



OPTIM HYB1-90-440

OPTIM HYB1-90-440, Capacitor bank

Code: R4E103. (CONSULTAR DISPONIBILIDAD)

- > Cable section (mm²): 1 x 95
- > kvar (400 V): 75
- > kvar (440 V): 90
- > Man.Switch (A): Included
- > Composition 230V/50Hz (Single-phase): (3 x 2 x 5) +
- > Composition 400V/50Hz (Three-phase): (3 x 15)
- > Use voltage (V): 440

Description

The **OPTIM HYB** automatic capacitor banks with hybrid switching are units designed for automatic compensation of reactive energy in networks in which the load levels fluctuate, with power variation rates of seconds and also independently of the level of unbalance in the installation. The compensation system is based on the combination of switching by three-phase step contact breakers and single-phase step semiconductors (thyristors), controlled by a smart regulator that uses the electrical parameters provided via communications by a power analyzer of the **CVM-MINI** range for its calculations.

Application

The **OPTIM HYB** series is ideal for achieving very accurate reactive power compensation in any installation, and especially those that present a certain degree of unbalance, since the compensation between phase and neutral adds to the fast reply provided by the static switching of the thyristor. It is therefore possible to guarantee a significant reduction in the chance of penalties in comparison with conventional capacitor banks.



OPTIM HYB1-90-440

Automatic hybrid switching capacitor banks

Code: R4E103.

Specifications

AC power supply

| | |
|-----------|-------|
| Frequency | 50 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 |
| Reinforcement voltage | 3 x 440 V F-F / 1 x 254 V F-N |
| Tolerance C | -5% / +10% |

Mechanical characteristics

| | |
|----------------------------------|---------------------------|
| Size (mm) width x height x depth | 685 x 970 x 340 (mm) |
| Envelope | Steel sheet grey RAL 7035 |
| Fastening | Vertical |
| Ventilation | Natural |
| Weight (kg) | 42 |

Environmental characteristics

| | |
|--|----------------|
| Protection class | IP 21 |
| Relative humidity (without condensation) | 80% |
| Working temperature | -25 ... +45 °C |

Current measurement circuit

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

Standards

| | |
|---------------------------------------|---------------------------------|
| Electrical safety, Maximum height (m) | < 2000 |
| Standards | IEC 61921, IEC 61642, IEC 60831 |

Features / performance

| | |
|------------|--|
| Components | Cylindrical capacitor, CLZ-FP type aluminium casing Reactive energy regulator, HYB computer communicating via RS-485 with a CVM-MINI-RS485 type power analyser |
| Optional | 4-pole circuit breaker at capacitor bank header 4-pole circuit breaker + earth leakage protection at capacitor bank header |

Protection



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Circuit breaker type

Single or three-pole circuit breaker protection in each single or three-phase step



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Dimensions

