

STE 100

## Steuer-, Sicherheits- und Trenntransformator STE Control-, safety isolating- and isolating transformer STE Range

► **CAGE-CLAMP Anschlussklemmen**  
**CAGE-CLAMP terminals**

► **Bis 250 VA mit Kombifußplatte\***  
**Up to 250 VA with dual purpose foot plate\***

Einschaltstromarmer Steuer-, Sicherheits-, bzw. Trenntransformator nach IEC 61558-2-2; 2-4; 2-6, DIN EN 61558-2-2; 2-4; 2-6, VDE 0570 Teil 2-2; 2-4; 2-6, UL 506

Primärseitig  $\pm 5\%$  Anzapfungen zur Spannungsanpassung  
\*Kombifußplatte für Schraub- und Tragschienenmontage nach DIN 50022

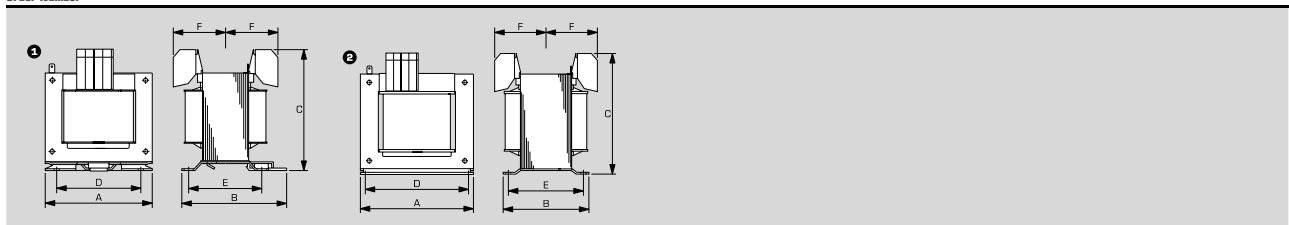
Low inrush current control-, safety isolating- and isolating transformer to IEC 61558-2-2, DIN EN 61558-2-2; 2-4; 2-6, VDE 0570 part 2-2; 2-4; 2-6, UL 506

$\pm 5\%$  primary tapplings for the adaption of the voltage

\*Dual purpose foot plate for screw type terminal or panel installation on mounting rails to DIN 50022



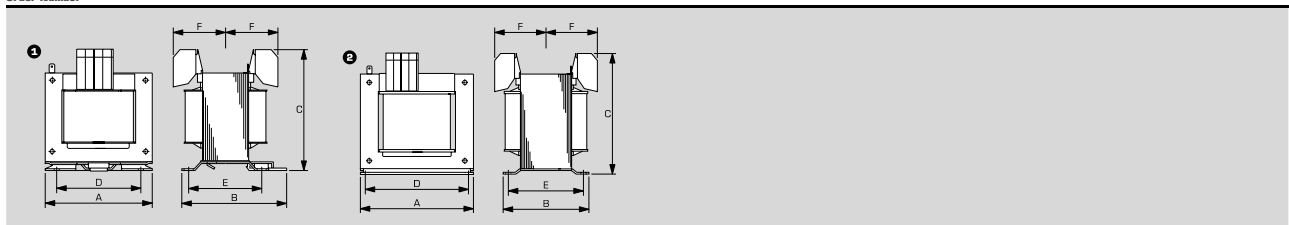
Typ Type	STE 63/23/24	STE 63/4/24	STE 63/4/23	STE 100/23/24	STE 100/4/23	STE 160/23/24	STE 160/4/23	STE 250/23/24
<b>Eingangsspannung</b> Input voltage	<b>230 V</b>	<b>400 V</b>	<b>400 V</b>	<b>230 V</b>	<b>400 V</b>	<b>230 V</b>	<b>400 V</b>	<b>230 V</b>
Anzapfungen Eingang (±) Tappings Input (±)	11 V	20 V	20 V	11 V	20 V	11 V	20 V	11 V
Frequenzbereich Frequency range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
<b>Ausgangsspannung</b> Output voltage	<b>24 V</b>	<b>24 V</b>	<b>230 V</b>	<b>24 V</b>	<b>230 V</b>	<b>24 V</b>	<b>230 V</b>	<b>24 V</b>
Leerlaufspannung (ca. x Faktor) No-load voltage (ca. x factor)	1.10	1.10	1.10	1.07	1.07	1.06	1.06	1.07
<b>Leistung VDE (DB cos phi=1)</b> <b>Power VDE (DB cos phi=1)</b>	<b>63 VA</b>	<b>63 VA</b>	<b>63 VA</b>	<b>100 VA</b>	<b>100 VA</b>	<b>160 VA</b>	<b>160 VA</b>	<b>250 VA</b>
Leistung VDE (DB cos phi=0.5) Power VDE (DB cos phi=0.5)	175 VA	175 VA	175 VA	310 VA	310 VA	490 VA	490 VA	850 VA
Prüfzeichen Approvals	C-UL-US	C-UL-US	C-UL-US	C-UL-US	C-UL-US	C-UL-US	C-UL-US	C-UL-US
Schutzart Protection index	IP 00	IP 00	IP 00	IP 00	IP 00	IP 00	IP 00	IP 00
Schutzklasse (vorbereitet) Safety class (prepared)	I	I	I	I	I	I	I	I
Kühlart Cooling method	Selbstkühlung self cooling	Selbstkühlung self cooling	Selbstkühlung self cooling	Selbstkühlung self cooling	Selbstkühlung self cooling	Selbstkühlung self cooling	Selbstkühlung self cooling	Selbstkühlung self cooling
Umgebungstemperatur max. Ambient temperature max.	40 °C	40 °C	40 °C	40 °C	40 °C	40 °C	40 °C	40 °C
Isolierstoffklasse Class of Insulation System	VDE=B, UL=130	VDE=B, UL=130	VDE=B, UL=130	VDE=B, UL=130	VDE=B, UL=130	VDE=B, UL=130	VDE=B, UL=130	VDE=B, UL=130
Prüfspannung Test voltage	3600 V, 50 Hz	4500 V, 50 Hz	4500 V, 50 Hz	3600 V, 50 Hz	4500 V, 50 Hz	3600 V, 50 Hz	4500 V, 50 Hz	3600 V, 50 Hz
Wirkungsgrad Efficiency	87 %	87 %	87 %	87 %	87 %	90 %	90 %	90 %
Bauart Type	offen open type	offen open type	offen open type	offen open type	offen open type	offen open type	offen open type	offen open type
Anschlüsse Terminals	CAGE CLAMP, PE 6,3x0,8	CAGE CLAMP, PE 6,3x0,8	CAGE CLAMP, PE 6,3x0,8	CAGE CLAMP, PE 6,3x0,8	CAGE CLAMP, PE 6,3x0,8	CAGE CLAMP, PE 6,3x0,8	CAGE CLAMP, PE 6,3x0,8	CAGE CLAMP, PE 6,3x0,8
Befestigung Fixing method	Kombifußplatte auch für TS-35 Schiene dual purpose foot plate also for installation on mounting rails	Kombifußplatte auch für TS-35 Schiene dual purpose foot plate also for installation on mounting rails	Kombifußplatte auch für TS-35 Schiene dual purpose foot plate also for installation on mounting rails	Kombifußplatte auch für TS-35 Schiene dual purpose foot plate also for installation on mounting rails	Kombifußplatte auch für TS-35 Schiene dual purpose foot plate also for installation on mounting rails	Kombifußplatte auch für TS-35 Schiene dual purpose foot plate also for installation on mounting rails	Kombifußplatte auch für TS-35 Schiene dual purpose foot plate also for installation on mounting rails	Kombifußplatte auch für TS-35 Schiene dual purpose foot plate also for installation on mounting rails
Befestigungsschrauben Fixing screws	M4	M4	M4	M4	M4	M5	M5	M5
Maße in mm A/B/C/D Dimensions in mm A/B/C/D	84/85/88/64	84/85/88/64	84/85/88/64	84/85/96/64	84/85/96/64	96/102/104/84	96/102/104/84	96/102/104/84
Maße in mm E/F Dimensions in mm E/F	64/46	64/46	64/46	64/54,5	64/54,5	87/56	87/56	87/62,5
Maßbild Dimension drawing	1	1	1	1	1	1	1	1
Gewicht Weight	1.20 kg	1.20 kg	1.20 kg	2.00 kg	2.00 kg	2.90 kg	2.90 kg	3.50 kg
<b>Bestellnummer</b> <b>Order Number</b>	<b>STE 63/23/24</b>	<b>STE 63/4/24</b>	<b>STE 63/4/23</b>	<b>STE 100/23/24</b>	<b>STE 100/4/23</b>	<b>STE 160/23/24</b>	<b>STE 160/4/23</b>	<b>STE 250/23/24</b>





## Steuer-, Sicherheits- und Trenntransformator STE Control-, safety isolating- and isolating transformer STE Range

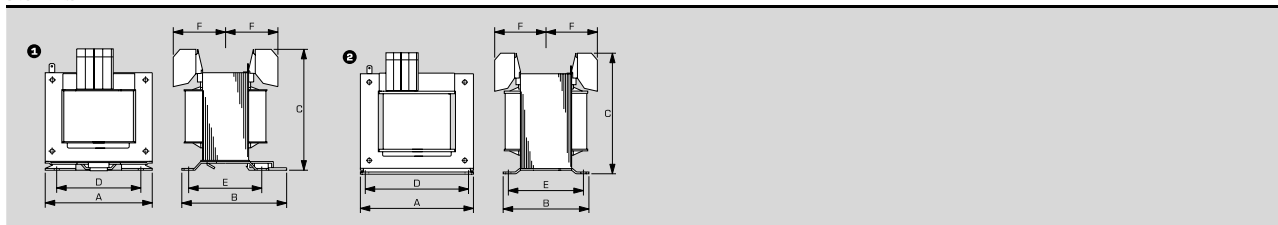
Typ Type	STE 250/4/24	STE 250/4/23	STE 320/23/24	STE 320/4/23	STE 400/23/24	STE 400/4/23	STE 500/23/24	STE 500/4/24
<b>Eingangsspannung</b> Input voltage	<b>400 V</b>	<b>400 V</b>	<b>230 V</b>	<b>400 V</b>	<b>230 V</b>	<b>400 V</b>	<b>230 V</b>	<b>400 V</b>
Anzapfungen Eingang (±) Tappings input (±)	20 V	20 V	11 V	20 V	11 V	20 V	11 V	20 V
Frequenzbereich Frequency range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
<b>Ausgangsspannung</b> Output voltage	<b>24 V</b>	<b>230 V</b>	<b>24 V</b>	<b>230 V</b>	<b>24 V</b>	<b>230 V</b>	<b>24 V</b>	<b>24 V</b>
Leerlaufspannung (ca. x Faktor) No-load voltage (ca. x factor)	1.07	1.07	1.05	1.05	1.05	1.05	1.05	1.05
<b>Leistung VDE (DB cos phi=1)</b> Power VDE (DB cos phi=1)	<b>250 VA</b>	<b>250 VA</b>	<b>320 VA</b>	<b>320 VA</b>	<b>400 VA</b>	<b>400 VA</b>	<b>500 VA</b>	<b>500 VA</b>
Leistung VDE (DB cos phi=0.5) Power VDE (DB cos phi=0.5)	850 VA	850 VA	1120 VA	1120 VA	1440 VA	1440 VA	2000 VA	2000 VA
Prüfzeichen Approvals	C-UL-US	C-UL-US	C-UL-US	C-UL-US	C-UL-US	C-UL-US	C-UL-US	C-UL-US
Schutzart Protection index	IP 00	IP 00	IP 00	IP 00	IP 00	IP 00	IP 00	IP 00
Schutzklasse (vorbereitet) Safety class (prepared)	I	I	I	I	I	I	I	I
Kühlart Cooling method	Selbstkühlung self cooling	Selbstkühlung self cooling	Selbstkühlung self cooling	Selbstkühlung self cooling	Selbstkühlung self cooling	Selbstkühlung self cooling	Selbstkühlung self cooling	Selbstkühlung self cooling
Umgebungstemperatur max. Ambient temperature max.	40 °C	40 °C	40 °C	40 °C	40 °C	40 °C	40 °C	40 °C
Isolierstoffklasse Class of Insulation System	VDE=B, UL=130	VDE=B, UL=130	VDE=B, UL=130	VDE=B, UL=130	VDE=B, UL=130	VDE=B, UL=130	VDE=B, UL=130	VDE=B, UL=130
Prüfspannung Test voltage	4500 V, 50 Hz	4500 V, 50 Hz	3600 V, 50 Hz	4500 V, 50 Hz	3600 V, 50 Hz	4500 V, 50 Hz	3600 V, 50 Hz	4500 V, 50 Hz
Wirkungsgrad Efficiency	90 %	90 %	91 %	91 %	92 %	92 %	93 %	93 %
Bauart Type	offen open type	offen open type	offen open type	offen open type	offen open type	offen open type	offen open type	offen open type
Anschlüsse Terminals	CAGE CLAMP, PE 6,3x0,8	CAGE CLAMP, PE 6,3x0,8	CAGE CLAMP, PE 6,3x0,8	CAGE CLAMP, PE 6,3x0,8	CAGE CLAMP, PE 6,3x0,8	CAGE CLAMP, PE 6,3x0,8	CAGE CLAMP, PE 6,3x0,8	CAGE CLAMP, PE 6,3x0,8
Befestigung Fixing method	Kombifußplatte auch für TS-35 Schiene dual purpose foot plate also for installation on mounting rails	Kombifußplatte auch für TS-35 Schiene dual purpose foot plate also for installation on mounting rails	Fußplatte base plate	Fußplatte base plate	Fußplatte base plate	Fußplatte base plate	Fußplatte base plate	Fußplatte base plate
Befestigungsschrauben Fixing screws	M5	M5	M5	M5	M5	M5	M5	M5
Maße in mm A/B/C/D Dimensions in mm A/B/C/D	96/102/104/84	96/102/104/84	105/103/110/81	105/103/110/81	120/104/121/90	120/104/121/90	120/124/121/90	120/124/121/90
Maße in mm E/F Dimensions in mm E/F	87/62,5	87/62,5	86/63	86/63	86/60	86/60	106/71	106/71
Maßbild Dimension drawing	1	1	2	2	2	2	2	2
Gewicht Weight	3.50 kg	3.50 kg	4.30 kg	4.30 kg	5.00 kg	5.00 kg	6.50 kg	6.50 kg
<b>Bestellnummer</b> Order Number	<b>STE 250/4/24</b>	<b>STE 250/4/23</b>	<b>STE 320/23/24</b>	<b>STE 320/4/23</b>	<b>STE 400/23/24</b>	<b>STE 400/4/23</b>	<b>STE 500/23/24</b>	<b>STE 500/4/24</b>





**Steuer-, Sicherheits- und Trenntransformator STE**  
**Control-, safety isolating- and isolating transformer STE Range**

Typ Type	STE 500/4/23	STE 630/4/23	STE 800/4/23	STE 1000/4/23	STE 1600/4/23	STE 2000/4/23	STE 2500/4/23
<b>Eingangsspannung</b> Input voltage	<b>400 V</b>	<b>400 V</b>	<b>400 V</b>	<b>400 V</b>	<b>400 V</b>	<b>400 V</b>	<b>400 V</b>
Anzapfungen Eingang (±) Tappings input (±)	20 V	20 V	20 V	20 V	20 V	20 V	20 V
Frequenzbereich Frequency range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
<b>Ausgangsspannung</b> Output voltage	<b>230 V</b>	<b>230 V</b>	<b>230 V</b>	<b>230 V</b>	<b>230 V</b>	<b>230 V</b>	<b>230 V</b>
Leerlaufspannung (ca. x Faktor) No-load voltage (ca. x factor)	1.05	1.03	1.03	1.02	1.02	1.02	1.01
<b>Leistung VDE (DB cos phi=1)</b> Power VDE (DB cos phi=1)	<b>500 VA</b>	<b>630 VA</b>	<b>800 VA</b>	<b>1000 VA</b>	<b>1600 VA</b>	<b>2000 VA</b>	<b>2500 VA</b>
Leistung VDE (DB cos phi=0.5) Power VDE (DB cos phi=0.5)	2000 VA	2350 VA	3400 VA	5000 VA	7800 VA	10900 VA	12500 VA
Prüfzeichen Approvals	C-UL-US	C-UL-US	C-UL-US	C-UL-US	C-UL-US	C-UL-US	C-UL-US
Schutzart Protection index	IP 00	IP 00	IP 00	IP 00	IP 00	IP 00	IP 00
Schutzklasse (vorbereitet) Safety class (prepared)	I	I	I	I	I	I	I
Kühlart Cooling method	Selbstkühlung self cooling	Selbstkühlung self cooling	Selbstkühlung self cooling	Selbstkühlung self cooling	Selbstkühlung self cooling	Selbstkühlung self cooling	Selbstkühlung self cooling
Umgebungstemperatur max. Ambient temperature max.	40 °C	40 °C	40 °C	40 °C	40 °C	40 °C	40 °C
Isolierstoffklasse Class of Insulation System	VDE=B, UL=130	VDE=B, UL=130	VDE=B, UL=130	VDE=B, UL=130	VDE=B, UL=130	VDE=B, UL=130	VDE=B, UL=130
Prüfspannung Test voltage	4500 V, 50 Hz	4500 V, 50 Hz	4500 V, 50 Hz	4500 V, 50 Hz	4500 V, 50 Hz	4500 V, 50 Hz	4500 V, 50 Hz
Wirkungsgrad Efficiency	93 %	93 %	93 %	94 %	94 %	95 %	95 %
Bauart Type	offen open type	offen open type	offen open type	offen open type	offen open type	offen open type	offen open type
Anschlüsse Terminals	CAGE CLAMP, PE 6,3x0,8	CAGE CLAMP, PE 6,3x0,8	CAGE CLAMP, PE 6,3x0,8	CAGE CLAMP, PE 6,3x0,8	CAGE CLAMP, PE 6,3x0,8	CAGE CLAMP, PE 6,3x0,8	CAGE CLAMP, PE 6,3x0,8
Befestigung Fixing method	Fußplatte base plate	Fußplatte base plate	Fußplatte base plate	Fußplatte base plate	Fußplatte base plate	Fußplatte base plate	Fußplatte base plate
Befestigungsschrauben Fixing screws	M5	M6	M6	M6	M6	M8	M8
Maße in mm A/B/C/D Dimensions in mm A/B/C/D	120/124/121/90	150/113/143/122	150/130/143/122	150/156/143/122	192/145/180.5/156	192/161/180.5/156	192/179/180.5/156
Maße in mm E/F Dimensions in mm E/F	106/71	91/59	107.5/65	134/82	117/72	136/80	151/91
Maßbild Dimension drawing	2	2	2	1	2	2	2
Gewicht Weight	6.50 kg	7.80 kg	9.90 kg	13.10 kg	18.00 kg	21.80 kg	25.50 kg
<b>Bestellnummer</b> Order Number	<b>STE 500/4/23</b>	<b>STE 630/4/23</b>	<b>STE 800/4/23</b>	<b>STE 1000/4/23</b>	<b>STE 1600/4/23</b>	<b>STE 2000/4/23</b>	<b>STE 2500/4/23</b>





# Steu 1600/23

Revised : 03.2002

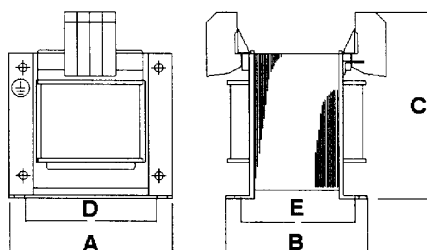
## Product

Isolating Transformer  
Control Transformer

## Type No.:

STEU 1600/23

## Dimensions



A = 192,0mm  
B = 161,0mm  
C = 180,5mm  
D = 156,0mm  
E = 133,0mm

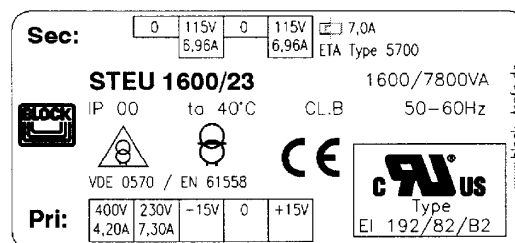
## Technical Details

Safety Standards	VDE 0570, EN 61558-1 EN 61558-2-4 ; EN 61558-2-2 UL 506; CSA 22.2
Designated Voltage	Input: 230V/400V +/-15Vac
Input Voltage Range	+6/-10%
Designated Voltage	Output: 2 x 115Vac
No-Load output voltage	
x Factor	1,02
Designated Current	Output: 2 x 6,96A
Designated Frequency	50-60Hz.
Output Power	1600VA
Protection Index	IP 00
Protection Class	Prepared for class I equipment
Insulation Class	B (130°C)
Ambient Temperature	Max. 40°C
Short-Circuit Protection	Non-short-Circuit-Proof
HV-Test Voltage	
Prim.-Sec	4500V
Prim.-Core	4000V
Sec.-Core	2500V
Connection (Input)	Cage Clamp Terminals 4mm <sup>2</sup>
Connection (Output)	Cage Clamp Terminals 4mm <sup>2</sup>
Weight	approx. 20,8Kg

## Description

Low in rush current for applications using motor protection switches.  
International standard input voltages 230V and 400V to DIN IEC 60 038.  
Low regulation.  
Output windings for series or parallel connection.

## Marking:



## Approvals



Funktionsisolation Sec.-Sec. ! Wicklungen für Reihen- oder Parallelschaltung vorgesehen !  
Functional insulation between Secondary windings ! Suitable only for parallel or series configuration !



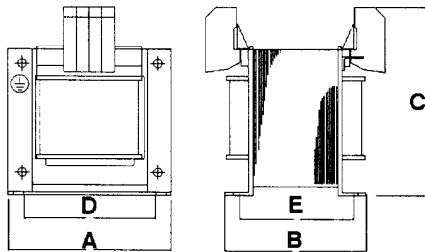
**Product**

Isolating Transformer  
Control Transformer

**Type No.:**

STEU 2000/23

**Dimensions**



**A = 192,0mm**  
**B = 184,0mm**  
**C = 180,5mm**  
**D = 156,0mm**  
**E = 155,0mm**

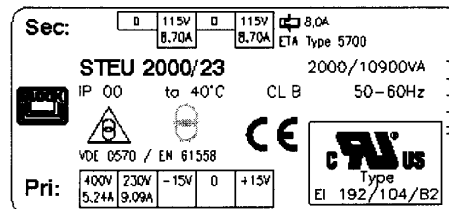
**Technical Details**

Safety Standards	VDE 0570, EN 61558-1 EN 61558-2-4 ; EN 61558-2-2 UL 506; CSA 22.2
Designated Voltage	Input: 230V/400V +/-15Vac
Input Voltage Range	+6/-10%
Designated Voltage	Output: 2 x 115Vac
No-Load output voltage x Factor	1,02
Designated Current	Output: 2 x 8,70A
Designated Frequency	50-60Hz.
Output Power	2000VA
Protection Index	IP 00
Protection Class	Prepared for class I equipment
Insulation Class	B (130°C)
Ambient Temperature	Max. 40°C
Short-Circuit Protection	Non-short-Circuit-Proof
HV-Test Voltage	
Prim-Sec	4500V
Prim.-Core	4000V
Sec.-Core	2500V
Connection (Input)	Cage Clamp Terminals 4mm <sup>2</sup>
Connection (Output)	Cage Clamp Terminals 4mm <sup>2</sup>
Weight	approx. 26Kg

**Description**

Low in rush current for applications using motor protection switches.  
International standard input voltages 230V and 400V to DIN IEC 60 038.  
Low regulation.  
Output windings for series or parallel connection.

**Marking:**



Funktionsisolation Sec.-Sec. ! Wicklungen für Reihen- oder Parallelschaltung vorgesehen !  
Functional insulation between Secondary windings ! Suitable only for parallel or series configuration !

**Approvals**





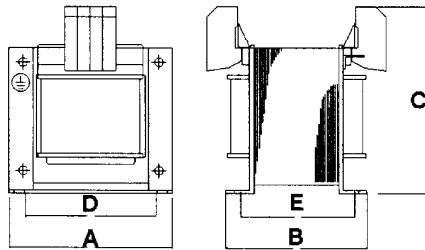
**Product**

Isolating Transformer  
 Control Transformer

**Type No.:**

STEU 2500/23

**Dimensions**



**A = 192,0mm**  
**B = 190,0mm**  
**C = 180,5mm**  
**D = 156,0mm**  
**E = 161,0mm**

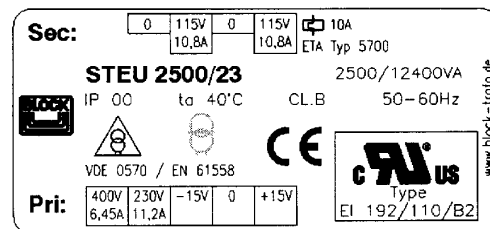
**Technical Details**

Safety Standards	VDE 0570, EN 61558-1 EN 61558-2-4 ; EN 61558-2-2 UL 506; CSA 22.2
Designated Voltage	Input: 230V/400V +/-15Vac
Input Voltage Range	+6/-10%
Designated Voltage	Output: 2 x 115Vac
No-Load output voltage	
x Factor	1,02
Designated Current	Output: 2 x 10,8A
Designated Frequency	50-60Hz.
Output Power	2500VA
Protection Index	IP 00
Protection Class	Prepared for class I equipment
Insulation Class	B (130°C)
Ambient Temperature	Max. 40°C
Short-Circuit Protection	Non-short-Circuit-Proof
HV-Test Voltage	
Prim.-Sec	4500V
Prim.-Core	4000V
Sec.-Core	2500V
Connection (Input)	Cage Clamp Terminals 4mm <sup>2</sup>
Connection (Output)	Cage Clamp Terminals 4mm <sup>2</sup>
Weight	approx. 26,3Kg

**Description**

Low in rush current for applications using motor protection switches.  
 International standard input voltages 230V and 400V to DIN IEC 60 038.  
 Low regulation.  
 Output windings for series or parallel connection.

**Marking:**



Funktionsisolation Sec.-Sec. ! Wicklungen für Reihen- oder Parallelschaltung vorgesehen !  
 Functional insulation between Secondary windings ! Suitable only for parallel or series configuration !

**Approvals**

