



**Control transformer, 1.6 kVA, Rated input voltage 400± 5 % V, Rated output voltage 230 V**

**Part no.** STN1,6(400/230)  
**Catalog No.** 221524  
**Alternate Catalog No.** STN1P6-I2-G2

### Delivery program

|                                       |     |   |
|---------------------------------------|-----|---|
| Product range                         |     | Single-phase control transformers ST... |
| Basic function                        |     | Single-phase STN control transformers   |
| Rated input voltage                   | V   | 400± 5 %                                |
| Rated output voltage                  | V   | 230                                     |
| Rated power                           | kVA | 1.6                                     |
| Short-time rating                     | kVA | 3.98                                    |
| Terminal diagram / contact assignment |     |   |
| Cu factor 3,40                        |     |   |

### Technical data

#### General

|                     |  |  |  |
|---------------------|--|--|--|
| Standards           |  |  |  |
| Built and tested to |  |  | IEC/EN 61558-2-2<br>VDE 0570 Part 2-2                    |
| 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         |      |  | B           |
| Rated frequency          | Hz   |  | 50 - 60     |
| Primary tapping          |      |  | ± 5 %       |
| Degree of Protection     |      |  | IP00        |
| Separate windings        |      |  | ●           |
| Fully vacuum-impregnated |      |  | ●           |
| Rated duty factor        | % DF |  | 100         |

#### Electrical characteristics

|                      |    |  |   |
|----------------------|----|--|---|
| Note                 |    |  | The following applies for the no-load loss, short-circuit loss (copper losses), short-circuit voltage and efficiency values: all details relate to a temperature of 20 °C |
| Total weight         | kg |  | 14.3  |
| No-load losses       | W  |  | 43  |
| Short-circuit losses | W  |  | 44  |
| Shortcircuit voltage | %  |  | 2.5   |
| Efficiency           |    |  | 0.95  |

### Design verification as per IEC/EN 61439

|  |                   |    |     |
|--|-------------------|----|-----|
| Technical data for design verification                   |                   |    |     |
| Rated operational current for specified heat dissipation | I <sub>n</sub>    | A  | 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  | 87  |
| Heat dissipation capacity                                | P <sub>diss</sub> | W  | 0   |
| Operating ambient temperature min.                       |                   | °C | -25 |
| Operating ambient temperature max.                       |                   | °C | 40  |

|  |  |  |
|--|--|--|
| IEC/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 be observed.                                   |
| 10.12 Electromagnetic compatibility  |  | Is the panel builder's responsibility. The specifications for the switchgear must be 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

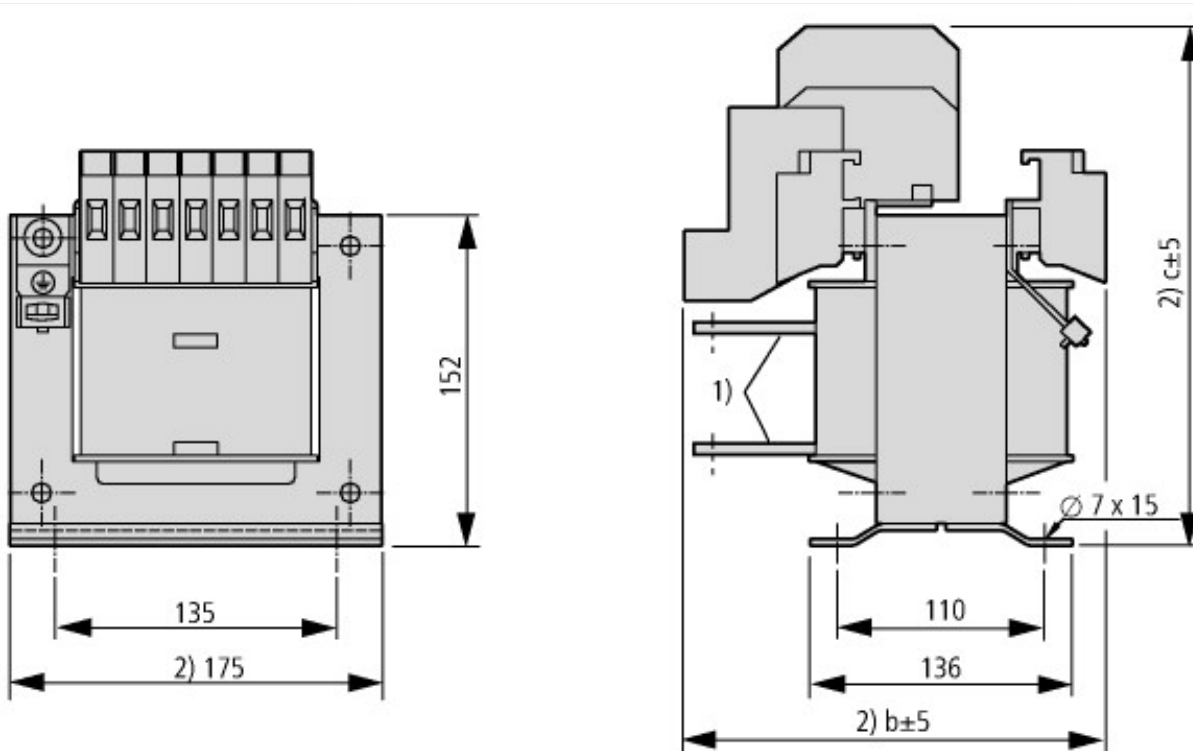
|   |    |           |
|---|----|-----------|
| Low-voltage industrial components (EG000017) / One-phase control transformer (EC002486)   |    |           |
| Electric engineering, automation, process control engineering / Transformer, converter, coil / Control transformer / One-phase control transformer (ecl@ss10.0.1-27-03-13-02 [AAB620015]) |    |           |
| Built as safety transformer   |    | No        |
| Built as isolating transformer  |    | No        |
| 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 | 1600      |

|   |    |        |
|---|----|--------|
| Type of insulation material acc. IEC 85 |    | B      |
| Short-circuit-proof                     |    | No     |
| Relative short circuit voltage          | %  | 2.5    |
| Width                                   | mm | 195    |
| Height                                  | mm | 240    |
| Depth                                   | mm | 138    |
| 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.              |  | XPTQ2, XPTQ8  |
| 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



|           | b   | c   |
|-----------|-----|-----|
| 12 V      | 183 | 170 |
| 24 V      | 138 | 216 |
| 42 V      | 148 | 169 |
| 110 V     | 138 | 157 |
| 200/230 V | 138 | 157 |

- ① Connection lugs
- ② Maximum space requirement
- ③ with STN0,06-02 ground connection at bottom

## Assets (links)

### Declaration of CE Conformity

00003098