

ELGÓR+HANSEN

Connection to new energy

Container transformer station

EH-nTS/mw-4000/...

We are part of

Grenevia



www.elgorhansen.com

We power intelligence in demanding projects

We provide technical solutions in the field of power systems and automation and control of machines and entire industrial facilities.

We implement designs of electrical and electronic devices and systems automation and IT, including ATEX solutions for explosion-hazardous zones.

We offer both proprietary solutions and those we use products of recognized and proven global brands. We support clients in every phase of the investment, i.e. at the design, construction, documentation and during operation, both at home and abroad.

+ 30

over 30 years of experience

+ 3000

completed projects



Transformer station

EH-nTS/mw-4000/...

EH-nTS/mw-4000/... type transformer station manufactured by Elgór + Hansen is intended for the electric power generation plants using renewable energy sources such as PV farms. The elements of the station are situated inside a metal structure, which is protected corrosion and unfavorable weather conditions.

The housing is made of steel shapes that form a self-supporting skeleton, which consists of:

- welded floor structure,
- flat roof
- steel poles located in the corners of the housing.

The installation provides for the use of a transformer with a capacity of 4000 kVA and is designed to work with the medium voltage (MV) network from the Distribution Network side and the low voltage (nN) network from the generated energy receiving side.

The installation is serviced locally in the station's main room or remotely thanks to the applied telemechanics systems.

flat roof made of structure layered with roof membrane, thermal insulation and painted galvanized steel sheet



walls made of laminar panels in the so-called sandwich system with varnished galvanized sheet and insulated with mineral wool



housing equipped with thermally insulated metal door and air intakes to provide required ventilation of the station



floor made of checkered steel sheets, bridging grille and a tin tank used as a leakproof oil drip-pan





lower costs of transport and installation of the station in relation to analogous concrete structures



simple and quick on-site installation in relation to traditional concrete switchgears



overall dimensions enabling standard transport on public or private roads



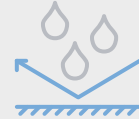
free access to LV or MV switchgears from the inside of the station



Light weight (without transformer)



high reliability and operational safety

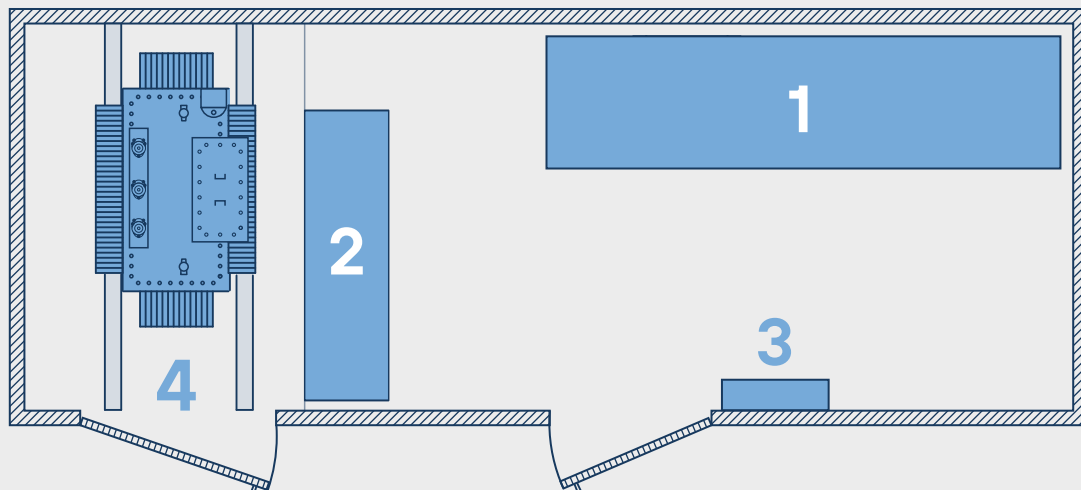


high level of anti-corrosion protection of the station's metal elements



possible switchgears configurations according to individual customer requirements

CONSTRUCTION



1

MVS - medium voltage switchgear

- + feeder bay for connection of MV cables from distribution network
- + measurement field with current and voltage transformers
- + transformer field for connections of the transformer MV side cables

Secondary circuit system

- + controller implementing the station's operation logic with a control and protection function
- + controller of telemechanics systems enabling data transmission and the function of remote control of the station from the master system
- + control and measurement equipment, including a power quality analyzer

2

LVS - lower voltage switchgear

- + circuit breaker with overcurrent protection for connection on the LV side of transformer
- + fuse switch disconnectors for connecting wires inflow from power generating installations

GVS - 24V DC guaranteed voltage switchgear

- + buffer power supply 230 V AC/24V DC
- + AGM 24 V/45 Ah accumulators (optionally other capacities)

AS - 230 V AC auxiliary switchgear

- + overcurrent protection for control systems, measurement protection, automation and auxiliary circuits
- + optional transformer

3

LV power measurement panel

- + 3-phase electricity meter for active and reactive energy
- + time synchronizer with GPS antenna
- + GSM communication unit
- + overcurrent protection of the meter
- + reserve power supply UPS

4

LV/MV transformer

- + upper voltage 15,75 kV or 21 kV
- + lower voltage 800 V or different as required by customer
- + losses as required by the Eco Design2

TECHNICAL PARAMETERS

Transformer power	up to 4000 kVA
Rated frequency	50 Hz
Weight of the container with equipment (without transformer)	up to 8000 kg
Dimensions (height * lenght * width)	3400*7600*3000 mm
Ingress protection	IP 43
MV	LV
Maximum rated voltage	up to 36 kV
Rated voltage	up to 1000 V
Continuous rated current	up to 630 A
Continuous rated current	up to 4000 A
Short-term lated current (1 s)	up to 25 kA
Short-term lated current (1 s)	up to 100 kA
Peak rated current	up to 63 kA
Peak rated current	up to 220 kA
Odporność na wew. łuk elektryczny 1 s	up to 20 kA
Number of main outflows	up to 20

EXAMPLE OF STATION CONFIGURATION DIAGRAM

