

Three-phase pad-mount transformers, 15 kV class

RG-A | Submittal-ready specification

Liquid-filled, dead-front compartmental pad-mount transformers for utility and cooperative distribution, oilfield pads, and outdoor data center unit substations. Built and tested to IEEE C57.12.00 and C57.12.90 with certified routine test reports on every unit. Lead time 12 to 16 weeks after drawing approval.

Ratings and construction

Ratings	500 to 5,000 kVA. Standard steps 500, 750, 1,000, 1,500, 2,000, 2,500, 3,000, 3,750, and 5,000 kVA. 75 to 300 kVA on request.
Primary voltage	12,470Y/7,200 V, 13,200Y/7,620 V, or 13,800 V delta or wye. De-energized tap changer with four 2.5 percent taps, two above and two below rated voltage.
Secondary voltage	480Y/277 V standard. 208Y/120 V and 600 V available.
Basic impulse level	95 kV high voltage standard, 125 kV option. 30 kV low voltage.
Impedance	5.75 percent plus or minus 7.5 percent from 750 to 2,500 kVA. 2.0 percent plus or minus 10 percent at 500 kVA and below. 6.0 to 6.5 percent from 3,000 to 5,000 kVA.
Cooling and fluid	ONAN with mineral oil per ASTM D3487 Type II, or KNAN with FM Approved FR3 natural ester (fire point above 300 C).
Temperature rise	65 C standard. 55 C or 55/65 C dual rating for 50 C maximum ambient.
Frequency and phases	60 Hz, three phase. Vector groups Dy1, Dyn1, Yyn0, or as specified.
Construction	Dead-front compartmental cabinet per IEEE C57.12.34 with separate high- and low-voltage compartments. Loop feed with six 200 A bushing wells and parking stands; radial feed with three wells available. Gang-operated four-position under-oil load-break switch. Bayonet expulsion fuses in series with partial-range current-limiting fuses. Sealed tank rated 7 psig without permanent distortion, 12 psig without rupture. Coating system per IEEE C57.12.28, Munsell 7GY 3.29/1.5 green. Mild steel or 304 stainless cabinet. Penta-head bolt and padlock provisions.
Core and windings	Grain-oriented electrical steel core. Copper or aluminum windings, specified at order. Electrostatic shield available.
Harmonic rating	Standard linear load. K-4 to K-13 available; K-19 on request.
Accessories	Liquid-level gauge, dial thermometer, pressure-vacuum gauge, pressure relief device, drain valve with sampler, ground pads, lifting lugs, laser-engraved and bar-coded nameplate. Internal fault indicator and gauges with alarm contacts optional.
Sound level	Per NEMA TR 1 for the rating.
Lead time	12 to 16 weeks after drawing approval. Production slot confirmed at order.

Standards and testing

IEEE C57.12.00 (general requirements), IEEE C57.12.90 (test code), IEEE C57.12.34 (three-phase pad-mounted compartmental type), IEEE C57.12.28 (enclosure integrity), IEEE 386 (separable connectors). Efficiency per US Department of Energy 10 CFR 431 Subpart K for all covered ratings. FM Approvals Class 3990 construction on FR3-filled units. Routine tests on every unit: ratio, polarity and phase relation, winding resistance, no-load loss and excitation current, load loss and impedance, applied voltage, induced voltage, leak test. Design tests available: lightning impulse, temperature rise, audible sound, short-circuit withstand. Certified test reports ship with each unit; witnessed factory acceptance tests on request.

Options

125 kV BIL. 55 C or 55/65 C rise. 304 stainless cabinet. FR3 natural ester. K-factor windings. Electrostatic shield. Dual-voltage primary. Radial feed. Gauges with alarm contacts. Internal fault indicator. Surge arresters. Base for skid mounting. Custom paint color.

Ordering information

To quote, send the primary and secondary voltages, kVA rating, quantity, impedance if specified, fluid, enclosure material, accessories, the site location, and the date units are needed on site. Submittal drawings are returned within 10 business days of order. Quotes are delivered duty paid (DDP) to the site. Request a quote at riogridpower.com/quote or contact@riogridpower.com.

Ratings and dimensions are confirmed on the submittal drawings for each order. Specifications may be revised without notice; the drawing package governs.