	122	9		x		C	35.6	3 x 364.7	1 x 10 / 525 + 2 x 30.3 / 440
75	multiind-basic 400-75.0-8-Cu-L-S	x		0.59	109.2	270	300	180	95	122	9	x			A	38.8	3 x 461.7	3 x 28.1
75	multiind-basic 400-75.0-8-Al-AW-S		x	0.59	109.2	270	300	210	95	122	9		x		C	38.7	3 x 461.7	3 x 28.1

## Specifications multiind-basic ... 12.5%

Detuning factor: **12.5%** Resonance frequency: **142 Hz**

POWER kvar	TYPE multiind-basic ... 12.5%	INDUCTIVITY		RATED CURRENT A	DIMENSIONS in mm							CONNECTION			DIA-GRAM	WEIGHT kg	CAPACITANCE μF	CAPACITOR multicond UHPC ... -525-3P
		Cu	Al		mH	H	B	T	W1	W2	LL	L	AW	RK				
2.5	multiind-basic 400-02.5-12.5-Cu-L-S	x		27.53	3.8	165	180	86	95	62.5	9	x			A	5.3	3 x 15.3	4.0
5	multiind-basic 400-05.0-12.5-Cu-L-S	x		13.77	7.6	165	180	96	95	72.5	9	x			A	8.7	3 x 30.7	8.0
7.5	multiind-basic 400-07.5-12.5-Cu-L-S	x		8.44	12.4	195	210	92	95	68.5	9	x			A	9.9	3 x 50.0	13.0
10	multiind-basic 400-10.0-12.5-Cu-L-S	x		7.32	14.3	195	210	109	95	86	9	x			A	14.0	3 x 57.7	15.0
12.5	multiind-basic 400-12.5-12.5-Cu-L-S	x		6.089	17.3	220	240	105	95	71	9	x			A	15.1	3 x 69.3	18.0
15	multiind-basic 400-15.0-12.5-Cu-L-S	x		5.23	20.1	220	240	95	95	71	9	x			A	15.1	3 x 80.7	21.0
20	multiind-basic 400-20.0-12.5-Cu-L-S	x		3.65	28.8	220	240	125	95	101	9	x			A	23.9	3 x 115.7	30.0
20	multiind-basic 400-20.0-12.5-Al-AW-S		x	3.65	28.8	240	260	167	95	112	9		x		C	23.2	3 x 115.7	30.0
25	multiind-basic 400-25.0-12.5-Cu-L-S	x		2.97	35.4	220	240	145	95	101	9	x			A	24.7	3 x 142.3	37.0
25	multiind-basic 400-25.0-12.5-Al-AW-S		x	2.97	35.4	240	260	167	95	112	9		x		C	26.7	3 x 142.3	37.0
30	multiind-basic 400-30.0-12.5-Cu-L-S	x		2.44	43.1	220	240	145	95	101	9	x			A	24.7	3 x 173.3	1 x 15.0 + 1 x 30.0
30	multiind-basic 400-30.0-12.5-Al-AW-S		x	2.44	43.1	240	260	167	95	112	9		x		C	25.7	3 x 173.3	1 x 15.0 + 1 x 30.0
40	multiind-basic 400-40.0-12.5-Cu-L-S	x		1.83	57.5	270	300	145	95	95	9	x			A	39.4	3 x 231.0	2 x 30.0
40	multiind-basic 400-40.0-12.5-Al-AW-S		x	1.83	57.5	270	300	180	95	107	9		x		C	36.2	3 x 231.0	2 x 30.0
50	multiind-basic 400-50.0-12.5-Cu-L-S	x		1.48	70.8	270	300	150	95	107	9	x			A	45.9	3 x 284.7	2 x 37.0
50	multiind-basic 400-50.0-12.5-Al-AW-S		x	1.48	70.8	270	300	210	95	112	9		x		C	41.3	3 x 284.7	2 x 37.0
60	multiind-basic 400-60.0-12.5-Cu-L-S	x		1.22	86.2	270	300	180	95	112	9	x			A	48.6	3 x 346.7	3 x 30.0
75	multiind-basic 400-75.0-12.5-Al-AW-S		X	0.988	106.3	260	300	175	95	122	9		X		C	49.7	3 x 462.0	3 x 37.0



# Filter circuit reactors

## multiind 50Hz

### Specifications multiind-light ... 14 %

Detuning factor: **14%** Resonance frequency: **134 Hz**

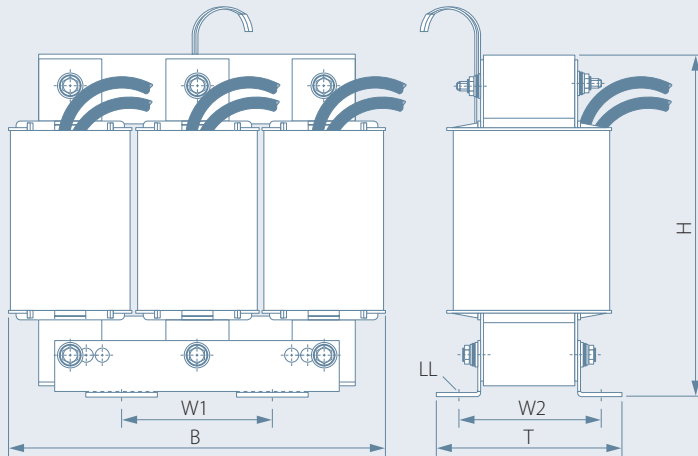
POWER kvar	TYPE multiind-light... 14%	INDUCTIVITY		RATED CUR- RENT A	DIMENSIONS						CONNECTION			DIA- GRAM	WEIGHT kg	CAPACI- TANCE µF	CAPACITOR multicond UHPC ... -525-3P	
		Cu	Al		mH	H	B	T	W1	W2	LL	L	AW					RK
2.5	multiind-light 400-02.5-14-Cu-L-S	x		30.84	3.9	165	180	86	95	62.5	9	x			A	5.3	3 x 15.3	4.0
5	multiind-light 400-05.0-14-Cu-L-S	x		15.42	7.8	165	180	96	95	72.5	9	x			A	8.3	3 x 30.7	8.0
7.5	multiind-light 400-07.5-14-Cu-L-S	x		9.46	12.7	195	210	109	95	86	9	x			A	13.4	3 x 50.0	13.0
10	multiind-light 400-10.0-14-Cu-L-S	x		8.20	14.6	195	210	109	95	86	9	x			A	14.1	3 x 57.7	15.0
12.5	multiind-light 400-12.5-14-Cu-L-S	x		6.82	17.6	220	240	105	95	81	9	x			A	16.9	3 x 69.3	18.0
15	multiind-light 400-15.0-14-Cu-L-S	x		5.86	20.4	220	240	105	95	81	9	x			A	17.9	3 x 80.7	21.0
20	multiind-light 400-20.0-14-Cu-L-S	x		4.09	29.3	220	240	125	95	101	9	x			A	24.3	3 x 115.7	30.0
25	multiind-light 400-25.0-14-Cu-L-S	x		3.32	36.0	220	240	145	95	101	9	x			A	24.2	3 x 142.3	37.0
25	multiind-light 400-25.0-14-Al-AW-S		x	3.32	36.0	240	260	167	95	112	9		x		C	24.9	3 x 142.3	37.0
30	multiind-light 400-30.0-14-Cu-L-S	x		2.73	43.9	220	240	145	95	101	9	x			A	24.6	3 x 173.3	1 x 15.0 + 1 x 30.0
30	multiind-light 400-30.0-14-Al-AW-S		x	2.73	43.9	240	260	167	95	112	9		x		C	23.9	3 x 173.3	1 x 15.0 + 1 x 30.0
40	multiind-light 400-40.0-14-Cu-L-S	x		2.05	58.5	270	300	145	95	95	9	x			A	37.1	3 x 231.0	2 x 30.0
40	multiind-light 400-40.0-14-Al-AW-S		x	2.05	58.5	270	300	180	95	107	9		x		C	36.2	3 x 231.0	2 x 30.0
50	multiind-light 400-50.0-14-Cu-L-S	x		1.66	72.1	270	300	150	95	107	9	x			A	46.5	3 x 284.7	2 x 37.0
50	multiind-light 400-50.0-14-Al-AW-S		x	1.66	72.1	270	300	210	95	112	9		x		C	39.0	3 x 284.7	2 x 37.0
60	multiind-light 400-60.0-14-Cu-L-S	x		1.36	87.7	270	300	180	95	112	9	x			A	50.0	3 x 346.7	3 x 30.0

### Specifications multiind-basic ... 14 %

Detuning factor: **14%** Resonance frequency: **134 Hz**

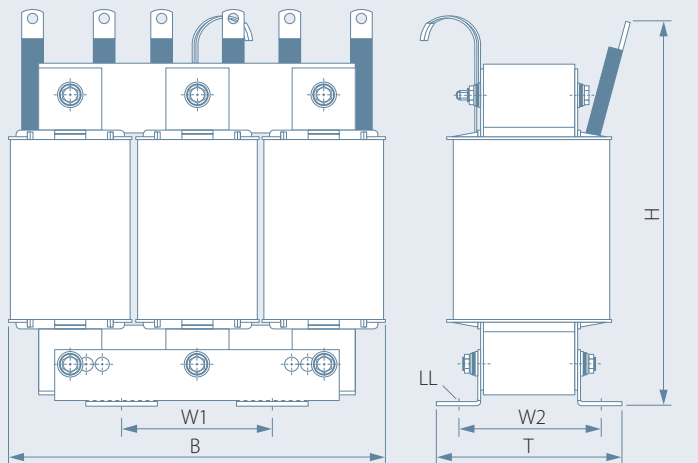
POWER kvar	TYPE multiind-basic ... 14%	INDUCTIVITY		RATED CUR- RENT A	DIMENSIONS						CONNECTION			DIA- GRAM	WEIGHT kg	CAPACI- TANCE µF	CAPACITOR multicond UHPC ... -525-3P	
		Cu	Al		mH	H	B	T	W1	W2	LL	L	AW					RK
2.5	multiind-basic 400-02.5-14-Cu-L-S	x		30.84	3.9	165	180	86	95	62.5	9	x			A	5.3	3 x 15.3	4.0
5	multiind-basic 400-05.0-14-Cu-L-S	x		15.42	7.8	165	180	96	95	72.5	9	x			A	8.3	3 x 30.7	8.0
7.5	multiind-basic 400-07.5-14-Cu-L-S	x		9.46	12.7	195	210	109	95	86	9	x			A	13.4	3 x 50.0	13.0
10	multiind-basic 400-10.0-14-Cu-L-S	x		8.20	14.6	195	210	109	95	86	9	x			A	14.4	3 x 57.7	15.0
12.5	multiind-basic 400-12.5-14-Cu-L-S	x		5.86	17.6	220	240	105	95	81	9	x			A	17.9	3 x 80.7	21.0
15	multiind-basic 400-15.0-14-Cu-L-S	x		5.86	20.4	220	240	105	95	81	9	x			A	17.9	3 x 80.7	21.0
20	multiind-basic 400-20.0-14-Cu-L-S	x		4.09	29.3	220	240	125	95	101	9	x			A	23.5	3 x 115.7	30.0
25	multiind-basic 400-25.0-14-Cu-L-S	x		3.32	36.0	220	240	145	95	101	9	x			A	24.2	3 x 142.3	37.0
25	multiind-basic 400-25.0-14-Al-AW-S		x	3.32	36.0	240	260	167	95	112	9		x		C	24.9	3 x 142.3	37.0
30	multiind-basic 400-30.0-14-Cu-L-S	x		2.73	43.9	220	240	145	95	101	9	x			A	24.6	3 x 173.3	1 x 15.0 + 1 x 30.0
30	multiind-basic 400-30.0-14-Al-AW-S		x	2.73	43.9	270	300	180	95	112	9		x		C	23.9	3 x 173.3	1 x 15.0 + 1 x 30.0
40	multiind-basic 400-40.0-14-Cu-L-S	x		2.05	58.5	270	300	145	95	95	9	x			A	37.1	3 x 231.0	2 x 30.0
40	multiind-basic 400-40.0-14-Al-AW-S		x	2.05	58.5	270	300	180	95	107	9		x		C	36.2	3 x 231.0	2 x 30.0
50	multiind-basic 400-50.0-14-Cu-L-S	x		1.66	72.1	270	300	150	95	107	9	x			A	46.5	3 x 284.7	2 x 37.0
50	multiind-basic 400-50.0-14-Al-AW-S		x	1.66	72.1	270	300	210	95	112	9		x		C	39.0	3 x 284.7	2 x 37.0
60	multiind-basic 400-60.0-14-Cu-L-S	x		1.36	87.7	270	300	210	95	112	9	x			A	47.6	3 x 346.7	3 x 30.0

## Construction diagrams



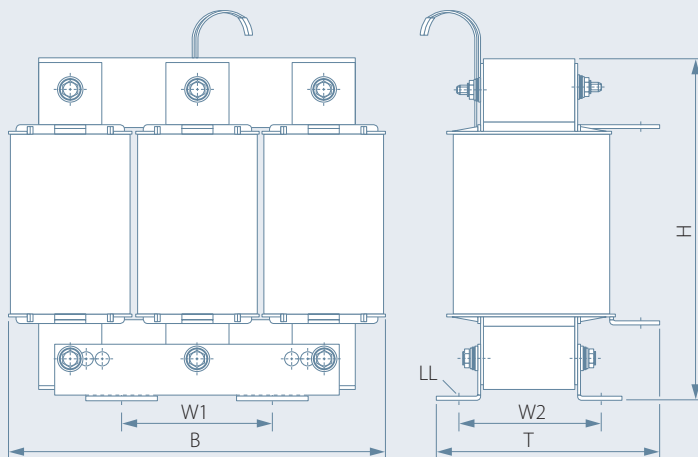
**Diagram A**

Design with connection lines  
Type L



**Diagram B**

Design with tubular cable lug  
Type RK



**Diagram C**

Design with connection angle  
Type AW

Not suitable for measurement purposes.



## multiind 50Hz Technical details

	<b>multiind 5.5</b>	<b>multiind 7.0</b>	
DEVICE TYPE	<b>basic</b> p = 5.5 %	<b>light</b> p = 7 %	<b>basic</b> p = 7 %
<b>Rated voltage   frequency</b>	U <sub>n</sub> = 400 V   50Hz	U <sub>n</sub> = 400 V   50Hz	U <sub>n</sub> = 400 V   50Hz
<b>Maximum permissible operating voltage</b>	U <sub>n</sub> = 400 V ± 10%	U <sub>n</sub> = 400 V ± 10%	U <sub>n</sub> = 400 V ± 10%
<b>Power</b>	2.5 – 75 kvar	2.5 – 75 kvar	2.5 – 75 kvar
<b>Inductive stability   Inductive tolerance</b>	L (I <sub>Lin</sub> ) ≥ 0.95 L <sub>N</sub>   ± 3%	L (I <sub>Lin</sub> ) ≥ 0.95 L <sub>N</sub>   ± 3%	L (I <sub>Lin</sub> ) ≥ 0.95 L <sub>N</sub>   ± 3%
<b>Overtemperature protection</b>	Break contact at 125 °C (250 V – 50 Hz – 2.5 A), temperature class B	Break contact at 125 °C (250 V – 50 Hz – 2.5 A), temperature class B	
<b>Protection type</b>	IP 00	IP 00	IP 00
<b>Protection class</b>	I	I	I
<b>Ambient temperature</b>	maximum 40 °C	maximum 40 °C	maximum 40 °C
<b>Cooling type</b>	Natural cooling	Natural cooling	Natural cooling
<b>Impregnation</b>	vacuum-impregnated	vacuum-impregnated	vacuum-impregnated
<b>Detuning factor   Resonance frequency</b>	5.5 %   214 Hz	7 %   189 Hz	7 %   189 Hz
<b>Linearity</b>	2.1 x I <sub>rated</sub>	1.6 x I <sub>rated</sub>	1.85 x I <sub>rated</sub>
<b>Standards</b>	DIN EN 60076-6 (VDE 0532-76-6) DIN EN 61558-1-A1 (VDE 0570-1-A1) DIN EN 61558-2-20 (VDE 0570-2-20)	DIN EN 60076-6 (VDE 0532-76-6) DIN EN 61558-1-A1 (VDE 0570-1-A1) DIN EN 61558-2-20 (VDE 0570-2-20)	
<b>Designs</b>	Cu = copper Al = aluminum  L = cable connection AW = connection angle RK = tubular cable lug	Cu = copper Al = aluminum  L = cable connection AW = connection angle RK = tubular cable lug	

<b>multiind 8.0</b>		<b>multiind 12.5</b>		<b>multiind 14.0</b>	
<b>light</b> p = 8 %	<b>basic</b> p = 8 %	<b>basic</b> p = 12.5 %	<b>basic</b> p = 12.5 %	<b>light</b> p = 14 %	<b>basic</b> p = 14 %
U <sub>n</sub> = 400 V   50 Hz	U <sub>n</sub> = 400 V   50 Hz	U <sub>n</sub> = 400 V   50 Hz	U <sub>n</sub> = 400 V   50 Hz	U <sub>n</sub> = 400 V   50 Hz	U <sub>n</sub> = 400 V   50 Hz
U <sub>n</sub> = 400 V ± 10 %	U <sub>n</sub> = 400 V ± 10 %	U <sub>n</sub> = 400 V ± 10 %	U <sub>n</sub> = 400 V ± 10 %	U <sub>n</sub> = 400 V ± 10 %	U <sub>n</sub> = 400 V ± 10 %
2.5 – 75 kvar	2.5 – 75 kvar	2.5 – 50 kvar	2.5 – 50 kvar	2.5 – 50 kvar	2.5 – 50 kvar
L (I <sub>Lin</sub> ) ≥ 0.95 L <sub>N</sub>   ± 3 %	L (I <sub>Lin</sub> ) ≥ 0.95 L <sub>N</sub>   ± 3 %	L (I <sub>Lin</sub> ) ≥ 0.95 L <sub>N</sub>   ± 3 %	L (I <sub>Lin</sub> ) ≥ 0.95 L <sub>N</sub>   ± 3 %	L (I <sub>Lin</sub> ) ≥ 0.95 L <sub>N</sub>   ± 3 %	L (I <sub>Lin</sub> ) ≥ 0.95 L <sub>N</sub>   ± 3 %
Break contact at 125 °C (250 V – 50 Hz – 2.5 A), temperature class B		Break contact at 125 °C (250 V – 50 Hz – 2.5 A), temperature class B		Break contact at 125 °C (250 V – 50 Hz – 2.5 A), temperature class B	
IP 00	IP 00	IP 00	IP 00	IP 00	IP 00
I	I	I	I	I	I
maximum 40 °C	maximum 40 °C	maximum 40 °C	maximum 40 °C	maximum 40 °C	maximum 40 °C
Natural cooling	Natural cooling	Natural cooling	Natural cooling	Natural cooling	Natural cooling
vacuum-impregnated	vacuum-impregnated	vacuum-impregnated	vacuum-impregnated	vacuum-impregnated	vacuum-impregnated
8 %   176 Hz	8 %   176 Hz	12.5 %   142 Hz	12.5 %   142 Hz	14 %   134 Hz	14 %   134 Hz
1.6 x I <sub>rated</sub>	1.85 x I <sub>rated</sub>	1.5 x I <sub>rated</sub>	1.5 x I <sub>rated</sub>	1.4 x I <sub>rated</sub>	1.5 x I <sub>rated</sub>
DIN EN 60076-6 (VDE 0532-76-6) DIN EN 61558-1-A1 (VDE 0570-1-A1) DIN EN 61558-2-20 (VDE 0570-2-20)		DIN EN 60076-6 (VDE 0532-76-6) DIN EN 61558-1-A1 (VDE 0570-1-A1) DIN EN 61558-2-20 (VDE 0570-2-20)		DIN EN 60076-6 (VDE 0532-76-6) DIN EN 61558-1-A1 (VDE 0570-1-A1) DIN EN 61558-2-20 (VDE 0570-2-20)	
Cu = copper Al = aluminum  L = cable connection AW = connection angle RK = tubular cable lug		Cu = copper Al = aluminum  L = cable connection AW = connection angle RK = tubular cable lug		Cu = copper Al = aluminum  L = cable connection AW = connection angle RK = tubular cable lug	

# Filter circuit reactors

## multiind 60Hz

### Specifications multiind-basic ... 6%

Detuning: **6%** Resonance frequency: **245 Hz**

VOLTAGE V	POWER kvar	TYPE multiind-basic ... 6%	INDUCTIVITY		RATED CURRENT A	DIMENSIONS						CONNECTION			DIAGRAM	WEIGHT kg	CAPACITANCE µF	CAPACITOR multicond UHPC	
			Cu	Al		mH	H	W	D	W1	W2	LL	L	AW					RK
380V/60Hz	12.5	multiind-basic 380-60-12.5-6-CU-RK-S	x		1.8280	20.3	215	210	109	95	85	9			x	B	13.5	231	1x 20.0-525-3P
380V/60Hz	13.4	multiind-basic 380-60-13.4-6-CU-RK-S	x		1.8250	20.3	215	210	109	95	85	9			x	B	13.5	231	1x 16.7-480-3P
380V/60Hz	25	multiind-basic 380-60-25.0-6-AL-AW-S		x	0.9490	39.2	240	260	167	95	112	9		x		C	24.5	445	1x 17.9-480-3P 1x 14.3-480-3P
380V/60Hz	26.7	multiind-basic 380-60-26.7-6-CU-RK-S	x		0.9160	40.6	250	240	115	95	92	9			x	B	21	461	1x 33.4-480-3P
380V/60Hz	50	multiind-basic 380-60-50.0-6-CU-RK-S	x		0.484	76.8	305	300	150	95	117	9			x	B	34.1	873	1x 29.8-480-3P 2x 33.4-480-3P
440V/60Hz	12.5	multiind-basic 440-60-12.5-6-CU-RK-S	x		2.4403	17.6	215	210	109	95	85	9			x	B	11.8	173	1x 15.0-525-3P
440V/60Hz	25	multiind-basic 440-60-25.0-6-AL-AW-S		x	1.2166	35.4	220	240	145	95	92	9		x		C	17.6	347	1x 30.0-525-3P
440V/60Hz	50	multiind-basic 440-60-50.0-6-AL-AW-S		x	0.6416	67	270	300	180	95	117	9		x		C	33	658	1x 20.0-525-3P 1x 37.0-525-3P

### Specifications multiind-basic ... 7%

Detuning: **7%** Resonance frequency: **227Hz**

VOLTAGE V	POWER kvar	TYPE multiind-basic ... 7%	INDUCTIVITY		RATED CURRENT A	DIMENSIONS						CONNECTION			DIAGRAM	WEIGHT kg	CAPACITANCE µF	CAPACITOR multicond UHPC	
			Cu	Al		mH	H	W	D	W1	W2	LL	L	AW					RK
230V/60Hz	10	multiind-basic 230-60-10-7-CU-RK-S	x		1.0661	24.9	215	210	109	95	85	9			x	B	13.8	462	1x 28.1-440-3P
230V/60Hz	20	multiind-basic 230-60-20-7-CU-RK-S	x		0.5319	49.9	250	240	129	95	105	9			x	B	22.2	925.5	1x 20.0-440-3P 1x 36.3-440-3P
480V/60Hz	25	multiind-basic 480-60-25.0-7-AL-AW-S		x	1.7043	32.5	220	240	145	95	92	9		x		C	17.3	289	1x 25.0-525-3P
480V/60Hz	50	multiind-basic 480-60-50.0-7-AL-AW-S		x	0.9276	59.7	240	260	167	95	112	9		x		C	27.0	531	1x 21.0-525-3P 1x 25.0-525-3P

### Specifications multiind-basic ... 13%

Detuning: **13%** Resonance frequency: **167 Hz**

VOLTAGE V	POWER kvar	TYPE multiind-basic ... 13%	INDUCTIVITY		RATED CURRENT A	DIMENSIONS						CONNECTION			DIAGRAM	WEIGHT kg	CAPACITANCE µF	CAPACITOR multicond UHPC	
			Cu	Al		mH	H	W	D	W1	W2	LL	L	AW					RK
380V/60Hz	12.5	multiind-basic 380-60-12.5-13-CU-RK-S	x		4.3976	19.8	250	240	105	95	82	9			x	B	16	207.9	1x 18.0-525-3P
380V/60Hz	25	multiind-basic 380-60-25.0-13-AL-AW-S		x	2.1988	39.5	270	300	180	95	117	9		x		C	32	416	2x 18.0-525-3P
380V/60Hz	50	multiind-basic 380-60-50.0-13-AL-AW-S		x	1.0698	81.3	270	300	180	95	117	9		x		C	33	855	2x 37.0-525-3P
440V/60Hz	12.5	multiind-basic 440-60-12.5-13-CU-RK-S	x		6.0980	16.5	215	210	109	95	85	9			x	B	15	150	1x 13.0-525-3P
440V/60Hz	25	multiind-basic 440-60-25.0-13-AL-AW-S		x	3.0490	33	240	260	167	95	112	9		x		C	24	300	2x 13.0-525-3P
440V/60Hz	50	multiind-basic 440-60-50.0-13-AL-AW-S		x	1.5250	66	270	300	180	95	117	9		x		C	33	600	1x 15.0-525-3P 1x 37.0-525-3P

## multiind 60Hz technical details

DEVICE TYPE	multiind 6 %		multiind 7 %		multiind 13 %	
	basic ρ = 6 %	basic ρ = 6 %	basic ρ = 7 %	basic ρ = 7 %	basic ρ = 13 %	basic ρ = 13 %
<b>Rated voltage</b>	U <sub>n</sub> = 380 V	U <sub>n</sub> = 440 V	U <sub>n</sub> = 230 V	U <sub>n</sub> = 480 V	U <sub>n</sub> = 380 V	U <sub>n</sub> = 440 V
<b>Frequency</b>	60 Hz	60 Hz	60 Hz	60 Hz	60 Hz	60 Hz
<b>Maximum permissible operating voltage</b>	U <sub>n</sub> = 380 V ± 10 %	U <sub>n</sub> = 440 V ± 10 %	U <sub>n</sub> = 230 V ± 10 %	U <sub>n</sub> = 480 V ± 10 %	U <sub>n</sub> = 380 V ± 10 %	U <sub>n</sub> = 440 V ± 10 %
<b>Power</b>	12.5 x 13.4, 25; 26.7; x 50 kvar	12.5 x 25; 50 kvar	10; 20 kvar	25; 50 kvar	12.5 x 25; 50 kvar	12.5 x 25; 50 kvar
<b>Inductive stability</b>	L (I <sub>Lin</sub> ) ≥ 0.95 L <sub>N</sub>		L (I <sub>Lin</sub> ) ≥ 0.95 L <sub>N</sub>		L (I <sub>Lin</sub> ) ≥ 0.95 L <sub>N</sub>	
<b>Inductive tolerance</b>	± 3 %		± 3 %		± 3 %	
<b>Overtemperature protection</b>	Break contact at 125 °C (250 V – 50 Hz – 2.5 A)		Break contact at 125 °C (250 V – 50 Hz – 2.5 A)		Break contact at 125 °C (250 V – 50 Hz – 2.5 A)	
<b>Protection type</b>	IP 00		IP 00		IP 00	
<b>Protection class</b>	I		I		I	
<b>Ambient temperature</b>	Maximum 40 °C		Maximum 40 °C		Maximum 40 °C	
<b>Cooling type</b>	Natural cooling		Natural cooling		Natural cooling	
<b>Impregnation</b>	Vacuum-impregnated		Vacuum-impregnated		Vacuum-impregnated	
<b>Detuning</b>	6 %	6 %	7 %	7 %	13 %	13 %
<b>Resonance frequency</b>	245 Hz	245 Hz	227 Hz	227 Hz	167 Hz	167 Hz
<b>Linearity</b>	1.85 x I <sub>rated</sub>	1.85 x I <sub>rated</sub>	1.85 x I <sub>rated</sub>	1.85 x I <sub>rated</sub>	1.5 x I <sub>rated</sub>	1.5 x I <sub>rated</sub>
<b>Standards</b>	DIN EN 60289 (VDE 0532-289)		DIN EN 60289 (VDE 0532-289)		DIN EN 60289 (VDE 0532-289)	
<b>Designs</b>	Cu = copper Al = aluminum  L = cable connection AW = connection angle RK = tubular cable lug					