

# Dry-type transformers

Class 1  
Division 2



**EATON**

*Powering Business Worldwide*

# Dry-type transformers

chemical plants  
refineries

Many petrochemical and other industrial facilities have atmospheres unsuitable for application of either liquid-filled or general-purpose dry-type transformers. Eaton offers a solution with Type EPZ and EPTZ transformers, which are suitable for installation in Class I, Division 2, Groups A, B, C and D locations, as defined by NEC® Article 501, with NEC-recommended installation procedures for dry-type transformers rated under 600V nominal operation.



## A Class I, Division 2 location per Section 500 of the NEC is:

1. A location in which volatile flammable liquids or gases are handled, processed or used, but which normally will be confined within closed containers or systems from which they can escape only in case of accidental rupture or breakdown of the container or system.
  2. Or, a location where ignitable concentrations of gases or vapors are normally prevented by positive mechanical ventilation and that might become hazardous through failure of the ventilation equipment.
  3. Or, a location that is adjacent to a Class I, Division 1 location and ignitable concentrations of gases or vapors might occasionally enter.
- Atmospheres classified by NEC Section 500 as Group A may contain acetylene gas. Group B includes the gases hydrogen and formaldehyde. Group C may contain gases or vapors such as ethyl ether, ethylene or the equivalent. Atmospheres classified as Group D may contain gases or vapors such as acetone, ammonia, benzene, butane, cyclopropane, ethanol, gasoline, hexane, methanol, methane, natural gas, naphtha, propane or the equivalent.

Connections must be made to an adjacent explosion-proof junction box. Unused tap leads must be properly insulated prior to energizing. EPZ and EPTZ transformers are labeled as "Suitable for use in Class I, Division 2, Groups A, B, C and D locations, as defined by the NEC Article 501, with the NEC-recommended installation procedures for dry-type transformers rated under 600V nominal operation."

The transformer requirements from Section 500 of the NEC for Class I, Division 2 shall comply with Sections 450.21 through 450.27 (as applicable) of the NEC.

## Features at a glance

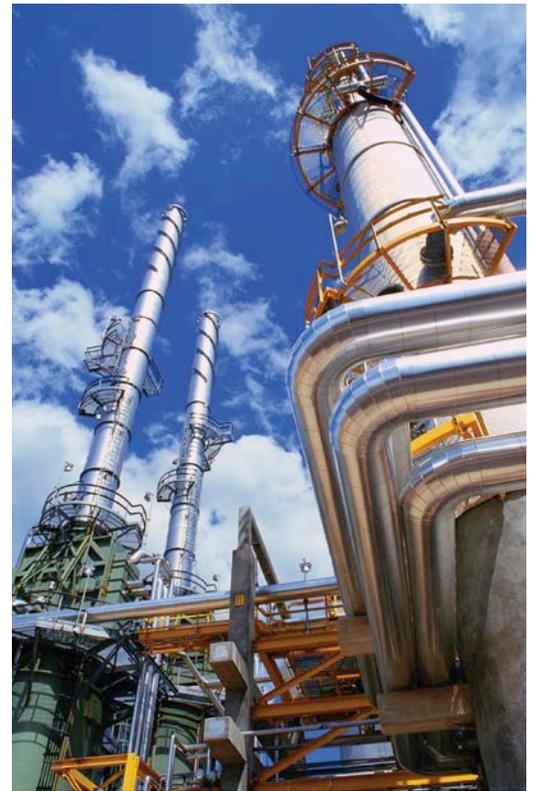
- Single-phase ratings 1.0–25 kVA
- Three-phase ratings 3–75 kVA
- NEMA® 3R enclosure (NEMA 4X enclosure optional)
- 180°C insulation system
- 115°C winding temperature rise
- Aluminum windings standard (copper optional)
- Resin-encapsulated core-coil assembly
- Optional 304 or 316 grade stainless steel enclosures
- UL® Listed for hazardous locations (file #E304546)



corrosive environments  
offshore oil platforms  
harsh industrial applications

## Product selection

Class I, Division 2 and other dry-type transformers are available from Eaton distributor locations. They are supported by regional warehouses that maintain extensive inventories of virtually every dry-type transformer. For the distributor nearest you, call toll-free 1-800-525-2000.



## Technical data

kVA	Catalog Number	Catalog Number 304 Grade Stainless Steel ① ②	Dimensions in Inches (mm)			Approximate Weight Lb (kg)	Frame
			Height	Width	Depth		
<b>Single-Phase, Type EPZ, 480V Primary, 120/240V Secondary, 115°C Rise, 60 Hz, No Taps</b>							
0.5	Z48N11S51A	Z48N11S51SS	6½ (165.1)	4¾ (123.8)	4¾ (117.5)	13 (6)	57H
0.75	Z48N11S76A	Z48N11S76SS	8¾ (212.7)	6 (152.4)	5½ (139.7)	20 (9)	58H
1	Z48N11S01A	Z48N11S01SS	8¾ (212.7)	6 (152.4)	5½ (139.7)	30 (14)	59H
1	Z48N11S16A	Z48N11S16SS	10½ (266.7)	6¾ (161.9)	6¾ (155.6)	40 (18)	67H
2	Z48N11S02A	Z48N11S02SS	10½ (266.7)	6¾ (161.9)	6¾ (155.6)	40 (18)	68H
3	Z48N11S03A	Z48N11S03SS	14¾ (358.8)	7¾ (196.9)	8 (203.2)	65 (30)	176H
5	Z48N11S05A	Z48N11S05SS	16 (406.4)	10¾ (263.5)	9¾ (250.8)	113 (51)	177H
7.5	Z48N11S07A	Z48N11S07SS	16 (406.4)	10¾ (263.5)	9¾ (250.8)	123 (56)	178H
10	Z48N11S10A	Z48N11S10SS	19 (482.6)	13¾ (339.7)	10½ (266.7)	193 (88)	179H
15	Z48N11S15A	Z48N11S15SS	19 (482.6)	13¾ (339.7)	10½ (266.7)	216 (98)	180H
25	Z48N11S25A	Z48N11S25SS	22¾ (568.3)	16¾ (415.9)	14½ (368.3)	375 (170)	182H
<b>Three-Phase, Type EPTZ, 480V Delta Primary, 208Y/120V Secondary, 115°C Rise, 60 Hz, -2 Taps at 5% Increments</b>							
3	Z48G28T03A ③	Z48G28T03SS ③	13¾ (339.7)	16 (406.4)	8¾ (212.7)	116 (53)	201H
6	Z48G28T06A ③	Z48G28T06SS ③	15¾ (403.2)	16½ (419.1)	9¾ (250.8)	143 (65)	200H
9	Z48G28T09A ③	Z48G28T09SS ③	15¾ (403.2)	16½ (419.1)	9¾ (250.8)	166 (75)	103H
15	Z48G28T15A ③	Z48G28T15SS ③	17¾ (441.3)	19 <sup>11</sup> / <sub>16</sub> (500.1)	10 <sup>1</sup> / <sub>16</sub> (265.1)	275 (125)	95H
30	Z48G28T30A	Z48G28T30SS	26¾ (676.3)	25¼ (641.4)	12¾ (323.9)	422 (191)	243H
45	Z48G28T45A	Z48G28T45SS	26½ (673.1)	28½ (723.9)	14¾ (371.5)	660 (299)	244H
75	Z48G28T75A	Z48G28T75SS	30¾ (781.1)	30½ (765.2)	15¾ (396.9)	1275 (580)	245H
<b>Three-Phase, Type EPTZ, 480V Delta Primary, 240V Delta with 120V Lighting Tap on B Phase Secondary, 115°C Rise, 60 Hz, -2 Taps at 5% Increments ④</b>							
6	Z48G22T06A	Z48G22T06SS	13¾ (333.4)	19 <sup>9</sup> / <sub>16</sub> (496.9)	6¼ (158.8)	115 (52)	102H
9	Z48G22T09A	Z48G22T09SS	14 <sup>15</sup> / <sub>16</sub> (379.4)	21 <sup>7</sup> / <sub>16</sub> (555.6)	7¾ (187.3)	160 (73)	97H
15	Z48G22T15A	Z48G22T15SS	21¾ (552.5)	22 <sup>9</sup> / <sub>16</sub> (566.7)	11¾ (288.9)	340 (155)	195H
30	Z48G22T30A	Z48G22T30SS	26¾ (676.3)	25¼ (641.4)	12¾ (323.9)	422 (191)	243H
45	Z48G22T45A	Z48G22T45SS	26½ (673.1)	28½ (723.9)	14¾ (371.5)	660 (299)	244H

① For 316 grade stainless steel enclosure, change suffix "SS" to "S6."

② For NEMA 4X enclosures, add suffix "4X" after "SS" or "S6."

③ Transformer is T-T connected.

④ Center tap capacity limited to 5% of rated kVA.

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