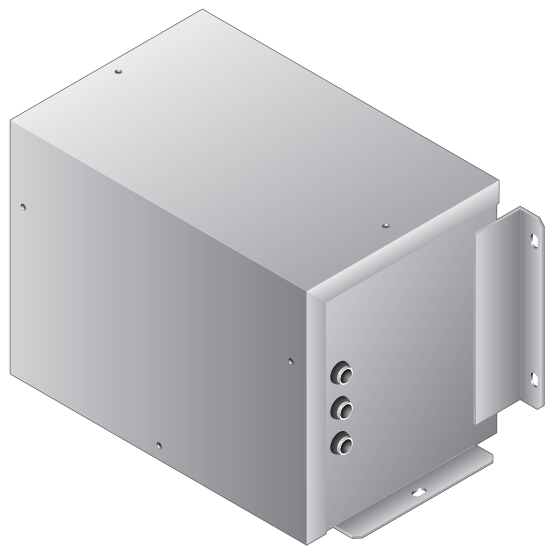




FEF-480 V

FEF-600 V

## Raychem FEF Front-End filter Installation Instructions



### DESCRIPTION

The Raychem Front-End Filter (catalog number FEF-480 V or FEF-600 V) is an industrial grade unit designed to provide network isolation for power line carrier systems. The FEF significantly reduces the amount of external electrical noise that can reach the heat-trace system. The effect is improved communications between the RAYCHEM SES or 700 devices. The FEF is connected to the primary side of the dedicated heat-trace transformer. The FEF-480 V is for primary transformer voltage of 480 V and the FEF-600 V is for primary transformer voltage of 600 V.

### TOOLS REQUIRED

- Flat-blade screwdriver
- Mounting tools

### KIT CONTENTS

Item	Qty	Description
A	1	FEF

### APPROVALS



### ⚠ WARNING:

This component is an electrical device that must be installed correctly to ensure proper operation and to prevent shock or fire. Read these important warnings and carefully follow all of the installation instructions.

- Turn off safety disconnect before working inside panel.

For technical support, call Chemelex at (800) 545-6258.

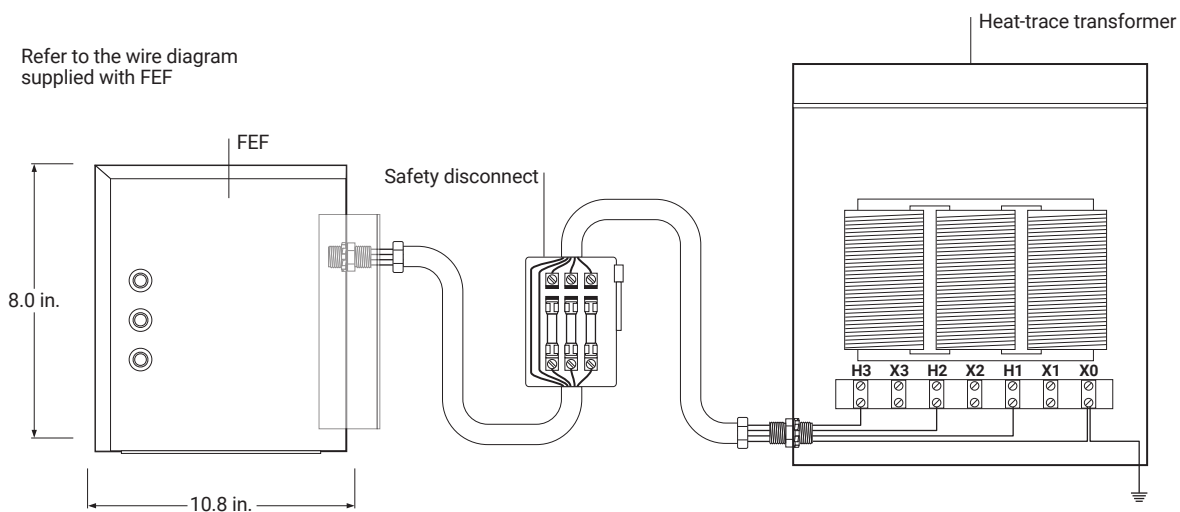
## MOUNTING INSTRUCTIONS

### Preparation

1. Mount the FEF on a structurally solid wall as close to the heattracing transformer as possible but not in a position where ambient temperatures will exceed 115°F. Select a conduit type that is approved for the environment. Cut a hole in the side or bottom of the unit for conduit entry as shown in Figure 1. Cut the hole before mounting if it is more convenient.
2. Mount a safety disconnect on the wall between the dedicated heat-trace transformer and the FEF as required per NEC Sec. 460.8(C). If the safety disconnect is fused, use 600 V, 10 A, 300 KA I.C. fuses.
3. Turn off power to the heat-trace transformer and cut a hole on the side of the transformer wall for conduit entry.

### Connection

1. Install approved conduit from the FEF to the safety disconnect and from the safety disconnect to the side of the heat-trace transformer.
2. Under normal conditions, the filter should draw only 3 Amps per line. Harmonics and high frequency noise at some sites may cause much higher current levels. Use 14 AWG or larger wire rated at 600 V. Pull 4 conductors (3 line, 1 ground) through the conduit and terminate the 3 line conductors on the filter's terminal block as illustrated on back page. Connect the ground conductor to the filter's ground lug.
3. At the transformer, terminate the three line conductors on the primary posts labeled H1, H2, and H3. Terminate the ground conductor to transformer ground. Use appropriately sized terminal lugs when needed. H1, H2, and H3 are interchangeable.
4. Replace the covers on the transformer and on the FEF. Power the heat-trace transformer. Resume normal operation.



FEF Connection Detail

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