

## C64C / C84C

### Capacitor Modules

- Power Range: 25 to 100 kvar per module
- Compact design; up to 5 modules per cabinet
- Ideal for mounting in all common switchgear systems
- Easy and quick mounting with multifunctional rails
- Power Factor Correction Capacitors LKT dry-type with triple safety feature

#### // Application Recommendations

Capacitor modules type C64C and C84C are suitable for installation in standard switchgear systems. Additional mounting rails for all common switchgear systems:

- W = 600 mm, D = 400, 500, 600 mm resp.
- W = 800 mm, D = 400, 500, 600 mm

allow an easy and quick installation of complex Power Factor Correction Systems.

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 91 ff.).

## // Power Range

Compact compensation module for installation in switchgear systems:

- 25 to 100 kvar

## // Construction

Sheet steel chassis with mounted power capacitors, contactors and fuses - ideal for mounting in all common switchgear systems.

The module consists of:

- 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
- Capacitor Switching Contactors with leading transition contacts for damping of current peaks
- Busbar system with bus-mounting fuse bases, 3-pole, size NH00
- Control circuit with female connector (wired connector for connection with terminal strip incl.)

## // Application / Installation

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.

## // Installation

Specific module rails are required for installation in the switchgear system. Those module rails are available for all common switchgear systems and can be supplied as an optional accessory.

## // Connection

The network connection can be done either vertically or horizontally. For the horizontal connection one has to connect the cables equipped with the cable lugs to the busbar by using the M12 screws.

A bus connection bracket CU AW-1 for vertical connection is available as an option.

Additional modules can be connected directly via the busbar system.

## // Technical Data

Design	Sheet steel chassis for installation in switchgear cabinets C6xC... for cabinets (width = 600 mm) C8xC... for cabinets (width = 800 mm)
Rated voltage	400 V / 50 Hz
Rated voltage of capacitors	440 V / 50 Hz
Ambient temperature	-5 °C to +60 °C
Humidity	Max. 90 %, no condensation
Standards	EN 60831-1 and -2 IEC 60831-1 and -2 EN 61921 VDE 0660 Part 600-1 and -2 EN 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 C6xD... and C8xD... series of Capacitor Modules.

For further information on power factor correction and harmonics please refer to our „Manual of Power Factor Corrections“.

Article- No.	Type	Rated power	Step power	Switching sequence	Dimensions			Weight (gross) approx. [kg]	Protection IP
		[kvar]	[kvar]		Width [mm]	Height [mm]	Depth [mm]		

Capacitor Modules for installation in switchgear systems with a width of 600 mm, rated mains voltage: 400 V / 50 Hz

Type series: C64C

34-64167	C64C 25-3,13-211-400/440-64	25	3.13	1:1:2:4	500	300	350	15	00
34-64163	C64C 25-6,25-21-400/440-64	25	6.25	1:1:2	500	300	350	15	00
34-64164	C64C 25-12,5-2-400/440-64	25	12.5	1:1	500	300	350	15	00
34-64165	C64C 25-25-1-400/440-64	25	25	1	500	300	350	16	00
34-64170	C64C 31,25-6,25-12-400/440-64	31.25	6.25	1:2:2	500	300	350	16	00
34-64180	C64C 34,38-3,13-112-400/440-64	34.38	3.13	1:2:4:4	500	300	350	16	00
34-64172	C64C 37,5-6,25-22-400/440-64	37.5	6.25	1:1:2:2	500	300	350	16	00
34-64173	C64C 37,5-12,5-11-400/440-64	37.5	12.5	1:2	500	300	350	16	00
34-64177	C64C 43,75-6,25-111-400/440-64	43.75	6.25	1:2:4	500	300	350	17	00
34-64181	C64C 46,88-3,13-1111-400/440-64	46.88	3.13	1:2:4:8	500	300	350	17	00
34-64288	C64C 50-3,13-2111-400/440-64	50	3.13	1:1:2:4:8	500	300	350	18	00
34-64182	C64C 50-6,25-211-400/440-64	50	6.25	1:1:2:4	500	300	350	18	00
34-64185	C64C 50-12,5-21-400/440-64	50	12.5	1:1:2	500	300	350	19	00
34-64186	C64C 50-25-2-400/440-64	50	25	1:1	500	300	350	19	00
34-64187	C64C 50-50-1-400/440-64	50	50	1	500	300	350	18	00
34-64193	C64C 62,5-12,5-12-400/440-64	62.5	12.5	1:2:2	500	300	350	19	00
34-64194	C64C 68,75-6,25-112-400/440-64	68.75	6.25	1:2:4:4	500	300	350	22	00
34-64196	C64C 75-12,5-22-400/440-64	75	12.5	1:1:2:2	500	300	350	23	00
34-64200	C64C 75-25-11-400/440-64	75	25	1:2	500	300	350	23	00
34-64845	C64C 75-12,5-11A-400/440-64	75	12.5	1:2:3	500	300	350	21	00
34-64203	C64C 87,5-12,5-111-400/440-64	87.5	12.5	1:2:4	500	300	350	24	00
34-64205	C64C 93,75-6,25-1111-400/440-64	93.75	6.25	1:2:4:8	500	300	350	24	00
34-64206	C64C 100-12,5-211-400/440-64	100	12.5	1:1:2:4	500	300	350	26	00
34-64208	C64C 100-25-21-400/440-64	100	25	1:1:2	500	300	350	29	00
34-64188	C64C 100-50-2-400/440-64	100	50	1:1	500	300	350	24	00

Other rated voltages, frequencies and power ratings on request

Recommended supply lead cross sections: please refer to the technical annex (page 145 ff.)

Article-No.	Type	Rated power	Step power	Switching sequence	Dimensions			Weight (gross) approx.	Protection IP
		[kvar]	[kvar]		Width	Height	Depth		
					[mm]	[mm]	[mm]	[kg]	

Capacitor Modules for installation in switchgear systems with a width of 800 mm, rated mains voltage: 400 V / 50 Hz

Type series: C84C

34-64289	C84C 25-3,13-211-400/440-84	25	3.13	1:1:2:4	700	300	350	26	00
34-64290	C84C 25-6,25-21-400/440-84	25	6.25	1:1:2	700	300	350	26	00
34-64213	C84C 25-12,5-2-400/440-84	25	12.5	1:1	700	300	350	26	00
34-64214	C84C 25-25-1-400/440-84	25	25	1	700	300	350	27	00
34-64291	C84C 31,25-6,25-12-400/440-84	31.25	6.25	1:2:2	700	300	350	27	00
34-64292	C84C 34,38-3,13-112-400/440-84	34.38	3.13	1:2:4:4	700	300	350	26	00
34-64293	C84C 37,5-6,25-22-400/440-84	37.5	6.25	1:1:2:2	700	300	350	27	00
34-64215	C84C 37,5-12,5-11-400/440-84	37.5	12.5	1:2	700	300	350	28	00
34-64294	C84C 43,75-6,25-111-400/440-84	43.75	6.25	1:2:4	700	300	350	28	00
34-64295	C84C 46,88-3,13-1111-400/440-84	46.88	3.13	1:2:4:8	700	300	350	29	00
34-64296	C84C 50-3,13-2111-400/440-84	50	3.13	1:1:2:4:8	700	300	350	29	00
34-64297	C84C 50-6,25-211-400/440-84	50	6.25	1:1:2:4	700	300	350	30	00
34-64217	C84C 50-12,5-21-400/440-84	50	12.5	1:1:2	700	300	350	30	00
34-64218	C84C 50-25-2-400/440-84	50	25	1:1	700	300	350	25	00
34-64219	C84C 50-50-1-400/440-84	50	50	1	700	300	350	30	00
34-64222	C84C 62,5-12,5-12-400/440-84	62.5	12.5	1:2:2	700	300	350	31	00
34-64298	C84C 68,75-6,25-112-400/440-84	68.75	6.25	1:2:4:4	700	300	350	31	00
34-64299	C84C 75-12,5-22-400/440-84	75	12.5	1:1:2:2	700	300	350	31	00
34-64224	C84C 75-25-11-400/440-84	75	25	1:2	700	300	350	31	00
34-64227	C84C 87,5-12,5-111-400/440-84	87.5	12.5	1:2:4	700	300	350	30	00
34-64229	C84C 93,75-6,25-1111-400/440-84	93.75	6.25	1:2:4:8	700	300	350	32	00
34-64846	C84C 75-12,5-11A-400/440-84	75	12.5	1:2:3	700	300	350	31	00
34-64126	C84C 100-12,5-211-400/440-84	100	12.5	1:1:2:4	700	300	350	34	00
34-64232	C84C 100-25-21-400/440-84	100	25	1:1:2	700	300	350	37	00
34-64127	C84C 100-50-2-400/440-84	100	50	1:1	700	300	350	30	00

Other rated voltages, frequencies and power ratings on request

Recommended supply lead cross sections: please refer to the technical annex (page 145 ff.)

# PFC Systems on mounting plates / Capacitor Modules

## Capacitor Modules



### // Options and accessories for Capacitor Modules type C64C / C84C, 50 Hz

#### Accessories

Article-No.	Type	Description
<b>Power Factor Control Relays</b>		
38-00320	RM 2106	With 6 control contacts
38-00340	RM 2112	With 12 control contacts
38-00100	RM 9606	With 6 control contacts (German manual)
38-00103	RM 9606	With 6 control contacts (English manual)
38-00300	EMR 1100 S	With 12 control contacts (German manual)
38-00301	EMR 1100 S	With 12 control contacts (English manual)
20-50006	EMR 1100	With 12 control contacts and bus interface to FRAKO Energy Management System (German manual)
20-50008	EMR 1100	With 12 control contacts and bus interface to FRAKO Energy Management System (Engl. manual)
39-29054	PROPHI 12RS	With 12 control contacts, with Profibus or Modbus interface
39-29050	RM 2012 6+6D	With 12 control contacts, 6 relays / 6 with reaction time between 20/40 ms
39-29051	RM 2012 12D	With 12 control contacts, reaction time between 20/40 ms
<b>Power Factor Control Relay package</b> (completely assembled and tested units)		
34-72016	STR-RM 9606	RM 9606, control terminal strip with thermal trip contact, cable length 1150 mm
34-72024	STR-EMR 1100 S	EMR 1100 S, control terminal strip with thermal trip contact, length 1150 mm
34-72002	STR-EMR 1100	EMR 1100, control terminal strip with thermal trip contact, cable length 1150 mm
<b>Control terminal strip with thermal trip contact</b> (premounted)		
34-80002	RKL-RM 9606	Suitable for RM 9606
34-80003	RKL-EMR 1100	Suitable for EMR 1100 / EMR 1100 S
34-80027	RKL-Z-Cabinet	For extension units (only 12 control contacts)
<b>Control cable</b> (prepared)		
89-20557	RK RM 9606-1150	For connection of RM 9606 with control terminal strip (length: 1000 mm, 6 control contacts)
89-20558	RK RM 9606-1500	For connection of RM 9606 with control terminal strip (length: 1500 mm, 6 control contacts)
89-20622	RK RM 9606-2600	For connection of RM 9606 with control terminal strip (length: 2600 mm, 6 control contacts)
89-20555	RK EMR 1100-1150	For connection of EMR 1100 / EMR 1100 S with control terminal strip (length: 1150 mm, 12- control contacts)
89-20556	RK EMR 1100-1500	For connection of EMR 1100 / EMR 1100 S with control terminal strip (length: 1500 mm, 12 control contacts)
89-20621	RK EMR 1100-2600	For connection of EMR 1100 / EMR 1100 S with control terminal strip (length: 2600 mm, 12 control contacts)
89-20559	SS 12-6000	For connection of the 'basic unit' with the 'extension unit' (length: 6 m, 12 control contacts)
<b>Mounting plates</b> for control terminal strips, control transformers etc.		
34-80069	SB-C6	Cabinet width 600 mm
34-80053	SB-C8	Cabinet width 800 mm
<b>Ventilation packages</b> , consisting of:		
34-80096	LP-LSFC-I IP20-6/1	1 roof vent installation in cabinet, 1 air inlet filter and thermostat
34-80285	LP-LSFC-A IP43-7/1	1 roof vent installation on cabinet, 1 air inlet filter and thermostat
34-80187	LP-LSFC-A IP43-7/2	1 roof vent installation on cabinet, 2 air inlet filters and thermostat
<b>Bus connection bracket set</b>		
34-80006	CU AW-1	Busbar bracket set for cable connection, complete with fixing screws and protection against accidental contact
34-80302	Final cover complete	Protection against accidental contact final cover (necessary for module packages without CU-AW1)

Other accessories on request

## // Selection of module rails for the most common switchgear systems

Article-No.	Manufacturer of cabinet	Cabinet type	Cabinet width [mm]	Cabinet depth [mm]
34-80051	ABB	MNS (with distribution busbars)	800	600
34-80176	ABB	MNS (without distribution busbars)	800	600
34-80128	ABB	RNS	800	600
34-80211	ABN	BST312	830	525
34-80133	AEG	EVS and SEN4000	800	400
34-80180	AEG	EVS and SEN4000	800	600
34-80071	CEGELEC	Intermas	800	500
34-80072	CEGELEC	Intermas	800	600
34-80179	DESSAUER	Dessa Norm	800	600
34-80201	DESSAUER	Dessa Norm	800	800
34-80039	EATON / MOELLER	IVS1600	800	400
34-80071	EATON / MOELLER	IVS1600	800	500
34-80072	EATON / MOELLER	IVS1600	800	600
34-80138	EATON / MOELLER	SVTL	800	400
34-80130	EATON / MOELLER	SVTL	800	600
34-80173	EATON / MOELLER	xEnergy (with distribution busbars)	800	600
34-80174	EATON / MOELLER	xEnergy (without distribution busbars)	800	600
34-80148	ELDON	MCS	800	400
34-80152	ELDON	MCS	800	500
34-80233	ELDON	MCS	800	600
34-80067	ELEK	UR / URV	800	400
34-80105	ELEK	UR / URV	800	600
34-80073	ELEK	UR / URV	800	800
34-80059	ELEK	UR / URV	850	400
34-80050	ELEK	UR / URV	850	600
34-80132	ELEK	UR / URV	850	800
34-80120	ELIN-EBG	ELIN-EBG SV	800	600
34-80120	ELIN-EBG	SVT	800	600
34-80172	ELSTEEL	Elsteel	800	600
34-80147	ELSTEEL	Elsteel	800	800
34-80238	ELSTEEL	Elsteel (with busbar space)	800	600
34-80040	FRAKO	LSFC	600/800	400
34-80041	FRAKO	LSFC	600/800	500
34-80042	FRAKO	LSFC	600/800	600
34-80253	GE	VPS STEEL	800	400
34-80181	HAGER	Hager FG22	600	600
34-80214	HAGER	Hager FG23	850	400
34-80055	HENSEL	SAS 2000 (frame assembly)	850	500
34-80168	HENSEL	SAS 2000 (M. Plate brackets reinforced assembly)	600	500
34-80190	HENSEL	SAS 2000 (M. Plate brackets reinforced assembly)	850	500
34-80154	ISA	ISA 2000	800	800
34-80119	LÖGSTRUP	Lögstrup	760	570
34-80077	LÖGSTRUP	Lögstrup	760	760
34-80227	LOHMEIER	RS	800	600
34-80228	LOHMEIER	RS	800	800

# PFC Systems on mounting plates / Capacitor Modules

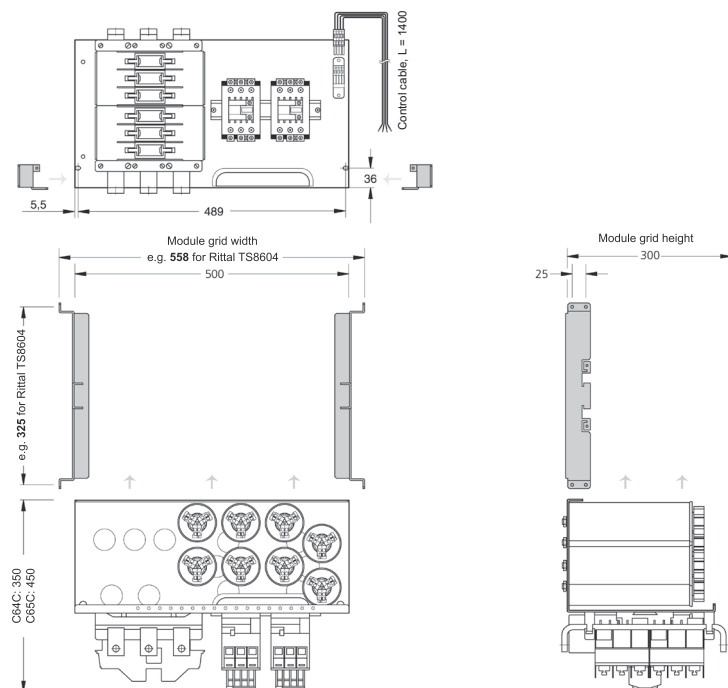
## Capacitor Modules



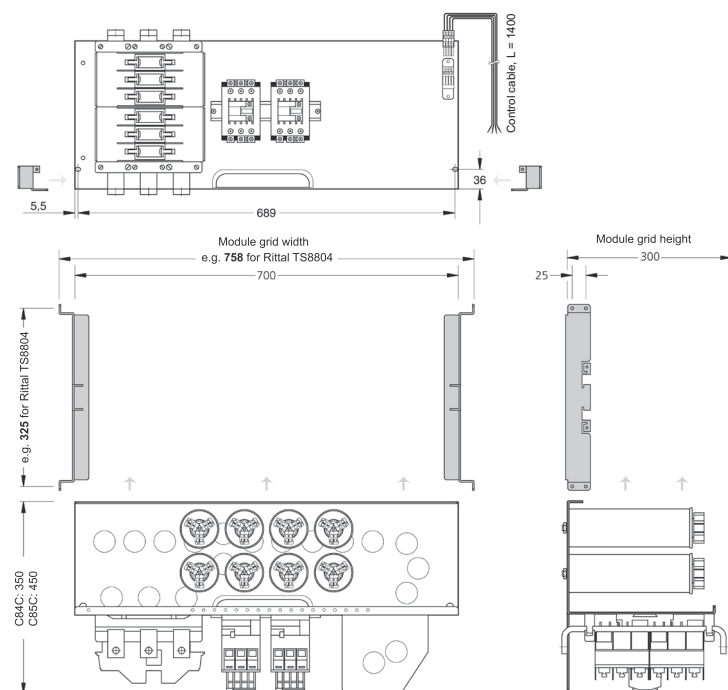
Article-No.	Manufacturer of cabinet	Cabinet type	Cabinet width [mm]	Cabinet depth [mm]
34-80198	MEHLER	ARM-C	800	400
34-80106	MEHLER	SRM-C	800	600
34-80097	MONA	MONA 5000	800	400
34-80098	MONA	MONA 5000	800	600
34-80245	MONA	MONA 5000	800	800
34-80047	RITTAL	ES4... / PS4...	600/800	400
34-80048	RITTAL	ES4... / PS4...	600/800	500
34-80049	RITTAL	ES4... / PS4...	600/800	600
34-80293	RITTAL	ES4... / PS4...	600/800	800
34-80040	RITTAL	TS8...	600/800	400
34-80041	RITTAL	TS8...	600/800	500
34-80042	RITTAL	TS8...	600/800	600
34-80137	RITTAL	TS8...	600/800	800
34-80134	SAREL	S6000	800	500
34-80237	SAREL	S6000	800	600
34-80291	SCHNEIDER	Prisma P	650	600
34-80284	SCHNEIDER	Prisma P (with busbar space)	800	600
34-80070	SIEMENS	Sivacon 8PT	800	600
34-80155	SIEMENS	Sivacon 8PT	800	800
34-80223	SIEMENS	Sivacon 8PT	850	600
34-80153	SIEMENS	Sivacon 8PT (with distribution busbars)	800	600
34-80255	SIEMENS	Sivacon S8 (Siemens S8- compensation section with busbar terminals on the rear side)	800	600
34-80252	SIEMENS	Sivacon S8 (normal section. FRAKO disassembling without busbar terminals on the rear side)	800	600
34-80076	STRIEBEL&JOHN	2/8XA4	600	400
34-80115	STRIEBEL&JOHN	2/8XA6	600	600
34-80104	STRIEBEL&JOHN	3/8XA4	850	400
34-80061	STRIEBEL&JOHN	3/8XA6	850	600
34-80222	STRIEBEL&JOHN	3/8XA8	850	800
34-80251	STRIEBEL&JOHN	Triline-R	614	425
34-80212	STRIEBEL&JOHN	Triline-R	614	625
34-80182	STRIEBEL&JOHN	Triline-R	864	425
34-80141	STRIEBEL&JOHN	Triline-R	864	625
34-80250	STRIEBEL&JOHN	Triline-R	864	825
34-80269	WEBER	MES	800	600
34-80178	WEBER	PM8	800	400
34-80129	WEBER	PM8	800	500
34-80218	WEBER	PM8	800	600

Other module rails on request

## // Dimensions



Dimensional drawing type series C64C (25 bis 100 kvar)  
with module rails (here: MT-C6-Rittal TS8.604)



Dimensional drawing type series C84C (25 bis 100 kvar)  
with module rails (here: MT-C8-Rittal TS8.804)

All dimensions in mm