

# General Electric Manufacturing Company Ltd.

## Product Specification

Product: Electric Transformer

Designed for Transmission & Distribution of a.c. electric power of frequency 50Hz, 3-phase.

1. Intended for continuous duty in damp tropical climate under conditions:
  1. ambient air temperature from -10°C to 50°C
  2. relative humidity not over 98% at 35°C
  3. altitude not over 1000 metre above sea level
  4. explosion-proof medium free of vapour & gases damaging protecting coating of the transformers as well as dust in concentrations impermissibly affecting the equipment.
2. Allowable overheating (above ambient temperature)
  - For windings - 65°C
  - For top oil - 60°C
4. Intended for operation in both outdoor & indoor installations:
  - In open air
  - In rooms with temperature and humidity fluctuations significantly different from those in the open air.
  - In closed rooms with natural ventilation providing significant decrease in solar radiation, wind, atmospheric precipitation effect, dew absence.
  - In premises with artificially regulated climatic conditions providing protection against direct effect of atmospheric precipitation and wind as well as sand and dust of the ambient (in ventilated industrial or other room).
  - Cooling system is ONAN (Oil Natural Air Natural)
5. Permissible overload:

At an ambient temperature over 50°C

  - 30% for 2 hours,
  - 45% for 80 minutes,
  - 60% for 45 minutes &
  - 100% for 10 minutes.

At the ambient temperature over 50°C (but not over 55°C) the transformer rated power should be reduced by 1.5% per °C. In this case power is calculated from the formula:

$$P=PH((175-1.5t)/100)$$

Where  $P_H$  is the rated power,  $t$  is the ambient temperature

### 6. Specifications:

1. VOLTAGE RATING:
  1. HV WINDING 11KV
  2. LV WINDING 0.415KV
2. NO OF PHAE THREE
3. VECTOR GROUP Dyn-11
4. TAP CHANGER +1x2.5%, 0, -3x2.5%
5. FREQUENCY 50Hz
6. DUTY CONTINUOUS
7. COOLING SYSTEM ONAN
8. BASI INSULATION LEVEL 75KV
9. TEMP RISE (ABOVE AMBIENT):
  1. FOR WINDING 65°c
  2. FOR TOP OIL 60°c
10. STANDARD IEC60076
  1. MOUNTING OUT DOOR/INDOOR NOT OVER 1000M ABOVE SEA LEVEL

POWER RATING 500/300/250/150/100/50KVA

ALSO IN ACCORDANCE WITH THE DESIRE & REQUIREMENT OF THE CUSTOMET

## TECHNICAL SPECIFICATION

### DISTRIBUTION TRANSFORMER

### SINGLE PHASE

1. VOLTAGE RATING:	
1. HV WINDING	11KV
2. LV WINDING	0.24KV
2. NO OF PHAE	SINGLE
3. VECTOR GROUP	I/I-0
4. FREQUENCY	50Hz
5. DUTY	CONTINUOUS
6. COOLING SYSTEM	ONAN
7. BASI INSULATION LEVEL	95KV
8. TEMP RISE (ABOVE AMBIENT):	
1. FOR WINDING	65°c
2. FOR TOP OIL	60°c
9. STANDARD	IEC 60076
1. MOUNTING	OUT DOOR/INDOOR NOT OVER 1000M ABOVE
SEA LEVEL	
POWER RATING	25 & 15KVA

## **DESCRIPTION & SPECIFICATIONS:**

1	Installation	Outdoor mounted on cross-arm angle/channel structure
2	Application	Protection of Distribution Transformer.
3	Type	Open drop out expulsion
4	Nominal rated Voltage (3 phase)	11KV
5	Maximum system Voltage (3 phase)	12KV
6	Frequency	50Hz
7	Continuous current rating	100A
8	Basic Insulation Level (Impulse Voltage)	75KV (To earth and between poles)
9	Power frequency withstand voltage Dry & Wet	35KV (To earth and between poles)
10	Cree page Distance	25mm/KV (Minimum)
11	Fuse holder type	Heavy duty sealed cap with Eye at upper end of the Fuse holder.
12	Fuse link continuous ratings	As per Customer's requirements.
13	Fuse link type	K-Type as per NEMA standard, medium melting high surge.
14	Rated Interrupting capacity	8 KA (RMS)
15	Standard	Design, Manufacture, Testing and performance are in accordance with IEC 282-2.

## **Features and Accessories:**

- Each Cut-Out is completed including Fuse holder and Fuse Link.
- The design provides reasonable protection against earthing by animals or birds.
- Terminals are tin plated and suitable to accommodate for ACSR Merlin/Grosbeak /Hawk or suitable conductor as required.
- All moveable current carrying contacts are silver-plated.
- Rackets are provided for steel cross-arm mounting with nuts bolts etc.
- Fused cut-out units to latest revision of IEC 282-2 Standard are required to protect and provide insulator for distribution transformer. The unit supplied complete with galvanized steel brackets, bolts, nuts and washers for mounting. They are provided with a latch mechanism, which will open the fuse element when the fuse has operated. The latch mechanism is constructed as to operate easily from the ground with the aid of an operating stick.
- Insulators are of the post type made of porcelain to withstand a mechanical force of 1600N. Current carrying equipments are made of copper or copper alloy.
- Termination will be suitable for connection of compression terminal lugs.
- The fuse element is totally enclosed by a fuse holder to protect it from the atmosphere specified electrical characteristics of the fuse units will be to latest revision of relevant IEC standard.
- Fuse links for the fuse cut-out units are of the disconnecting type suitable for opening closing and removed by an opening stick.
- Each fuse link is suitable for a common fuse base.

## **TECHNICAL SPECIFICATION**

### **DISTRIBUTION TRANSFORMER      SINGLE PHASE**

1. VOLTAGE RATING:
    1. HV WINDING            6.35KV
    2. LV WINDING            0.24KV
  2. NO OF PHAE            SINGLE
  3. VECTOR GROUP        I/I-0
  4. FREQUENCY            50Hz
  5. DUTY                    CONTINUOUS
  6. COOLING SYSTEM      ONAN
  7. BASI INSULATION LEVEL 95KV
  8. TEMP RISE (ABOVE AMBIENT):
    1. FOR WINDING        65°c
    2. FOR TOP OIL        60°c
  9. STANDARD            IEC 60076
    1. MOUNTING            OUT DOOR/INDOOR NOT OVER 1000M ABOVE SEA LEVEL
- POWER RATING            25/15/10/5KVA