



OPTIM FRM-50-440

OPTIM FRM-50-440, Fixed capacitor with armonic filter

Code: R5Y380.

- > Cable section (mm²): 25
- > kvar (400 V): 42
- > kvar (440 V): 50
- > Cut off power: 50 kA
- > Use voltage (V): 440

Description

The **FRF / FRM** Series capacitor banks with detuned filters have been designed for power compensation purposes in motors and transformers with a constant load level, a high content of harmonics and where there is a risk of resonance. Including:

- **FRF**: general protection with NH-00 fuses with a high rupture power (HRP) for the capacitor.
- **FRM**: general circuit breaker protection for the capacitor.

Application

Its application is mainly based on the compensation of transformers and motors. In general, it is used for the compensation of installations under constant loads and where there is a high content of harmonics in the network.



OPTIM FRM-50-440

Fixed capacitor with rejection reactance p = 7 %

Code: R5Y380.

Specifications

Electrical characteristics

| | |
|-----------------------|--|
| Losses (W) | Dielectric: < 0.2 W/kvar Total: < 0.5 W/kvar |
| Discharge resistance | 75 V / 3 min |
| Surge | 19 % 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 |
| Reinforcement voltage | 440 V |
| Tolerance C | ±10 % |

Mechanical characteristics

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|----------------------------------|--|
| Size (mm) width x height x depth | 650 x 1060 x 420 (mm) |
| Fastening | Vertical |
| Ventilation | Natural or forced according to options |
| Weight (kg) | 85 |

Environmental characteristics

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| Protection class | IP 21 |
| Relative humidity (without condensation) | 80% |

Current measurement circuit

| | |
|--------------------|--------|
| Permanent overload | 1,3 In |
|--------------------|--------|

Standards

| | |
|---------------------------------------|--------|
| Electrical safety, Maximum height (m) | 2000 m |
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Features / performance

| | |
|------------|---|
| Components | CF Capacitor General tripolar circuit breaker for protection. Waste filters tuned to 189 Hz to protect harmonics present in the network and avoid resonance phenomena with harmonics of order 5 or more. It incorporates a thermostat to disconnect the step in case of high temperature (90 °C). |
|------------|---|

Protection

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| Element | Individual protection of each step with fuses with high rupture power (HRP). NH-00 Series. |
|---------|--|

OPTIM FRM

Fixed capacitors with detuned reactor of P = 7% (fres=189 Hz), 50 Hz

| CODE | TYPE | kvar (400 V) | kvar (440 V) | Cable section (mm2) |
|---|------------------|--------------|--------------|---------------------|
| OPTIM FRM, molded case circuit breaker protection, 440 V, 50 Hz | | | | |
| R5Y350. | OPTIM FRM-25-440 | 21 | 25 | 10 |



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| CODE | TYPE | kvar (400 V) | kvar (440 V) | Cable section (mm2) |
|---------|--------------------|--------------|--------------|---------------------|
| R5Y370. | OPTIM FRM-37,5-440 | 31 | 37,5 | 16 |
| R5Y380. | OPTIM FRM-50-440 | 42 | 50 | 25 |
| R5Y390. | OPTIM FRM-60-440 | 50 | 60 | 35 |
| R5Y3A0. | OPTIM FRM-75-440 | 62 | 75 | 50 |
| R5Y3B0. | OPTIM FRM-100-440 | 83 | 100 | 70 |

See CFB capacitor and RZ / RBZ reactor components in the Low Voltage Capacitor and Reactor Section. Cable cross-section for installations with $U_n = 400 \text{ V}$. The installation company must ensure compliance with the low voltage directive at all times, in accordance with the particularities of each installation and type of cable



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Dimensions

