TS and TTS series

General purpose, single phase (TS) and three phase (TTS), double wound, enclosed type transformer assemblies, rated from 2.5 to 25 kVA single-phase and from 1 to 25 kVA three phase.

Applications

Designed for installation in plant rooms, workshops, etc., TS and TTS 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 2mm sheet steel with a durable paint finish, shade Dark Admiralty Grey. Wall mounting enclosures are available for ratings up to 4 kVA single-phase, vented to IP21 or non-vented to IP44. Enclosures for all other ratings of single phase transformer and for all three phase transformers are floor standing and are vented to IP21. See table on page 2 for weights and dimensions.

Ratings

Single phase, continuously rated from 2.5 to 25 kVA.
Three phase, continuously rated from 1 to 25 kVA.
Transformer windings are designed and manufactured in accordance with BS EN 61558 Parts 1, 2-4, 2-6 and 2-23, where applicable.

Voltages

Primary Voltages - 230 and 400 volts
Secondary Voltages - 24, 25, 42, 50, 110, 230 and 400 volts

BS7671:2018 permits a supply voltage tolerance of -6% / +10%. Any variation in the voltage connected to the primary of the transformer will proportionally vary the secondary voltage and also alter the inrush current characteristics. To address the impact of supply voltage variations, voltage tappings can be incorporated into the primary winding. We would be pleased to quote for transformers with primary tappings.

Transformers with dual secondary windings are available to feed power tools at 110 volts and inspection lamps at 24 volts. The earthing arrangement of secondary windings must be specified. PTO for guidance on the earthing of transformer windings.

Fitments

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

Alternative Products

TLW and TSW series of wall mounting transformer fitted with socket outlets. Refer to data sheet TRDS011.

TH series of IP55 wall / floor mounting transformer rated from 2 to 10kVA. Refer to data sheet TRDS021.

TH series of non-standard, heavy duty transformer, rated from 0.1 to 25 kVA. Refer to data sheet TRDS015.

Please refer to our website or contact our Customer Service Centres for full details of all Blakley Power Products.

TS series, 10 kVA, 230:110V

Approximate Weights and Dimensions (not including fitments)

Single-phase Transformers		
Standard Ratings, kVA	**Dimensions, mm (W x D x H)**	**Approx Wt, kg**
2.5 to 4 kVA Wall Mounting	336 x 333 x 333	35 to 50
2.5 to 4 kVA	336 x 321 x 373	35 to 50
5 to 10 kVA	442 x 432 x 478	70 to 103
12 to 25 kVA	804 x 526 x 604	115 to 165

Three phase Transformers		
Standard Ratings, kVA	**Dimensions, mm (W x D x H)**	**Approx Wt, kg**
1, 2 and 3 kVA	389 x 321 x 418	35 to 52
5, 7.5, 10 and 15 kVA	442 x 432 x 478	84 to 115
15, 20 and 25 kVA	804 x 526 x 604	150 to188

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
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