

# Single-phase transformer 230 V / 400 V

Single-phase 400 V from a 230 V supply · 63 VA to 20 kVA · IP00, IP23 or IP54 · made in France

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This 230V to 400V single phase transformer steps the 230 V mains — formerly 220 V — up to 400 volts single-phase AC, isolated from the supply: to power a machine or device designed for 400 V across two wires, where only 230 V is available. It does not create three-phase. 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 → 400 V**  
isolates and steps up

**YOUR EQUIPMENT**  
**400 V ~**  
single-phase, across two  
wires

## Key points

- **Single-phase 400 V** — For equipment designed for 400 V across two wires, on a 230 V site.
- **Two separate windings** — No electrical connection between the 230 V and the 400 V.
- **Screw terminals up to 55 A, lugs above** — Screw terminals up to 10 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 400 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.
- **Electrostatic shield as standard** — Connected to earth, it limits the transfer of disturbances between primary and secondary.
- **Made and tested in Gailhan** — Wound, wired and 100 % tested in our workshop in the Gard, southern France, before dispatch.

## 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                                                  |
| Electrostatic shield | standard, earthed                                             |
| Thermal protection   | on request                                                    |
| Connection           | Screw terminals up to 55 A (10 kVA on this model), lugs above |

## Enclosures

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

Ratings and references

| REFERENCE          | RATING  | CURRENT<br>primary /<br>secondary | aM<br>primary /<br>secondary | LOSSES NO-<br>LOAD /<br>LOAD | EFFICIENCY | WEIGHT<br>IP00 / 23 / 54 | DIMENSIONS<br>IP00<br>mm | DIMENSIONS<br>IP54<br>mm |
|--------------------|---------|-----------------------------------|------------------------------|------------------------------|------------|--------------------------|--------------------------|--------------------------|
| TMN230400-63-xx    | 63 VA   | 0.27 / 0.16 A                     | aM 2 / 2 A                   | 2 / 3.6 W                    | 90.5 %     | 1.5 / 3 / 2 kg           | 75 × 68 × 73             | 100 × 64 × 72            |
| TMN230400-100-xx   | 100 VA  | 0.43 / 0.25 A                     | aM 2 / 2 A                   | 3 / 5 W                      | 92 %       | 2 / 3.5 / 2.6 kg         | 84 × 82 × 78             | 130 × 80 × 98            |
| TMN230400-160-xx   | 160 VA  | 0.70 / 0.40 A                     | aM 2 / 2 A                   | 4 / 8.5 W                    | 92.5 %     | 2.5 / 4 / 3.2 kg         | 96 × 89 × 87             | 130 × 80 × 98            |
| TMN230400-200-xx   | 200 VA  | 0.87 / 0.50 A                     | aM 2 / 2 A                   | 5 / 8.8 W                    | 93 %       | 2.6 / 4.1 / 3.5 kg       | 118 × 97 × 97            | 130 × 80 × 98            |
| TMN230400-250-xx   | 250 VA  | 1.09 / 0.62 A                     | aM 2 / 2 A                   | 5 / 11.9 W                   | 93.2 %     | 3.9 / 5.4 / 4.5 kg       | 108 × 95 × 100           | 165 × 93 × 94            |
| TMN230400-300-xx   | 300 VA  | 1.30 / 0.75 A                     | aM 2 / 2 A                   | 6 / 14.6 W                   | 93 %       | 4 / 5.5 / 5.5 kg         | 108 × 103 × 94           | 165 × 93 × 94            |
| TMN230400-400-xx   | 400 VA  | 1.74 / 1 A                        | aM 2 / 2 A                   | 8 / 15.1 W                   | 94.2 %     | 6 / 9 / 7.5 kg           | 126 × 122 × 108          | 176 × 103 × 130          |
| TMN230400-500-xx   | 500 VA  | 2.17 / 1.25 A                     | aM 4 / 2 A                   | 9 / 15.2 W                   | 95.2 %     | 6.8 / 9.8 / 8.2 kg       | 126 × 110 × 115          | 176 × 103 × 130          |
| TMN230400-630-xx   | 630 VA  | 2.74 / 1.57 A                     | aM 4 / 2 A                   | 12 / 22.4 W                  | 94.6 %     | 9 / 12 / 11 kg           | 150 × 124 × 126          | 176 × 103 × 130          |
| TMN230400-750-xx   | 750 VA  | 3.26 / 1.88 A                     | aM 4 / 2 A                   | 15 / 24.3 W                  | 94.8 %     | 10.3 / 13.3 / 15.3 kg    | 150 × 120 × 135          | 300 × 200 × 250          |
| TMN230400-1000-xx  | 1 kVA   | 4.35 / 2.50 A                     | aM 6 / 4 A                   | 18 / 28.4 W                  | 95.4 %     | 14 / 17 / 19 kg          | 150 × 144 × 127          | 300 × 200 × 250          |
| TMN230400-1600-xx  | 1,6 kVA | 6.96 / 4 A                        | aM 8 / 6 A                   | 19 / 46.4 W                  | 95.9 %     | 16.4 / 20.4 / 21.4 kg    | 180 × 140 × 160          | 300 × 200 × 250          |
| TMN230400-2000-xx  | 2 kVA   | 8.70 / 5 A                        | aM 10 / 6 A                  | 19 / 58.5 W                  | 96.1 %     | 20 / 24 / 25 kg          | 180 × 160 × 160          | 300 × 200 × 250          |
| TMN230400-2500-xx  | 2,5 kVA | 10.87 / 6.25 A                    | aM 12 / 8 A                  | 24 / 66.8 W                  | 96.4 %     | 24 / 28 / 29 kg          | 180 × 180 × 150          | 300 × 200 × 250          |
| TMN230400-3000-xx  | 3 kVA   | 13.04 / 7.50 A                    | aM 16 / 8 A                  | 29 / 128.2 W                 | 94.8 %     | 29 / 33 / 34 kg          | 180 × 200 × 160          | 300 × 200 × 250          |
| TMN230400-4000-xx  | 4 kVA   | 17.39 / 10 A                      | aM 20 / 12 A                 | 42 / 103.3 W                 | 96.4 %     | 33 / 37 / 43 kg          | 240 × 190 × 220          | 595 × 250 × 375          |
| TMN230400-5000-xx  | 5 kVA   | 21.74 / 12.50 A                   | aM 25 / 16 A                 | 45 / 121.2 W                 | 96.7 %     | 36 / 40 / 46 kg          | 240 × 200 × 220          | 595 × 250 × 375          |
| TMN230400-6300-xx  | 6,3 kVA | 27.39 / 15.75 A                   | aM 32 / 20 A                 | 56 / 130.1 W                 | 97 %       | 40 / 44 / 50 kg          | 240 × 210 × 220          | 595 × 250 × 375          |
| TMN230400-7500-xx  | 7,5 kVA | 32.61 / 18.75 A                   | aM 40 / 20 A                 | 56 / 154.8 W                 | 97.2 %     | 46 / 48 / 56 kg          | 240 × 230 × 220          | 595 × 250 × 375          |
| TMN230400-10000-xx | 10 kVA  | 43.48 / 25 A                      | aM 50 / 32 A                 | on request                   | —          | 75 / 83 / 85 kg          | 390 × 150 × 470          | 642 × 350 × 550          |
| TMN230400-15000-xx | 15 kVA  | 65.22 / 37.50 A                   | aM 80 / 40 A                 | on request                   | —          | 80 / 88 / 90 kg          | 390 × 160 × 470          | 642 × 350 × 550          |
| TMN230400-20000-xx | 20 kVA  | 86.96 / 50 A                      | aM 100 / 63 A                | on request                   | —          | 95 / 103 / 105 kg        | 390 × 170 × 470          | 642 × 350 × 550          |

Protection and installation

- Primary.** 230 V to terminals 1 (0 V) and 2 (230 V), earth to the primary earth terminal.
- Secondary.** 400 V equipment to terminals 3 (0 V) and 4 (400 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](mailto:contact@abltransfo.com) · +33 4 66 80 14 33 · [abltransfo.com](http://abltransfo.com)