



## OPTIM FR8 P&P-525-480-60Hz

OPTIM FR8 P&P-525-480-60Hz, Detuned capacitor bank 60 Hz

Code: R54UC1.

- > Frequency (Hz): 60 Hz
- > kvar (480 V): 525
- > Aut.Switch (A): 3 x 1000
- > Composition: 7x75
- > 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 FR8 P&P-525-480-60Hz

Automatic capacitor banks with detuned filters

Code: R54UC1.

### Specifications

#### AC power supply

|           |       |
|-----------|-------|
| Frequency | 60 Hz |
|-----------|-------|

#### 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 | 1500 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)                      | 580                                         |

#### 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. |
|---------|--------------------------------------------------------------------------------------------|

#### 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        |              |



## OPTIM FR8 P&P-525-480-60Hz

Automatic capacitor banks with detuned filters

Code: R54UC1.

| 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        |              |
| <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         | 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        |              |
| <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          | 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        |              |
| <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          | 3 x 1000       | 7x40        |              |
| R54SH2.                                                                                                                            | OPTIM FR8 P&P-320-240-60Hz   | 320          | 3 x 1000       | 8x40        |              |
| <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          | 3 x 1250       | 9x40        |              |
| R54SJ6.                                                                                                                            | OPTIM FR10 P&P-400-240-60Hz  | 400          | 3 x 1250       | 10x40       |              |
| <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          | 3 x 1600       | 11x40       |              |
| R54SK6.                                                                                                                            | OPTIM FR12 P&P-480-240-60Hz  | 480          | 3 x 1600       | 12x40       |              |
| <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    |              | 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          |
| <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    |              | 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          |
| <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 |              | 3 x 630        | 37,5+4x75   | 337,5        |



# OPTIM FR8 P&P-525-480-60Hz

Automatic capacitor banks with detuned filters

Code: R54UC1.

| 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          |