

Power Factor Capacitor and Reactor

Mikro's range of power factor capacitors is designed for power factor correction in low-voltage applications such as motors, transformers, generators and supply cables. The dry type capacitor's cylindrical shape improves thermal response and simplifies installation while the capacitor itself is manufactured using metalized polypropylene film as the dielectric. Mikro Antiresonance Reactor functions by detuning the resonance that occurs when harmonics interact with the power factor corrector capacitor. This essential partner to the Mikro capacitor negates the resonance which could otherwise cause excessive voltage and current, leading to damage in the operational capability of the power factor capacitor.



TECHNICAL SPECIFICATION FOR POWER FACTOR CAPACITOR

SPECIFICATIONS	DETAILS		
Type	Dry Type Cylinder type	Oil Type	Dry Type Cylinder, Heavy Duty Type
Voltage Range	220...690 V AC	230...1100 V AC	440 V AC
Phase	Single Phase (Upon Request)	Single Phase (Upon Request)	Single Phase (Upon Request)
	Three Phase	Three Phase	Three Phase
Frequency	50Hz	50Hz	50Hz
	60Hz (Upon request)	60Hz (Upon request)	60Hz (Upon request)
Power Range	2.5kVAR to 60kVAR	5kVAR to 75kVAR	2.5kVAR to 80kVAR
Capacitor Losses	< 0,35 W/kVAR	< 0,35 W/kVAR	< 0,2 W/kVAR
Total Losses with Discharge Resistor	< 1.0 W/kVAR	< 1.0 W/kVAR	< 1.0 W/kVAR
Capacity Tolerance	-5% ~ 10% (at 20°C)	-5% ~ 10% (at 20°C)	-5% ~ 10% (at 20°C)
Max Overvoltage	Un + 10% (up to 8 hours daily)	Un + 10% (up to 8 hours daily)	Un + 10% (up to 8 hours daily)
	Un + 15% (up to 30 mins daily)	Un + 15% (up to 30 mins daily)	Un + 15% (up to 30 mins daily)
	Un + 20% (up to 5 mins monthly)	Un + 20% (up to 5 mins monthly)	Un + 20% (up to 5 mins monthly)
Max Overcurrent	Un + 30% (up to 1 mins monthly)	Un + 30% (up to 1 mins monthly)	Un + 30% (up to 1 mins monthly)
	1.3 x In	1.3 x In	2.7 x In
Max Inrush Current	200 x In	200 x In	450 x In
Withstand Voltage	2.15 x Un (10 seconds)	2.15 x Un (10 seconds)	2.15 x Un (10 seconds)
Connection	3 phase (Single phase on request)	3 phase (Single phase on request)	3 phase (Single phase on request)
Insulation Level	3/15kV	3/15kV	3/15kV
Mean life expectancy	100,000 hrs	100,000 hrs	200,000 hrs
Altitude	Metallised Polypropylene	Metallised Polypropylene	Metallised Polypropylene
Dielectric	-25°C ~ 55°C	-25°C ~ 45°C	-40°C ~ 60°C
Ambient Temperature	Max 2,000m	Max 2,000m	Max 4,000m
Discharge	External discharge module	External discharge module	External discharge module
Cooling	Natural forced	Natural forced	Natural forced
Impregnation	Epoxy resin	Capacitor Oil (Non PCB)	Epoxy resin
Safety	Self healing technology	Self healing technology	Self healing technology
	Overpressure disconnecter	Overpressure disconnecter	Overpressure disconnecter
Installation Place	Indoor (Outdoor on request)	Indoor (Outdoor on request)	Indoor (Outdoor on request)
Applicable Standards	IEC60831-1, IEC60831-2	IEC60831-1, IEC60831-2	IEC60831-1, IEC60831-2

TECHNICAL SPECIFICATION FOR DETUNED REACTOR

SPECIFICATIONS	DETAILS
Frequency	50Hz or 60Hz
Voltage	380..440V AC ****
Output power	4..100kVAR *
Detuning/Filtering %p	6, 7, 14% ***
Core	Multi Gap Silicon Steel Iron Core
Ambient Temperature	40°C Max, Class D
Insulation Class	F
Insulation Strength	3kV 50Hz for 1 min P-P, P-E
Linearity	< 5% drop of initial inductance value *
Approval	IEC 60076-6 Ed 1.0 **
Cooling	Natural Cooling
Enclosure	IP00
Phase	3 Phase
Temperature protection	Bi-metal thermostat, 150° C NC type

**** other voltage level available upon request
 *** 5,67 and 13% available upon request
 ** Applicable to certain model
 * Able to customize

POWER FACTOR CAPACITOR AND REACTOR

Detuned Reactor

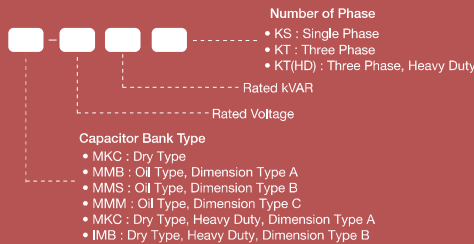
DESCRIPTION	MODEL
6%, Vsystem 400V, matching 440V Cap	MX06-400/XX-440/XXX
7%, Vsystem 400V, matching 440V Cap	MX07-400/XX-440/XXX
14%, Vsystem 400V, matching 440V Cap	MX14-400/XX-440/XXX
6%, Vsystem 400V, matching 525V Cap	MX06-400/XX-525/XXX
7%, Vsystem 400V, matching 525V Cap	MX07-400/XX-525/XXX
14%, Vsystem 400V, matching 525V Cap	MX14-400/XX-525/XXX

Capacitor Bank

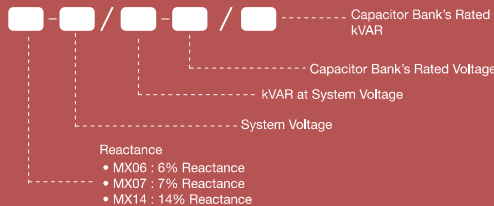
DESCRIPTION	MODEL
Dry 230V AC, 1-Phase	MKC-235XXXKS
Dry 250V AC, 1-Phase	MKC-255XXXKS
Dry 230V AC	MKC-235XXXKT
Dry 380V AC	MKC-385XXXKT
Dry 400V AC	MKC-405XXXKT
Dry 415V AC	MKC-415XXXKT
Dry 440V AC	MKC-445XXXKT
Dry 480V AC	MKC-485XXXKT
Dry 525V AC	MKC-525XXXKT
Dry 660V AC	MKC-665XXXKT
Dry 690V AC	MKC-695XXXKT
Oil 230V AC	MMX-235XXXKT
Oil 415V AC	MMX-415XXXKT
Oil 440V AC	MMX-445XXXKT
Oil 480V AC	MMX-485XXXKT
Oil 525V AC	MMX-525XXXKT
Oil 660V AC	MMX-665XXXKT
Oil 690V AC	MMX-695XXXKT
Oil 720V AC	MMX-725XXXKT
Oil 800V AC	MMX-805XXXKT
Oil 1100V AC	MMX-1105XXXKT
Dry Heavy Duty 440V AC	IMB-445XXXKT(HD)

ORDERING INFORMATION

Capacitor Bank



Detuned Reactor



Power Factor Capacitor Dimensions

Part No.	Dimension D*H (mm)
Dry Type Capacitor Cylinder (3 Phase, 50Hz, 230V AC)	
MKC-235025KT	63*165
MKC-235050KT	86*170
MKC-235075KT	86*230
MKC-235100KT	86*275
MKC-235125KT	86*275
MKC-235150KT	96*275
MKC-235200KT	116*305
MKC-235250KT	136*305
MKC-235300KT	136*305

Dry Type Capacitor Cylinder (3 Phase, 50Hz, 400V AC)	
MKC-405025KT	63*135
MKC-405050KT	86*140
MKC-405075KT	86*170
MKC-405100KT	86*230
MKC-405125KT	86*230
MKC-405150KT	86*275
MKC-405200KT	96*275
MKC-405250KT	116*275
MKC-405300KT	116*305
MKC-405400KT	136*305
MKC-405500KT	136*380

Dry Type Capacitor Cylinder (3 Phase, 50Hz, 440V AC)	
MKC-445025KT	63*135
MKC-445050KT	63*165
MKC-445075KT	86*170
MKC-445100KT	86*170
MKC-445125KT	86*230
MKC-445150KT	86*230
MKC-445200KT	86*275
MKC-445250KT	96*275
MKC-445300KT	116*275
MKC-445400KT	136*305
MKC-445500KT	136*305

Dry Type Capacitor Cylinder (3 Phase, 50Hz, 525V AC)	
MKC-525025KT	63*135
MKC-525050KT	86*140
MKC-525075KT	86*170
MKC-525100KT	86*230
MKC-525125KT	86*230
MKC-525150KT	86*275
MKC-525200KT	96*275
MKC-525250KT	116*275
MKC-525300KT	116*275
MKC-525400KT	136*280
MKC-525500KT	136*355

Part No.	Dimension D*H (mm)
Oil Type Capacitor Cylinder (3 Phase, 50Hz, 230V AC)	
MMS-235010KT	215*205
MMB-235015KT	210*170
MMB-235020KT	210*180
MMB-235025KT	210*230
MMB-235030KT	210*240
MMB-235040KT	210*310
MMB-235050KT	210*360

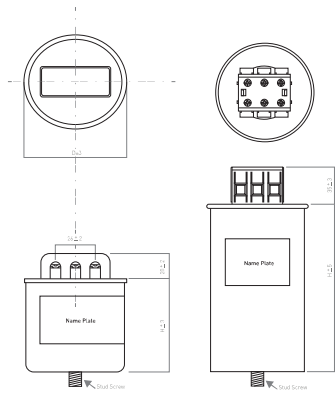
Oil Type Capacitor Cylinder (3 Phase, 50Hz, 440V AC)	
MMS-445010KT	215*155
MMS-445015KT	215*205
MMS-445020KT	215*255
MMB-445025KT	210*180
MMB-445030KT	210*220
MMB-445040KT	210*230
MMB-445050KT	210*280

Oil Type Capacitor Cylinder (3 Phase, 50Hz, 525V AC)	
MMS-525005KT	215*115
MMS-525010KT	215*175
MMS-525012KT	215*205
MMS-525015KT	215*255
MMB-525020KT	210*170
MMB-525025KT	210*180
MMB-525030KT	210*220
MMB-525040KT	210*280
MMB-525050KT	210*310

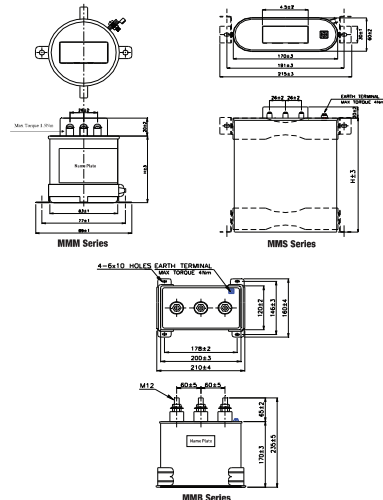
Dry Type, Heavy Duty Capacitor Cylinder (3 Phase, 50Hz, 440V AC)	
MKC-445025KT(HD)	86*140
MKC-445050KT(HD)	86*170
MKC-445100KT(HD)	86*275
MKC-445150KT(HD)	86*275
MKC-445200KT(HD)	116*305
MKC-445250KT(HD)	136*305
MKC-445300KT(HD)	136*305
MKC-445400KT(HD)	136*305

Part No.	Dimension W*D*H (mm)
Dry Type, Heavy Duty Capacitor Cylinder (3 Phase, 50Hz, 440V AC)	
IMB-445400KT(HD)	350*400*230
IMB-445500KT(HD)	350*400*230
IMB-445600KT(HD)	350*400*230
IMB-445750KT(HD)	350*400*300
IMB-445800KT(HD)	350*400*300

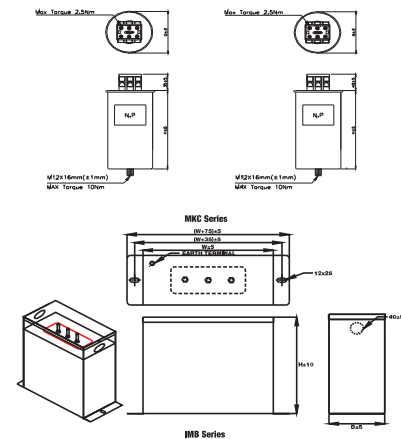
Dry Type Capacitor Dimensions



Oil Type Capacitor Dimensions



Dry Type (Heavy Duty) Capacitor Dimensions



Detuned Reactor Dimensions

Part No.	Dimension W*H*D*W1 (mm)
6, 7 and 14% detuned reactor, with 230V AC 50Hz capacitor at 210-230V AC 50Hz only	
MX06-210/8.9-230/10	175*180*180*98*90
MX06-210/13.3-230/15	175*180*210*122*90
MX06-210/17.7-230/20	240*230*180*98*160
MX06-210/22.2-230/25	240*230*185*103*160
MX06-210/26.6-230/30	240*230*200*118*160
MX06-210/35.5-230/40	240*230*225*140*160
MX06-210/44.3-230/50	340*270*250*156*200
MX06-210/53.2-230/60	340*270*260*166*200
MX06-210/70.9-230/80	400*350*260*126*240
MX06-210/79.8-230/90	400*350*280*142*240
MX06-210/88.7-230/100	400*350*300*162*240
MX07-210/9.0-230/10	175*180*180*98*90
MX07-210/13.4-230/15	175*180*210*122*90
MX07-210/17.9-230/20	240*230*180*98*160
MX07-210/22.4-230/25	240*230*185*103*160
MX07-210/26.9-230/30	240*230*200*118*160
MX07-210/35.8-230/40	240*230*225*140*160
MX07-210/44.8-230/50	340*270*250*156*200
MX07-210/53.8-230/60	340*270*260*166*200
MX07-210/71.7-230/80	400*350*260*126*240
MX07-210/80.7-230/90	400*350*280*142*240
MX07-210/89.6-230/100	400*350*300*162*240
MX13-210/9.6-230/10	240*230*180*98*160
MX13-210/14.4-230/15	240*230*205*120*160
MX13-210/19.2-230/20	240*230*220*140*160
MX13-210/23.9-230/25	240*230*245*165*160
MX13-210/28.7-230/30	340*270*250*156*200
MX13-210/38.3-230/40	340*270*280*186*200
MX13-210/47.9-230/50	400*350*290*152*240
MX13-210/57.5-230/60	400*350*310*172*240
MX13-210/76.6-230/80	460*410*360*151*280
MX13-210/86.2-230/90	460*410*380*171*280
MX13-210/95.8-230/100	460*410*400*191*280

Part No.	Dimension W*H*D*W1 (mm)
6, 7 and 14% detuned reactor, with 440V AC 50Hz capacitor at 380-400V AC 50Hz only	
MX06-400/8.8-440/10	175*180*190*92*90
MX06-400/13.2-440/15	175*180*200*112*90
MX06-400/17.6-440/20	240*230*180*89*160
MX06-400/22.0-440/25	240*230*185*94*160
MX06-400/26.4-440/30	240*230*200*109*160
MX06-400/35.2-440/40	240*230*220*129*160
MX06-400/43.9-440/50	240*230*240*149*160
MX06-400/52.7-440/60	315*230*200*129*241
MX06-400/66.7-440/075	340*270*260*166*200
MX06-400/70.3-440/80	340*270*270*176*200
MX06-400/79.1-440/90	400*350*260*126*240
MX06-400/87.9-440/100	400*350*265*131*240
MX07-400/8.9-440/10	175*180*190*92*90
MX07-400/13.3-440/15	175*180*200*112*90
MX07-400/17.8-440/20	240*230*180*89*160
MX07-400/22.2-440/25	240*230*185*94*160
MX07-400/26.7-440/30	240*230*200*129*160
MX07-400/35.5-440/40	240*230*220*125*160
MX07-400/44.4-440/50	315*255*210*149*210
MX07-400/53.3-440/60	315*255*220*128*210
MX07-400/71.0-440/80	340*270*270*176*200
MX07-400/79.9-440/90	400*350*245*115*240
MX07-400/88.8-440/100	400*350*255*125*240
MX13-400/9.5-440/10	240*230*175*93*160
MX13-400/14.2-440/15	240*230*200*115*160
MX13-400/19.0-440/20	240*230*215*135*160
MX13-400/23.7-440/25	240*230*240*160*160
MX13-400/28.5-440/30	340*270*245*151*200
MX13-400/38.0-440/40	340*270*270*181*200
MX13-400/47.5-440/50	400*350*285*147*240
MX13-400/57.0-440/60	400*350*305*167*240
MX13-400/76.0-440/80	460*410*355*146*280
MX13-400/85.5-440/90	460*410*375*166*280
MX13-400/95.0-440/100	460*410*395*186*280

Part No.	Dimension W*H*D*W1 (mm)
6, 7 and 14% detuned reactor, with 525V AC 50Hz capacitor at 380-400V AC 50Hz only	
MX06-400/6.2-525/10	175*180*190*92*90
MX06-400/9.3-525/15	175*180*195*97*90
MX06-400/12.3-525/20	175*180*200*112*90
MX06-400/15.4-525/25	240*230*180*89*160
MX06-400/18.5-525/30	240*230*185*94*160
MX06-400/24.7-525/40	240*230*200*109*160
MX06-400/30.9-525/50	240*230*215*124*160
MX06-400/37.0-525/60	240*230*230*139*160
MX06-400/49.4-525/80	315*230*200*129*241
MX06-400/55.6-525/90	340*270*250*156*200
MX06-400/61.7-525/100	340*270*260*166*200
MX07-400/6.2-525/10	175*180*190*92*90
MX07-400/9.4-525/15	175*180*195*97*90
MX07-400/12.5-525/20	175*180*200*112*90
MX07-400/15.6-525/25	240*230*180*89*160
MX07-400/18.7-525/30	240*230*185*94*160
MX07-400/25.0-525/40	240*230*200*109*160
MX07-400/31.2-525/50	240*230*215*124*160
MX07-400/37.4-525/60	240*230*230*139*160
MX07-400/49.9-525/80	315*230*200*129*241
MX07-400/56.1-525/90	340*270*250*156*200
MX07-400/62.4-525/100	340*270*260*166*200
MX13-400/6.7-525/10	240*230*170*90*160
MX13-400/10.0-525/15	240*230*210*120*160
MX13-400/13.3-525/20	240*230*235*145*160
MX13-400/16.7-525/25	240*230*245*155*160
MX13-400/20.0-525/30	340*270*240*146*200
MX13-400/26.7-525/40	340*270*265*171*200
MX13-400/33.3-525/50	400*350*270*136*240
MX13-400/40.0-525/60	400*350*285*165*240
MX13-400/53.4-525/80	400*350*310*191*240
MX13-400/60.1-525/90	460*400*340*151*280
MX13-400/66.7-525/100	460*400*350*166*280

