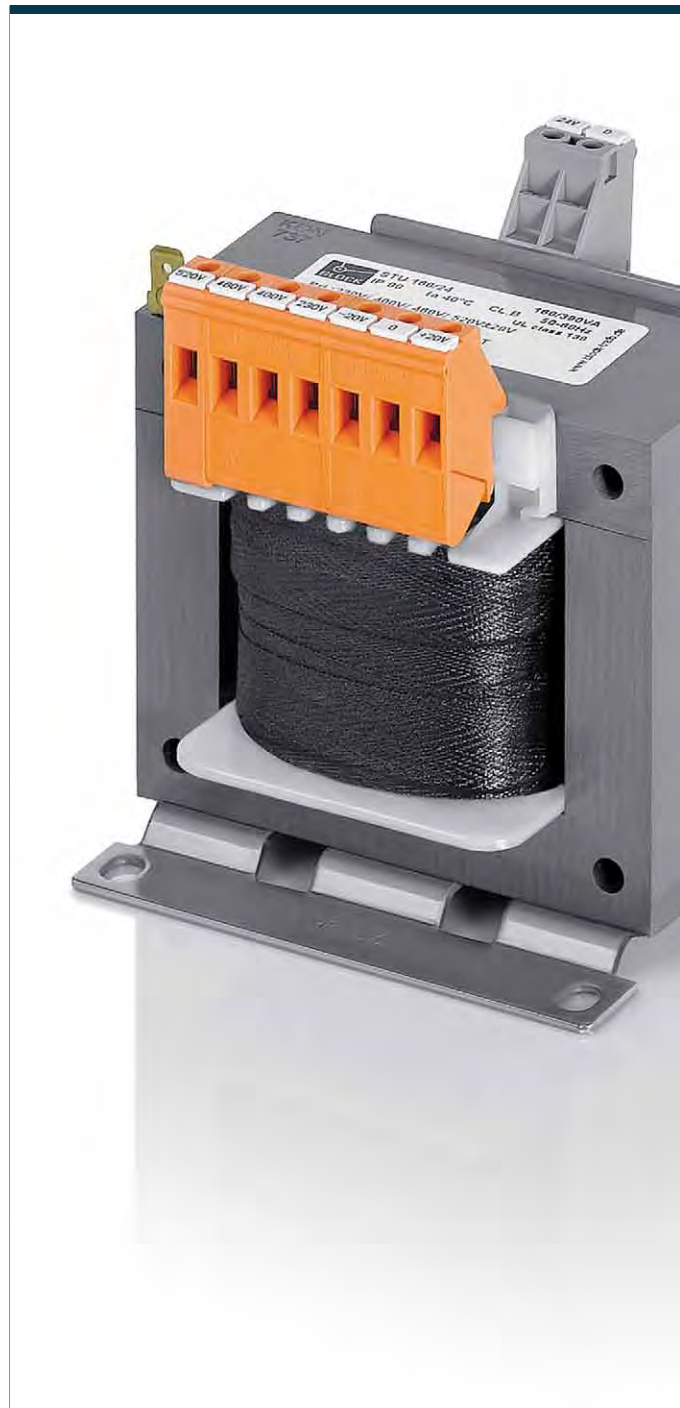


Universal Control- and safety isolating- resp. isolating transformer **STU**



General Data

Rated input voltage 210 - 540 Vac
Rated output voltage 24 - 230 Vac
Rated power 63 - 2500 VA
Insulation class B
Maximum ambient temperature 40 °C
Efficiency up to 95 %
Degree of protection IP 00

Advantages

Universal input voltages 210 to 540 Vac
Very good switch-on behaviour thanks to reduced starting currents
High performance for the volume thanks to compact design
Very good corrosion protection and low noise thanks to BLOCKIMPEX vacuum impregnation
Contact protected screw connection terminals complying with UVV BVG A3
Simple mounting thanks to robust metal footplate with oval slots

Applications

As a control transformer for the electrical isolation of the input and output sides. The construction of the transformer to supply control systems according to VDE 0113 is designed.

As an isolating transformer for the safe electrical isolation of the input and output sides. The transformer may be used to set up protective separation as a protective measure in accordance with VDE 0100.

As a safety isolating transformer for the safe electrical isolation of the input and output sides. The transformer is suitable for creating SELV and PELV circuits because of the limit on the output voltage.

Standards



Control transformer
to: VDE 0570 Teil 2-2, DIN EN 61558-2-2, EN 61558-2-2, IEC 61558-2-2,
UL 5085-1/-2, CSA 22.2 No.66

Isolating transformer
to: VDE 0570 Part 2-4, DIN EN 61558-2-4, EN 61558-2-4, IEC 61558-2-4,
UL 5085-1/-2, CSA 22.2 No.66

Safety isolating transformer
to: VDE 0570 Part 2-6, DIN EN 61558-2-6, EN 61558-2-6, IEC 61558-2-6,
UL 5085-1/-2, CSA 22.2 No.66

Certifications



ENEC 10 (VDE), UL 5085-1/-2, CSA 22.2 No.66



Universal Control- and safety isolating- resp. isolating transformer **STU**

Electrical data	Type	STU 63/24	STU 63/2x115	STU 100/24	STU 100/2x115	STU 130/24	STU 130/2x115
	Input						
	Rated input Voltage	210 Vac/230 Vac/250 Vac 380 Vac/400 Vac/420 Vac 440 Vac/460 Vac/480 Vac 500 Vac/520 Vac/540 Vac	210 Vac/230 Vac/250 Vac 380 Vac/400 Vac/420 Vac 440 Vac/460 Vac/480 Vac 500 Vac/520 Vac/540 Vac	210 Vac/230 Vac/250 Vac 380 Vac/400 Vac/420 Vac 440 Vac/460 Vac/480 Vac 500 Vac/520 Vac/540 Vac	210 Vac/230 Vac/250 Vac 380 Vac/400 Vac/420 Vac 440 Vac/460 Vac/480 Vac 500 Vac/520 Vac/540 Vac	210 Vac/230 Vac/250 Vac 380 Vac/400 Vac/420 Vac 440 Vac/460 Vac/480 Vac 500 Vac/520 Vac/540 Vac	210 Vac/230 Vac/250 Vac 380 Vac/400 Vac/420 Vac 440 Vac/460 Vac/480 Vac 500 Vac/520 Vac/540 Vac
	Frequency range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
	Output						
	Rated output voltage	24 Vac	2x115 Vac	24 Vac	2x115 Vac	24 Vac	2x115 Vac
	Rated power VDE (DB cos phi=1)	63 VA	63 VA	100 VA	100 VA	130 VA	130 VA
	Rated power VDE (KB cos phi=0.5)	110 VA	110 VA	225 VA	225 VA	300 VA	300 VA
	No-load voltage (app. x factor)	1.10	1.10	1.10	1.10	1.10	1.10
	Efficiency	84 %	84 %	86 %	86 %	86 %	86 %
Standards							
Classification	Control- and safety isolating transformer	Control- and isolating transformer	Control- and safety isolating transformer	Control- and isolating transformer	Control- and safety isolating transformer	Control- and isolating transformer	
Approvals							
Approvals	cURus, ENEC 10 (VDE)	cURus, ENEC 10 (VDE)	cURus, ENEC 10 (VDE)	cURus, ENEC 10 (VDE)	cURus, ENEC 10 (VDE)	cURus, ENEC 10 (VDE)	
Environment							
Ambient temperature max.	40 °C	40 °C	40 °C	40 °C	40 °C	40 °C	
Cooling method	by self-cooling	by self-cooling	by self-cooling	by self-cooling	by self-cooling	by self-cooling	
Safety and protection							
Type	open type	open type	open type	open type	open type	open type	
Class of Insulation System	VDE=B, UL=class 105	VDE=B, UL=class 105	VDE=B, UL=class 105	VDE=B, UL=class 105	VDE=B, UL=class 105	VDE=B, UL=class 105	
Protection index	IP 00	IP 00	IP 00	IP 00	IP 00	IP 00	
Safety class (prepared)	I	I	I	I	I	I	
Short circuit strength	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	
Short circuit proof and overload proof*							
Setting range 230 ±20 Vac	0.25 - 0.40 A	0.25 - 0.40 A	0.40 - 0.63 A	0.40 - 0.63 A	0.63 - 1.00 A	0.63 - 1.00 A	
Setting value 230 ±20 Vac	0.30 A	0.30 A	0.53 A	0.53 A	0.66 A	0.66 A	
Setting range 400 ±20 Vac	0.16 - 0.25 A	0.16 - 0.25 A	0.25 - 0.40 A	0.25 - 0.40 A	0.40 - 0.63 A	0.25 - 0.40 A	
Setting value 400 ±20 Vac	0.20 A	0.20 A	0.31 A	0.31 A	0.38 A	0.38 A	
Setting range 460 ±20 Vac	0.16 - 0.25 A	0.16 - 0.25 A	0.25 - 0.40 A	0.25 - 0.40 A	0.25 - 0.40 A	0.25 - 0.40 A	
Setting value 460 ±20 Vac	0.17 A	0.17 A	0.27 A	0.27 A	0.33 A	0.33 A	
Setting range 520 ±20 Vac	0.10 - 0.16 A	0.10 - 0.16 A	0.16 - 0.25 A	0.16 - 0.25 A	0.25 - 0.40 A	0.25 - 0.40 A	
Setting value 520 ±20 Vac	0.15 A	0.15 A	0.24 A	0.24 A	0.30 A	0.30 A	
* Fusing recommendation for the primary circuit by circuit breaker with tripping characteristic type 20 x Inom related to set							
Order numbers							
Order Number	STU 63/24	STU 63/2x115	STU 100/24	STU 100/2x115	STU 130/24	STU 130/2x115	



Universal Control- and safety isolating- resp. isolating transformer **STU**

Electrical data	Type	STU 160/24	STU 160/2x115	STU 250/24	STU 250/2x115	STU 400/24	STU 400/2x115
	Input						
	Rated input Voltage	210 Vac/230 Vac/250 Vac 380 Vac/400 Vac/420 Vac 440 Vac/460 Vac/480 Vac 500 Vac/520 Vac/540 Vac	210 Vac/230 Vac/250 Vac 380 Vac/400 Vac/420 Vac 440 Vac/460 Vac/480 Vac 500 Vac/520 Vac/540 Vac	210 Vac/230 Vac/250 Vac 380 Vac/400 Vac/420 Vac 440 Vac/460 Vac/480 Vac 500 Vac/520 Vac/540 Vac	210 Vac/230 Vac/250 Vac 380 Vac/400 Vac/420 Vac 440 Vac/460 Vac/480 Vac 500 Vac/520 Vac/540 Vac	210 Vac/230 Vac/250 Vac 380 Vac/400 Vac/420 Vac 440 Vac/460 Vac/480 Vac 500 Vac/520 Vac/540 Vac	210 Vac/230 Vac/250 Vac 380 Vac/400 Vac/420 Vac 440 Vac/460 Vac/480 Vac 500 Vac/520 Vac/540 Vac
	Frequency range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
	Output						
	Rated output voltage	24 Vac	2x115 Vac	24 Vac	2x115 Vac	24 Vac	2x115 Vac
	Rated power VDE (DB cos phi=1)	160 VA	160 VA	250 VA	250 VA	400 VA	400 VA
	Rated power VDE (KB cos phi=0.5)	390 VA	390 VA	555 VA	555 VA	1020 VA	1020 VA
	No-load voltage (app. x factor)	1.09	1.09	1.08	1.08	1.06	1.06
	Efficiency	87 %	87 %	90 %	90 %	91 %	91 %
Standards							
Classification	Control- and safety isolating transformer	Control- and isolating transformer	Control- and safety isolating transformer	Control- and isolating transformer	Control- and safety isolating transformer	Control- and isolating transformer	
Approvals							
Approvals	cURus, ENEC 10 (VDE)	cURus, ENEC 10 (VDE)	cURus, ENEC 10 (VDE)	cURus, ENEC 10 (VDE)	cURus, ENEC 10 (VDE)	cURus, ENEC 10 (VDE)	
Environment							
Ambient temperature max.	40 °C	40 °C	40 °C	40 °C	40 °C	40 °C	
Cooling method	by self-cooling	by self-cooling	by self-cooling	by self-cooling	by self-cooling	by self-cooling	
Safety and protection							
Type	open type	open type	open type	open type	open type	open type	
Class of Insulation System	VDE=B, UL=class 105	VDE=B, UL=class 105	VDE=B, UL=class 105	VDE=B, UL=class 105	VDE=B, UL=class 105	VDE=B, UL=class 105	
Protection index	IP 00	IP 00	IP 00	IP 00	IP 00	IP 00	
Safety class (prepared)	I	I	I	I	I	I	
Short circuit strength	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	
Short circuit proof and overload proof*							
Setting range 230 ±20 Vac	0.63 - 1.00 A	0.63 - 1.00 A	1.00 - 1.60 A	1.00 - 1.60 A	1.60 - 2.50 A	1.60 - 2.50 A	
Setting value 230 ±20 Vac	0.80 A	0.80 A	1.20 A	1.20 A	1.90 A	1.90 A	
Setting range 400 ±20 Vac	0.40 - 0.63 A	0.40 - 0.63 A	0.63 - 1.00 A	0.63 - 1.00 A	1.00 - 1.60 A	1.00 - 1.60 A	
Setting value 400 ±20 Vac	0.50 A	0.50 A	0.70 A	0.70 A	1.10 A	1.10 A	
Setting range 460 ±20 Vac	0.40 - 0.63 A	0.40 - 0.63 A	0.40 - 0.63 A	0.40 - 0.63 A	1.00 - 1.60 A	1.00 - 1.60 A	
Setting value 460 ±20 Vac	0.40 A	0.40 A	0.60 A	0.60 A	1.00 A	1.00 A	
Setting range 520 ±20 Vac	0.25 - 0.40 A	0.25 - 0.40 A	0.40 - 0.63 A	0.40 - 0.63 A	0.63 - 1.00 A	0.63 - 1.00 A	
Setting value 520 ±20 Vac	0.30 A	0.30 A	0.50 A	0.50 A	0.90 A	0.90 A	
* Fusing recommendation for the primary circuit by circuit breaker with tripping characteristic type 20 x Inom related to set							
Order numbers							
Order Number	STU 160/24	STU 160/2x115	STU 250/24	STU 250/2x115	STU 400/24	STU 400/2x115	



Universal Control- and safety isolating- resp. isolating transformer **STU**

Electrical data	Type	STU 500/24	STU 500/2x115	STU 630/24	STU 630/2x115	STU 800/24	STU 800/2x115
	Input						
	Rated input Voltage	210 Vac/230 Vac/250 Vac 380 Vac/400 Vac/420 Vac 440 Vac/460 Vac/480 Vac 500 Vac/520 Vac/540 Vac	210 Vac/230 Vac/250 Vac 380 Vac/400 Vac/420 Vac 440 Vac/460 Vac/480 Vac 500 Vac/520 Vac/540 Vac	210 Vac/230 Vac/250 Vac 380 Vac/400 Vac/420 Vac 440 Vac/460 Vac/480 Vac 500 Vac/520 Vac/540 Vac	210 Vac/230 Vac/250 Vac 380 Vac/400 Vac/420 Vac 440 Vac/460 Vac/480 Vac 500 Vac/520 Vac/540 Vac	210 Vac/230 Vac/250 Vac 380 Vac/400 Vac/420 Vac 440 Vac/460 Vac/480 Vac 500 Vac/520 Vac/540 Vac	210 Vac/230 Vac/250 Vac 380 Vac/400 Vac/420 Vac 440 Vac/460 Vac/480 Vac 500 Vac/520 Vac/540 Vac
	Frequency range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
	Output						
	Rated output voltage	24 Vac	2x115 Vac	24 Vac	2x115 Vac	24 Vac	2x115 Vac
	Rated power VDE (DB cos phi=1)	500 VA	500 VA	630 VA	630 VA	800 VA	800 VA
	Rated power VDE (KB cos phi=0.5)	1370 VA	1370 VA	1540 VA	1540 VA	2000 VA	2000 VA
	No-load voltage (app. x factor)	1.05	1.05	1.05	1.05	1.04	1.04
	Efficiency	91 %	91 %	92 %	92 %	92 %	92 %
Standards							
Classification	Control- and safety isolating transformer	Control- and isolating transformer	Control- and safety isolating transformer	Control- and isolating transformer	Control- and safety isolating transformer	Control- and isolating transformer	
Approvals							
Approvals	cURus, ENEC 10 (VDE)	cURus, ENEC 10 (VDE)	cURus, ENEC 10 (VDE)	cURus, ENEC 10 (VDE)	cURus, ENEC 10 (VDE)	cURus, ENEC 10 (VDE)	
Environment							
Ambient temperature max.	40 °C	40 °C	40 °C	40 °C	40 °C	40 °C	
Cooling method	by self-cooling	by self-cooling	by self-cooling	by self-cooling	by self-cooling	by self-cooling	
Safety and protection							
Type	open type	open type	open type	open type	open type	open type	
Class of Insulation System	VDE=B, UL=class 105	VDE=B, UL=class 105	VDE=B, UL=class 105	VDE=B, UL=class 105	VDE=B, UL=class 105	VDE=B, UL=class 105	
Protection index	IP 00	IP 00	IP 00	IP 00	IP 00	IP 00	
Safety class (prepared)	I	I	I	I	I	I	
Short circuit strength	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	
Short circuit proof and overload proof*							
Setting range 230 ±20 Vac	1.60 - 2.50 A	1.60 - 2.50 A	2.50 - 4.00 A	2.50 - 4.00 A	2.50 - 4.00 A	2.50 - 4.00 A	
Setting value 230 ±20 Vac	2.30 A	2.30 A	3.00 A	3.00 A	3.70 A	3.70 A	
Setting range 400 ±20 Vac	1.00 - 1.60 A	1.00 - 1.60 A	1.60 - 2.50 A	1.60 - 2.50 A	1.60 - 2.50 A	1.60 - 2.50 A	
Setting value 400 ±20 Vac	1.40 A	1.40 A	1.70 A	1.70 A	2.10 A	2.10 A	
Setting range 460 ±20 Vac	1.00 - 1.60 A	1.00 - 1.60 A	1.00 - 1.60 A	1.00 - 1.60 A	1.60 - 2.50 A	1.60 - 2.50 A	
Setting value 460 ±20 Vac	1.20 A	1.20 A	1.50 A	1.50 A	1.70 A	1.70 A	
Setting range 520 ±20 Vac	1.00 - 1.60 A	1.00 - 1.60 A	1.00 - 1.60 A	1.00 - 1.60 A	1.60 - 2.50 A	1.60 - 2.50 A	
Setting value 520 ±20 Vac	1.00 A	1.00 A	1.30 A	1.30 A	1.60 A	1.60 A	
* Fusing recommendation for the primary circuit by circuit breaker with tripping characteristic type 20 x Inom related to set							
Order numbers							
Order Number	STU 500/24	STU 500/2x115	STU 630/24	STU 630/2x115	STU 800/24	STU 800/2x115	



Universal Control- and safety isolating- resp. isolating transformer **STU**

Electrical data	Type	STU 1000/2x115	STU 1600/2x115	STU 2000/2x115	STU 2500/2x115		
	Input						
	Rated input Voltage	210 Vac/230 Vac/250 Vac 380 Vac/400 Vac/420 Vac 440 Vac/460 Vac/480 Vac 500 Vac/520 Vac/540 Vac	210 Vac/230 Vac/250 Vac 380 Vac/400 Vac/420 Vac 440 Vac/460 Vac/480 Vac 500 Vac/520 Vac/540 Vac	210 Vac/230 Vac/250 Vac 380 Vac/400 Vac/420 Vac 440 Vac/460 Vac/480 Vac 500 Vac/520 Vac/540 Vac	210 Vac/230 Vac/250 Vac 380 Vac/400 Vac/420 Vac 440 Vac/460 Vac/480 Vac 500 Vac/520 Vac/540 Vac		
	Frequency range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz		
	Output						
	Rated output voltage	2x115 Vac	2x115 Vac	2x115 Vac	2x115 Vac		
	Rated power VDE (DB cos phi=1)	1000 VA	1600 VA	2000 VA	2500 VA		
	Rated power VDE (KB cos phi=0.5)	3120 VA	3800 VA	5770 VA	6200 VA		
	No-load voltage (app. x factor)	1.03	1.03	1.02	1.02		
	Efficiency	94 %	94 %	95 %	95 %		
Standards							
Classification	Control- and isolating transformer	Control- and isolating transformer	Control- and isolating transformer	Control- and isolating transformer			
Approvals							
Approvals	cURus, ENEC 10 (VDE)	cURus, ENEC 10 (VDE)	cURus, ENEC 10 (VDE)	cURus, ENEC 10 (VDE)			
Environment							
Ambient temperature max.	40 °C	40 °C	40 °C	40 °C			
Cooling method	by self-cooling	by self-cooling	by self-cooling	by self-cooling			
Safety and protection							
Type	open type	open type	open type	open type			
Class of Insulation System	VDE=B, UL=class 105	VDE=B, UL=class 105	VDE=B, UL=class 105	VDE=B, UL=class 105			
Protection index	IP 00	IP 00	IP 00	IP 00			
Safety class (prepared)	I	I	I	I			
Short circuit strength	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof			
Short circuit proof and overload proof*							
Setting range 230 ±20 Vac	4.00 - 6.30 A	6.30 - 10.00 A	8.00 - 12.00 A	10.00 - 16.00 A			
Setting value 230 ±20 Vac	4.60 A	7.30 A	9.10 A	11.20 A			
Setting range 400 ±20 Vac	2.50 - 4.00 A	4.00 - 6.30 A	4.00 - 6.30 A	6.30 - 10.00 A			
Setting value 400 ±20 Vac	2.60 A	4.20 A	5.20 A	6.50 A			
Setting range 460 ±20 Vac	1.60 - 2.50 A	2.50 - 4.00 A	4.00 - 6.30 A	4.00 - 6.30 A			
Setting value 460 ±20 Vac	2.30 A	3.70 A	4.50 A	5.60 A			
Setting range 520 ±20 Vac	1.60 - 2.50 A	2.50 - 4.00 A	4.00 - 6.30 A	4.00 - 6.30 A			
Setting value 520 ±20 Vac	2.00 A	3.20 A	4.00 A	5.00 A			
* Fusing recommendation for the primary circuit by circuit breaker with tripping characteristic type 20 x Inom related to set							
Order numbers							
Order Number	STU 1000/2x115	STU 1600/2x115	STU 2000/2x115	STU 2500/2x115			



Universal Control- and safety isolating- resp. isolating transformer **STU**

Mechanical data	Type	Terminals	Fixing method	Fixing screws	Weight	Dimension picture (in mm)	A	B	C	D	E	F1	F2
	STU 63/24	Screw-type terminals, PE 6.3 x 0.8	Base plate	M4	1.50 kg		84	64	94	64	50	38	38
	STU 63/2x115	Screw-type terminals, PE 6.3 x 0.8	Base plate	M4	1.50 kg		84	64	94	64	50	38	38
	STU 100/24	Screw-type terminals, PE 6.3 x 0.8	Base plate	M4	2.00 kg		84	76	94	64	63.5	43	43
	STU 100/2x115	Screw-type terminals, PE 6.3 x 0.8	Base plate	M4	2.00 kg		84	76	94	64	63.5	43	43
	STU 130/24	Screw-type terminals, PE 6.3 x 0.8	Base plate	M5	2.30 kg		96	78	105	84	63.5	39	39
	STU 130/2x115	Screw-type terminals, PE 6.3 x 0.8	Base plate	M5	2.30 kg		96	78	105	84	63.5	39	39
	STU 160/24	Screw-type terminals, PE 6.3 x 0.8	Base plate	M5	2.80 kg		96	88	105	84	73	43	43
	STU 160/2x115	Screw-type terminals, PE 6.3 x 0.8	Base plate	M5	2.80 kg		96	88	105	84	73	43	43
	STU 250/24	Screw-type terminals, PE 6.3 x 0.8	Base plate	M5	4.10 kg		120	92	123	90	74	42	42
	STU 250/2x115	Screw-type terminals, PE 6.3 x 0.8	Base plate	M5	4.10 kg		120	92	123	90	74	42	42
	STU 400/24	Screw-type terminals, PE 6.3 x 0.8	Base plate	M5	5.40 kg		120	102	123	90	85	50	67
	STU 400/2x115	Screw-type terminals, PE 6.3 x 0.8	Base plate	M5	5.40 kg		120	102	123	90	85	50	58
	STU 500/24	Screw-type terminals, PE 6.3 x 0.8	Base plate	M5	7.00 kg		120	122	126	90	104	60	77
	STU 500/2x115	Screw-type terminals, PE 6.3 x 0.8	Base plate	M5	7.00 kg		120	122	126	90	104	60	68
	STU 630/24	Screw-type terminals, PE 6.3 x 0.8	Base plate	M6	7.90 kg		150	111	149	122	90	47	65
	STU 630/2x115	Screw-type terminals, PE 6.3 x 0.8	Base plate	M6	7.90 kg		150	111	149	122	90	47	56
	STU 800/24	Screw-type terminals, PE 6.3 x 0.8	Base plate	M6	10.30 kg		150	128	150	122	106	54	74
	STU 800/2x115	Screw-type terminals, PE 6.3 x 0.8	Base plate	M6	10.30 kg		150	128	150	122	106	54	65
	STU 1000/2x115	Screw-type terminals, PE 6.3 x 0.8	Base plate	M6	13.50 kg		150	154	145	122	130	68	77
	STU 1600/2x115	Screw-type terminals, PE 6.3 x 0.8	Base plate	M8	17.80 kg		190	145	163	156	120	86	66
	STU 2000/2x115	Screw-type terminals, PE 6.3 x 0.8	Base plate	M8	22.40 kg		190	180	163	156	150	82	83
	STU 2500/2x115	Screw-type terminals, PE 6.3 x 0.8	Base plate	M8	25.30 kg		190	185	163	156	160	87	88

Dimension pictures

