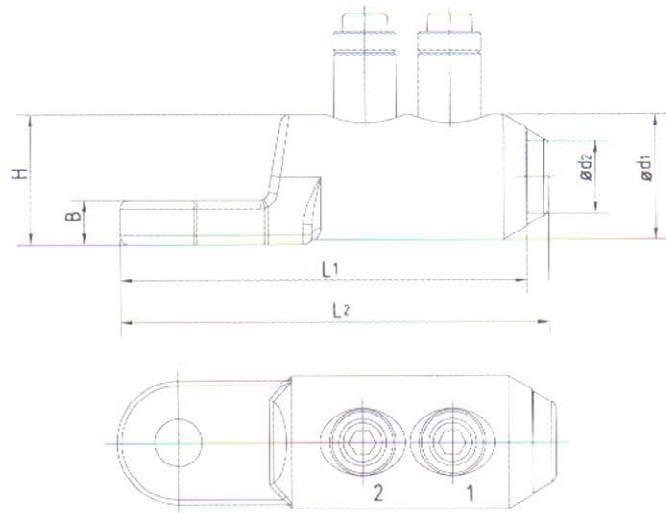


## SICON bolted cable lug

The special design of SICON bolts means that there are no fixed predetermined break points in the thread. Instead the bolt always breaks reliably at the surface of the clamp body.

- Nothing protrudes from the clamp body
- Full use of the thread load rating for any conductor cross section
- No special tools needed
- Smooth breakage of the shear bolt simplifies tightening



No.	Tap plate mounting hole Ø (mm)	Number of bolts	Width across flats	Diameter D1 Ø d1 (mm)	Diameter D2 Ø d2 (mm)	Dimension L <sub>1</sub> L <sub>1</sub> (mm)	Dimension L <sub>2</sub> L <sub>2</sub> (mm)	Packing unit
332 604 010	13	1	SW 5	24	13	70	75	12
332 599 010	13	2	SW 5	28	16.3	91	96	12
332 595 010	13	2	SW 6	33	20	115	117	12
332 595 011	16.5	2	SW 6	35	20	120	122	12
332 605 010	13	2	SW 8	38	24	120	123	12
332 605 011	16.5	2	SW 8	35	24	120	123	12
332 625 010	13	3	SW 8	42	26	138	141	12
332 625 011	16.5	3	SW 8	42	26	138	141	12
332 606 010	16.5	3	SW 8	50	33	180	184	6

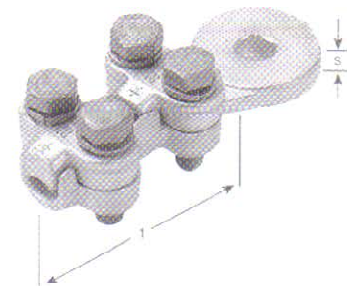
No.	Al ○ (mm <sup>2</sup> )	Al ● (mm <sup>2</sup> )	Al ● (mm <sup>2</sup> )	Al ◊ (mm <sup>2</sup> )	Al ◊ (mm <sup>2</sup> )	Cu ○ (mm <sup>2</sup> )	Cu ● (mm <sup>2</sup> )	Cu ● (mm <sup>2</sup> )	Cu ◊ (mm <sup>2</sup> )
332 604 010	10 - 95	10 - 95	10 - 95	50 - 95	35 - 70	10 - 95	10 - 95	10 - 95	35 - 70
332 599 010	25 - 150	25 - 150	25 - 150	35 - 120	35 - 120	25 - 150	25 - 150	25 - 150	35 - 120
332 595 010	50 - 240	50 - 185	50 - 240	50 - 185	50 - 150	50 - 240	50 - 185	50 - 240	50 - 150
332 595 011	50 - 240	50 - 185	50 - 240	50 - 185	50 - 150	50 - 240	50 - 185	50 - 240	50 - 150
332 605 010	95 - 400	95 - 300	95 - 300	95 - 240	95 - 240	95 - 400	95 - 300	95 - 300	95 - 240
332 605 011	95 - 400	95 - 300	95 - 300	95 - 240	95 - 240	95 - 400	95 - 300	95 - 300	95 - 240
332 625 010	185 - 500	185 - 400	185 - 400	185 - 240	185 - 240	185 - 500	185 - 400	185 - 400	185 - 240
332 625 011	185 - 500	185 - 400	185 - 400	185 - 240	185 - 240	185 - 500	185 - 400	185 - 400	185 - 240
332 606 010	300 - 800	300 - 630	300 - 630	-	300 - 400	300 - 800	300 - 630	300 - 630	300 - 400

## Serrated cable lug

The diversity of terminations and conductor materials as well as the variety of conductor constructions (solid, stranded, flexible, highly flexible) call for different types of cable lugs. Moreover, the dimensions of tap-plate and tap-plate mounting holes must match the different diameters of the terminal bolts.

## Serrated cable lugs Al

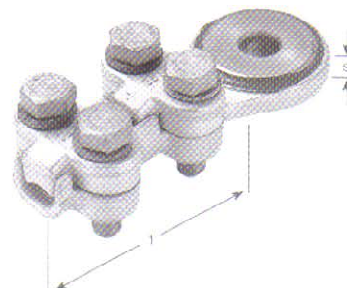
with two terminal covers.



No.	Conductor cross section	Diameter of conductor	Tap plate mounting hole	Tap plate	Screw	Dimension L	Dimension S	Packing unit
	(mm <sup>2</sup> )	Ø (mm)	Ø (mm)	Ø (mm)		L (mm)	s (mm)	
<b>330 368 368</b>	35 - 70	7,5 - 11,7	10.5	36	M8	83	7	20
<b>330 369 369</b>	70 - 120	10,5 - 14,0	13	40	M8	92	7	20

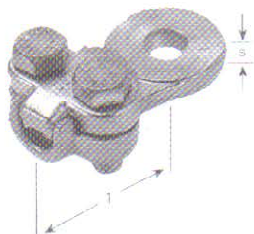
## Serrated cable lugs Al/Cu with two caps

The size of the mounting hole should not be enlarged.



No.	Conductor cross section	Diameter of conductor	Tap plate mounting hole	Tap plate	Screw	Dimension L	Dimension S	Packing unit
	(mm <sup>2</sup> )	Ø (mm)	Ø (mm)	Ø (mm)		L (mm)	s (mm)	
<b>330 379 379</b>	35 - 70	7,5 - 11,7	10.5	36	M8	83	12	20
<b>330 379 875</b>	35 - 70	7,5 - 11,7	13	36	M8	83	12	20
<b>330 380 380</b>	70 - 120	10,5 - 14,0	13	40	M8	92	13	20
<b>330 381 951</b>	150 - 240	15,8 - 20,3	13	40	M8	102	15	20

## Serrated cable lugs Cu with one cap



Bolted cable lug

No.	Conductor cross section (mm <sup>2</sup> )	Diameter of conductor Ø (mm)	Tap plate mounting hole		Screw	Dimension		Packing unit
			Ø (mm)	Ø (mm)		L (mm)	s (mm)	
330 311 311	10 - 35	3,5 - 7,5	10,5	30	M6	46	6	20
330 311 980	10 - 35	3,5 - 7,5	13	30	M6	46	6	20
330 312 971	35 - 70	7,5 - 10,5	13	30	M8	49	7	20
330 313 313	70 - 120	10,5 - 14,0	13	40	M8	58	7	20

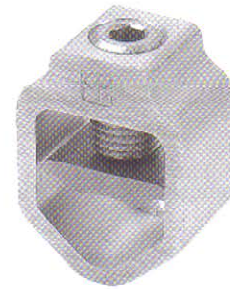
## V-type terminal clamps

Direct terminal clamps for connecting copper and aluminium conductors to V-shaped plates.

The cable is taken to the V-shaped busbar with transverse grooves without any intermediate links. The clamp, with bolt and thrust piece, is intended for use as a multi-range clamp for stranded copper or aluminium conductors or for solid aluminium conductors.

## V type Direkta terminal clamps Al for one conductor

for copper and aluminium conductors for connecting to V-shaped plates.



No.	Number of conductors	Width across flats	Torque (Nm)	Width (mm)	Height (mm)	Length (mm)
331 847 847	1	SW 5	12	25.5	33	18
330 969 969	1	SW 6	25	34	45	22

No.	Al ○ (mm <sup>2</sup> )	Al ● (mm <sup>2</sup> )	Al ◊ (mm <sup>2</sup> )	Al ◈ (mm <sup>2</sup> )	Cu ○ (mm <sup>2</sup> )	Cu ● (mm <sup>2</sup> )	Cu ◈ (mm <sup>2</sup> )
331 847 847	16 - 50	16 - 50	35 - 95	35 - 70	16 - 50	16 - 50	35 - 70
330 969 969	35	35	50 - 240	35 - 185	35	35	35 - 185

## Insulating Cap

No.	Suitable for
335 375 375	330 969 969



## V plate

No.	Type	Thickness d (mm)	Hole Ø (mm)	Suitable for
333 740 808	straight	3	12.5	330 969 969
333 740 740	30° angled	3	12.5	330 969 969
331 847 847	straight	3	12.5	331 847 847
331 847 847	straight	3	8.4	331 847 847





## V type Direkta terminal clamps Al for two conductors

for copper and aluminium conductors for connecting to V-shaped plates.

No.	Type	Number of conductors	Width across flats	Torque (Nm)	Width (mm)	Height (mm)	Length (mm)
331 659 659	-	2	SW 5	12	27.5	52	25
331 660 660	for 2 conductors	2	SW 6	25	33	74	29

No.	Al	Al	Al	Al	Cu	Cu	Cu
	(mm <sup>2</sup> )	(mm <sup>2</sup> )	(mm <sup>2</sup> )	(mm <sup>2</sup> )	(mm <sup>2</sup> )	(mm <sup>2</sup> )	(mm <sup>2</sup> )
331 659 659	25 - 50	25 - 50	35 - 70	35 - 70	25 - 50	25 - 50	35 - 70
331 660 660	-	-	70 - 240	50 - 185	-	-	50 - 185

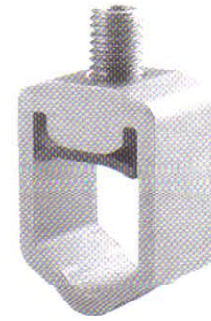


## V plate

No.	Type	Thickness d (mm)	Hole Ø (mm)	Suitable for
550 740 001	10° angled	5	12.5	331 660 660

## V type Direkta terminal clamp VN

for copper and aluminium conductors for connecting to V-shaped plates.



No.	Width across flats		Torque (Nm)	Width (mm)	Height (mm)	Length (mm)	
330 971 001	SW 6		25	36.6	50.5	23	

No.	Al ○ (mm <sup>2</sup> )	Al ● (mm <sup>2</sup> )	Al ◊ (mm <sup>2</sup> )	Al ◈ (mm <sup>2</sup> )	Cu ○ (mm <sup>2</sup> )	Cu ● (mm <sup>2</sup> )	Cu ◊ (mm <sup>2</sup> )
330 971 001	25 - 300	25 - 300	35 - 300	35 - 240	25 - 300	25 - 300	35 - 240

## Insulating Cap

No.	Suitable for
546 012 024	330 971 001



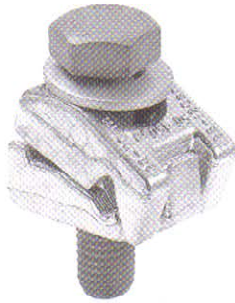
## VN plate

No.	Type	Thickness d (mm)	Hole Ø (mm)	Suitable for
550 741 003	10° angled	3	12.5	330 971 001



## Flat terminal clamps

Direct terminal clamps for connecting stranded copper and aluminium cables as well as solid aluminium cables to flat busbars.



### Flat Direkta terminal clamps Al with screw

for copper and aluminium conductors.

No.	Screw	Internal diameter of spring washer Ø (mm)	Number of conductors	Width (mm)	Height (mm)	Length (mm)
331 472 472	M12	12.2	1	32	44	44
331 867 867	M12	12.2	1	26	32	35

No.	Al ○ (mm <sup>2</sup> )	Al ● (mm <sup>2</sup> )	Al ◐ (mm <sup>2</sup> )	Al ◑ (mm <sup>2</sup> )	Cu ○ (mm <sup>2</sup> )	Cu ● (mm <sup>2</sup> )	Cu ◐ (mm <sup>2</sup> )
331 472 472	-	-	150 - 300	120 - 240	-	-	120 - 240
331 867 867	35 - 70	35 - 70	50 - 150	35 - 120	35 - 70	35 - 70	35 - 120

## Flat Direkta terminal clamps Al without screws

for copper and aluminium conductors.



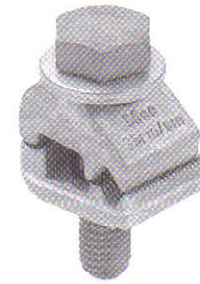
No.	Internal diameter of spring washer Ø (mm)	Number of conductors	for Screw	Width (mm)	Height (mm)	Length (mm)
331 962 962	10.2	1	M10	26	32	35
331 962 963	12.2	1	M12	26	32	35








No.	Al ○ (mm <sup>2</sup> )	Al ● (mm <sup>2</sup> )	Al ◐ (mm <sup>2</sup> )	Al ◑ (mm <sup>2</sup> )	Cu ○ (mm <sup>2</sup> )	Cu ● (mm <sup>2</sup> )	Cu ◐ (mm <sup>2</sup> )
331 962 962	35 - 70	35 - 70	50 - 150	35 - 120	35 - 70	35 - 70	35 - 120
331 962 963	35 - 70	35 - 70	50 - 150	35 - 120	35 - 70	35 - 70	35 - 120

## Flat Direkta terminal clamps brass for one conductor

for copper and aluminium conductors.

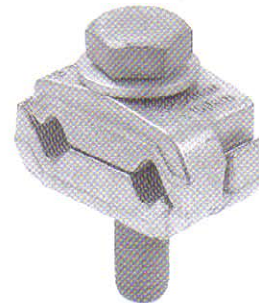


No.	Screw	Internal diameter of spring washer Ø (mm)	Number of conductors	Width (mm)	Height (mm)	Length (mm)
331 575 580	M10	10.2	1	26	32.5	35.5
331 575 581	M12	12.2	1	26	32.5	35.5








No.	Al  (mm <sup>2</sup> )	Al  (mm <sup>2</sup> )	Al  (mm <sup>2</sup> )	Al  (mm <sup>2</sup> )	Cu  (mm <sup>2</sup> )	Cu  (mm <sup>2</sup> )	Cu  (mm <sup>2</sup> )
331 575 580	-	-	95 - 185	70 - 150	-	-	70 - 150
331 575 581	-	-	95 - 185	70 - 150	-	-	70 - 150

## Flat Direkta terminal clamps brass for two conductors

for copper and aluminium conductors.



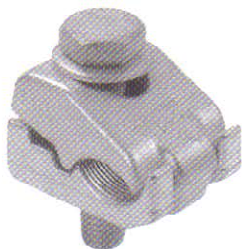
No.	Screw	Internal diameter of spring washer Ø (mm)	Number of conductors	Width (mm)	Height (mm)	Length (mm)
331 584 584	M8	8.2	2	18	26	34
331 655 655	M12	12.2	2	26	35	47

No.	Al  (mm <sup>2</sup> )	Al  (mm <sup>2</sup> )	Al  (mm <sup>2</sup> )	Al  (mm <sup>2</sup> )	Cu  (mm <sup>2</sup> )	Cu  (mm <sup>2</sup> )	Cu  (mm <sup>2</sup> )
331 584 584	16 - 35	16 - 35	50	16 - 35	16 - 35	16 - 35	16 - 35
331 655 655	-	-	70 - 150 2 x 185	50 - 120 2 x 150	-	-	50 - 120 2 x 150



# Terminations

Flat terminal clamps



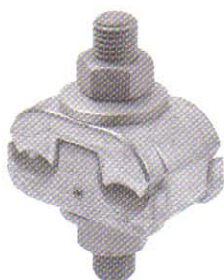
## Flat Direkta terminal clamps brass for one conductor

for circular copper and aluminium conductors.

No.	Screw		Number of conductors	Width (mm)	Height (mm)	Length (mm)	
332 028 028	M12		1	35	36	50	

No.	Al (mm <sup>2</sup> )	Al (mm <sup>2</sup> )	Al (mm <sup>2</sup> )	Al (mm <sup>2</sup> )	Cu (mm <sup>2</sup> )	Cu (mm <sup>2</sup> )	Cu (mm <sup>2</sup> )
332 028 028	95 - 300	95 - 300	-	-	95 - 300	95 - 300	-



## Flat Direkta terminal clamps MS for two conductors

with threaded pin for circular copper and aluminium conductors.

No.	Screw		Number of conductors	Width (mm)	Height (mm)	Length (mm)	
332 109 109	M16		2	41	52	69	

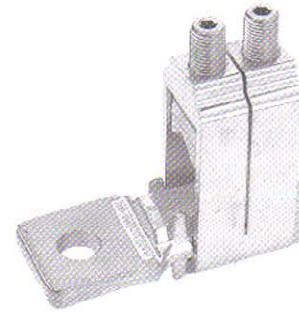
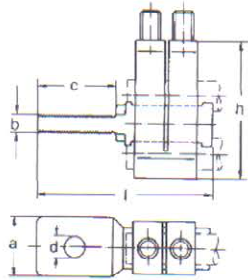
  

No.	Al (mm <sup>2</sup> )	Al (mm <sup>2</sup> )	Al (mm <sup>2</sup> )	Al (mm <sup>2</sup> )	Cu (mm <sup>2</sup> )	Cu (mm <sup>2</sup> )	Cu (mm <sup>2</sup> )
332 109 109	95 - 300	95 - 300	-	-	95 - 300	95 - 300	-

## Terminal clamp with flat plate

### Two core terminal clamp with flat plate

for Cu and Al conductors (circular and sector shaped), with 2 thrust bolts.

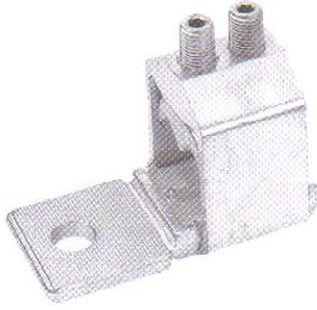


Terminal clamp with flat plate

No.	Number of conductors	Dimension A	Dimension B	Dimension C	Dimension D	Dimension H	Dimension L	Packing unit
		a (mm)	b (mm)	c (mm)	d (mm)	h (mm)	L (mm)	
331 751 751	2	45	10	48	-	101	113	4
331 820 182	2	45	10	48	13	101	113	4 ✖
331 820 820	2	45	10	48	17	101	113	4

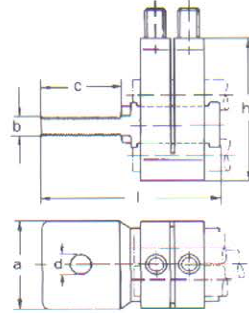
No.	Cu	Al	Al	Cu
	(mm <sup>2</sup> )	(mm <sup>2</sup> )	(mm <sup>2</sup> )	(mm <sup>2</sup> )
331 751 751	120 - 300	120 - 300	120 - 185	120 - 185
331 820 182	120 - 300	120 - 300	120 - 185	120 - 185
331 820 820	120 - 300	120 - 300	120 - 185	120 - 185

*\*240 =*



## Triple conductor clamps with flat plate

for Cu and Al circular conductors,  
with 2 thrust bolts.



No.	Number of conductors	Dimension A	Dimension B	Dimension C	Dimension D	Dimension H	Dimension L	Packing unit
		a (mm)	b (mm)	c (mm)	d (mm)	h (mm)	L (mm)	
332 142 081	3	52	9.5	56	-	92	121	4
332 142 001	3	52	9.5	56	14	92	121	4
332 142 142	3	52	9.5	56	17	92	121	4

No.	Cu	Al
	(mm <sup>2</sup> )	(mm <sup>2</sup> )
332 142 081	95 - 185	95 - 185
332 142 001	95 - 185	95 - 185
332 142 142	95 - 185	95 - 185

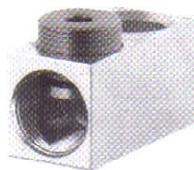
### Transformer terminal clamps

for terminal bolts compliant with DIN EN 50386.

current strength	bolts	transformer sizes
250 A	M12	100 kVA / 160 kVA
630 A	M20	250 kVA / 400 kVA
1250 A	M30 x 2	630 kVA
2000 A	M42 x 3	800 kVA / 1000 kVA
3150 A	M48 x 3	1250 kVA / 1600 kVA

When fitting clamps with 2 thrust bolts, ensure that the thrust bolts are tightened at least 6 times alternately up to a torque of 25 Nm (not applicable for 2DIREKT transformer connection clamps). The terminal screws on the transformer terminal bolts must be tightened to 20 Nm.

- The clamp channels have been designed so that both round and sector-shaped conductors can be clamped
- Multi-range use thanks to electrolytic tinning, suitable for both Al and Cu conductors
- Suitable for outdoor use if used with the corresponding cover
- Easy assembly with an SW6 pin wrench, no special tools required



## 2DIREKT single wire transformer terminal clamp

for terminal bolts compliant with DIN EN 50386.

For **horizontal** or **vertical** connection of Cu or Al cables to the secondary side of distribution transformers with DIN EN 50386 compliant bolted connections (1 kV).

2DIREKT terminal clamps are type tested in compliance with IEC 61238 with Cu cables, 240 mm<sup>2</sup>.

Width across flats 8 for thrust bolts, 55 Nm.  
Lock with 50 Nm.

Other types on request.

No.	Conductor cross sections (mm <sup>2</sup> )	Number of conductors	Terminal bolt (mm)	Width (mm)	Height (mm)	Packing unit
331 745 001	35 - 240	1	M12	30	34	4
331 745 003	35 - 240	1	M16	30	34	4
331 745 002	35 - 240	1	M20	30	34	4



## Cover for 2DIREKT single wire terminal

No.	Type	For terminal clamp	Packing unit
331 345 001	Internal use	331 745 001 331 745 002 331 745 003	4
331 345 002	Outdoor use	331 745 001 331 745 002 331 745 003	4

SCANARE 2

**2DIREKT two wire transformer terminal clamp**

for terminal bolts compliant with DIN EN 50386.

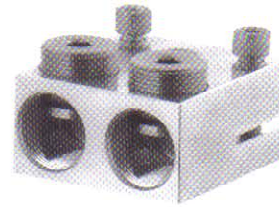
For **horizontal** or **vertical** connection of Cu or Al cables to the secondary side of distribution transformers with DIN EN 50386 compliant bolted connections (1 kV).

2DIREKT terminal clamps are type tested in compliance with IEC 61238 with Cu cables, 240 mm<sup>2</sup>.

Width across flats 8 for thrust bolts, 55 Nm.

Width across flats 6 for cheese-head bolts, 25 Nm.

Other types on request.

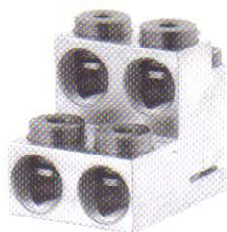


No.	Conductor cross sections (mm <sup>2</sup> )	Number of conductors	Terminal bolt (mm)	Width (mm)	Height (mm)	Packing unit
331 746 004	35 - 240	2	M12	64	34	4
331 746 006	35 - 240	2	M16	64	34	4
331 746 003	35 - 240	2	M20	64	34	4
331 746 002	35 - 240	2	M30x2	64	34	4

**Cover for 2DIREKT two wire terminal**

No.	Type	For terminal clamp	Packing unit
331 346 001	Internal use	331 746 002 331 746 003 331 746 006	4
331 346 003	Internal use	331 746 004	4
331 346 002	Outdoor use	331 746 002 331 746 003 331 746 006	4
331 346 004	Outdoor use	331 746 004	4





## 2DIREKT four wire transformer terminal clamp

for terminal bolts compliant with DIN EN 50386.

For **horizontal** or **vertical** connection of Cu or Al cables to the secondary side of distribution transformers with DIN EN 50386 compliant bolted connections (1 kV).

2DIREKT terminal clamps are type tested in compliance with IEC 61238 with Cu cables, 240 mm<sup>2</sup>.

Width across flats 8 for thrust bolts, 55 Nm.

Width across flats 6 for cheese-head bolts, 25 Nm.

Other types on request.

No.	Conductor cross sections (mm <sup>2</sup> )	Number of conductors	Terminal bolt (mm)	Width (mm)	Height (mm)	Packing unit
331 747 004	35 - 240	4	M20	64	74	4
331 747 001	35 - 240	4	M30 x 2	64	74	4
331 747 002	35 - 240	4	M42 x 3	64	74	4
331 747 003	35 - 240	4	M48 x 3	64	74	4

## 1 Cover for 2DIREKT four wire terminal



No.	Type	For terminal clamp	Packing unit
331 347 001	Internal use	331 747 001 331 747 002 331 747 004	4 <b>1</b>
331 347 002	Outdoor use	331 747 001 331 747 002 331 747 004	4 <b>1</b>
<b>2</b> 331 348 002	Internal and outdoor use	331 747 003	4 <b>2</b>

## DIREKT six wire transformer terminal clamp

for terminal bolts compliant with DIN EN 50386.

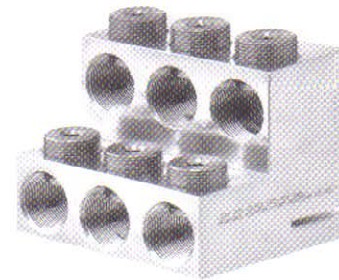
For **horizontal** connection of Cu or Al cables to the secondary side of distribution transformers with DIN EN 50386 compliant bolted connections (1 kV).

DIREKT terminal clamps are type tested in compliance with IEC 61238 with Cu cables, 240 mm<sup>2</sup>.

Width across flats 8 for thrust bolts, 55 Nm.

Width across flats 6 for cheese-head bolts, 25 Nm.

Other types on request.



No.	Conductor cross sections (mm <sup>2</sup> )	Number of conductors	Terminal bolt (mm)	Width (mm)	Height (mm)	Packing unit
331 749 002	185 - 400	6	M42 x 3	110	87	4
331 749 001	185 - 400	6	M48 x 3	110	87	4

## Cover for DIREKT six wire terminal

No.	Type	For terminal clamp	Packing unit
331 348 001	Internal and outdoor use	331 749 001 331 749 002	4 <span style="color: red;">1</span>
331 348 002	Internal and outdoor use	331 749 001 331 749 002	4 <span style="color: red;">2</span>

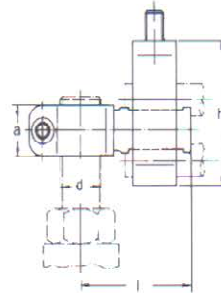










## Transformer terminal clamps

with bolt terminal (90° angled) for Cu and Al conductors (circular and sector shaped). The terminal part is offset so that two clamps for **triple and quadruple conductor connection** can be mounted one above the other.



No.	Number of conductors	Terminal bolt	Dimension A	Dimension H	Dimension L	Matching cover	Packing unit
		(mm)	a (mm)	h (mm)	L (mm)		
331 914 914	2	M12	28	72	55	332 369 001	4
331 914 916	2	M20	28	72	55	332 369 001	4

No.	Cu	Al	Al	Cu
	 (mm <sup>2</sup> )	 (mm <sup>2</sup> )	 (mm <sup>2</sup> )	 (mm <sup>2</sup> )
331 914 914	50 - 150	50 - 150	50 - 150	50 - 150
331 914 916	50 - 150	50 - 150	50 - 150	50 - 150

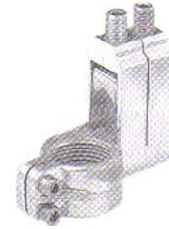
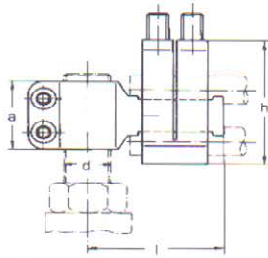
## Covers for Transformer terminal clamps



No.	Dimension D	Dimension L	For terminal clamp	Packing unit
	d (mm)	L (mm)		
332 369 001	72	183	331 914 914	4
			331 914 916	





## Transformer terminal clamps

with bolt terminal (90° angled) for Cu and Al conductors (circular and sector shaped). The terminal part is offset so that two clamps for **triple and quadruple conductor connection** can be mounted one above the other.



Transformer terminal clamps

No.	Number of conductors	Terminal bolt (mm)	Dimension A a (mm)	Dimension H h (mm)	Dimension L L (mm)	Matching cover	Packing unit
331 993 003	2	M20	36	101	84	332 371 001	4
331 993 993	2	M30 x 2	36	101	84	332 371 001	4
331 993 994	2	M42 x 3	36	101	84	332 371 001	4

No.	Cu  (mm <sup>2</sup> )	Al  (mm <sup>2</sup> )	Al  (mm <sup>2</sup> )	Cu  (mm <sup>2</sup> )
331 993 003	120 - 300	120 - 300	120 - 185	120 - 185
331 993 993	120 - 300	120 - 300	120 - 185	120 - 185
331 993 994	120 - 300	120 - 300	120 - 185	120 - 185

## Covers for Transformer terminal clamps

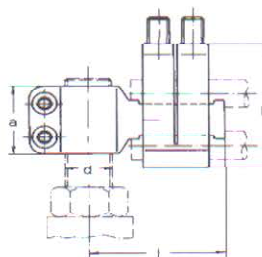
No.	Dimension D d (mm)	Dimension L L (mm)	For terminal clamp	Packing unit
332 371 001	110	270	331 993 003 331 993 993 331 993 994	4









## Transformer terminal clamps

with bolt terminal (90° angled) for Cu and Al conductors.



No.	Number of conductors	Terminal bolt	Dimension A	Dimension H	Dimension L	Matching cover	Packing unit
		(mm)	a (mm)	h (mm)	L (mm)		
332 082 001	3	M20	38	90	80	332 340 001	4
332 082 082	3	M30 x 2	38	90	80	332 340 001	4

No.	Cu	Al	Al	Cu
	 (mm <sup>2</sup> )	 (mm <sup>2</sup> )	 (mm <sup>2</sup> )	 (mm <sup>2</sup> )
332 082 001	95 - 185	-	95 - 185	-
332 082 082	95 - 185	-	95 - 185	-

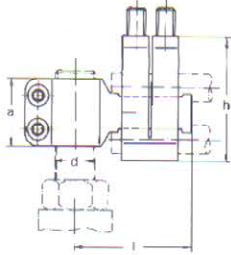
## Covers for Transformer terminal clamps



No.	Dimension D	Dimension L	For terminal clamp	Packing unit
	d (mm)	L (mm)		
332 340 001	110	250	332 082 001 332 082 082	4

## Transformer terminal clamps

with bolt terminal (90° angled) for Cu and Al conductors (circular and sector shaped).



Transformer terminal clamps

No.	Number of conductors	Terminal bolt (mm)	Dimension A	Dimension H	Dimension L	Matching cover	Packing unit
			a (mm)	h (mm)	L (mm)		
331 744 002	2	M12	34	101	84	332 346 001	4
331 744 744	2	M20	34	101	84	332 340 001	4
331 744 748	2	M30 x 2	38	101	87	332 340 001	4

No.	Cu	Al	Al	Cu
	(mm <sup>2</sup> )	(mm <sup>2</sup> )	(mm <sup>2</sup> )	(mm <sup>2</sup> )
331 744 002	120 - 300	120 - 300	120 - 185	120 - 185
331 744 744	120 - 300	120 - 300	120 - 185	120 - 185
331 744 748	120 - 300	120 - 300	120 - 185	120 - 185

## Covers for Transformer terminal clamps

No.	Dimension D	Dimension L	For terminal clamp	Packing unit
	d (mm)	L (mm)		
332 346 001	60	190	331 744 002	4
332 340 001	110	250	331 744 744 331 744 748	4





## Ball pin for terminal clamps

with earthing facility.

No.	Ball diameter	Maximum permissible short-circuit current $I_k$ (kA/1s)	Thread	For terminal clamp	Matching cover
	Ø (mm)		G		
625 097 002	20	18.50	M20	331 744 744	332 340 002
				332 082 001	
625 097 003	20	18.50	M30 x 2	331 744 748	332 340 002
				332 082 082	

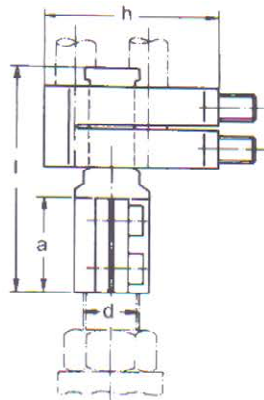
## Covers for Transformer terminal clamps with ball pin device







No.	Dimension D	Dimension L	For ball pin	For terminal clamp	Packing unit
	d (mm)	L (mm)			
332 340 002	110	305	625 097 002	331 744 744	4
			625 097 003	332 082 001	
				331 744 748	
				332 082 082	

## Transformer terminal clamps

with bolt terminal (straight) for Cu and Al conductors (circular and sector shaped).



No.	Number of conductors	Terminal bolt	Dimension A	Dimension H	Dimension L	Matching cover	Packing unit
		(mm)	a (mm)	h (mm)	L (mm)		
331 852 001	2	M12	42	101	106	332 384 001	4
331 852 855	2	M20	42	101	106	332 383 002	4
331 852 857	2	M30 x 2	42	101	106	332 383 002	4

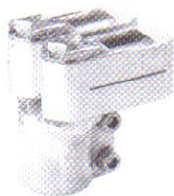
No.	Cu	Al	Al	Cu
	 (mm <sup>2</sup> )	 (mm <sup>2</sup> )	 (mm <sup>2</sup> )	 (mm <sup>2</sup> )
331 852 001	120 - 300	120 - 300	120 - 185	120 - 185
331 852 855	120 - 300	120 - 300	120 - 185	120 - 185
331 852 857	120 - 300	120 - 300	120 - 185	120 - 185

## Covers for Transformer terminal clamps

No.	Dimension D	Dimension L	For terminal clamp	Packing unit
	d (mm)	L (mm)		
332 384 001	60	254	331 852 001	4
332 383 002	100	290	331 852 855 331 852 857	4







# Terminations



## Four core transformer terminal clamp

with bolt terminal (straight) for Cu and Al conductors (circular and sector shaped).

No.	Number of conductors	Terminal bolt	Dimension A	Dimension H	Dimension L	Matching cover	Packing unit
		(mm)	a (mm)	h (mm)	L (mm)		
332 436 003	4	M30 x 2	52	101	113	332 445 001	4
332 436 001	4	M42 x 3	52	101	113	332 435 001	4

No.	Cu	Al	Al	Cu
				
	(mm <sup>2</sup> )	(mm <sup>2</sup> )	(mm <sup>2</sup> )	(mm <sup>2</sup> )
332 436 003	120 - 300	120 - 300	120 - 185	120 - 185
332 436 001	120 - 300	120 - 300	120 - 185	120 - 185

## Covers for Transformer terminal clamps



No.	Dimension D	Dimension L	For terminal clamp	Packing unit
	d (mm)	L (mm)		
332 435 001	122	339	332 436 001	4
332 445 001	105	285	332 436 003	4

## Spool piece

for transformer terminal clamps, insulated on one side.



No.

623 409 001

## Al elast contact discs

Al elast contact discs are used for screw connections designed to carry the full current for planar aluminium and aluminium and copper or aluminium with bronze connection surfaces.

The Al elast contact disc surfaces are tin-plated to keep them free of non-conducting aluminium oxide layers.

Al elast contact discs were subjected to comprehensive ageing tests in the PFISTERER testing laboratories. Amongst other things up to 2500 heating cycles were carried out with test currents up to 1250A and at temperatures up to 115 °C at the connection points. Comparison tests showed that the resistance of the Al elast contact disc connections was only about 20 - 30% of that of comparable traditional rail connections after the end of the durability tests.

The given load values apply when using Al elast contact discs on DIN 46206 flat connections and DIN 43673 busbar screw connections and with similar configurations.

In order to achieve the best possible force input into the Al elast contact disc 36 mm external diameter, 4 mm thick large surface steel discs are used

### Diameter 37 mm

Thread	8.8 steel Nm	A2 F80 / A4 Nm	Cu-Ni alloy Nm	Rated current A
M10	-	-	39	600
M10	46	43	-	750
M12	-	-	68	1000
M12	80	75	-	1250
M16	120	120	120	1250

## Al elast contact discs

with integrated adapter for screw,  
without steel washers.



No.	Contact disc diameter Ø (mm)	Adapter for screw	Packing unit
332 127 127	37	M10 - M16	50





## Steel washers

No.	Contact disc diameter	Thickness	Washers suitable for screws	Packing unit
	Ø (mm)	(mm)		
619 099 007	36	4	M12	100



## Assembly set

with integrated adapter for M12 - M16 screws and 2 steel washers for flat terminals and connections in outdoor substations and indoor installations.

The Al elast contact discs are supplied with two washers ø 36 mm, packed in bags.

No.	Washers suitable for screws	Pitch min.	Packing unit
		(mm)	
332 110 001	M12	40	25
332 110 004	M16	40	25



## Cu Contact Ring

for an optimal contact between insulated and bare copper busbars.

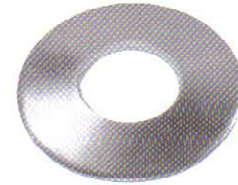
Thus the insulation is penetrated when it is fitted onto the insulated busbar.

No.	Nominal current	Max. short circuiting current	Washers suitable for screws	Torque	Max. insulation thickness
	$I_N$ (A)	$I_k$ 1s/kA		(Nm)	(mm)
624 120 002	1250	40	M12 - St 8.8 tZn	80	1.50

### Bi-metal discs Al/Cu

Due to electrochemical influence on Al and Cu contact surfaces, transition resistances occur. Bi-metal discs effectively prevent contacts from these effects.

No.	Diameter D1	Diameter D2	Thickness (mm)	Washers suitable for screws
	Ø d1 (mm)	Ø d2 (mm)		
302 028 026	18	8.5	1	M8
302 028 027	22	10.5	1	M10
302 028 029	26	11	1	M10
302 028 030	26	13	2	M12
302 028 031	30	13	2	M12
302 028 032	38	13	2	M12
302 028 034	38	17	2	M16



### Contact grease compound P1

PFISTERER Contact Grease Compound P1 permanently protects Al/Al and Al/Cu bolted connections on outdoor and indoor installations against corrosion.

Together with its high temperature resistance, i.e. 90 °C during continuous operation and 200 °C during short-circuits, a reliable transmission of continuous current is guaranteed.

Contact Grease Compound P1 has good adhesive properties, **is non-conductive**, water-resistant as well as to an atmosphere containing steam, SO<sub>2</sub>/SO<sub>3</sub>, sodium chloride, nitrous gases, chlorine and ozone.



No.	Filling weight (kg)
002 996 001	0.1
001 531 531	0.56
001 937 937	25



## Battery impact wrench

This battery-operated impact wrench is ideal for using to tighten shear bolts. The ergonomic design with a soft grip support is compact, a good weight and has an optimum centre of gravity that guarantees careful work. As the battery can be switched in two directions, working with the battery-operated impact wrench is flexible. The strong gear box ensures that the wrench has a long service life. The battery-operated impact wrench has an electronic system with revolution control as well as clockwise or anti-clockwise rotation.

### Technical data:

- Battery pack voltage/capacity: 14,4 V/2 Ah - 2 pieces
- Battery charger
- No. of strokes: 0-2500 1/min
- Idle speed: 0-2200 U/min
- Tool housing: 1/2" SD
- Weight inc. battery: 2.1 kg
- Special tool set:
  - Allen nut SW 5, SW 6, SW 8
  - Load -carrying nut SW 10, SW 13, SW 16, SW 19

No.

305 917 001

## IN K 19 power screwdriver bit 1/2"



No.	Width across flats (SW)	Length of peak (mm)
305 917 106	6	9
305 917 107	6	19

## Brace for mechanical connector

For bracing mechanical connectors.

### Properties:

- Infinitely adjustable for mechanical connections with a cross section range of 25 mm<sup>2</sup> - 240 mm<sup>2</sup> and a diameter of 14 - 35 mm
- Length 280 mm
- Weight: 400 g
- Insulation to comply with EN/IEC 60900



No.

331 901 900

## Plastic cover for SICON

Saves using fillers on the shear spot.



No.	Diameter Ø (mm)	Suitable for	Packing unit
625 229 100	19	332 447 010	6
625 229 110	19	332 592 010 332 595 010 332 595 011 332 614 010	4
625 229 210	15	332 607 010 332 593 010 332 599 010 332 601 010 332 604 010	4
625 229 310	22	332 602 010 332 605 010 332 605 011 332 617 010 332 625 010	4