



## OPTIM FR4 P&P-175-480-60Hz

OPTIM FR4 P&P-175-480-60Hz, Detuned capacitor bank ,60 Hz

Code: R54SB0.

- > kvar (480 V): 175
- > Aut.Switch (A): 3 x 400
- > Composition: 25+3x50
- > Use voltage (V): 480
- > 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**).



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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
Thermal management	Natural or forced according to options
Fastening	Vertical / Self-supporting
Weight (kg)	275

#### Environmental characteristics

Protection class	IP 21
Relative humidity (without condensation)	80%
Working temperature	T <sup>a</sup> 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)	Composition	Use voltage (V)	Aut.Switch (A)	P%	kvar (480 V)
<b>OPTIM FRS P&amp;P, automatic capacitor banks with computer SMART III regulator. Steps protections by Circuit Breaker</b>							
R54RBN.	OPTIM FRS P&P-25-240-60Hz	25	2x5+10	240	3 x 100	7	



## OPTIM FR4 P&P-175-480-60Hz

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CODE	TYPE	kvar (240 V)	Composition	Use voltage (V)	Aut.Switch (A)	P%	kvar (480 V)
R54RBP.	OPTIM FRS P&P-30-240-60Hz	30	3x10	240	3 x 125	7	
R54RBS.	OPTIM FRS P&P-40-240-60Hz	40	4x10	240	3 x 160	7	
<b>OPTIM FR4 P&amp;P, automatic capacitor banks with computer SMART III regulator. Steps protection by blade fuse type NH-00.</b>							
R54SF0.	OPTIM FR4 P&P-37,5-240-60Hz	37,5	3x12,5	240	3 x 125	7	
R54SF2.	OPTIM FR4 P&P-50-240-60Hz	50	2x12,5+25	240	3 x 200	7	
R54SF3.	OPTIM FR4 P&P-62,5-240-60Hz	62,5	12,5+2x25	240	3 x 250	7	
R54SF4.	OPTIM FR4 P&P-75-240-60Hz	75	3x25	240	3 x 250	7	
R54SF5.	OPTIM FR4 P&P-87,5-240-60Hz	87,5	12,5+3x25	240	3 x 400	7	
R54SF6.	OPTIM FR4 P&P-100-240-60Hz	100	4x25	240	3 x 400	7	
R54SF8.	OPTIM FR4 P&P-140-240-60Hz	140	20+3x40	240	3 x 400	7	
R54SF9.	OPTIM FR4 P&P-160-240-60Hz	160	4x40	240	3 x 630	7	
<b>OPTIM FR6 P&amp;P, automatic capacitor banks with computer SMART III regulator. Steps protection by blade fuse type NH-00.</b>							
R54SG3.	OPTIM FR6 P&P-180-240-60Hz	180	20+4x40	240	3 x 630	7	
R54SG4.	OPTIM FR6 P&P-200-240-60Hz	200	5x40	240	3 x 630	7	
R54SG6.	OPTIM FR6 P&P-220-240-60Hz	220	20+5x40	240	3 x 800	7	
R54SG7.	OPTIM FR6 P&P-240-240-60Hz	240	6x40	240	3 x 800	7	
<b>OPTIM FR8 P&amp;P, automatic capacitor banks with computer SMART III regulator. Steps protection by blade fuse type NH-00.</b>							
R54SH1.	OPTIM FR8 P&P-280-240-60Hz	280	7x40	240	3 x 1000	7	
R54SH2.	OPTIM FR8 P&P-320-240-60Hz	320	8x40	240	3 x 1000	7	
<b>OPTIM FR10 P&amp;P, automatic capacitor banks with computer SMART III regulator. Steps protection by blade fuse type NH-00.</b>							
R54SJ4.	OPTIM FR10 P&P-360-240-60Hz	360	9x40	240	3 x 1250	7	
R54SJ6.	OPTIM FR10 P&P-400-240-60Hz	400	10x40	240	3 x 1250	7	
<b>OPTIM FR12 P&amp;P, automatic capacitor banks with computer SMART III regulator. Steps protection by blade fuse type NH-00.</b>							
R54SK4.	OPTIM FR12 P&P-440-240-60Hz	440	11x40	240	3 x 1600	7	
R54SK6.	OPTIM FR12 P&P-480-240-60Hz	480	12x40	240	3 x 1600	7	
<b>OPTIM FRS P&amp;P, automatic capacitor banks with computer SMART III regulator. General protection by Circuit Breaker</b>							
R54RB2.	OPTIM FRS P&P-50-480-60Hz		2x12,5+25	480	3 x 100	7	50
R54RB4.	OPTIM FRS P&P-75-480-60Hz		3x25	480	3 x 125	7	75
R54RB9.	OPTIM FRS P&P-100-480-60Hz		4x25	480	3 x 160	7	100
<b>OPTIM FR4 P&amp;P, automatic capacitor banks with computer SMART III regulator. Steps protection by blade fuse type NH-00.</b>							
R54SB4.	OPTIM FR4 P&P-75-480-60Hz		3x25	480	3 x 125	7	75
R54SB6.	OPTIM FR4 P&P-100-480-60Hz		2x25+50	480	3 x 200	7	100
R54SB7.	OPTIM FR4 P&P-125-480-60Hz		25+2x50	480	3 x 250	7	125
R54SB3.	OPTIM FR4 P&P-150-480-60Hz		2x25+2x50	480	3 x 250	7	150
R54SB0.	OPTIM FR4 P&P-175-480-60Hz		25+3x50	480	3 x 400	7	175
R54SB9.	OPTIM FR4 P&P-200-480-60Hz		4x50	480	3 x 400	7	200
R54SB8.	OPTIM FR4 P&P-262,5-480-60Hz		37,5+3x75	480	3 x 400	7	262,5
R54SB5.	OPTIM FR4 P&P-300-480-60Hz		4x75	480	3 x 630	7	300



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Automatic capacitor banks with detuned filters

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CODE	TYPE	kvar (240 V)	Composition	Use voltage (V)	Aut.Switch (A)	P%	kvar (480 V)
<b>OPTIM FR6 P&amp;P, automatic capacitor banks with computer SMART III regulator. Steps protection by blade fuse type NH-00.</b>							
R54TB3.	OPTIM FR6 P&P-337,5-480-60Hz		37,5+4x75	480	3 x 630	7	337,5
R54TB4.	OPTIM FR6 P&P-375-480-60Hz		5x75	480	3 x 630	7	375
R54TB6.	OPTIM FR6 P&P-412,5-480-60Hz		37,5+5x75	480	3 x 800	7	412,5
R54TB7.	OPTIM FR6 P&P-450-480-60Hz		6x75	480	3 x 800	7	450
<b>OPTIM FR8 P&amp;P, automatic capacitor banks with computer SMART III regulator. Steps protection by blade fuse type NH-00.</b>							
R54UC0.	OPTIM FR8 P&P-487,5-480-60Hz		37,5+6x75	480	3 x 800	7	487,5
R54UC1.	OPTIM FR8 P&P-525-480-60Hz		7x75	480	3 x 1000	7	525
R54UC2.	OPTIM FR8 P&P-600-480-60Hz		8x75	480	3 x 1000	7	600
<b>OPTIM FR10 P&amp;P, automatic capacitor banks with computer SMART III regulator. Steps protection by blade fuse type NH-00.</b>							
R54VB4.	OPTIM FR10 P&P-675-480-60Hz		9x75	480	3 x 1250	7	675
R54VB6.	OPTIM FR10 P&P-750-480-60Hz		10x75	480	3 x 1250	7	750
<b>OPTIM FR12 P&amp;P, automatic capacitor banks with computer SMART III regulator. Steps protection by blade fuse type NH-00.</b>							
R54WD1.	OPTIM FR12 P&P-825-480-60Hz		11x75	480	3 x 1600	7	825
R54WD2.	OPTIM FR12 P&P-900-480-60Hz		12x75	480	3 x 1600	7	900