

Company Name Details

Company Information	Additional Company / Plant Detail	Confirmation of Type Approval
JEFFERSON ELECTRIC 9650 S. FRANKLIN DRIVE WI 53132 United States Tel 414-209-1620 Fax 414-209-1621 Email: ejaeger@jeffersonelectric.com Website: jeffersonelectric.com		This product doesn't have a Confirmation of Type Approval.

Certificate Number	Category	Expiry Date

Product	Transformer, Electrical Marine
Model	Series 411, 413, 415, 416, 511, 513, 516, 421, 423, 424, 521, 523, 524 & 425
Intended Service	Transformers for Marine & Offshore Application
Description	Dry Type Power Transformers: 411/511, 413/513 & 416/516 - 1-Phase/ 3-Phase Encapsulated; Enclosure: NEMA 3R 421/521, 423/523 & 424/524 - 1-Phase/ 3-Phase Ventilated; Enclosure: NEMA 1, 3R 415/425 - Single/Three Phase Auto Transformer; Enclosure: NEMA 1, 3R

411/511, 413/513 & 416/516 - General Purpose Transformers:
1-Phase: 0.050 to 1 kVA, Temperature Rise 95 °C;
1-Phase: 1.5 to 50 kVA, Temperature Rise 135 °C
3-Phase: 0.5 KVA to 75 KVA, Temperature Rise 135 °C with 25 °C

Ambient
Power: 600 V Max. 50/60 Hz
180 °C Insulation Class

415 - Auto Transformers:
1 or 3-Phase Auto kVA: 0.5 to 300 kVA
1 or 3-Phase Equivalent isolation kVA: 0.50 kVA to 25 kVA
Power: 600 V Max, 60 Hz

421/521, 423/523 & 424/524 - General Purpose Transformers:
1-Phase: 15 kVA to 667 kVA,
3-Phase: 15 kVA to 1000 kVA,
Temperature Rise: 150 °C (15 - 1000 kVA), 115 °C (15 kVA to 500
kVA) (501-750 kVA
if used in the 1000 kVA enclosure), 80 °C (15 - 500 kVA)
Power: 600 V Class, 50/60 Hz (15 - 500 kVA), 60 Hz (501-1000 kVA)
220 °C Insulation Class

Ratings

425 - Auto Transformers:
1 or 3-Phase Equivalent isolation kVA: 15 to 1000 kVA
1 or 3-Phase Auto kVA: Sized according to Equivalent Isolation kVA
as per Formula 1
below:
Temperature Rise: 150 °C (15 - 1000 kVA), 115 °C (15 kVA to 500
kVA) (501-750 kVA
if used in the 1000 kVA enclosure), 80 °C (15 - 500 kVA)
Power: 600 V Max, 60 Hz

Series 411, 413, 416, 511, 513 & 516- General Purpose Transformers
of 10 KVA or less suitable for
Class I Division 2, Groups A,B,C and D Hazardous Locations

Series 415 & 515- AutoTransformers suitable for Class I Division 2,
Groups A,B,C and D Hazardous Locations

Unit certification is required for transformers utilized in essential
services or emergency services as per 4-8-3/7.3.5 of the Steel Vessel
Rules.

Service Restrictions

- (1) Transformers 10 kVA/phase and over are to be provided with anti-
condensation heaters installed inside the transformer compartment
and energized at full heater voltage from a suitable external source
throughout the standby period as per 4-8-3/7.3.4.
- (2) Enclosure protections is to be in accordance with 4-8-3/Table 2 of
the SV Rules and 4-3-3/Table 1 of the MODU Rules.
- (3) Ambient temperature rating is to be included on the nameplate.

Duplicate PDA resides with Jefferson Electric-Reynosa

Comments

The Manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product.

Document UL File E78376, Project No. 97NK27163 Issued 28 May 1998 & Revised 03 August 2010

**Notes,
Drawing and
Documentation**

Document UL File E356573, Project No. 13CA49597 Issued 30 October 2013

UL Certificate No. 20131101-E356573, Transformers, General Purpose for use in Hazardous Locations, Issued 01 November 2013
Document UL File E4466, Project 02NB29214, Issued 19 December 2002, Revised 08 May 2008 & 15 February 2014

This Product Design Assessment (PDA) Certificate 16-HS1528482-PDA, dated 28/Jun/2016 remains valid until 27/Jun/2021 or until the Rules or specifications used in the assessment are revised (whichever occurs first).

**Term of
Validity**

This PDA is intended for a product to be installed on an ABS classed vessel, MODU or facility which is in existence or under contract for construction on the date of the ABS Rules or specifications used to evaluate the Product.

Use of the Product on an ABS classed vessel, MODU or facility which is contracted after the validity date of the ABS Rules and specifications used to evaluate the Product, will require re-evaluation of the PDA.

Use of the Product for non ABS classed vessels, MODUs or facilities is to be to an agreement between the manufacturer and intended client.

ABS Rules

Rules for Conditions of Classification, Part 1 2016 Steel Vessels
Rules 1-1-4/7.7, 1-1-A3, 1-1-A4, which covers the following:
2016 Steel Vessel Rules 4-8-3/7, 4-8-5/3.7.5, 4-8-5/5.17.9
2016 Steel Vessels Under 90 Meters (295 feet) in Length: 4-6-4/9, 4-6-5/1.11.3, 4-6-4/10.9.2
Offshore Support Vessels (OSV Rules) 4-8-3/7, 4-8-5/3.7.5, 4-8-5/5.17.9
Rules for Conditions of Classification, Part 1 - 2016 Offshore Units and Structures 1-1-4/9.7, 1-1-A2, 1-1-A3, which covers the following:
2016 Mobile Offshore Drilling Units 4-3-3/Table 1; 4-3-5/1.7.2, 4-3-5/Table 1, 6-1-7/11

**National
Standard**

UL 506, 12th Ed., UL 1561,3rd Ed; 1979 ANSI/IEEE C57.12.91 UL 5085

**International
Standard**

CSA C22.2 No.47-M90, No.66-1988
CAN/CSA C22.2 No. 66.1-06, C22.2 No. 213-M1987
ANSI/ISA 12.12.01, 2013

Government Standard NA

EUMED Standard NA

Others Standard NA

Model Certificate	Model Certificate #	Issue Date	Expiry Date
PDA	16-HS1528482-PDA	29-JUN-2016	27-JUN-2021