

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

Part no. ST10,4(400/230)
 Catalog No. 046640
 Alternate Catalog No. ST10P4-I2-G2

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
Cu factor 1,15			

Technical data

General

Standards			
Built and tested to			IEC/EN 61558-2-2/2-4/2-6 VDE 0570 Part 2-2 VDE 0570 Part 2-6 (safety transformers) VDE 0570 Part 2-4 (isolating transformer)
Suitable for use to			IEC/EN 60204-1, ÖVE-EN 13 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			●
Reinforced insulation			●
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	5.2
No-load losses		W	17
Short-circuit losses		W	18
Shortcircuit voltage		%	4.4
Efficiency			0.92

Design verification as per IEC/EN 61439

Technical data for design verification			
Rated operational current for specified heat dissipation	I _n	A	0
Heat dissipation per pole, current-dependent	P _{vid}	W	0
Equipment heat dissipation, current-dependent	P _{vid}	W	0
Static heat dissipation, non-current-dependent	P _{vs}	W	35
Heat dissipation capacity	P _{diss}	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 8.0

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			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 according to IEC 85			B

Short-circuit-proof		No
Relative short circuit voltage	%	4.4
Width	mm	121
Height	mm	119
Depth	mm	100
Degree of protection (IP)		IP00
Ring core		No
Suitable for mounting on PCB		No
Modular version		No
Conductor material		Copper