TOROIDAL TRANSFORMERS



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INTRODUCTION

APPLICATION

Small power transformers are used to transform voltages to the desired level or simply for galvanic isolation of the primary and secondary sides. Transformers of this type are standardly manufactured as single-phase, low-voltage units with primary voltage of 230 V or 400 V and secondary voltage from 12 V to 400 V. However, other voltages up to 1000 V are also available upon customer request. They are manufactured in accordance with the applicable EN/IEC 61558-1 standard series for transformers, chokes and power supply devices.

DESCRIPTION

The materials used in the construction of these transformers are at least in the thermal class B.
At the rated load, voltage and frequency, an ambient temperature below 40°C and altitude below 1000m, the maximum rise of the transformer temperature does not exceed 80°C.

ADVANTAGES

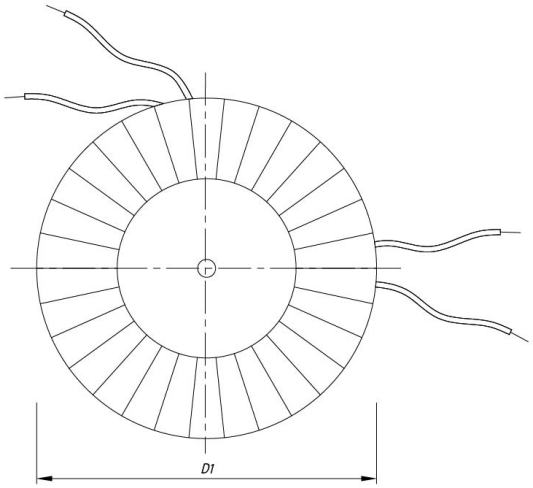
By using high-quality magnetic sheets for a core with no air gap and by choosing a suitable ratio of copper and iron in the transformer, the following advantages are achieved compared to transformers with a classic core:

- negligible magnetic losses
- low noise level
- small losses in windings
- high degree of efficiency
- light weight
- compactness
- easy installation

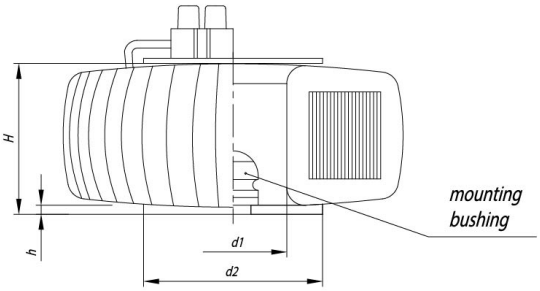
TTU-A and TTU-C



TTU type A



TTU type C



TOROIDAL TRANSFORMERS **TTU-A** AND **TTU-C**

TECHNICAL DATA	TTU-A, TTU-C
Highest voltage for equipment (kV)	0,72
Test voltage 50 Hz, 1 min (eff.) (kV)	3
Rated frequency (Hz)	50/60
Rated primary voltage (V)	230, 400 or as per request
Rated secondary voltage (V)	12, 24, 48, 110, 230 or as per request
Temperature class of insulation	B
Mounting	Indoor
Area of application	Every, including tropical
Valid standard	EN/IEC 61558-1

We make these transformers with following transformation ratios:
230/12V, 400/12V, 230/24V, 400/24V, 230/48V, 400/48V, 230/110V, 400/110V, 230/230V, 400/230V and 400/400V, and other ratios upon customer request.
Placement of connectors can also be in accordance with customer request.

Transformer type TTU-A and TTU-C	Rated power (VA)	Dimensions (mm)					Inlet thread	Mass (kg)
		D1	d1	d2	H	h		
TTU-15	15	60	22	41	37	2	M4	~0,38
TTU-20	20	72	30	53	44	2	M5	~0,82
TTU-30	30	90	30	53	36	2	M5	~1,22
TTU-50	50	100	28	75	40	3	M6	~1,37
TTU-80	80	104	36	75	56	3	M6	~1,90
TTU-100	100	104	36	75	56	3	M6	~2,10
TTU-160	160	106	34	83	59	3	M6	~2,40
TTU-200	200	118	36	102	59	3	M6	~3,86
TTU-250	250	120	36	102	59	3	M6	~3,92
TTU-320	320	115	40	83	71	3	M6	~4,80
TTU-400	400	120	40	102	71	3	M6	~5,20
TTU-500	500	128	38	115	72	3	M8	~5,60
TTU-630	630	142	44	115	85	3	M8	~6,80
TTU-800	800	156	44	135	85	3	M8	~7,00
TTU-1000	1000	166	48	145	96	4	M10	~9,70
TTU-1200	1200	168	50	145	108	4	M10	~10,90
TTU-1600	1600	174	45	145	108	4	M10	~11,90
TTU-2000	2000	204	62	160	108	4	M10	~18,50

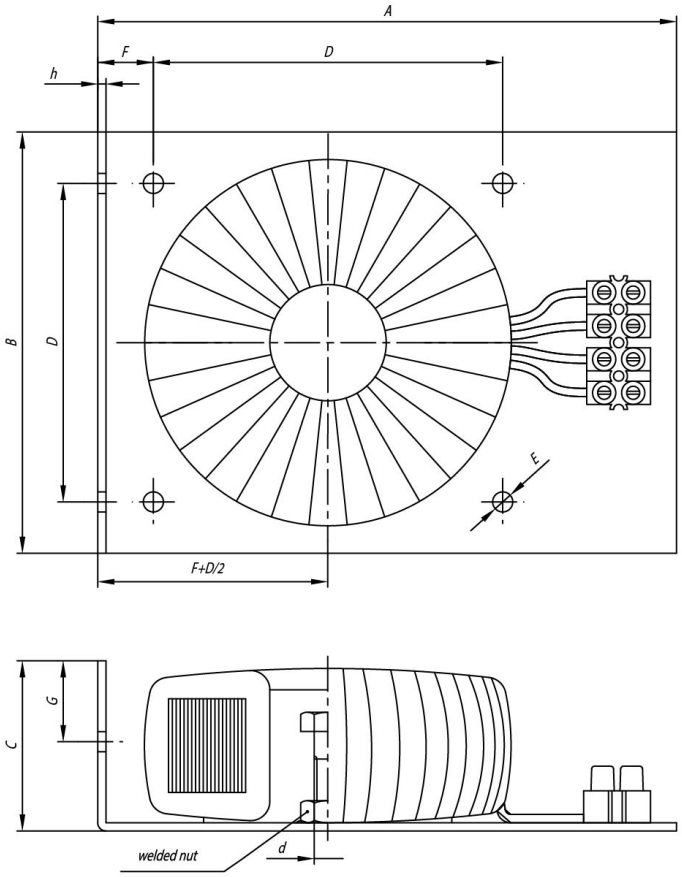
When ordering, please specify the transformation ratio, the primary rated power and rated power for each secondary (if there is more than one).

TTU-A – Toroidal transformer with free connectors.
TTU-C – Toroidal transformer on epoxy-resin base with connectors in terminal strips.

CONTENTS

TTU-B





TOROIDAL TRANSFORMERS **TTU-B**

TECHNICAL DATA	TTU-B
Highest voltage for equipment (kV)	0,72
Test voltage 50 Hz, 1 min (eff.) (kV)	3
Rated frequency (Hz)	50/60
Rated primary voltage (V)	230, 400 or per customer request
Rated secondary voltage (V)	12, 24, 48, 110, 230 or per customer request
Temperature class of insulation	B
Mounting	Indoor
Area of application	Every, including tropical
Valid standard	EN/IEC 61558-1

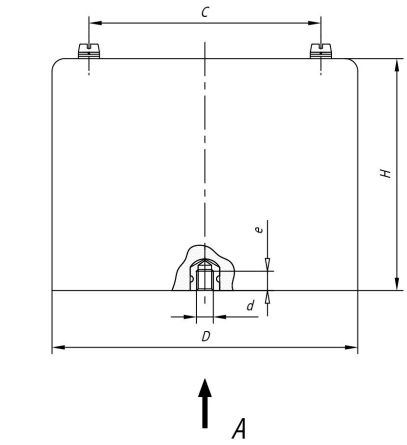
We make these transformers with following transformation ratios:
230/12V, 400/12V, 230/24V, 400/24V, 230/48V, 400/48V, 230/110V, 400/110V, 230/230V, 400/230V and 400/400V, as well as other ratios upon customer request.
When ordering, please specify the transformation ratio, the primary rated power and rated power for each secondary (if there is more than one).
TTU-B - Toroidal transformer with a metal mounting base.

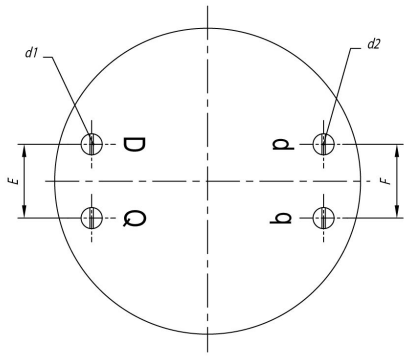
Transformer type TTU-B	Rated power (VA)	Dimensions (mm)							Mass (kg)
		A	B	C	D	E	F	G	
TTU-15	15	145	95	40	82	4,5	12	20	~0,60
TTU-20	20	145	95	40	82	4,5	12	20	~0,98
TTU-30	30	145	95	40	82	4,5	12	20	~1,44
TTU-50	50	145	95	40	82	4,5	12	20	~1,58
TTU-80	80	145	95	40	82	4,5	12	20	~2,10
TTU-100	100	160	115	60	95	4,5	13	30	~2,40
TTU-160	160	160	115	60	95	4,5	13	30	~2,60
TTU-200	200	185	135	70	112	5,5	15	35	~4,16
TTU-250	250	185	135	70	112	5,5	15	35	~4,21
TTU-320	320	185	135	70	112	5,5	15	35	~4,94
TTU-400	400	185	135	70	112	5,5	15	35	~5,32
TTU-500	500	185	135	70	112	5,5	15	35	~5,76
TTU-630	630	215	155	80	130	6,5	17	40	~7,52
TTU-800	800	215	155	80	130	6,5	17	40	~7,68
TTU-1000	1000	230	175	80	140	6,5	17	40	~10,47
TTU-1200	1200	230	175	80	140	6,5	17	40	~11,67
TTU-1600	1600	250	190	90	160	8,5	25	45	~12,93
TTU-2000	2000	250	190	90	160	8,5	25	45	~19,53

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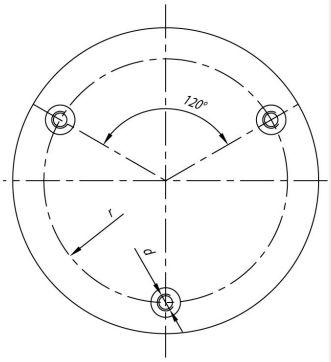
ZTZU







View "A" for 800-4000 VA



PROTECTIVE TRANSFORMERS **ZTZU**

TECHNICAL DATA	ZTZU-1	ZTZU-2	ZTZU-3
Highest voltage for equipment (kV)	0,72		
Test voltage 50 Hz, 1 min (eff.) (kV)	3		
Rated frequency (Hz)	50/60		
Rated primary voltage (V)	230, 400 or per customer request		
Rated secondary voltage (V)	12, 24, 48, 110, 230 or per customer request		
Temperature class of insulation	B		
Mounting	Indoor		
Isolation	Epoxy resin		
Area of application	Every, including tropical		
Valid standard	EN/IEC 61558-1		
Mass (kg)	~4,75	~6,5	~18-34

The mass of the transformer depends on the rated power and transformation ratio, and it can vary.

Type	Rated power (VA)	Dimensions (mm)									
		D	H	C	d	E	F	e	r	d_1	d_2
ZTZU-1	100; 160; 200; 250;300	Ø110 -Ø130	100 -112	62	M8	35	35	10	-	M6	M6
ZTZU-2	400; 500; 630	Ø130 - Ø155	110 - 134	96	M8	50	50	10	-	M6	M6
ZTZU-3	800; 1000; 1500; 2000; 2500; 30 00; 3500; 4000	Ø220	220	160	M8	40	50	10	85	M6	M10

CONTENTS

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