

C64D-P / C84D-P / C65D-P / C85D-P

Capacitor Modules – detuned

- 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 C64D-P, C65D-P, C84D-P and C85D-P are suitable for installation in standard switchgear systems. Additional mounting rails for all common switchgear systems:

- W = 600 mm, T = 400, 500, 600 mm resp.
- W = 800 mm, T = 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:

Version	Detuning factor	Resonance frequency
P1	p = 14 %	134 Hz
P7	p = 7 %	189 Hz
P8	p = 8 %	177 Hz

// Power Range

Compact compensation module ideal for mounting 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
- Heavy duty Capacitor Switching Contactors
- Low-loss Harmonic Filter Reactors with temperature switches
- Busbar system with bus-mounting fuse base, 3-pole, size NH 00
- Control circuit with female connector (wired connector for connection with terminal strip incl.)

// Installation Site

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 C6xD... for cabinets (width = 600 mm) C8xD... for cabinets (width = 800 mm)
Rated voltage	400 V/50 Hz
Rated voltage of capacitors	440 V/50 Hz (-P5 to -P8) 480 V/50 Hz (-P1)
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

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

Capacitor Modules – detuned

Version: P1 (Detuning factor $p = 14\%$)

Article-No.	Type	Rated power [kvar]	Step power [kvar]	Switching sequence	Dimensions			Weight (gross) approx. [kg]	Protection IP
					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: C6xD ...-P1

34-64264	C64D 25-6,25-21-400/480-64-P1	25	6.25	1:1:2	500	300	350	57	00
34-64242	C64D 25-12,5-2-400/480-64-P1	25	12.5	1:1	500	300	350	45	00
34-64243	C64D 25-25-1-400/480-64-P1	25	25	1	500	300	350	49	00
34-65013	C65D 50-50-1-400/480-65-P1	50	50	1	500	300	450		00

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

Type series: C8xD ...-P1

34-64069	C84D 25-6,25-21-400/480-84-P1	25	6.25	1:1:2	700	300	350	47	00
34-64070	C84D 25-12,5-2-400/480-84-P1	25	12.5	1:1	700	300	350	47	00
34-64039	C84D 25-25-1-400/480-84-P1	25	25	1	700	300	350	51	00
34-64271	C84D 31,25-6,25-12-400/480-84-P1	31.25	6.25	1:2:2	700	300	350	46	00
34-64374	C84D 37,5-6,25-22-400/480-84-P1	37.5	6.25	1:1:2:2	700	300	350	52	00
34-64018	C84D 37,5-12,5-11-400/480-84-P1	37.5	12.5	1:2	700	300	350	45	00
34-64002	C84D 43,75-6,25-111-400/480-84-P1	43.75	6.25	1:2:4	700	300	350	78	00
34-64003	C84D 50-12,5-21-400/480-84-P1	50	12.5	1:1:2	700	300	350	83	00
34-64004	C84D 50-25-2-400/480-84-P1	50	25	1:1	700	300	350	80	00
34-64005	C84D 50-50-1-400/480-84-P1	50	50	1	700	300	350	69	00
34-65011	C85D 75-25-11-400/480-85-P1	75	25	1:2	700	300	450		00
34-64040	C85D 100-50-2-400/480-85-P1	100	50	1:1	700	300	450	118	00

Other rated voltages, frequencies and power ratings on request

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

Version: P7 (Detuning factor $p = 7\%$)

Article-No.	Type	Rated power [kvar]	Step power [kvar]	Switching sequence	Dimensions			Weight (gross) approx. [kg]	Protection IP
					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: C6xD ...-P7

34-64300	C64D 25-3,13-211-400/440-64-P7	25	3.13	1:1:2:4	500	300	350	44	00
34-64257	C64D 25-6,25-21-400/440-64-P7	25	6.25	1:1:2	500	300	350	44	00
34-64262	C64D 25-12,5-2-400/440-64-P7	25	12.5	1:1	500	300	350	44	00
34-64245	C64D 25-25-1-400/440-64-P7	25	25	1	500	300	350	33	00
34-64301	C64D 31,25-6,25-12-400/440-64-P7	31.25	6.25	1:2:2	500	300	350	45	00
34-64389	C64D 34,38-3,13-112-400/440-64-P7	34.38	3.13	1:2:4:4	500	300	350	46	00
34-64246	C64D 37,5-12,5-11-400/440-64-P7	37.5	12.5	1:2	500	300	350	44	00
34-64247	C64D 43,75-6,25-111-400/440-64-P7	43.75	6.25	1:2:4	500	300	350	54	00
34-64248	C64D 50-12,5-21-400/440-64-P7	50	12.5	1:1:2	500	300	350	55	00
34-64249	C64D 50-25-2-400/440-64-P7	50	25	1:1	500	300	350	47	00
34-64250	C64D 50-50-1-400/440-64-P7	50	50	1	500	300	350	49	00
34-64261	C65D 75-25-11-400/440-65-P7	75	25	1:2	500	300	450	65	00

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 800 mm, rated mains voltage: 400 V / 50 Hz

Type series: C8xD ...-P7

34-64071	C84D 25-6,25-21-400/440-84-P7	25	6.25	1:1:2	700	300	350	46	00
34-64072	C84D 25-12,5-2-400/440-84-P7	25	12.5	1:1	700	300	350	46	00
34-64015	C84D 25-25-1-400/440-84-P7	25	25	1	700	300	350	38	00
34-64339	C84D 31,25-6,25-12-400/440-84-P7	31.25	6.25	1:2:2	700	300	350	47	00
34-64303	C84D 34,38-3,13-112-400/440-84-P7	34.38	3.13	1:2:4:4	700	300	350	48	00
34-64211	C84D 37,5-12,5-11-400/440-84-P7	37.5	12.5	1:2	700	300	350	48	00
34-64304	C84D 37,5-6,25-22-400/440-84-P7	37.5	6.25	1:1:2:2	700	300	350	49	00
34-64073	C84D 43,75-6,25-111-400/440-84-P7	43.75	6.25	1:2:4	700	300	350	52	00
34-64305	C84D 46,88-3,13-1111-400/440-84-P7	46.88	3.13	1:2:4:8	700	300	350	57	00
34-64007	C84D 50-6,25-211-400/440-84-P7	50	6.25	1:1:2:4	700	300	350	50	00
34-64008	C84D 50-12,5-21-400/440-84-P7	50	12.5	1:1:2	700	300	350	60	00
34-64009	C84D 50-25-2-400/440-84-P7	50	25	1:1	700	300	350	55	00
34-64010	C84D 50-50-1-400/440-84-P7	50	50	1	700	300	350	52	00
34-64041	C84D 62,5-12,5-12-400/440-84-P7	62.5	12.5	1:2:2	700	300	350	55	00
34-64074	C84D 68,75-6,25-112-400/440-84-P7	68.75	6.25	1:2:4:4	700	300	350	56	00
34-64075	C84D 75-12,5-22-400/440-84-P7	75	12.5	1:1:2:2	700	300	350	59	00
34-64011	C84D 75-25-11-400/440-84-P7	75	25	1:2	700	300	350	71	00
34-64848	C84D 75-12,5-11A-400/440-84-P7	75	12.5	1:2:3	700	300	350	62	00
34-64012	C84D 87,5-12,5-111-400/440-84-P7	87.5	12.5	1:2:4	700	300	350	75	00
34-64648	C85D 100-12,5-211-400/440-85-P7	100	12.5	1:1:2:4	700	300	450	93	00
34-64013	C84D 100-25-21-400/440-84-P7	100	25	1:1:2	700	300	350	90	00
34-64014	C84D 100-50-2-400/440-84-P7	100	50	1:1	700	300	350	84	00

Other rated voltages, frequencies and power ratings on request

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

Version: P8 (Detuning factor $p = 8\%$)

Article-No.	Type	Rated power [kvar]	Step power [kvar]	Switching sequence	Dimensions			Weight (gross) approx. [kg]	Protection IP
					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: C6xD ...-P8

34-64651	C64D 25-3,13-211-400/440-64-P8	25	3.13	1:1:2:4	500	300	350	47	00
34-64358	C64D 25-6,25-21-400/440-64-P8	25	6.25	1:1:2	500	300	350	47	00
34-64322	C64D 25-12,5-2-400/440-64-P8	25	12.5	1:1	500	300	350	48	00
34-64359	C64D 25-25-1-400/440-64-P8	25	25	1	500	300	350	36	00
34-64652	C64D 31,25-6,25-12-400/440-64-P8	31.25	6.25	1:2:2	500	300	350	48	00
34-64653	C64D 34,38-3,13-112-400/440- 64-P8	34.38	3.13	1:2:4:4	500	300	350	49	00
34-64654	C64D 37,5-12,5-11-400/440-64- P8	37.5	12.5	1:2	500	300	350	50	00
34-64649	C64D 43,75-6,25-111-400/440- 64-P8	43.75	6.25	1:2:4	500	300	350	53	00
34-64286	C64D 50-12,5-21-400/440-64-P8	50	12.5	1:1:2	500	300	350	61	00
34-64273	C64D 50-25-2-400/440-64-P8	50	25	1:1	500	300	350	48	00
34-64274	C64D 50-50-1-400/440-64-P8	50	50	1	500	300	350	58	00
34-64474	C65D 75-25-11-400/440-65-P8	75	25	1:2	500	300	450	70	00

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

Type series: C8xD ...-P8

34-64499	C84D 18,75-6,25-11-400/440-84-P8	18.75	6.25	1:2	700	300	350	35	00
34-64655	C84D 25-3,13-211-400/440-84-P8	25	3.13	1:1:2:4	700	300	350	49	00
34-64656	C84D 25-6,25-21-400/440-84-P8	25	6.25	1:1:2	700	300	350	49	00
34-64454	C84D 25-12,5-2-400/440-84-P8	25	12.5	1:1	700	300	350	49	00
34-64016	C84D 25-25-1-400/440-84-P8	25	25	1	700	300	350	38	00
34-64526	C84D 31,25-6,25-12-400/440-84-P8	31.25	6.25	1:2:2	700	300	350	50	00
34-64657	C84D 34,38-3,13-112-400/440- 84-P8	34.38	3.13	1:2:4:4	700	300	350	51	00
34-64658	C84D 37,5-6,25-22-400/440-84-P8	37.5	6.25	1:1:2:2	700	300	350	52	00
34-64659	C84D 43,75-6,25-111-400/440- 84-P8	43.75	6.25	1:2:4	700	300	350	55	00
34-64660	C84D 46,88-3,13-1111-400/440- 84-P8	46.88	3.13	1:2:4:8	700	300	350	55	00
34-64051	C84D 50-6,25-211-400/440-84-P8	50	6.25	1:1:2:4	700	300	350	62	00
34-64063	C84D 50-12,5-21-400/440-84-P8	50	12.5	1:1:2	700	300	350	62	00
34-64054	C84D 50-25-2-400/440-84-P8	50	25	1:1	700	300	350	53	00
34-64114	C84D 50-50-1-400/440-84-P8	50	50	1	700	300	350	60	00
34-64117	C84D 62,5-12,5-12-400/440-84- P8	62.5	12.5	1:2:2	700	300	350	64	00
34-64350	C84D 68,75-6,25-112-400/440- 84-P8	68.75	6.25	1:2:4:4	700	300	350	56	00
34-64093	C84D 75-12,5-22-400/440-84-P8	75	12.5	1:1:2:2	700	300	350	70	00
34-64052	C84D 75-25-11-400/440-84-P8	75	25	1:2	700	300	350	70	00
34-64484	C84D 87,5-12,5-111-400/440-84-P8	87.5	12.5	1:2:4	700	300	350	79	00
34-64849	C84D 75-12,5-11A-400/440-84-P8	75	12.5	1:2:3	700	300	350	73	00
34-64644	C85D 100-12,5-211-400/440-85-P8	100	12.5	1:1:2:4	700	300	450	92	00
34-64053	C84D 100-25-21-400/440-84-P8	100	25	1:1:2	700	300	350	88	00
34-64017	C84D 100-50-2-400/440-84-P8	100	50	1:1	700	300	350	86	00

Other rated voltages, frequencies and power ratings on request

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

/ Options and accessories for Capacitor Modules type C64D-P / C84D-P / C65D-P / C85D-P, 50 Hz

Accessories

Article-No.	Type	Description
Power Factor Control Relay		
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
Power Factor Control Relay package (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, cable length 1150 mm
34-72002	STR-EMR 1100	EMR 1100, control terminal strip with thermal trip contact, cable length 1150 mm
Control terminal strip with thermal trip contact (pre-mounted)		
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)
Control cable (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)
Mounting plates for control terminal strips, control transformers etc.		
34-80069	SB-C6	Cabinet width 600 mm
34-80053	SB-C8	Cabinet width 800 mm
Ventilation packages , 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
Bus connection bracket set		
34-80006	CU AW-1	Bus connection bracket set for cable connection, complete with fixing screws and protection against accidental contact
34-80114	Final cover complete	Protection against accidental contact final cover (necessary for module packages without CU-AW1)

Further 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
34-80071	EATON / MOELLER	GU	800	500
34-80072	EATON / MOELLER	GU	800	600
34-80043	EATON / MOELLER	ID 2000	800	500
34-80044	EATON / MOELLER	ID 2000	800	650
34-80039	EATON / MOELLER	IVS1600	800	400
34-80071	EATON / MOELLER	IVS1600	800	500
34-80072	EATON / MOELLER	IVS1600	800	600
34-80057	EATON / MOELLER	MODAN 2000	800	400
34-80045	EATON / MOELLER	MODAN 2000/6000 (without busbars)	800	600
34-80066	EATON / MOELLER	MODAN 6000 (with busbars)	800	600
34-80046	EATON / MOELLER	MODAN 6000 (with busbars)	800	800
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

Article-No.	Manufacturer of cabinet	Cabinet type	Cabinet width [mm]	Cabinet depth [mm]
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
34-80198	MEHLER	ARM-C	800	400
34-80106	MEHLER	SRM-C	800	600
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
34-80097	WAGNER	MONA 5000	800	400
34-80098	WAGNER	MONA 5000	800	600
34-80245	WAGNER	MONA 5000	800	800
34-80269	WEBER	MES	800	600
34-80178	WEBER	PM8	800	400
34-80129	WEBER	PM8	800	500
34-80218	WEBER	PM8	800	600

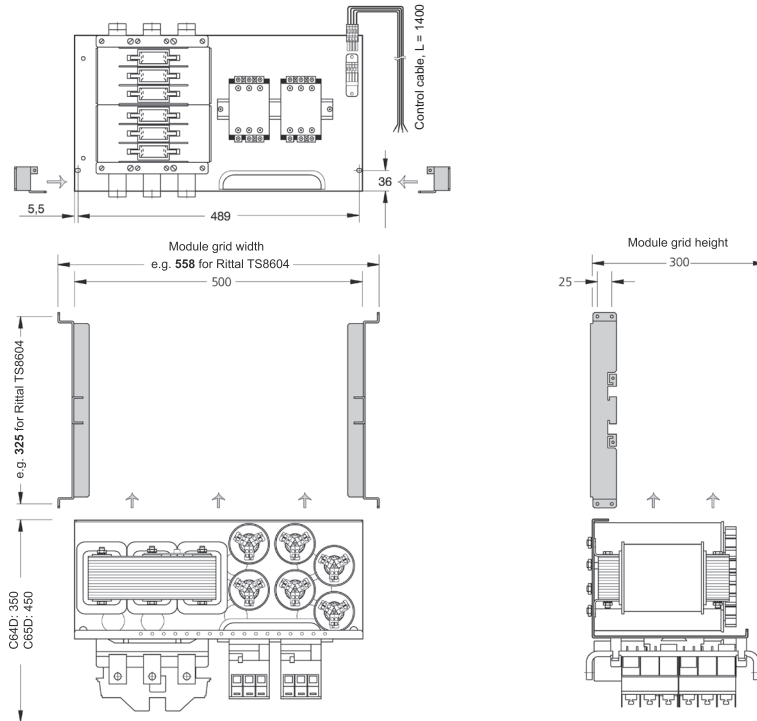
Other module rails on request

PFC Systems on mounting plates / Capacitor Modules

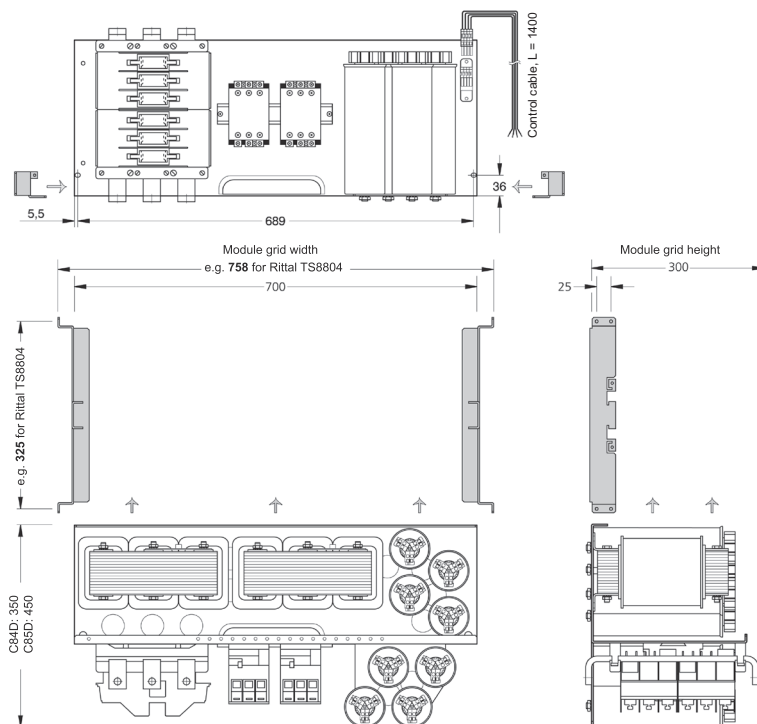
Capacitor Modules – detuned



// Dimensions

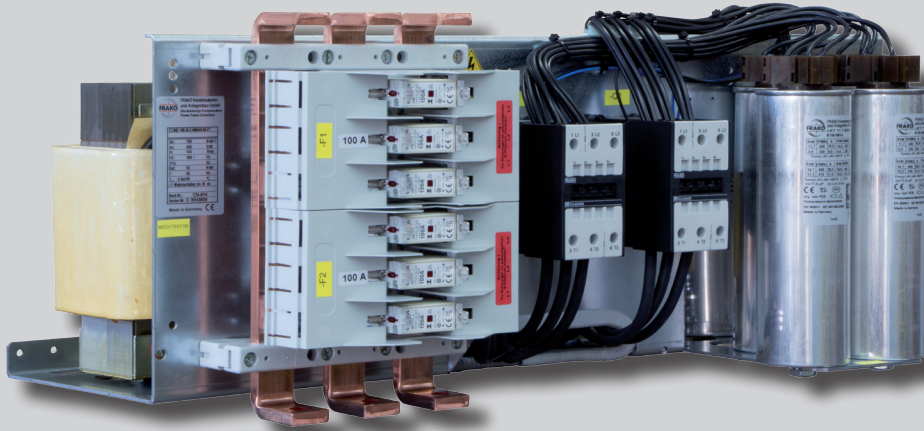


Dimensional drawing type series C64D (25 to 100 kvar) with module rails (here: MT-C6-Rittal TS8.604)



Dimensional drawing type series C84D (25 to 100 kvar) with module rails (here: MT-C8-Rittal TS8.804)

All dimensions in mm



C84D-P5 / C85D-P5

Capacitor Modules – detuned

- 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 C84D-P5 and C85D-P5 are suitable for installation in standard switchgear systems. Additional mounting rails for all common switchgear systems:

- W = 600 mm, T = 400, 500, 600 mm resp.
- W = 800 mm, T = 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:

Version	Detuning factor	Resonance frequency
P5	$p = 5.67 \%$	210 Hz

// Power Range

Compact compensation module ideal for mounting 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
- Heavy duty Capacitor Switching Contactors
- Low-loss Harmonic Filter Reactors with temperature switches
- Busbar system with bus-mounting fuse base, 3-pole, size NH 00
- Control circuit with female connector (wired connector for connection with terminal strip incl.)

// Installation Site

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 C6xD... for cabinets (width = 600 mm) C8xD... for cabinets (width = 800 mm)
Rated voltage	400 V/50 Hz
Rated voltage of capacitors	440 V/50 Hz (-P5 to -P8) 480 V/50 Hz (-P1)
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

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

Version: P5 (Detuning factor $p = 5.67\%$)

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

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

Type series: C8xD ...-P5

34-64969	C84D 25-25-1-400/440-84-P5	25	25	1	700	300	350	58	00
34-64970	C84D 50-50-1-400/440-84-P5	50	50	1	700	300	350	67	00
34-64971	C84D 50-25-2-400/440-84-P5	50	25	1:1	700	300	350	80	00
34-64972	C84D 75-25-11-400/440-84-P5	75	25	1:2	700	300	350	98	00
34-64973	C85D 100-50-2-400/440-85-P5	100	50	1:1	700	300	450	120	00

Other rated voltages, frequencies and power ratings on request

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

// Options and accessories for Capacitor Modules type C84D-P5 / C85D-P5, 50 Hz

Accessories

Article-No.	Type	Description
Power Factor Control Relay		
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
Power Factor Control Relay package (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, cable length 1150 mm
34-72002	STR-EMR 1100	EMR 1100, control terminal strip with thermal trip contact, cable length 1150 mm
Control terminal strip with thermal trip contact (pre-mounted)		
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)
Control cable (prepared)		
89-20557	RK RM 9606-1150	For connection of RM 9606 with control terminal strip (length: 1000 mm, 6 control contacts)

Accessories

Article-No.	Type	Description
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)

Mounting plates for control terminal strips, control transformers etc.

34-80069	SB–C6	Cabinet width 600 mm
34-80053	SB–C8	Cabinet width 800 mm

Ventilation packages, consisting of:

34-80096	LP–LSFC-I IP30-6/1	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

Bus connection bracket set

34-80006	CU AW–1	Bus connection 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)

Further 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

Article-No.	Manufacturer of cabinet	Cabinet type	Cabinet width [mm]	Cabinet depth [mm]
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
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

Article-No.	Manufacturer of cabinet	Cabinet type	Cabinet width [mm]	Cabinet depth [mm]
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

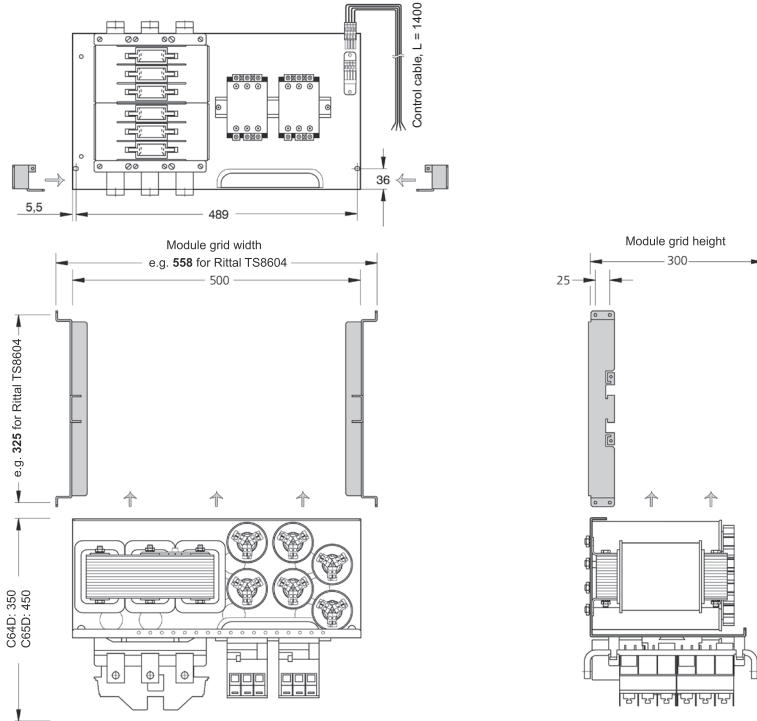
Other module rails on request

PFC Systems on mounting plates / Capacitor Modules

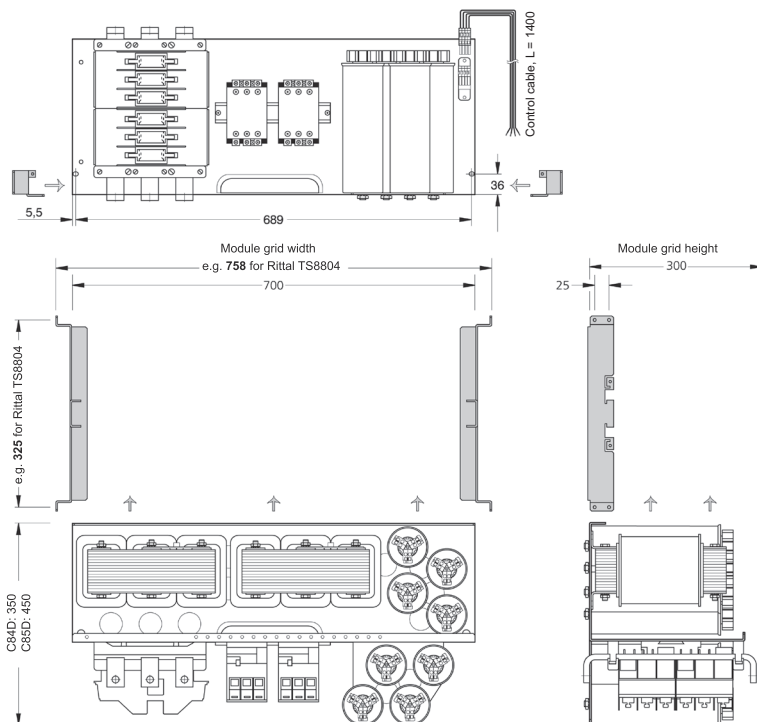
Capacitor Modules – detuned



// Dimensions



Dimensional drawing type series C64D (25 to 100 kvar)
with module rails (here: MT-C6-Rittal TS8.604)



Dimensional drawing type series C84D (25 to 100 kvar)
with module rails (here: MT-C8-Rittal TS8.804)

All dimensions in mm