

## TH series

Heavy Duty, double wound, enclosed type, industrial transformer assemblies, rated from 100VA to 25 kVA, single or three phase.

### Applications

Designed for installation in harsh locations, including plant rooms, workshops, road and rail locations, dockyards, water treatment works, etc. TH series transformers are available in a wide range of power ratings and voltage ratios and can incorporate a variety of fitments including MCBs, RCDs, Fusegear, Sockets and Isolators.

### Enclosures

Fabricated from 1.5mm or 2.0mm sheet steel, enclosures are of seam welded construction and, as standard, incorporate wall mounting and floor mounting brackets.

### IP Ratings

Standard IP ratings are vented to IP21 or non-vented to IP44.

Non-Standard IP ratings are vented to IP23 or non-vented to IP55.

### Finish

The standard finish is a zinc phosphate pre-treatment to BS3189 followed by polyester powder topcoat, shade Dark Admiralty Grey. The standard finish provides corrosion protection for approximately 10 years when the equipment is installed outdoors in a normal pollution environment.

For locations with a high level of pollution (acid rain, chemically laden atmosphere, etc) non-standard finishes are available including hot dip galvanized to BS729 or flame sprayed with zinc to BS2569 followed by polyester powder coating, shade to reasonable choice. We are also able to fabricate enclosures from various grades of stainless steel for road tunnel, rail, food industry and pharmaceutical installations. We would be pleased to advise on the best corrosion protection for specific installation environments.

### Ratings

Continuously rated from 100VA to 25 kVA, single or three phase. Transformer windings are designed and manufactured in accordance with BS EN 61558 Parts 1, 4, 6 and 23, as applicable. PTO for a full list of standard ratings, weights and dimensions.

### Voltages

Primary Voltages - 230 and 400 volts

Secondary Voltages - 12, 24, 25, 42, 50, 110 and 230 volts

Transformers with dual secondary windings can be supplied i.e. to feed a power tool at 110 volts and an inspection lamp at 24 volts. The earth connection of secondary windings must be specified - PTO for guidance on the earthing of transformer windings.

### Fitments

TH series transformers can be fitted with a wide combination of MCBs, RCDs, Fusegear, Sockets and Isolators. Our Customer Service Centres would be pleased to quote prices against your specific requirements.



Special TH series for a Tunnel Application  
Equipment End Mounted to Minimise Physical Damage

**THE POWER PROFESSIONALS**

**HIGHER POWER TRANS POWER SAFE POWER TEM POWER PRO POWER GREEN POWER**

THE COMPANY RESERVES THE RIGHT TO CHANGE PRODUCTS WITHOUT PRIOR NOTICE.



Cert. No. 902091

TRPDS5 - 01/08

## Approximate Weights and Dimensions (not including fitments)

| Single-phase Transformers                       |                            |               |
|---|----------------------------|---------------|
| Standard Ratings, kVA                           | Dimensions, mm (W x D x H) | Approx Wt, kg |
| 0.1, 0.15, 0.2, 0.25, 0.35, 0.5, 0.75 and 1 kVA | 282 x 248 x 217            | 4 to 15       |
| 1.5, 2, 2.5, 3 and 4 kVA                        | 379 x 348 x 284            | 20 to 50      |
| 5, 6, 7.5 and 10 kVA                            | 441 x 391 x 423            | 70 to 103     |
| 12, 15, 20 and 25 kVA                           | On Application             | 120 to 165    |

| Three phase Transformers |                            |               |
|--------------------------|----------------------------|---------------|
| Standard Ratings, kVA    | Dimensions, mm (W x D x H) | Approx Wt, kg |
| 1, 2 and 3 kVA           | 441 x 391 x 423            | 35 to 52      |
| 5, 7.5 and 10 kVA        | 579 x 548 x 517            | 84 to 115     |
| 15, 20 and 25 kVA        | On Application             | 150 to 188    |

## Guidance on the Earthing of Secondary Windings

To enable us to supply transformers correctly configured for each installation it is necessary to specify the earthing arrangement of the secondary winding

Detailed below are the normal earthing arrangements for standard TH series transformers.

| Secondary Voltage                             | Earthing Arrangement   | BS 7671 Definition                  | Comments  |
|---|------------------------|-------------------------------------|---|
| 12 Volts, single or three phase               | Earth Free             | Separated Extra Low Voltage (SELV)  | Hard wired or non-standard 2P socket. Over current protection to be DP or TP.   |
| 24, 25, 42 or 50 Volts, single or three phase | Earth Free             | Separated Extra Low Voltage (SELV)  | Sockets to be 2P or 3P. Over current protection to be DP or TP.                 |
| 24, 25, 42 or 50 Volts, single phase          | Neutral Earthed        | Protective Extra Low Voltage (PELV) | Sockets to be SP+N+E. Over current protection to be SP.                         |
| 24, 25, 42 or 50 Volts, single phase          | Centre-tapped to Earth | Protective Extra Low Voltage (PELV) | Sockets to be 2P+E. Over current protection to be DP.                           |
| 110 Volts, single phase                       | Centre-tapped to Earth | Reduced Low Voltage (RLV)           | Sockets to be 2P+E. Over current protection to be DP.                           |
| 110 Volts, three phase                        | Neutral Earthed        | Reduced Low Voltage (RLV)           | Sockets can be 2P+E or 3P+E. Over current protection to be DP or TP             |
| 120 Volts, single phase                       | Neutral Earthed        | Low Voltage (LV)                    | Sockets to be SP+N+E. Over current protection to be SP. USA domestic voltage.   |
| 208 Volts, three phase                        | Neutral Earthed        | Low Voltage (LV)                    | 208 volts L to L, 120 volts L to N. USA industrial voltage. DY11.               |
| 230 Volts, single phase                       | Neutral Earthed        | Low Voltage (LV)                    | Sockets to be SP+N+E. Over current protection to be SP.                         |
| 230 Volts, single phase                       | Earth Free             | Protection by Electrical Separation | Maximum of one socket (feeding one appliance). Over current protection to be DP |
| 400 Volts, three phase                        | Neutral Earthed        | Low Voltage (LV)                    | 400V L to L, 230V L to N. DY11.   |
| 400 Volts, three phase                        | Earth Free             | Protection by Electrical Separation | Maximum of one socket (feeding one appliance). Over current protection to be TP |

- **SOUTH** 1 Thomas Road, Optima Park, Crayford, Kent DA1 4GA Tel: 0845 074 0084 Fax: 0845 074 0085
  - **NORTH** Unit 55, Monckton Road Ind Estate, Wakefield WF2 7AL Tel: 0845 074 0086 Fax: 0845 074 0087
- [www.blakley.co.uk](http://www.blakley.co.uk) • [sales@blakley.co.uk](mailto:sales@blakley.co.uk)

**BLAKLEY**  
E L E C T R I C S