# POWERVAR FILTER MV

MEDIUM VOLTAGE POWER FACTOR CORRECTION AND HARMONIC FILTERING

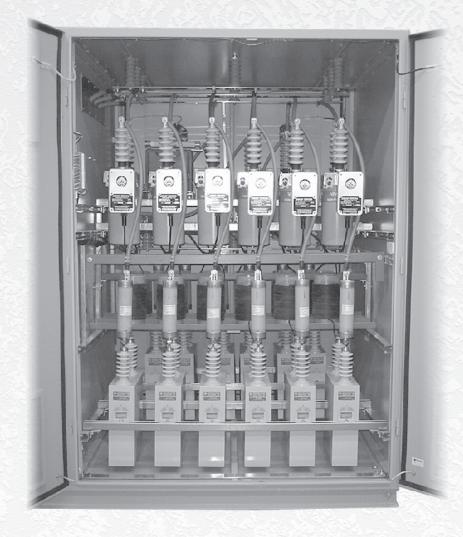




Serving you since 1948

## POWERVAR<sup>M</sup> FILTER MV MEDIUM VOLTAGE POWER FACTOR CORRECTION AND HARMONIC FILTERING

Medium voltage fixed capacitor banks
Medium voltage automatic capacitor banks
Medium voltage detuned capacitor banks
Medium voltage harmonic filters
Multiple tuned filters
High pass filters



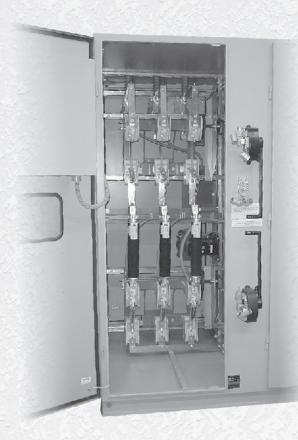
## QUALITY CONSTRUCTION :

Power Survey's commitment to quality follows through our entire process from the first proposal to final installation. Capacitor banks and filters are designed, manufactured and tested per IEEE, NEMA ANSI and CSA standards.

#### **Features include :**

- 11 Gauge all welded enclosures
- Galvanized Steel Outdoor Enclosures
- C-Chanel Base for Rigidity
- Continuous Ground Bus
- Heavy Duty 3-point Latch Doors

## **POWERVAR**<sup>™</sup> **FILTER MV**



# **ENGINEERING and DESIGN OPTIONS :**

Flexibility in engineering and product design has been a trademark of Power Survey since its inception in 1948. Products are designed per your application requirements and include:

- •Externally operated main air disconnect or load break switch
- Mechanically operated switch
- Oil or Vacuum switches for manual or automatic capacitor step switching
- Surge arrestors for vacuum switched harmonic filters
- Key interlock systems
- Transient inrush reactors
- Control power transformers

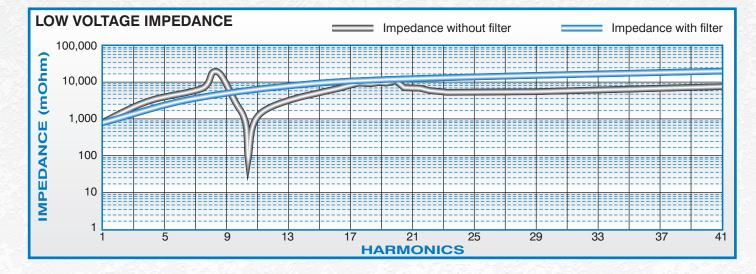
## **TESTING and SERVICE :**

Each POWERVAR MV capacitor and filter bank undergoes full functional and electrical tests which include :

- •NEMA and ANSI standards production test.
- Full high-pot, functional and continuity testing.
- BIL and other special testing are available upon request.

In addition to equipment, Power Survey can offer other products and services including :

- •Power system harmonic analysis with detailed printed reports.
- Field power system measurements to verify harmonic analysis and results.
- Equipment supply on total turn-key basis.



## **POWERVAR**<sup>®</sup> **FILTER MV** FEATURES AND SPECIFICATIONS

Each POWERVAR-MV Capacitor Bank and Filter is supplied with the following standard features and options:

#### ENCLOSURE

- •11 Gauge, seam welded NEMA 1, 3R or 4X ratings
- •Outdoor units consist of galvanized steel.
- •C-Channel base is supplied for rigidity and skidding into place
- •ANSI gray-61 corrosion resistant enamel
- •Continuous <sup>1</sup>/<sub>4</sub>" x 2" ground bus
- •Heavy-duty 3-point latching mechanism with rollers
- •Stainless steel pin hinges and fastening hardware inside and out
- •Aluminum or galvanized steel nameplates and warning labels blind-riveted to enclosure
- •Forced air ventilation

## CAPACITORS

- •95kV BIL rating, low loss, double bushing, allfilm capacitors
- •Ungrounded Y- configuration switched in specified kvar increments
- •Stainless steel tank and mounting brackets with a light gray finish
- •Meet the latest applicable ANSI, IEEE, NEMA and CSA standards
- •Non-PCB dielectric fluid
- Internal discharge resistors

#### **PROTECTION AND PROTECTION** SCHEMES

- •50kA current limiting fuses
- •Blown fuse detection and phase unbalance schemes
- •Y grounded with ground current transformer
- •\*Y ungrounded with potential transformer in neutral to ground connection
- •\*Double-Y connected with neutral current transformer.
- •Control power transformer with both primary and secondary current limiting fuses



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#### **OPTIONS**

- •Externally operated main air disconnect or load interrupting switch: \*fused, non-fused, shunt-trip, rated for capacitive current interruption
- Mechanically interlocked ground switch
- Oil or vacuum switches for switching the
- capacitor steps on and off
- Surge arrestors for vacuum switched harmonic filter reactors
- Kirk Key interlock systems
- Transient inrush reactors

## **POWER FACTOR CONTROLLER**

The capacitor banks may be equipped with a digital power factor controller. The controller has a digital display that shows plant power factor, plant current level and plant voltage level. Set point power factor is set by digital display.

## REACTORS

Reactors are designed specifically for each application and include:

- •Standard iron core design
- •Air core reactors based on application requirements
- 3 phase reactors up to 4.16 kV
- Single phase reactors at higher voltages.
- Reactors for de-tuned and harmonic filter banks are supplied with insulation levels and current ratings in accordance with specific harmonic loads.

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