



OPTIM FR4 P&P-160-240-60Hz

OPTIM FR4 P&P-160-240-60Hz, Detuned capacitor bank 60 Hz

Code: R54SF9.

- > Frequency (Hz): 60 Hz
- > kvar (240 V): 160
- > Aut.Switch (A): 3 x 630
- > Composition: 4x40
- > Mounting: Floor-mounted
- > P%: 7

Description

The **OPTIM FR P&P** Series capacitor banks with detuned filters have been designed for power compensation purposes in networks with fluctuating load levels, a high content of harmonics and where there is a risk of resonance. Power variations are relatively slow (in seconds) so that the switching operations are carried out with contactors.

Application

Its application is mainly focused on the compensation of installations with different loads, which require a regulated compensation, as a result of the power factor variations and where there is a high content of harmonics in the network.

- Fixed detuned filters. For the compensation of transformers and motors (**OPTIM FRF / FRM**)
- Automatic detuned filters, For the monitoring of variable loads (**OPTIM FR P&P**).



OPTIM FR4 P&P-160-240-60Hz

Automatic capacitor banks with detuned filters

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Specifications

AC power supply

Frequency	60 Hz
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Electrical characteristics

Losses (W)	< 0,5 W/kvar
Discharge resistance	75 V / 3 min
Surge	10 % 8 h over 24 h 15 % up to 15 min over 24 hours 20 % up to 5 min over 24 hours 30 % up to 1 min over 24 hours
Manoeuvre voltage	Contactors: 230 V
Tolerance C	-5% / 10 %

Mechanical characteristics

Size (mm) width x height x depth	900 x 1900 x 650 (mm)
Envelope	Sheet metal RAL 7035 Grey / RAL 3005 Garnet
Fastening	Vertical / Self-supporting
Ventilation	Natural or forced according to options
Weight (kg)	355

Environmental characteristics

Protection class	IP 21
Relative humidity (without condensation)	80%
Working temperature	T° class D: Daily average: 45 °C, annual average: 35 °C, maximum: 55 °C, minimum: -50 °C

Current measurement circuit

Permanent overload	1,3 In
Transformation ratio	In / 5A

Protection

Element	Individual protection of each step with fuses with high rupture power (HRP). NH-00 Series.
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OPTIM FR P&P 60Hz

Automatic capacitor banks with detuned filters (contactors switching), type P=7% (fres=227 Hz), 60 Hz.

CODE	TYPE	kvar (240 V)	Aut.Switch (A)	Composition	kvar (480 V)
OPTIM FRS P&P, automatic capacitor banks with computer SMART III regulator. Steps protections by Circuit Breaker					
R54RBN.	OPTIM FRS P&P-25-240-60Hz	25	3 x 100	2x5+10	
R54RBP.	OPTIM FRS P&P-30-240-60Hz	30	3 x 125	3x10	



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Automatic capacitor banks with detuned filters

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CODE	TYPE	kvar (240 V)	Aut.Switch (A)	Composition	kvar (480 V)
R54RBS.	OPTIM FRS P&P-40-240-60Hz	40	3 x 160	4x10	
OPTIM FR4 P&P, automatic capacitor banks with computer SMART III regulator. Steps protection by blade fuse type NH-00.					
R54SF0.	OPTIM FR4 P&P-37,5-240-60Hz	37,5	3 x 125	3x12,5	
R54SF2.	OPTIM FR4 P&P-50-240-60Hz	50	3 x 200	2x12,5+25	
R54SF3.	OPTIM FR4 P&P-62,5-240-60Hz	62,5	3 x 250	12,5+2x25	
R54SF4.	OPTIM FR4 P&P-75-240-60Hz	75	3 x 250	3x25	
R54SF5.	OPTIM FR4 P&P-87,5-240-60Hz	87,5	3 x 400	12,5+3x25	
R54SF6.	OPTIM FR4 P&P-100-240-60Hz	100	3 x 400	4x25	
R54SF8.	OPTIM FR4 P&P-140-240-60Hz	140	3 x 400	20+3x40	
R54SF9.	OPTIM FR4 P&P-160-240-60Hz	160	3 x 630	4x40	
OPTIM FR6 P&P, automatic capacitor banks with computer SMART III regulator. Steps protection by blade fuse type NH-00.					
R54SG3.	OPTIM FR6 P&P-180-240-60Hz	180	3 x 630	20+4x40	
R54SG4.	OPTIM FR6 P&P-200-240-60Hz	200	3 x 630	5x40	
R54SG6.	OPTIM FR6 P&P-220-240-60Hz	220	3 x 800	20+5x40	
R54SG7.	OPTIM FR6 P&P-240-240-60Hz	240	3 x 800	6x40	
OPTIM FR8 P&P, automatic capacitor banks with computer SMART III regulator. Steps protection by blade fuse type NH-00.					
R54SH1.	OPTIM FR8 P&P-280-240-60Hz	280	3 x 1000	7x40	
R54SH2.	OPTIM FR8 P&P-320-240-60Hz	320	3 x 1000	8x40	
OPTIM FR10 P&P, automatic capacitor banks with computer SMART III regulator. Steps protection by blade fuse type NH-00.					
R54SJ4.	OPTIM FR10 P&P-360-240-60Hz	360	3 x 1250	9x40	
R54SJ6.	OPTIM FR10 P&P-400-240-60Hz	400	3 x 1250	10x40	
OPTIM FR12 P&P, automatic capacitor banks with computer SMART III regulator. Steps protection by blade fuse type NH-00.					
R54SK4.	OPTIM FR12 P&P-440-240-60Hz	440	3 x 1600	11x40	
R54SK6.	OPTIM FR12 P&P-480-240-60Hz	480	3 x 1600	12x40	
OPTIM FRS P&P, automatic capacitor banks with computer SMART III regulator. General protection by Circuit Breaker					
R54RB2.	OPTIM FRS P&P-50-480-60Hz		3 x 100	2x12,5+25	50
R54RB4.	OPTIM FRS P&P-75-480-60Hz		3 x 125	3x25	75
R54RB9.	OPTIM FRS P&P-100-480-60Hz		3 x 160	4x25	100
OPTIM FR4 P&P, automatic capacitor banks with computer SMART III regulator. Steps protection by blade fuse type NH-00.					
R54SB4.	OPTIM FR4 P&P-75-480-60Hz		3 x 125	3x25	75
R54SB6.	OPTIM FR4 P&P-100-480-60Hz		3 x 200	2x25+50	100
R54SB7.	OPTIM FR4 P&P-125-480-60Hz		3 x 250	25+2x50	125
R54SB3.	OPTIM FR4 P&P-150-480-60Hz		3 x 250	2x25+2x50	150
R54SB0.	OPTIM FR4 P&P-175-480-60Hz		3 x 400	25+3x50	175
R54SB9.	OPTIM FR4 P&P-200-480-60Hz		3 x 400	4x50	200
R54SB8.	OPTIM FR4 P&P-262,5-480-60Hz		3 x 400	37,5+3x75	262,5
R54SB5.	OPTIM FR4 P&P-300-480-60Hz		3 x 630	4x75	300
OPTIM FR6 P&P, automatic capacitor banks with computer SMART III regulator. Steps protection by blade fuse type NH-00.					
R54TB3.	OPTIM FR6 P&P-337,5-480-60Hz		3 x 630	37,5+4x75	337,5



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CODE	TYPE	kvar (240 V)	Aut.Switch (A)	Composition	kvar (480 V)
R54TB4.	OPTIM FR6 P&P-375-480-60Hz		3 x 630	5x75	375
R54TB6.	OPTIM FR6 P&P-412,5-480-60Hz		3 x 800	37,5+5x75	412,5
R54TB7.	OPTIM FR6 P&P-450-480-60Hz		3 x 800	6x75	450
OPTIM FR8 P&P, automatic capacitor banks with computer SMART III regulator. Steps protection by blade fuse type NH-00.					
R54UC0.	OPTIM FR8 P&P-487,5-480-60Hz		3 x 800	37,5+6x75	487,5
R54UC1.	OPTIM FR8 P&P-525-480-60Hz		3 x 1000	7x75	525
R54UC2.	OPTIM FR8 P&P-600-480-60Hz		3 x 1000	8x75	600
OPTIM FR10 P&P, automatic capacitor banks with computer SMART III regulator. Steps protection by blade fuse type NH-00.					
R54VB4.	OPTIM FR10 P&P-675-480-60Hz		3 x 1250	9x75	675
R54VB6.	OPTIM FR10 P&P-750-480-60Hz		3 x 1250	10x75	750
OPTIM FR12 P&P, automatic capacitor banks with computer SMART III regulator. Steps protection by blade fuse type NH-00.					
R54WD1.	OPTIM FR12 P&P-825-480-60Hz		3 x 1600	11x75	825
R54WD2.	OPTIM FR12 P&P-900-480-60Hz		3 x 1600	12x75	900