

# When to use a three-phase pad-mounted transformer

## At issue

In an underground primary feeder system, three-phase pad-mounted transformers are an alternative to three-phase substation transformers.

## Recommendation

When compared to substation transformers, pad-mounted transformers offer many benefits. These include:

- Reduced land requirements and installation costs
- Improved aesthetics
- Enhanced safety

## Rationale

### Reduced land requirements and installation costs

Because the physical profile of a pad-mounted transformer is smaller than that of a substation, land requirements and associated costs of obtaining rights-of-way and permits are reduced. Additionally, because they are tamper-proof and self-contained, pad-mounted transformers can be installed in unsecured areas, saving the additional cost and space of a fence or enclosure. Access for maintenance is also made easier.

### Improved aesthetics

Pad-mounted transformers are smaller than equivalent substations and have uncluttered, unobstrusive exteriors.

### Enhanced safety

Public safety is enhanced through a tamper-resistant design that meets or exceeds IEEE Std C57.12.28™-2014 standard security requirements. With underground cable access and fully enclosed connections—particularly in dead-front designs with elbow inserts—pad-mounted transformers offer increased safety for operating personnel. The enclosed design also shields the unit from environmental hazards.

## The connection

Eaton offers its Cooper Power™ series three-phase pad-mounted transformers in the following ratings:

### Three-phase

- kVA range: 45-10,000 kVA
- Primary voltage: 2,400-46,000 volts, with or without taps; dual voltages available
- Secondary voltage: 208Y/120-14,400 Volts

### See publications

- 210-12 Three-phase Pad-mounted Compartmental Type Transformer
- S210-12-1, Three-phase Pad-mounted Compartmental Type Installation and Maintenance Instructions



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Printed in USA  
Publication No. TD202002EN

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For Eaton's Cooper Power series distribution transformers product information call 1-877-277-4636 or visit: [www.cooperpower.com](http://www.cooperpower.com).