## SINGLE PHASE DRY-TYPE TRANSFORMERS, 600V AND BELOW

KVA CAPACITY	Approx Dimension in mm (in.)			Approx
	Height	Width	Length	Weight (Kgs)
5	406 (16)	254 (10)	365 (15)	60
10	508 (20)	356 (14)	365 (15)	90
15	559 (22)	356 (14)	406 (16)	100
20	559 (22)	356 (14)	406 (16)	100
25	660 (26)	406 (16)	432 (17)	120
30	660 (26)	406 (16)	432 (17)	120
37.5	762 (30)	508 (20)	610 (24)	160
45	762 (30)	508 (20)	610 (24)	200
50	889 (35)	508 (20)	711 (28)	200
60	889 (35)	508 (20)	711 (28)	215
75	889 (35)	508 (20)	711 (28)	280
100	1016 (40)	635 (25)	889 (35)	320

# THREE PHASE DRY-TYPE TRANSFORMERS, 600V AND BELOW

KVA CAPACITY	Approx Dimension in mm (in.)			Approx
	Height	Width	Length	Weight (Kgs)
5	432 (17)	254 (10)	432 (17)	75
10	558 (22)	356 (14)	558 (22)	110
15	635 (25)	406 (16)	584 (23)	120
25	711 (28)	457 (18)	711 (28)	180
37.5	711 (28)	457 (18)	711 (28)	200
50	762 (30)	457 (18)	762 (33)	260
75	762 (30)	508 (20)	813 (35)	300
100	940 (37)	559 (22)	914 (36)	380
125	940 (37)	559 (22)	965 (38)	520
150	1016 (40)	610 (24)	965 (38)	560
200	1016 (40)	762 (30)	965 (38)	750
300	1397 (55)	838 (33)	1143 (47)	1000
500	1626 (64)	914 (36)	1219 (48)	1200
750	1651 (65)	991 (39)	1422 (56)	1600
1000	1845 (73)	1100 (43)	1620 (64)	2000









# DRY-TYPE TRANSFORMERS

**SINCE 2001** 

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- **f** V.B. Powernet Electrical & Industrial Supply

**V.B. POWERNET** manufactures a complete line of dry-type transformers for industrial and commercial applications, single-phase, and three phase, and both indoor and outdoor applications.

#### WHAT IS A TRANSFORMER?

• A transformer is an electrical apparatus designed to convert alternating voltage from one voltage level to another. Tranformers are completely static devices without continuously moving mechanical parts, which, by electromagnetic induction, transform electrical energy from one or more circuits to one or more other circuits at same frequency.

#### GENERAL PURPOSE TRANSFORMER

 Standard design for all general loads, indoor or outdoor, including lighting, industrial and commercial applications.

## **ISOLATION / INDUCTION TRANSFORMER**

• A transformer designed with two isolated windings between primary and secondary coils. It is used to separate voltage to another either same voltage or step-up and step-down voltage, also when loads needs a solid grounding.

## **ELECTROSTATICALLY SHIELDED TRANSFORMER**

 Are designed to protect the system from unwanted high-frequency voltages that occur due to switching and loading on distribution lines. While all transformers with separated primary and secondary windings isolate the load circuits, transients and electrical noise can be transmitted to the load circuits through the inter-winding capacitance of the transformer.

These disturbances can have a detrimental effect on sensitive electronic equipment and can cause improper operation. Electrostatic shielding bring these unwanted signals to ground thus preventing the electrical disturbances from being transmitted to the load circuits.

## AUTOTRANSFORMER

 Are more economical and physically smaller than equivalent two-winding transformers designed to carry the same load. They will perform the same function as two-winding transformer with the exception of insulating or isolating two circuits. Since Autotransformers may transmit line disturbances directly, they may be prohibited in some areas by local building codes. Before applying them, care should be taken to assure that they are acceptable according to local codes.

NOTE: Autotransformers are not used in closed delta connections as they introduce into the circuit a phase shift.

#### COPPER WOUND TRANSFORMER

Designed according to customers specifications when copper windings are needed.

CUSTOM BUILT TRANSFORMER FOR UPS APPLICATION AND FOR HIGH HARMONIC LOADS SUCH AS K RATED TRANSFORMERS (K1, K4, K13, K20 RATED)

# **GENERAL SPECIFICATION AND FEATURES:**

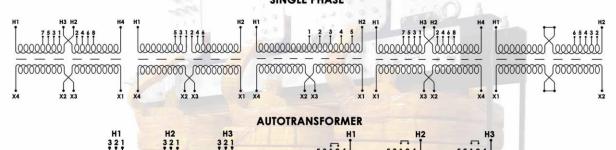
- CORE Constructed using non aging grain oriented silicon steel.
- COIL Constructed using aluminum or copper conductors then varnish with air-dry electrical grade varnish.
- **ENCLOSURE** Standard enclosures are made from heavy gauge steel sheet, powder coated or enamel paint finish. Modified enclosures for different applications are available upon request.
- Taps provided on primary windings.
- 220°C INSULATION SYSTEM (CLASS H INSULATION) The total temperature of 220°C is derived from the average conductor temperature rise of 150°C. Hotspot temperature gradient of 30°C and an ambient temperature of 40°C.
- Diagrammatic nameplate includes wiring diagram and rating data.
- · Comes standard with grounding bolt.
- Adheres to NEMA ST-20 standards.
- V.B. Powernet dry-type transformer are designed, manufactured & tested in accordance with ANSI / NEMA & IIEE Standards.

#### STANDARD TESTING INCLUDES:

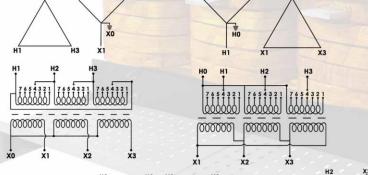
- TRANSFORMER TURNS RATIO TEST
- POLARITY TEST
- WINDING INSULATION RESISTANCE TEST
- TRANSFORMER WINDING RESISTANCE TEST (D.L.R.O)
- NO-LOAD (EXCITATION) LOSS TEST
- EXCITATION CURRENT TEST
- IMPEDANCE TEST

#### WIRING DIAGRAMS

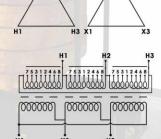
# SINGLE PHASE

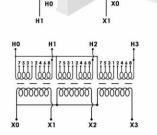


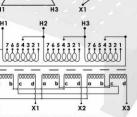
# THREE PHASE



X3







HARMONIC MITIGATING TRANSFORMER