

Single-phase transformer 230 V / 48 V

48 V AC · 63 VA to 20 kVA · IP00, IP23 or IP54 · made in France

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This 48V transformer steps the 230 V single-phase mains — formerly 220 V — down to 48 volts AC, an extra-low voltage used to supply machine tools and industrial equipment, control circuits, inspection lamps and devices designed for 48 V AC. The primary and secondary are two separate windings. From 63 VA to 20 kVA, open frame (IP00), with a ventilated cover (IP23) or in a sealed housing (IP54): it is wound and tested in our workshop in Gailhan, in the Gard (southern France).

YOUR SUPPLY
230 V ~
 single-phase, formerly
 220 V

TRANSFORMER
230 → 48 V
 isolates and steps down

YOUR EQUIPMENT
48 V ~
 AC: machines, control,
 inspection lamps

Key points

- **48 V AC** — An extra-low voltage, below the 50 V limit, for machines, control circuits and lighting.
- **Two separate windings** — No electrical connection between the 230 V and the 48 V.
- **Screw terminals up to 55 A, lugs above** — Screw terminals up to 2.5 kVA on this model, lugs above that. Terminal marking: 1 and 2 on the primary (0 and 230 V), 3 and 4 on the secondary (0 and 48 V), earth on the primary side.
- **Open frame, covered or sealed** — IP00 for cabinet mounting, IP23 with a ventilated cover, IP54 in a moulded housing or a sealed enclosure.
- **100 % tested** — Every transformer is tested before it leaves the workshop.
- **Made in Gailhan** — Wound, wired and inspected in our workshop in the Gard, southern France.

General characteristics

Frequency	50 / 60 Hz
Insulation class	H (180 °C)
Cooling	dry-type, natural air cooling (AN)
Ambient temperature	40 °C max.
Standard	EN 61558-2-4 · EN 61558-2-6
Thermal protection	on request
Connection	Screw terminals up to 55 A (2.5 kVA on this model), lugs above

Enclosures

- IP00 · open frame, for cabinet
- IP23 · ventilated enclosure
- IP54 · sealed enclosure

Ratings and references

REFERENCE	RATING	CURRENT primary / secondary	aM primary / secondary	LOSSES NO- LOAD / LOAD	EFFICIENCY	WEIGHT IP00 / 23 / 54	DIMENSIONS IP00 mm	DIMENSIONS IP54 mm
TMN23048-63-xx	63 VA	0.27 / 1.31 A	aM 2 / 2 A	2 / 3.3 W	92.1 %	1.5 / 3 / 2 kg	75 × 68 × 73	100 × 64 × 72
TMN23048-100-xx	100 VA	0.43 / 2.08 A	aM 2 / 4 A	3 / 5.4 W	92 %	2 / 3.5 / 2.6 kg	84 × 82 × 78	130 × 80 × 98
TMN23048-160-xx	160 VA	0.70 / 3.33 A	aM 2 / 4 A	4 / 8.6 W	91.9 %	2.5 / 4 / 3.2 kg	96 × 89 × 87	130 × 80 × 98
TMN23048-200-xx	200 VA	0.87 / 4.17 A	aM 2 / 6 A	5 / 9 W	93 %	2.6 / 4.1 / 3.5 kg	118 × 97 × 97	130 × 80 × 98
TMN23048-250-xx	250 VA	1.09 / 5.21 A	aM 2 / 6 A	5 / 11.9 W	93.2 %	3.9 / 5.4 / 4.5 kg	108 × 95 × 100	165 × 93 × 94
TMN23048-300-xx	300 VA	1.30 / 6.25 A	aM 2 / 8 A	6 / 14.9 W	93 %	4 / 5.5 / 5.5 kg	108 × 103 × 94	165 × 93 × 94
TMN23048-400-xx	400 VA	1.74 / 8.33 A	aM 2 / 10 A	8 / 15.6 W	94 %	6 / 9 / 7.5 kg	126 × 122 × 108	176 × 103 × 130
TMN23048-500-xx	500 VA	2.17 / 10.42 A	aM 4 / 12 A	10 / 18.1 W	94.4 %	6.8 / 9.8 / 8.2 kg	126 × 110 × 115	176 × 103 × 130
TMN23048-630-xx	630 VA	2.74 / 13.12 A	aM 4 / 16 A	12 / 23 W	94.4 %	9 / 12 / 11 kg	150 × 124 × 126	176 × 103 × 130
TMN23048-750-xx	750 VA	3.26 / 15.62 A	aM 4 / 20 A	15 / 23.7 W	94.8 %	10.3 / 13.3 / 15.3 kg	150 × 120 × 135	300 × 200 × 250
TMN23048-1000-xx	1 kVA	4.35 / 20.83 A	aM 6 / 25 A	18 / 28.8 W	95.3 %	14 / 17 / 19 kg	150 × 144 × 127	300 × 200 × 250
TMN23048-1600-xx	1,6 kVA	6.96 / 33.33 A	aM 8 / 40 A	19 / 45 W	96 %	16.4 / 20.4 / 21.4 kg	180 × 140 × 160	300 × 200 × 250
TMN23048-2000-xx	2 kVA	8.70 / 41.67 A	aM 10 / 50 A	19 / 59.5 W	96.1 %	20 / 24 / 25 kg	180 × 160 × 160	300 × 200 × 250
TMN23048-2500-xx	2,5 kVA	10.87 / 52.08 A	aM 12 / 63 A	24 / 66.5 W	96.4 %	24 / 28 / 29 kg	180 × 180 × 150	300 × 200 × 250
TMN23048-3000-xx	3 kVA	13.04 / 62.50 A	aM 16 / 80 A	37 / 79.9 W	96.1 %	29 / 33 / 34 kg	180 × 200 × 160	300 × 200 × 250
TMN23048-4000-xx	4 kVA	17.39 / 83.33 A	aM 20 / 100 A	42 / 103.8 W	96.3 %	33 / 37 / 43 kg	240 × 190 × 220	595 × 250 × 375
TMN23048-5000-xx	5 kVA	21.74 / 104.17 A	aM 25 / 125 A	45 / 121.6 W	96.7 %	36 / 40 / 46 kg	240 × 200 × 220	595 × 250 × 375
TMN23048-6300-xx	6,3 kVA	27.39 / 131.25 A	aM 32 / 160 A	56 / 130.3 W	97 %	40 / 44 / 50 kg	240 × 210 × 220	595 × 250 × 375
TMN23048-7500-xx	7,5 kVA	32.61 / 156.25 A	aM 40 / 200 A	56 / 160 W	97.1 %	46 / 48 / 56 kg	240 × 230 × 220	595 × 250 × 375
TMN23048-10000-xx	10 kVA	43.48 / 208.33 A	aM 50 / 250 A	on request	—	75 / 83 / 85 kg	390 × 150 × 470	642 × 350 × 550
TMN23048-15000-xx	15 kVA	65.22 / 312.50 A	aM 80 / 400 A	on request	—	0 / 0 / 0 kg	0 × 0 × 0	0 × 0 × 0
TMN23048-20000-xx	20 kVA	86.96 / 416.67 A	aM 100 / 500 A	on request	—	0 / 0 / 0 kg	0 × 0 × 0	0 × 0 × 0

Protection and installation

Primary. 230 V to terminals 1 (0 V) and 2 (230 V), earth to the primary earth terminal.

Secondary. 48 V equipment to terminals 3 (0 V) and 4 (48 V), with its own protection.

Safety. Connection by a qualified person, with the power off. In IP00, the transformer is installed in a closed cabinet or enclosure.

A question or another voltage? contact@abltransfo.com · +33 4 66 80 14 33 · abltransfo.com