



Polski Rejestr Statków

TYPE APPROVAL CERTIFICATE

This is to certify that the undernoted product type

1-PHASE AND 3-PHASE DRY TRANSFORMERS

ET1SM, ET3SM
ET1oM, ET3oM
 (power from 0,05 up to 160 kVA)

manufactured by

ELHAND TRANSFORMATORY Sp. z o.o.
ul. Klonowa 60
42-700 Lubliniec
Poland

is approved as complying with the requirements of the
 PRS Rules and is suitable for use on board of ships classified by PRS or in appliances with PRS certificates.

Certificate No. **TE/2175/880017/18**

Expiry date **2023-04-03**

Issued at

Gdańsk, 2018-04-04




 Signature

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Continued overleaf

Technical data

Product description:

1-phase and 3-phase dry type (air-cooled) power transformers. They are intended for installation in closed compartments (typically engine room or electrical equipment compartments) and assembled directly on the floor with usage of brackets and screws.

Type designation details:

ET1SM-xx, ET3SM-xx: ET – basic type; 1/3 – one or three phase; S – power transformers; M – marine type; xx – power in kVA.

ET1oM-xx, ET3oM-xx: ET – basic type; 1/3 – one or three phase; o – power transformers safety design (primary and secondary windings are screened); M – marine type; xx – power in kVA.

Primary voltage: up to 1000 V.

Secondary voltage: up to 1000 V.

Power range: from 0,05 up to 160 kVA.

Frequency: 50 or 60 Hz.

Enclosure protection degree: IP00 / IP23 / IP44 / IP54.

Max. permissible ambient temperature: up to +50 °C (above +45 °C power derating applies).

Insulation class: F, H.

Mounting type: vertical only.

Cooling: AN (natural cooling).

Electrical cables connection: from the bottom or from one side through cable glands.

Basis of approval

1. The technical documentation approved by PRS on 2018-03-27.
2. The Quality Management System Certificates (ISO9001) No. 644/S/2017 issued by CCJ Warszawa.
3. The inspection of the production process and quality control system carried out on 2018-03-13.
4. Tests carried out in presence of PRS Surveyor on 2018-03-13.
5. PRS Survey Report No. SZC/PW/12/18 issued on 2018-03-13.
6. The previous PRS Type Approval Certificate No. TE/1962/880017/13.

Additional conditions and remarks:

1. Each product is to be marked with: manufacturer name, type, power [kVA], serial number, max. ambient temperature (permissible), enclosure protection degree (IP), insulation class.
2. The condition for maintain validity of this Certificate is to maintain validity of a.m. ISO9001 Certificate.

Notes

- 1 The approval is valid only when the product is used in accordance with the manufacturer's conditions.
- 2 Changes of product design and materials which influence product quality are to be agreed with PRS.
- 3 Type Approval Certificate will be cancelled in the case of dissatisfactory service results, modifications made in the product structure or materials without PRS' consent, not advising PRS of the manufacturer's name change.

In carrying out survey activities Polski Rejestr Statków S.A. (PRS) makes efforts to ensure that they are conducted with conscientiousness and the principles of good practice, with due regard paid to the state-of-the-art technology. However, neither PRS nor its Surveyors shall bear any civil liability for damage, loss or expense which may arise in consequence or as the outcome of conducting these activities, or the result of information or advice given to the customer by PRS, irrespective of whether or not such were the result of neglect, error or lack of proper information. Nevertheless, should the customer prove that such damage, loss or expense was due to negligence on the part of the Society or its Surveyors, PRS will pay compensation to the customer for his loss up to but not exceeding the amount due for services provided, forming the basis of the customer's claim. In no cases will PRS be responsible for indirect losses (loss of prospective profits, loss of contract, inability to undertake activities, etc.) sustained by the customer and associated with the executing of a commission by PRS.