MotoRx series dV/dt filters

Overview
The MotoRx™ dV/dt filter comprises a line reactor, capacitive filtering, and an energy recovery/clamping circuit. The filter is used to reduce the dV/dt of the adjustable frequency drive (AFD) output waveform.

Application description
The MotoRx dV/dt filters are designed for applications with long lead lengths between an adjustable frequency drive and a motor. Long lead lengths can amplify voltage peaks at the motor; these voltage peaks have extremely fast rise times, which can harm the motor windings and insulation. The MotoRx reduces both the magnitude and rise time of these voltage peaks, thus reducing wear on the motor windings and insulation. Eaton recommends ordering the MotoRx as part of an enclosed drive package, thus eliminating any field wiring or mounting concerns.

Features and benefits
• dV/dt and peak voltage spikes are reduced for longer, more reliable motor operation
• Energy is recovered and returned to the drive’s DC bus, providing more efficient drive operation
• Voltage drop across the filter is lower than across a line reactor, providing superior motor performance
• Improves motor life
• Reduces motor heating
• Reduces insulation failures
• Reduces partial discharge and corona breakdown
• Reduces bearing currents
• Energy recovery circuit increases drive efficiency
Ordering information

Order the MotoRx when the cable distance between the motor and the drive is up to 600 feet.

### MotoRx dV/dt Filter Kit Catalog Number Selection

![Diagram showing MotoRx dV/dt Filter Kit Catalog Number Selection](image)

**MotoRx Filter Options**

- **PG**: 1000 V/μs

### Ordering a MotoRx dV/dt Filter with an Enclosed Drive (enclosed options)

![Diagram showing Ordering a MotoRx dV/dt Filter with an Enclosed Drive](image)

**Ordering Information**

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<th>Code Number</th>
<th>Horsepower</th>
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**Note:** The MotoRx dV/dt filter is available in sizes greater than 100 hp in an enclosed drive package. Field installation kits are available only up to 100 hp.