#### **DATASHEET - STI0,4(400/230)**



Control transformer, 0.4 kVA, Rated input voltage 400± 5 % V, Rated output voltage 230 V



Part no.STI0,4(400/230)Catalog No.046640Alternate CatalogSTI0P4-I2-G2No.No.

#### **Delivery program**

| Product range                         |     | Single-phase control transformers ST                             |
|---------------------------------------|-----|--|
| Basic function                        |     | Single-phase control, isolating and safety transformers STI, STZ |
| Rated input voltage                   | V   | 400± 5 %   |
| Rated output voltage                  | V   | 230  |
| Rated power                           | kVA | 0.4  |
| Short-time rating                     | kVA | 1.1  |
| Terminal diagram / contact assignment |     |  |
| Cu factor 1,15                        |     |  |

# Technical data

| General                    |      |   |
|----------------------------|------|---|
| Standards                  |      |   |
| Built and tested to        |      | IEC/EN 61558-2-2/2-4/2-6<br>VDE 0570 Part 2-2<br>VDE 0570 Part 2-6 (safety transformers)<br>VDE 0570 Part 2-4 (isolating transformer)   |
| Suitable for use to        |      | IEC/EN 60204-1, ÖVE-EN 13<br>VDE 0113, VDE 0100 Part 410  |
| Ambient temperature        |      | -25 - 40  |
| Characteristics            |      |   |
| Terminations               |      | ● (< 115 A)   |
| Connection lugs            |      | ● (> 115 A)   |
| Insulation class           |      | В   |
| Rated frequency            | Hz   | 50 - 60   |
| Primary tapping            |      | ± 5 %   |
| Degree of Protection       |      | IPOO  |
| Separate windings          |      | •   |
| Fully vacuum-impregnated   |      | •   |
| Reinforced insulation      |      | •   |
| Rated duty factor          | % DF | 100   |
| Electrical characteristics |      |   |
| Note                       |      | The following applies for the no-load loss, short-circuit loss (copper losses), short-<br>circuit voltage and efficiency values: all details relate to a temperature of 20 °C |
| Total weight               | kg   | 5.2   |
| No-load losses             | W    | 17  |
| Short-circuit losses       | W    | 18  |
|                            |      |   |

#### **Design verification as per IEC/EN 61439**

| Technical data for design verification                   |                   |   |    |
|--|-------------------|---|----|
| Rated operational current for specified heat dissipation | In                | А | 0  |
| Heat dissipation per pole, current-dependent             | P <sub>vid</sub>  | W | 0  |
| Equipment heat dissipation, current-dependent            | P <sub>vid</sub>  | W | 0  |
| Static heat dissipation, non-current-dependent           | P <sub>vs</sub>   | W | 35 |
| Heat dissipation capacity                                | P <sub>diss</sub> | W | 0  |

%

4.4

0.92

Shortcircuit voltage Efficiency

| Operating ambient temperature min.   | °C | -25  |
|--|----|--|
| Operating ambient temperature max.   | °C | 40   |
| C/EN 61439 design verification   |    |  |
| 10.2 Strength of materials and parts   |    |  |
| 10.2.2 Corrosion resistance  |    | Meets the product standard's requirements.   |
| 10.2.3.1 Verification of thermal stability of enclosures   |    | Meets the product standard's requirements.   |
| 10.2.3.2 Verification of resistance of insulating materials to normal heat   |    | Meets the product standard's requirements.   |
| 10.2.3.3 Verification of resistance of insulating materials to abnormal heat and fire due to internal electric effects |    | Meets the product standard's requirements.   |
| 10.2.4 Resistance to ultra-violet (UV) radiation   |    | Meets the product standard's requirements.   |
| 10.2.5 Lifting   |    | Does not apply, since the entire switchgear needs to be evaluated.   |
| 10.2.6 Mechanical impact   |    | Does not apply, since the entire switchgear needs to be evaluated.   |
| 10.2.7 Inscriptions  |    | Meets the product standard's requirements.   |
| 10.3 Degree of protection of ASSEMBLIES  |    | Does not apply, since the entire switchgear needs to be evaluated.   |
| 10.4 Clearances and creepage distances   |    | Meets the product standard's requirements.   |
| 10.5 Protection against electric shock   |    | Does not apply, since the entire switchgear needs to be evaluated.   |
| 10.6 Incorporation of switching devices and components   |    | Does not apply, since the entire switchgear needs to be evaluated.   |
| 10.7 Internal electrical circuits and connections  |    | Is the panel builder's responsibility.   |
| 10.8 Connections for external conductors   |    | Is the panel builder's responsibility.   |
| 10.9 Insulation properties   |    |  |
| 10.9.2 Power-frequency electric strength   |    | Is the panel builder's responsibility.   |
| 10.9.3 Impulse withstand voltage   |    | Is the panel builder's responsibility.   |
| 10.9.4 Testing of enclosures made of insulating material   |    | Is the panel builder's responsibility.   |
| 10.10 Temperature rise   |    | The panel builder is responsible for the temperature rise calculation. Eaton will provide heat dissipation data for the devices. |
| 10.11 Short-circuit rating   |    | Is the panel builder's responsibility. The specifications for the switchgear must observed.                                      |
| 10.12 Electromagnetic compatibility  |    | Is the panel builder's responsibility. The specifications for the switchgear must observed.                                      |
| 10.13 Mechanical function  |    | The device meets the requirements, provided the information in the instruction leaflet (IL) is observed.                         |

## **Technical data ETIM 7.0**

| Low-voltage industrial components (EG000017) / One-phase control transformer (EC002486) |
|---|
|---|

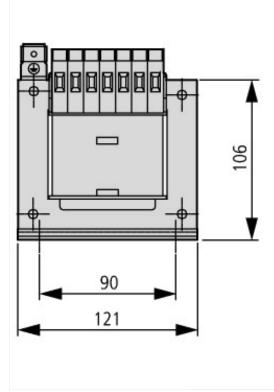
| Electric engineering, automation, process control engineering / Transformer, conver | rter, coil / Control transfo | ormer / One-phase control transformer (ecl@ss10.0.1-27-03-13-02 [AAB620015]) |
|---|------------------------------|--|
| Built as safety transformer   |                              | Yes  |
| Built as isolating transformer  |                              | Yes  |
| Built as energy saving transformer  |                              | No   |
| Primary voltage 1   | V                            | 400 - 400  |
| Primary voltage 2   | V                            | 0 - 0  |
| Primary voltage 3   | V                            | 0 - 0  |
| Primary voltage 4   | V                            | 0 - 0  |
| Primary voltage 5   | V                            | 0 - 0  |
| Primary voltage 6   | V                            | 0 - 0  |
| Primary voltage 7   | V                            | 0 - 0  |
| Primary voltage 8   | V                            | 0 - 0  |
| Primary voltage 9   | V                            | 0 - 0  |
| Primary voltage 10  | V                            | 0 - 0  |
| Secondary voltage 1   | V                            | 230 - 230  |
| Secondary voltage 2   | V                            | 0 - 0  |
| Secondary voltage 3   | V                            | 0 - 0  |
| Secondary voltage 4   | V                            | 0 - 0  |
| Secondary voltage 5   | V                            | 0 - 0  |
| Secondary voltage 6   | V                            | 0 - 0  |
| Secondary voltage 7   | V                            | 0 - 0  |
| Secondary voltage 8   | V                            | 0 - 0  |
| Secondary voltage 9   | V                            | 0 - 0  |
|   |                              |  |

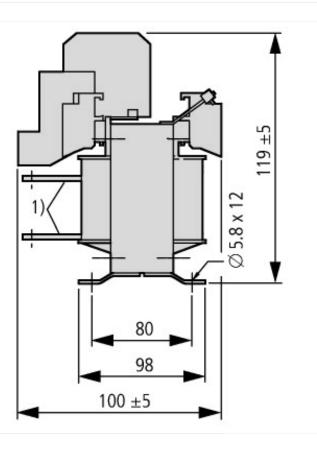
| Secondary voltage 10                    | V  | 0 - 0  |
|---|----|--------|
| Rated apparent power                    | VA | 400    |
| Type of insulation material acc. IEC 85 |    | В      |
| Short-circuit-proof                     |    | No     |
| Relative short circuit voltage          | %  | 4.4    |
| Width                                   | mm | 121    |
| Height                                  | mm | 131    |
| Depth                                   | mm | 100    |
| Degree of protection (IP)               |    | IP00   |
| Ring core                               |    | No     |
| Suitable for mounting on PCB            |    | No     |
| Modular version                         |    | No     |
| Conductor material                      |    | Copper |

## **Approvals**

| Product Standards                    | UL 506; UL5085-1; UL 5085-2; CSA-C22.2 No. 66; CSA-C22.2 No. 66.1-06; CSA-C22.2 No. 66.2-06; IEC/EN 61558-2-2; CE marking |
|--------------------------------------|---|
| UL File No.                          | E167225   |
| UL Category Control No.              | ΧΡΤΩ2, ΧΡΤΩ8  |
| CSA File No.                         | UL report applies to both US and Canada   |
| CSA Class No.                        | -   |
| North America Certification          | UL recognized, certified by UL for use in Canada  |
| Specially designed for North America | No  |
| Suitable for                         | Branch circuits   |
| Max. Voltage Rating                  | 600 V AC  |
| Degree of Protection                 | IEC: IP00, UL/CSA Type: -   |
|                                      |   |

### **Dimensions**





Connection lugs
With STI/STZ0.06 ... 0.16 ground connection at bottom