

## Cable connection technology

Socket sleeves (female), connectors  
ring-type, notched, clamp-type terminals  
insulating sleeves, elastic cable distributors  
Al terminals, Al-Cu terminals  
open brass terminals DIN-terminals

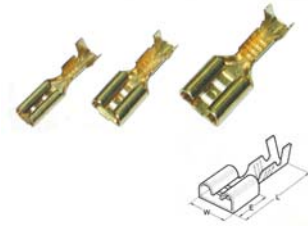


## Socket sleeves (male and female)

### Socket sleeves (female) with cable stop

- bare brass
- not insulated, to DIN 46247/part 1 - 3 and similar

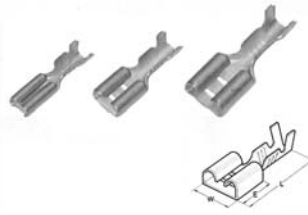
Art. No.	CS	plug	W	L	E	weight	PU
28 00 00	<b>0,5 - 1</b>	6,3 x 0,8	7,6	19,2	7,6	500	200
28 00 04	<b>1 - 2,5</b>	6,3 x 0,8	7,6	19,2	7,6	1100	200
28 00 08	<b>0,5 - 1,25</b>	4,8 x 0,8	5,6	15	6,4	1000	200
28 00 12		4,8 x 0,5	5,6	15	6,4	1000	200
28 00 16		2,8 x 0,8	3,75	16	6,4	1000	200
28 00 20		2,8 x 0,5	3,75	16	6,4	1000	200



### Socket sleeves (female) with cable stop

- tin-plated brass
- not insulated, to DIN 46247/part 1 - 3 and similar

Art. No.	CS	plug	W	L	E	weight	PU
28 00 30	<b>0,5 - 1</b>	6,3 x 0,8	7,6	19,2	7,6	500	200
28 00 34	<b>1 - 2,50</b>	6,3 x 0,8	7,6	19,2	7,6	1100	200
28 00 38	<b>0,5 - 1,25</b>	4,8 x 0,8	5,6	15	6,4	1000	200
28 00 42		4,8 x 0,5	5,6	15	6,4	1000	200
28 00 46		2,8 x 0,8	3,75	16	6,4	1000	200
28 00 50		2,8 x 0,5	3,75	16	6,4	1000	200



### Socket sleeves (female) with cable stop

- bare brass, not insulated
- with side cable connection

Art. No.	CS	plug	W	L	E	weight	PU
28 00 60	<b>0,5 - 1</b>	6,3 x 0,8	7,6	14,1	7,6	1300	200
28 00 64	<b>1 - 2,5</b>	6,3 x 0,8	7,6	14,1	7,6	1300	200



### Socket sleeves (female) with cable stop

- tin-plated brass, not insulated
- with side cable connection

Art. No.	CS	plug	W	L	E	weight	PU
28 00 70	<b>0,5 - 1</b>	6,3 x 0,8	7,6	14,1	7,6	1300	200
28 00 74	<b>1 - 2,5</b>	6,3 x 0,8	7,6	14,1	7,6	1300	200



### Socket sleeves (female) with cable stop

- bare brass, not insulated
- with branch

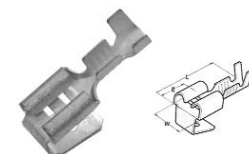
Art. No.	CS	plug	W	L	E	weight	PU
28 00 80	<b>0,5 - 1</b>	6,3 x 0,8	7,6	19,6	7,7	600	200
28 00 84	<b>1 - 2,5</b>	6,3 x 0,8	7,6	16,2	7,7	600	200



### Socket sleeves (female) with cable stop

- tin-plated brass, not insulated
- with branch

Art. No.	CS	plug	W	L	E	weight	PU
28 00 90	<b>0,5 - 1</b>	6,3 x 0,8	7,6	19,6	7,7	600	200
28 00 94	<b>1 - 2,5</b>	6,3 x 0,8	7,6	16,2	7,7	600	200



## Flat terminals

- bare brass
- uninsulated

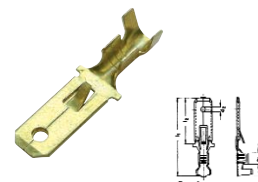
Art. No.	CS	plug	L	E	weight	PU
28 01 00	0,5 - 1	6,3 x 0,8	20,6	6,35	1200	200
28 01 04	1 - 2,5	6,3 x 0,8	17,2	6,35	1200	200



## Socket sleeves (male) with latching tongue

- bare brass
- uninsulated

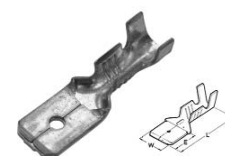
Art. No.	CS	plug	L	E	weight	PU
28 01 01	0,5 - 1	6,3 x 0,8	20,6	6,35	1200	200
28 01 05	1 - 2,5	6,3 x 0,8	17,2	6,35	1200	200



## Flat terminals

- tin-plated brass
- uninsulated

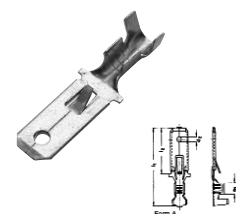
Art. No.	CS	plug	L	E	weight	PU
28 01 10	0,5 - 1	6,3 x 0,8	20,6	6,35	1200	200
28 01 14	1 - 2,5	6,3 x 0,8	17,2	6,35	1200	200



## Socket sleeves (male) with latching tongue

- tin-plated brass
- uninsulated

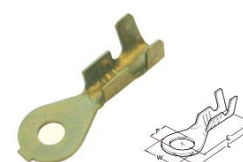
Art. No.	CS	plug	L	E	weight	PU
28 01 11	0,5 - 1	6,3 x 0,8	20,6	6,35	1200	200
28 01 15	1 - 2,5	6,3 x 0,8	17,2	6,35	1200	200



## Ring terminals

- bare brass
- uninsulated

Art. No.	CS	F	E	L	W	weight	PU
28 01 20	0,5 - 1	3,2	17	21	8	1200	200
28 01 24		4,3	17	21	8	1200	200
28 01 28		5,08	17	22	9,5	1200	200
28 01 32	1 - 2,5	3,2	17	21	8	1400	200
28 01 36		4,3	17	21	8	1400	200
28 01 40		5,08	17	22	9,5	1400	200



## Ring terminals

- tin-plated brass
- uninsulated

Art. No.	CS	F	E	L	W	weight	PU
28 01 50	0,5 - 1	3,2	17	21	8	1200	200
28 01 54		4,3	17	21	8	1200	200
28 01 58		5,08	17	22	9,5	1200	200
28 01 62	1 - 2,5	3,2	17	21	8	1400	200
28 01 66		4,3	17	21	8	1400	200
28 01 70		5,08	17	22	9,5	1400	200



Processing tools starting at Page 24

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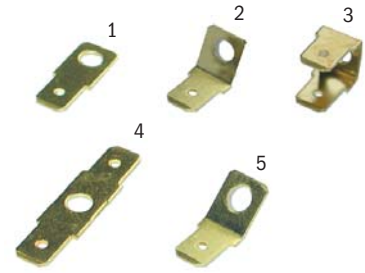
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# Socket sleeves (female), insulating sleeves, connectors

## Flat terminals

- bare brass
- uninsulated

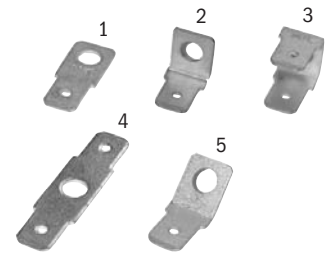
Art. No.	form	socket	length	drill-Ø	a	length	weight	PU
28 01 80	1	6,3 x 0,8	8	4,2	0°	19,20	500	200
28 01 82	5	6,3 x 0,8	8	4,2	45°	10,20	500	200
28 01 84	2	6,3 x 0,8	8	4,2	90°	11,30	500	200
28 01 86	4	6,3 x 0,8	8	4,2	0°	30,30	500	200
28 01 88	3	6,3 x 0,8	8	4,2	90°	11,45	500	200



## Flat terminals

- tin-plated brass
- uninsulated

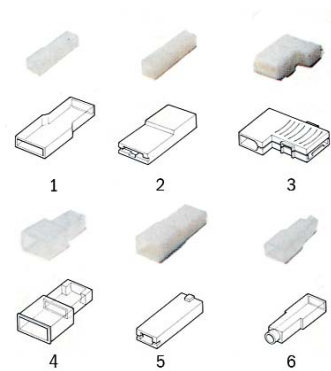
Art. No.	form	socket	length	drill-Ø	a	length	weight	PU
28 01 90	1	6,3 x 0,8	8	4,2	0°	19,20	500	200
28 01 92	5	6,3 x 0,8	8	4,2	45°	10,20	500	200
28 01 94	2	6,3 x 0,8	8	4,2	90°	11,30	500	200
28 01 96	4	6,3 x 0,8	8	4,2	0°	30,30	500	200
28 01 98	3	6,3 x 0,8	8	4,2	90°	11,45	500	200



## Insulating sleeves

- of PVC and nylon

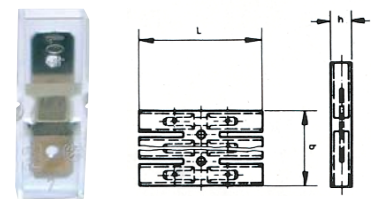
Art. No.	form	material	socket	weight	PU
28 02 00	1	PVC	6,3	150	100
28 02 02	2	Nylon	6,3	150	100
28 02 04	6	PVC	4,8	150	100
28 02 06	2	Nylon	4,8	150	100
28 02 08	6	PVC	2,8	150	100
28 02 10	5	Nylon	2,8	150	100
28 02 12	4	PVC	6,3	150	100
28 02 14	3	Nylon	6,3	150	100



## Elastic connectors with socket sleeves (male)

- 1 - 12 pole
- PVC, natural colour

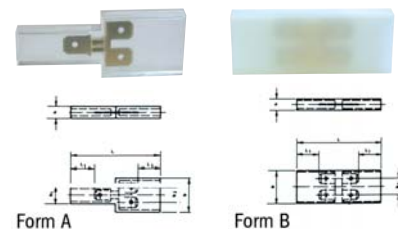
Art. No.	plug	PoZ	length	width	height	Screw holes		weight	PU
						mm	Ø		
28 04 60	2,8 x 0,8	1	7,5	35	5,5	-	-	200	100
28 04 82	2,8 x 0,8	12	88	35	5,5	75	2,7	1600	10
28 04 90	4,8 x 0,8	1	12,5	28	7	-	-	250	100
28 05 12	4,8 x 0,8	12	147	28	7	123	3,2	2800	10
28 05 20	6,3 x 0,8	1	12,5	28	7	-	-	300	100
28 05 42	6,3 x 0,8	12	147	28	7	123	3,2	3200	10
28 05 50	2,8 x 0,8	1	12,5	28	7	-	-	250	100
28 05 72	2,8 x 0,8	12	147	28	7	121	3,2	2800	50



## Elastic cable distributors

- PVC, natural colour

Art. No.	plug	L	l1	b	b1	b2	h	form	weight	PU
28 05 80	6,3 x 0,8	53	15	21	11,3	9	7,5	A	600	50
28 05 82	6,3 x 0,8	51	13	20	-	9	7	B	650	50



# Instructions

## 1. The choice of the connector

In order to obtain a connection that can be guaranteed for a long time it is necessary to select the connectors suitable to the application field and strictly conform to the section of the cable to be crimped.

In the large range of Haupa products you will certainly find the ideal solution for every requirement.

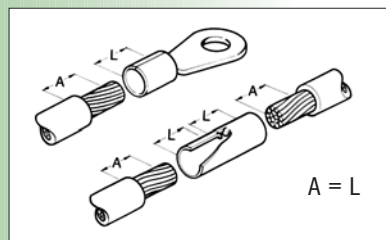
## 2. Stripping

Every crimping operation requires first that the cable is stripped without deforming the wires.

Ø mm <sup>2</sup>	stripping tolerance	
	+/- mm	
0.5 - 2.5	0.8	
4 - 6	1,2	
10 - 120	1.6	
150 - 630	3.2	

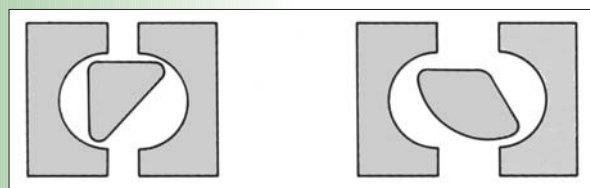
## 3. Cleaning

The conductor ends have to be solidly cleaned from oxidation and every rest of dirt before mounting.



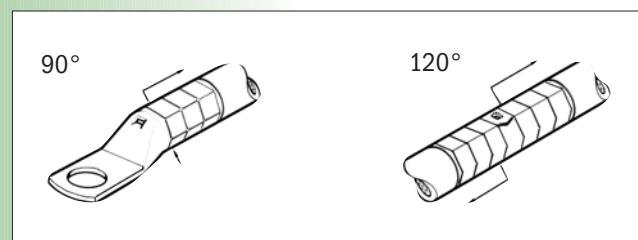
## 4. Assembling

- Fit the connector to the cable with a round section in the complete length of the stripped area.
- Verify that there are no wires outside the connector. If you need to use sectoral cables you must arrange a previous rounding crimping operation of the cable.



## 5. Choice of the crimping tool

All dies and punchings of the Haupa crimp system guarantee a high degree of connection between connector and cable. Exercise the crimping operation as shown in drawing 1 on the terminals and as drawing 2 on the butt connectors. The elevated pressure exerted by dies on terminals cause a uniform deformation on the whole crimping area.



## Tubular terminals



Copper tinned

with sight hole



## Press terminal DIN



Copper tinned



bare

## Press connector DIN



Copper tinned



bare

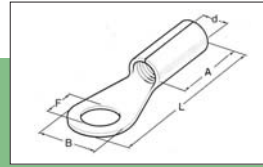
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# Terminals

## Crimp ring terminals without insulation DIN 46234

- Material: 99,9% electrolytic copper
- Surface: tin-plated
- Ring type



**Cu**

Art. No.	CS	M	F	B	L	d	A	weight	PU	
29 06 19	<b>0,5 - 1</b>	2,5	2,60	8	17,25	1,95	5,20	50	100	
29 06 20		3	3,20	8	17,25	1,95	5,20	50	100	
29 06 21		3,5	3,70	8	17,25	1,95	5,20	50	100	
29 06 22		4	4,20	8	16,65	1,95	5,20	50	100	
29 06 24		5	5,20	8	17,25	1,95	5,20	100	100	
29 06 23		6	6,20	10	18,50	1,95	5,20	50	100	
29 06 25		8	8,20	14	25	1,95	5,20	100	100	
29 06 17		10	10,50	14	25	1,95	5,20	100	100	
29 06 26		<b>1,5 - 2,5</b>	3	3,20	8	17,25	2,45	5,20	100	100
29 06 27			3,5	3,70	8	17,25	2,45	5,20	100	100
29 06 28	4		4,20	8	17,25	2,45	5,20	50	100	
29 06 30	5		5,20	10	20	2,45	5,20	50	100	
29 06 32	6		6,20	11	22	2,45	5,20	100	100	
29 06 34	8		8,20	15	26,80	2,45	5,20	100	100	
29 06 35	10		10,50	15	26,80	2,45	5,20	200	100	
29 06 37	<b>2,5 - 6</b>		3,5	3,70	8	18,70	3,50	6,50	150	100
29 06 36			4	4,20	8	18,70	3,50	6,50	150	100
29 06 46	<b>6</b>		5	5,30	10	15	3,60	6	200	100
29 06 48		6	6,50	11	16	3,60	6	200	100	
29 06 50		8	8,40	14	19	3,60	6	250	100	
29 06 52		10	10,50	18	21	3,60	6	300	100	
29 06 54		12	13,00	18	21	3,60	6	250	100	
29 06 56		<b>10</b>	5	5,30	10	16	4,50	8	250	100
29 06 58	6		6,40	11	17	4,50	8	250	100	
29 06 60	8		8,40	14	20	4,50	8	300	100	
29 06 62	10		10,50	18	21	4,50	8	350	100	
29 06 63	12		13,00	22	23	4,50	8	450	100	
29 06 64	<b>16</b>		5	5,30	10	20	5,80	10	500	100
29 06 66		6	6,40	11	20	5,80	10	400	100	
29 06 68		8	8,40	14	22	5,80	10	450	100	
29 06 70		10	10,50	18	24	5,80	10	500	100	
29 06 72		12	13,00	22	26	5,80	10	650	100	
29 06 76		<b>25</b>	6	6,40	12	25	7,50	11	350	50
29 06 78	8		8,40	16	25	7,50	11	400	50	
29 06 80	10		10,50	18	26	7,50	11	400	50	
29 06 82	12		13,00	22	31	7,50	11	500	50	
29 06 84	16		17,00	28	35	7,50	11	200	50	
29 06 86	<b>35</b>		8	8,40	16	26	9,00	12	200	50
29 06 88		10	10,50	18	27	9,00	12	550	50	
29 06 90		12	13,00	22	31	9,00	12	600	50	
29 06 92		16	17,00	28	36	9,00	12	900	50	
29 06 94	<b>50</b>	8	8,40	18	34	11,00	16	850	50	
29 06 96		10	10,50	18	34	11,00	16	900	50	
29 06 98		12	13,00	22	36	11,00	16	950	50	
29 07 00		16	17,00	28	40	11,00	16	1100	50	
29 07 01	<b>70</b>	8	8,40	22	38	13,00	18	1400	50	
29 07 02		10	10,50	22	38	13,00	18	1350	50	
29 07 04		12	13,00	22	38	13,00	18	1300	50	
29 07 07	<b>95</b>	8	8,40	24	42	15,00	20	1800	50	
29 07 08		10	10,50	24	42	15,00	20	2050	50	
29 07 10		12	13,00	24	42	15,00	20	2000	50	
29 07 12		16	17,00	28	44	15,00	20	2350	50	
29 07 13	<b>120</b>	10	10,50	24	44	16,50	22	1350	25	
29 07 14		12	13,00	24	44	16,50	22	1400	25	
29 07 16		16	17,00	28	48	16,50	22	1500	25	
29 07 17		20	21,00	32	53	16,50	22	1500	25	
29 07 19	<b>150</b>	10	10,50	30	50	19,00	24	2050	25	
29 07 21		12	13,00	30	50	19,00	24	2000	25	
29 07 18		16	17,00	30	50	19,00	24	1900	25	
29 07 20	<b>185</b>	16	17,00	36	50	21,00	25	2050	25	

# Terminals

## Insulated crimp cable lugs

- Nylon-insulated
- Ring type



Art. No.	CS	M	d1	d2	d4	a	l	KG/100 pcs.	PU
26 09 02	10	5	4,5	5,3	8	16,5	24,5	0,250	100
26 09 04		6		6,5			25,5	0,280	100
26 09 06		8		8,4			28,5	0,330	100
26 09 08		10		10,5			29,5	0,380	100
26 09 10		12		13,0			31,5	0,460	100
26 09 12	16	5	5,8	5,3	11	21,5	31,5	0,400	100
26 09 14		6		6,5			31,5	0,400	100
26 09 16		8		8,4			33,5	0,480	100
26 09 18		10		10,5			35,5	0,500	100
26 09 20		12		13,0			37,5	0,630	100
26 09 22	25	5	7,5	5,3	13	24	38	0,800	100
26 09 24		6		6,5			38	0,780	100
26 09 26		8		8,4			38	0,850	100
26 09 28		10		10,5			39	0,900	100
26 09 30		12		13,0			44	1,100	100
26 09 32		16		17,0			48	1,350	100
26 09 34	35	6	9	6,5	14,5	27	41	1,150	100
26 09 36		8		8,4			41	1,120	100
26 09 38		10		10,5			42	1,120	100
26 09 40		12		13,0			46	1,360	100
26 09 42		16		17,0			51	1,680	100
26 09 44	50	6	11	6,5	16,5	29,5	47,5	2,000	100
26 09 46		8		8,4			47,5	1,990	100
26 09 48		10		10,5			47,5	1,850	100
26 09 50		12		13,0			49,5	2,030	100
26 09 52		16		17,0			53,5	2,350	100
26 09 54	70	6	13	6,5	18,7	31,5	51	2,950	100
26 09 56		8		8,4			51	2,850	100
29 09 58		10		10,5			51	2,850	100
26 09 60		12		13,0			51	2,650	100
26 09 62		16		17,0			55	3,100	100
26 09 64	95	8	15	8,4	21,7	35,5	57,5	4,550	50
26 09 66		10		10,5			57,5	4,450	50
26 09 68		12		13,0			57,5	4,500	50
26 09 70		16		17,0			59,5	4,600	50
26 09 72	120	8	16,5	8,4	24,2	40	62	6,000	50
26 09 74		10		10,5			62	6,100	50
26 09 76		12		13,0			62	6,000	50
26 09 78		16		17,0			66	6,300	50
26 09 80	150	10	19	10,5	27,2	44	70	8,450	25
26 09 82		12		13,0			70	8,450	25
26 09 84		16		17,0			70	8,300	25

## Insulated crimp cable lugs

- Nylon-insulated
- Ring type



Art. No.	CS	M	colour	weight	PU
26 08 58	10	5	red	750	50
26 08 60		6	red	800	50
26 08 62	16	5	blue	850	50
26 08 63		8	blue	900	50

Processing tools starting  
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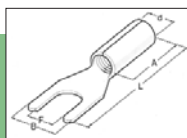
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# Terminals

## Crimp fork terminals without insulation DIN 46234

- Material: 99,9% electrolytic copper
- Surface: tin-plated
- Fork type

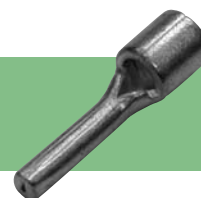
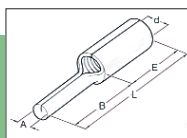


**Cu**

Art. No.	CS	M	F	B	L	d	A	weight	PU
29 07 30	<b>0,5 - 1</b>	3	3,20	5,60	14,60	1,95	5,20	50	100
29 07 31		3,5	3,70	6,50	14,90	1,95	5,20	50	100
29 07 32		4	4,20	6,40	15	1,95	5,20	100	100
29 07 34		5	5,20	8,00	16,25	1,95	5,20	100	100
29 07 35		6	6,20	9,20	17,50	1,95	5,20	100	100
29 07 36	<b>1,5 - 2,5</b>	3	3,20	5,60	17,25	2,45	5,20	100	100
29 07 39		3,5	3,70	6,60	14,30	2,45	5,20	100	100
29 07 38		4	4,20	6,60	14,30	2,45	5,20	100	100
29 07 40		5	5,20	9,10	19,25	2,45	5,20	100	100
29 07 42		6	6,20	10	21	2,45	5,20	50	100
29 07 44	<b>2,5 - 6</b>	4	4,20	8	18,60	3,50	6,50	100	100
29 07 46		5	5,20	9	21,10	3,50	6,50	150	100
29 07 48		6	6,20	11	22,30	3,50	6,50	150	100
29 07 50		8	8,20	15,20	27,30	3,50	6,50	150	100
29 07 51		10	10,50	19	30,20	3,50	6,50	300	100
29 07 52	<b>6 - 10</b>	5	5,2	9	20,8	4,7	8,50	300	100
29 07 54		6	6,4	10,3	20,8	4,7	8,50	250	100
29 07 56	<b>10 - 16</b>	6	6,4	11,0	25,5	5,8	10,50	250	100

## Crimp pin terminals without insulation DIN 46230

- Material: 99,9% electrolytic copper
- Surface: tin-plated
- Pin type



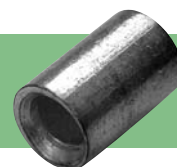
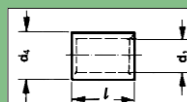
**Cu**

Art. No.	CS	A	B	E	L	d	weight	PU
29 07 70	<b>0,25 - 1,5</b>	1,8	12	5	17,3	1,85	20	100
29 07 71		1,8	9	5	17,3	1,85	30	100
29 07 73	<b>1,5 - 2,5</b>	1,8	9	5	17,3	2,40	50	100
29 07 75		1,8	9	5	17,3	2,40	100	100
29 07 77	<b>2,5 - 6</b>	2,6	12,5	6	20,5	3,60	150	100
29 07 76	<b>10</b>	4,0	14	8,5	24,5	4,50	200	100
29 07 78	<b>16</b>	4,5	14	10,5	26,5	5,80	450	100
29 07 80	<b>25</b>	7,0	15	14	33	7	70	100
29 07 82	<b>35</b>	8,0	20	16	40	8,2	1200	100
29 07 84	<b>50</b>	9,5	20	19	45	9,5	2300	100
29 07 86	<b>70</b>	11,5	25	24	55	11,2	3000	100
29 07 88	<b>95</b>	12,5	25	24	55	13,5	4000	100

## Connectors

### Parallel connectors DIN 46341 part 1, type A

- Material: 99,9% electrolytic copper
- Surface: tin-plated

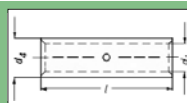


Cu

Art. No.	CS	d1	d2	d4	l	KG/100 pcs.	PU	Dealer Box
29 10 90	0,5 - 1	1,6		3,3	7	0,042	100	2000
29 10 92	1,5 - 2,5	2,3		4,2	7	0,053	100	2000
29 10 96	4 - 6	3,6		5,5	7	0,088	100	2000
29 10 98	10	4,5		7	9	0,164	100	2000
29 11 00	16	5,5		8,5	10	0,280	50	1000
29 11 02	25	7		10	13	0,440	50	600
29 11 04	35	8,5		12	16	0,780	50	500
29 11 06	50	10		14	19	1,220	50	300
29 11 08	70	12		16,5	19	1,620	25	200
29 11 10	95	13,5		18	20	1,900	25	150
29 11 12	120	15		19,5	22	2,300	20	120
29 11 14	150	16,5		21	26	3,000	15	60

### Butt connectors DIN 46341 part 1, type B

- Material: 99,9% electrolytic copper
- Surface: tin-plated



Cu

Art. No.	CS (mm²)	length	d1	d4	weight	PU	Dealer Box
29 11 19	0,5 - 1	15	1,6	15	100	100	2000
29 11 20	1,5 - 2,5	15	2,3	15	100	100	2000
29 11 24	4 - 6	15	3,6	15	190	100	2000
29 11 26	10	21	4,5	21	380	100	2000
29 11 28	16	26	5,5	26	580	50	1000
29 11 30	25	29	7	29	1120	50	600
29 11 32	35	32	8,5	32	1500	50	500
29 11 34	50	48	10	48	2500	50	300
29 11 36	70	48	12	48	4870	25	200
29 11 38	95	48	13,5	48	5910	25	150
29 11 40	120	48	15	48	7000	20	120
29 11 42	150	48	16,5	48	8120	15	60

Processing tools starting  
at Page 23

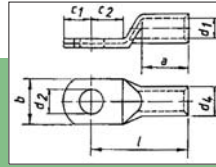
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# Terminals

## Tubular terminals, standard series

- tubular
- Material: 99.9% electrolytic copper E-CU DIN 40500
- Surface: tin-plated



Cu

available with and without sight hole e.g. 29 09 00/S (add xx xx xx/s when ordering)

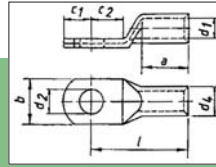
29 09 00

29 09 00/S

Art. No.	CS	M	crimping		d1	d2	d4	a	b	c1	c2	l	KG/100 pcs.	PU	Dealer Box
			narrow	wide											
29 09 00	0,75	3	1		1,3	3,2	2,8	6	6,0	3,25	4,0	12	0,060	100	2000
29 09 02		4	1			4,3			6,5	4,00	5,0	13	0,060	100	2000
29 09 04	1,5	3	1		1,8	3,2	3,3	6	6,5	3,25	4,0	12	0,080	100	2000
29 09 06		4	1			4,3			6,5	4,00	5,0	13	0,080	100	2000
29 09 08		5	1			5,3			7,5	4,75	5,5	14	0,080	100	2000
29 09 10		6	1			6,5			9,0	6,50	6,5	16	0,090	100	2000
29 09 12	2,5	3	1		2,3	3,2	4,2	6	7,5	3,25	4,0	12	0,120	100	2000
29 09 14		4	1			4,3			7,5	4,00	5,0	13	0,120	100	2000
29 09 16		5	1			5,3			8,5	4,75	5,5	14	0,130	100	2000
29 09 18		6	1			6,5			9,5	6,50	6,5	16	0,150	100	2000
29 09 20		8	1			8,5			13,0	7,75	9,5	20	0,180	100	2000
29 09 22	4	4	1		3	4,3	5	8	8,5	4,75	5,5	17	0,210	100	2000
29 09 24		5	1			5,3			9,0	4,75	6,0	17	0,210	100	2000
29 09 26		6	1			6,5			10,0	6,50	6,5	19	0,220	100	2000
29 09 28		8	1			8,5			13,0	8,50	9,5	22	0,280	100	2000
29 09 30	6	4	1		3,5	4,3	6,5	9	8,5	5,00	5,5	18	0,290	100	1800
29 09 32		5	1			5,3			10,0	6,50	7,5	21	0,470	100	1800
29 09 34		6	1			6,5			12,0	6,50	7,5	21	0,470	100	1400
29 09 36		8	1			8,5			15,0	10,00	10,0	23	0,540	100	1400
29 09 38	10	5	1		4,5	5,3	7	10	12,0	6,50	7,5	22	0,500	100	1000
29 09 40		6	1			6,5			12,0	6,50	7,5	22	0,490	100	1000
29 09 42		8	1			8,5			15,0	10,00	10,0	25	0,580	100	800
29 09 44		10	1			10,5			17,0	12,00	12,0	27	0,620	100	600
29 09 46		12	1			13,0			19,0	13,00	13,0	29	0,640	100	600
29 09 48	16	5	1	1	5,5	5,3	8,5	13	12,0	5,50	6,5	26	0,840	100	600
29 09 50		6	1	1		6,5			12,0	6,25	7,5	27	0,860	100	600
29 09 52		8	1	1		8,5			15,0	8,50	9,5	29	0,930	100	400
29 09 54		10	1	1		10,5			17,0	10,50	11,5	31	0,990	100	400
29 09 56		12	1	1		13,0			19,0	12,00	13,0	33	1,020	100	400
29 09 58	25	6	2	1	7	6,5	10	15	14,0	7,50	7,5	30	1,200	50	400
29 09 60		8	2	1		8,5			16,0	10,00	10,0	32	1,300	50	400
29 09 62		10	2	1		10,5			18,0	12,00	12,0	34	1,550	50	300
29 09 64		12	2	1		13,0			19,0	13,00	13,0	35	1,400	50	300
29 09 66	35	6	2	1	8,5	6,5	12	17	17,0	7,50	7,5	32	1,850	40	240
29 09 68		8	2	1		8,5			17,0	10,00	10,0	34	2,000	40	240
29 09 70		10	2	1		10,5			19,0	12,00	12,0	37	2,150	40	160
29 09 72		12	2	1		13,0			21,0	13,00	13,0	38	2,120	40	160
29 09 74		16	2	1		17,0			26,0	16,00	16,0	42	2,240	35	140
29 09 76	50	6	2	1	10	6,5	14	19	20,0	10,00	10,0	37	3,000	25	150
29 09 78		8	2	1		8,5			20,0	10,00	10,0	37	3,000	25	150
29 09 80		10	2	1		10,5			20,0	12,00	12,0	39	3,080	25	150
29 09 82		12	2	1		13,0			23,0	13,00	13,0	43	3,230	25	100
29 09 84		16	2	1		17,0			28,0	16,00	16,0	46	3,400	25	100
29 09 85	70	6	2	1	12	6,5	16,5	21	23,0	10,00	10,0	43	4,500	25	100
29 09 86		8	2	1		8,5			23,0	10,00	10,0	43	4,400	25	100
29 09 88		10	2	1		10,5			23,0	12,00	12,0	44	4,500	25	100
29 09 90		12	2	1		13,0			23,0	13,00	13,0	46	4,600	25	100
29 09 91		14	2	1		15,0			23,0	14,50	14,5	48	4,770	25	100
29 09 92		16	2	1		17,0			28,0	16,00	16,0	50	4,300	25	100
29 09 94	95	8	2	1	13,5	8,5	18	25	26,0	12,00	12,0	48	5,450	25	100
29 09 96		10	2	1		10,5			26,0	12,00	12,0	48	5,450	25	100
29 09 98		12	2	1		13,0			26,0	13,00	13,0	49	5,550	25	100
29 09 99		14	2	1		15,0			26,0	14,50	14,5	51	5,600	10	40
29 10 00		16	2	1		17,0			28,0	16,00	16,0	54	5,800	10	40
29 10 02		20	2	1		21,0			36,0	22,00	22,0	60	6,700	10	40

## Tubular terminals, standard series (continued)

- tubular
- Material: 99.9% electrolytic copper E-CU DIN 40500
- Surface: tin-plated



Cu

available with and without sight hole e.g. 29 00 04/S (add xx xx xx/s when ordering)

29 00 04

29 00 04/S

Art. No.	CS	M	crimping		d1	d2	d4	a	b	c1	c2	l	KG/100 pcs.	PU	Dealer Box
			narrow	wide											
29 00 04	120	8	2	1	15	8,5	19,5	26	28,0	14,0	14,0	51	6,700	20	20
29 00 06		10	2	1		10,5			28,0	14,0	14,0	51	6,550	20	80
29 00 08		12	2	1		13,0			28,0	14,0	14,0	51	6,400	20	80
29 00 09		14	2	1		15,0			28,0	15,0	15,0	52	6,450	18	72
29 00 10		16	2	1		17,0			30,0	16,0	16,0	54	6,500	18	72
29 00 12		20	2	1		21,0			36,0	22,0	22,0	63	7,700	15	60
29 00 14	150	10	2	1	16,5	10,5	21	30	31,0	14,0	14,0	56	7,600	12	72
29 00 16		12	2	1		13,0			31,0	15,0	15,0	57	7,700	12	72
29 00 17		14	2	1		15,0			31,0	15,0	15,0	57	7,650	12	72
29 00 18		16	2	1		17,0			31,0	16,0	16,0	58	7,500	12	48
29 00 20		20	2	1		21,0			36,0	22,0	22,0	66	8,800	12	48
29 00 22	185	12	2	1	19	13,0	24	30	35,0	18,0	18,0	65	11,800	20	40
29 00 23		14	2	1		15,0			35,0	18,0	18,0	65	11,400	20	40
29 00 24		16	2	1		17,0			35,0	18,0	18,0	65	11,250	20	40
29 00 26		20	2	1		21,0			39,0	22,0	22,0	69	12,000	20	40
29 00 28	240	12	4	2	21	13,0	26	35	39,0	21,5	19,0	72	14,550	15	30
29 00 29		14	4	2		15,0			39,0	21,5	19,0	72	14,250	15	30
29 00 30		16	4	2		17,0			39,0	21,5	19,0	72	14,100	15	30
29 00 34	300	12	4	2	23,5	13,0	29,5	44	43,0	24,0	24,0	72	23,350	8	16
29 00 36		14	4	2		15,0			43,0	24,0	24,0	87	23,150	8	16
29 00 38		16	4	2		17,0			43,0	24,0	24,0	87	22,750	8	16
29 00 40		20	4	2		21,0			43,0	24,0	24,0	87	22,200	8	16
29 00 46	400	16	4	2	27	17,0	34	44	49,0	24,0	24,0	90	32,000	5	10
29 00 48		20	4	2		21,0			49,0	24,0	24,0	90	31,400	5	10
29 00 41	500	16	4	2	31	17,0		70	55,0	24,0	24,0	103	47,860	4	8
29 00 43		20	4	2		21,0			55,0	24,0	24,0	103	47,800	4	8
29 00 45	625	16	4	2	34	17,0		70	60,0	24,0	24,0	108	51,350	3	6
29 00 47		20	4	2		21,0			60,0	24,0	24,0	108	50,600	3	6

Processing tools starting  
at Page 29

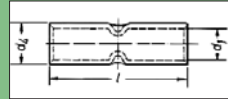
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# Connectors

## Butt connectors, standard series

- Material: 99.9% electrolytic copper E-CU DIN 40500
- Surface: tin-plated

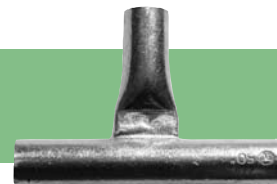
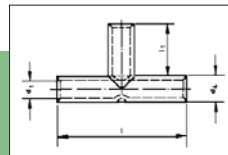


Cu

Art. No.	CS	crimping		d1	d4	l	KG/100 pcs.	PU	Dealer Box
		narrow	wide						
29 10 50	0,75	1		1,3	2,8	14	0,085	100	2000
29 10 52	1,5	1		1,8	3,3	14	0,139	100	2000
29 10 54	2,5	1		2,3	4,2	16	0,139	100	2000
29 10 56	4	1		3	5	19	0,275	50	1000
29 10 58	6	1		3,5	6,5	19	0,500	50	1000
29 10 60	10	1		4,5	7	30	0,590	50	600
29 10 62	16	1	1	5,5	8,5	35	1,020	50	500
29 10 64	25	2	1	7	10	40	1,420	50	200
29 10 66	35	2	1	8,5	12	45	2,250	25	200
29 10 68	50	2	1	10	14	50	3,300	25	100
29 10 70	70	2	1	12	16,5	55	4,900	25	50
29 10 72	95	2	1	13,5	18	60	6,000	25	50
29 10 74	120	2	1	15	19,5	65	7,000	25	50
29 10 76	150	2	1	16,5	21	70	8,300	25	50
29 10 78	185	2	1	19	24	80	11,200	18	36
29 10 80	240	4	2	21	26	90	14,000	6	12
29 10 82	300	4	2	23,5	29,5	100	22,200		6
29 10 84	400	4	2	27	34	100	30,000		6

## T-connectors, standard series

- Material: 99.9% electrolytic copper E-CU DIN 40500
- Surface: tin-plated

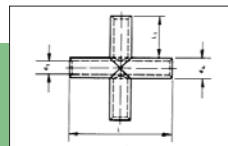


Cu

Art. No.	CS	d1	d4	L	L1	weight	PU
29 13 30	1,5	1,9	3,9	30	12	230	100
29 13 32	2,5	2,4	4,4	30	12	370	100
29 13 34	4	3	5	30	12	480	100
29 13 36	6	3,7	5,5	35	14	700	25
29 13 38	10	4,3	6,7	35	14	1000	25
29 13 40	16	5,4	7,8	50	21	2200	25
29 13 42	25	6,9	9,4	55	23	2950	25
29 13 44	35	8,3	11,3	70	30	5200	25
29 13 48	50	9,6	13,1	80	34	7900	25
29 13 50	70	11,5	15,3	85	35	11200	25
29 13 52	95	13,5	17,5	90	36	13000	25
29 13 54	120	15,5	20	95	38	14500	10
29 13 56	150	16,8	21,3	110	44	18900	10
29 13 58	185	19	24	115	45	25000	10
29 13 60	240	21	26	130	52	31100	10

## Cross connectors, standard series

- Material: 99.9% electrolytic copper E-CU DIN 40500
- Surface: tin-plated



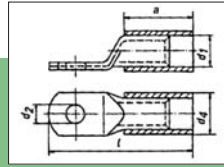
Cu

Art. No.	CS	d1	d4	L	L1	weight	PU
29 13 70	1,5	1,9	3,9	30	12	230	100
29 13 72	2,5	2,4	4,4	30	12	370	100
29 13 74	4	3	5	30	12	480	100
29 13 76	6	3,7	5,5	35	14	700	25
29 13 78	10	4,3	6,7	35	14	1000	25
29 13 80	16	5,4	7,8	50	21	2200	25
29 13 82	25	6,9	9,4	55	23	2950	25
29 13 84	35	8,3	11,3	70	30	5200	25
29 13 86	50	9,6	13,1	80	34	7900	25
29 13 88	70	11,5	15,3	85	35	11200	25
29 13 90	95	13,5	17,5	90	36	13000	25
29 13 92	120	15,5	20	95	38	14500	10
29 13 94	150	16,8	21,3	110	44	18900	10
29 13 96	185	19	24	115	45	25000	10
29 13 98	240	21	26	130	52	31100	10

# Terminals

## Tubular terminals, nylon-insulated, standard series

- Material: 99,9% electrolytic copper
- Surface: tin-plated • with sight hole
- Insulation: black



Cu

Art. No.	CS	M	d1	d2	d4	a	l	KG/100 pcs.	PU
29 08 00	10	5	7	5,5	9	17	35,5	0,500	100
29 08 01		6		6,5			35,5	0,500	100
29 08 02		8		8,5			42	0,600	100
29 08 04		10		10,5			46	0,700	100
29 08 06	16	5	8,5	5,5	10,5	21	39,5	0,900	100
29 08 10		6		6,5			41,3	0,900	100
29 08 12		8		8,5			45,5	1,000	100
29 08 14		10		10,5			49,5	1,100	100
29 08 16		12		13,0			54	1,100	100
29 08 18	25	6	10	6,5	12	24	46,5	1,300	100
29 08 20		8		8,5			51	1,400	100
29 08 22		10		10,5			55	1,600	100
29 08 24		12		13,0			57	1,500	100
29 08 26	35	6	12	6,5	14,5	27	49,5	2,000	100
29 08 30		8		8,5			54	2,200	100
29 08 32		10		10,5			59	2,300	100
29 08 34		12		13,0			61	2,300	100
29 08 36	50	6	14	6,5	16,5	32	59	3,200	100
29 08 40		8		8,5			59	3,200	100
29 08 42		10		10,5			63	3,300	100
29 08 44		12		13,0			68	3,500	100
29 08 46		14		15,0			71,5	3,500	100
29 08 48	70	8	16,4	8,5	18,9	33,5	65,5	4,700	100
29 08 50		10		10,5			66,5	4,800	50
29 08 52		12		13,0			70,5	4,900	50
29 08 54		14		15,0			73,5	5,000	50
29 08 56		16		17,0			78,5	4,500	50
29 08 58	95	8	17,8	8,5	20,8	40	74	5,900	50
29 08 60		10		10,5			74	5,800	25
29 08 62		12		13,0			76	6,000	25
29 08 64		14		15,0			79,5	6,000	25
29 08 66		16		17,0			84	6,200	25
29 08 68	120	8	19,3	8,5	22,3	41,5	80,5	7,200	25
29 08 70		10		10,5			80,5	7,000	25
29 08 72		12		13,0			80,5	6,800	25
29 08 74		14		15,0			82,5	6,900	25
29 08 76		16		17,0			85,5	7,000	25
29 08 78	150	10	20,8	10,5	23,8	48	88	8,200	25
29 08 80		12		13,0			89	8,300	25
29 08 82		14		15,0			90	8,200	25
29 08 84		16		17,0			92	8,100	25
29 08 86		20		21,0			106	9,400	25

Processing tools starting  
at Page 29

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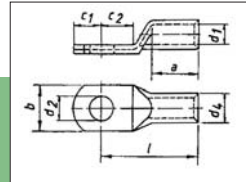
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# Terminals and connectors

## Tubular notched terminals for fine-wired highly flexible conductors

- tubular
- Material: 99.9% electrolytic copper E-CU DIN 40500
- Surface: tin-plated • with sight whole • cable class 5/6



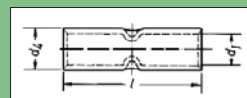
F-Type

Cu

Art. No.	CS	M	d1	d2	d4	a	b	c1	c2	i	PU	Dealer Box
29 02 50	10	6	5	6,4	8	16	11,5	6,00	7,0	23	100	1000
29 02 52		8		8,4		17	13,5	7,00	9,0	26	100	800
29 02 54		10		10,5		16	16,0	8,00	10,0	26	100	600
29 02 56		12		13,0		17	19,0	10,00	14,0	31	100	600
29 02 58	16	6	6	6,4	9	17	13,0	7,00	9,0	26	100	600
29 02 60		8		8,4		17	13,0	7,00	9,0	26	100	400
29 02 62		10		10,5		16	16,0	10,00	12,0	28	100	400
29 02 64		12		13,0		22	22,0	12,00	13,0	35	100	400
29 02 66	25	6	8	6,4	11	20	16,0	7,00	10,0	30	50	400
29 02 68		8		8,4		20	16,0	8,00	10,0	30	50	400
29 02 70		10		10,5		20	17,0	10,00	12,0	32	50	300
29 02 72		12		13,0		22	22,0	12,00	13,0	35	50	300
29 02 76	35	8	9	8,4	13	25	18,0	10,00	10,0	35	40	240
29 02 78		10		10,5		24	18,0	10,00	11,0	35	40	160
29 02 80		12		13,0		26	22,0	12,00	14,0	40	40	160
29 02 82	50	8	11	8,4	14,5	27	21,0	11,00	12,0	39	25	150
29 02 84		10		10,5		27	21,0	11,00	12,0	39	25	150
29 02 86		12		13,0		27	21,0	12,00	14,0	41	25	100
29 02 88		16		17,0		27	27,0	15,00	17,0	44	25	100
29 02 90	70	8	13	8,4	17	32	25,0	11,00	12,0	44	25	100
29 02 92		10		10,5		32	25,0	11,00	12,0	44	25	100
29 02 94		12		13,0		32	25,0	12,00	14,0	46	25	100
29 02 96		16		17,0		32	28,0	15,00	17,0	49	25	100
29 03 00	95	10	15	10,5	20	37	229,0	15,00	17,0	54	25	100
29 03 02		12		13,0		37	29,0	15,00	17,0	54	25	100
29 03 04		16		17,0		37	29,0	15,00	17,0	54	10	40
29 03 06	120	10	17	10,5	22	41	32,0	15,00	17,0	58	20	80
29 03 08		12		13,0		41	32,0	15,00	17,0	58	20	80
29 03 10		16		17,0		41	32,0	15,00	17,0	58	18	72
29 03 16	150	12	19	13,0	25	48	36,0	15,00	17,0	65	12	72
29 03 18		16		17,0		48	36,0	15,00	17,0	65	12	48
29 03 20		20		21,0		48	36,0	19,00	20,0	68	12	48
29 03 22	185	12	21	13,0	27	54	39,0	15,00	17,0	71	20	40
29 03 24		16		17,0		54	39,0	15,00	17,0	71	20	40
29 03 26		20		21,0		54	39,0	19,00	20,0	74	20	40
29 03 28	240	12	24	13,0	30	56	44,0	19,00	20,0	76	15	30
29 03 30		16		17,0		56	44,0	19,00	20,0	76	15	30
29 03 32		20		21,0		56	44,0	19,00	20,0	76	15	30
29 03 34	300	12	26	13,0	32	62	48,0	21,00	31,0	93	8	16
29 03 36		16		17,0		62	48,0	21,00	31,0	93	8	16
29 03 38		20		21,0		62	48,0	21,00	31,0	93	8	16

## Connector for fine-wired highly flexible conductors

- tubular
- Material: 99.9% electrolytic copper E-CU DIN 40500
- Surface: tin-plated • cable class 5/6



F-Type

Cu

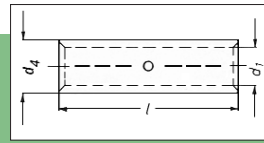
Art. No.	CS	d1	d2	l	KG/100 pcs.	PU	Dealer Box
29 03 50	10	5	8	30	0,75	50	600
29 03 52	16	6	9	35	0,89	50	500
29 03 54	25	8	11	35	1,4	50	200
29 03 56	35	9	13	35	2,2	25	200
29 03 58	50	11	14,5	45	2,6	25	100
29 03 60	70	13	17	45	3,4	25	50
29 03 62	95	15	20	45	5,7	25	50
29 03 64	120	17	22	55	6,2	25	50
29 03 66	150	19	25	65	10	25	50
29 03 68	185	21	27	70	14	18	36
29 03 70	240	24	30	70	16	6	12
29 03 72	300	26	32	75	17		6
29 03 74	400	30	36	75	18		6



# Crimp connectors

## Crimp connector DIN 46267 Part 1

- Material: 99.9% electrolytic copper tube
- to DIN 40500
- Surface: bare pickled

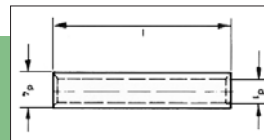


Cu

Art. No.	CS (mm <sup>2</sup> )	d1	L	IF	weight	PU	Dealer box
29 15 20	6	6	30	5	280	100	1600
29 15 22	10	4,5	30	6	400	100	1000
29 15 24	16	5,5	50	8	1500	50	300
29 15 26	25	7	50	10	2200	50	300
29 15 28	35	8,3	50	12	3000	50	200
29 15 30	50	10	55	14	4300	25	100
29 15 32	70	11,5	55	16	5560	25	100
29 15 34	95	13,5	70	18	9060	25	50
29 15 36	120	15,5	70	20	10600	25	50
29 15 38	150	17	80	22	15040	15	30
29 15 40	185	19	85	25	17050	5	30
29 15 42	240	21,5	90	28	24700	5	20
29 15 44	300	24,1	100	32	31900	5	10
29 15 46	400	27,5	150	38	77250	3	6
29 15 48	500	31	160	42	92700		8
29 15 50	625	35	160	44	94800		6
29 15 52	800	40	200	52	155000		6
29 15 54	1000	44	200	58	196000		6

## Crimp connector DIN 48085, Part 1

- Material: 99.9% electrolytic copper tube
- to DIN 40500, for tensile strength, overhead line construction
- Surface: bare pickled



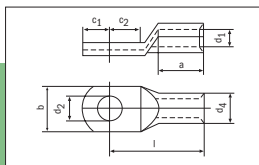
Cu

Art. No.	CS	Hexagonal crimp				L	Pr. mech.	Pr. hy.	IF	weight	PU
		∅	d1	d2							
29 14 40	6	3	3,5	6,5	65	4/4		6	135	100	
29 14 42	10	4,05	4,5	8,5	80	5/5		8	300	100	
29 14 44	16	5,1	5,5	8,5	80	5/5		8	280	100	
29 14 46	25	6,3	7	10	80	5/5		10	340	100	
29 14 48	35	7,5	8,5	12,5	95	5/5		12	560	100	
29 14 50	50	9	10	14,5	95	5/5		14	850	100	
29 14 52	70	10,5	11,5	16,5	95	5/5		16	1080	100	
29 14 54	95	12,5	13,5	21	145	8/8	4/4	20	2620	50	
29 14 56	120	14	15	23,5	160	8/8	4/4	22	3640	50	
29 14 58	150	15,7	16,5	25,5	180	8/8	4/4	25	4750	50	
29 14 60	185	17,5	18,5	31,5	260		5/5	32	11800	50	
29 14 62	240	20,2	21	34,5	310		6/6	34	16300	50	
29 14 64	300	22,5	23,5	38,5	360		7/7	38	23500	50	

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## Crimp terminals DIN 46235

- Material: 99,9% electrolytic copper
- Surface: tin-plated

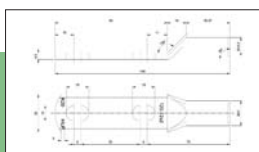


Cu

Art. No.	CS	M	IF	Hexagonal crimp		d1	d2	d4	a	b	c1	c2	l	KG/100 pcs.	PU	Dealer Box
				narrow	wide											
29 04 04	6	6	5	2		3,8	6,4	5,5	10	8,5	7,5	8	24	0,3	100	800
29 04 06*		8		2			8,4			13	10	10		0,35	100	800
29 04 08	10	5	6	2		4,5	5,3	6	10	9	7	8,5	27	0,37	100	800
29 04 10		6		2			6,4			9	7,5	8,5		0,36	100	800
29 04 12*		8		2			8,4			13	10	10		0,38	100	800
29 04 14*		10		2			10,5			15	8,2	8,2	28	0,38	100	800
29 04 16	16	6	8	2	1	5,5	6,4	8,5	20	13	7,5	8	36	1,2	50	500
29 04 18		8		2	1		8,4			13	10	10		1,25	50	400
29 04 20		10		2	1		10,5			17	12	12		1,3	50	400
29 04 22*		12		2	1		13			18	13	13		1,28	50	400
29 04 24	25	6	10	2	1	7	6,4	10	20	14	7,5	8	38	1,5	50	300
29 04 26		8		2	1		8,4			16	10	10		1,55	50	300
29 04 28		10		2	1		10,5			17	12	12		1,6	50	300
29 04 30		12		2	1		13			19	13	13		1,65	50	300
29 04 32*	35	6	12	2	1	8,2	6,4	12,5	20	17	7,5	8	42	2,75	25	150
29 04 34		8		2	1		8,4			17	10	10		2,9	25	150
29 04 36		10		2	1		10,5			19	12	12		2,85	25	150
29 04 38		12		2	1		13			21	13	13		2,8	25	150
29 04 40	50	8	14	3	1	10	8,4	14,5	28	20	10	10	52	4,45	25	100
29 04 42		10		3	1		10,5			22	12	12		4,5	25	100
29 04 44		12		3	1		13			24	13	13		4,4	25	100
29 04 46		16		3	1		17			28	16	16		4,6	25	100
29 04 48	70	8	16	3	1	11,5	8,4	16,5	28	24	10	10	55	6	25	100
29 04 50		10		3	1		10,5			24	12	12		6,05	25	100
29 04 52		12		3	1		13			24	13	13		5,89	25	100
29 04 54		16		3	1		17			30	16	16		6,2	20	80
29 04 56	95	10	18	4	2	13,5	10,5	19	35	28	12	12	65	9	15	60
29 04 58		12		4	2		13			28	13	13		8,6	15	60
29 04 60		16		4	2		17			32	16	16		9	15	60
29 04 62	120	10	20	4	2	15,5	10,5	21	35	32	15	16	70	11,4	20	40
29 04 64		12		4	2		13			32	16	17		11,3	20	40
29 04 66		16		4	2		17			32	18	19		11,25	20	40
29 04 68		20		4	2		21			38	21	22		11	15	30
29 04 70	150	10	22	4	2	17	10,5	23,5	35	34	15	16	78	16,4	15	30
29 04 72		12		4	2		13			34	16	17		16,3	15	30
29 04 74		16		4	2		17			34	19	20		16,2	15	30
29 04 76		20		4	2		21			40	21	22		15,9	12	24
29 04 78	185	10	25	4	2	19	10,5	25,5	40	37	15	16	82	19	12	24
29 04 80		12		4	2		13			37	16	17		18,1	12	24
29 04 82		16		4	2		17			37	19	20		18,75	12	24
29 04 84		20		4	2		21			40	21	22		18,7	10	20
29 04 86	240	12	28	5	2	21,5	13	29	40	42	16	17	92	27	8	16
29 04 88		16		5	2		17			42	19	20		27,4	8	16
29 04 90		20		5	2		21			45	21	22		26,9	8	16
29 04 92	300	16	32		2	24,5	17	32	50	48	19	22	100	33	5	10
29 04 94		20			2		21			48	22	22		33,25	5	10
29 04 96	400	16	38		3	27,5	17	38,5	70	55	25	25	115	68,5	4	8
29 04 98		20			3		21			55	25	25		65,4	4	8
29 05 16	500	20	42		3	31	21	42	70	60	25	25	125	81,6	4	8
29 05 18	625	20	44		3	34,5	21	44	80	60	25	25		79		6
29 05 20	800	20	52		3	40	21	52	100	75	30	30	165	148,6		10
29 05 22	1000	20	58		3	44	21	58	100	85	30	30	165	195		10

## Crimp terminals with 2 oval holes

- Material: 99.9% electrolytic copper tube
- Tube dimension to DIN 46235
- Surface: tin-plated, version with 2 oval holes



Cu

Art. No.	CS	M	IF	d1	d2	d4	a	b	c1	c2	l	PU
29 05 50	70	12	16	11,5	13	16,5	28	24	13	13	55	100
29 05 52	95	12	18	13,5	13	19	35	28	13	13	65	100
29 05 54	120	12	20	15,5	13	21	35	32	16	17	70	100
29 05 56	150	12	22	17	13	23,5	35	34	16	17	78	100
29 05 58	185	12	25	19	13	25,5	40	37	16	17	82	100
29 05 60	240	12	28	21,5	13	29	40	42	16	17	92	100

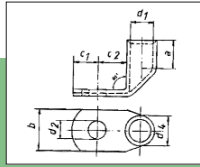
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# Angled terminals

## Angled terminals 90° acc. to DIN 46235

- Material: 99,9% electrolytic copper
- Tube dimension acc. to DIN 46235
- Surface: tin-plated

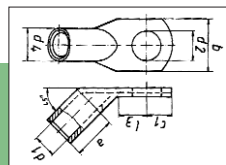


Cu

Art. No.	CS	M	IF	Hexagonal crimp		d1	d2	d4	a	b	c1	c2	KG/100 pcs.	PU
				narrow	wide									
29 17 00	6	5	5	2		3,8	5,3	5,5	10	8,5	6,5	9,0	0,300	100
29 17 02		6		2			6,4			8,5	7,5	10,0	0,300	100
29 17 04	10	5	6	2		4,5	5,3	6	10	9,0	7,0	10,0	0,340	100
29 17 06		6		2			6,4			9,0	7,5	10,0	0,350	100
29 17 08		8		2			8,4			13,0	10,0	13,0	0,370	100
29 17 10	16	6	8	2	1	5,5	6,4	8,5	20	13,0	7,5	11,0	1,200	100
29 17 12		8		2	1		8,4			13,0	10,0	13,0	1,300	100
29 17 14		10		2	1		10,5			17,0	12,0	15,0	1,400	100
29 17 16		12		2	1		13,0			18,0	13,0	18,0	1,300	100
29 17 18	25	6	10	2	1	7	6,4	10	20	14,0	7,5	11,0	1,500	100
29 17 20		8		2	1		8,4			16,0	10,0	13,0	1,600	100
29 17 22		10		2	1		10,5			17,0	12,0	15,0	1,600	100
29 17 24		12		2	1		13,0			19,0	13,0	18,0	1,700	100
29 17 26	35	8		2	1	8,2	8,4	12,5	20	17,0	10,0	13,0	2,700	100
29 17 28		10		2	1		10,5			19,0	12,0	15,0	2,800	100
29 17 30		12		2	1		13,0			21,0	13,0	18,0	2,800	100
29 17 32	50	8	14	3	1	10	8,4	14,5	28	20,0	10,0	16,0	4,400	100
29 17 34		10		3	1		10,5			22,0	12,0	16,0	4,500	100
29 17 36		12		3	1		13,0			24,0	13,0	18,0	4,500	100
29 17 38		16		3	1		17,0			28,0	16,0	22,0	4,600	100
29 17 40	70	8	16	3	1	11,5	8,4	16,5	28	24,0	10,0	14,0	6,000	100
29 17 42		10		3	1		10,5			24,0	12,0	16,0	6,300	100
29 17 44		12		3	1		13,0			24,0	13,0	18,0	6,300	100
29 17 46		16		3	1		17,0			30,0	16,0	22,0	6,600	100
29 17 48	95	10	18	4	2	13,5	10,5	19	35	28,0	12,0	17,0	9,000	50
29 17 50		12		4	2		13,0			28,0	13,0	18,0	9,300	50
29 17 52		16		4	2		17,0			32,0	16,0	22,0	9,000	50
29 17 54	120	10	20	4	2	15,5	10,5	21	35	32,0	15,0	17,0	10,400	50
29 17 56		12		4	2		13,0			32,0	16,0	18,0	10,700	50
29 17 58		16		4	2		17,0			32,0	18,0	22,0	10,700	50
29 17 60		20		4	2		21,0			38,0	21,0	24,0	11,000	50
29 17 62	150	10	22	4	2	17	10,5	23,5	35	34,0	15,0	17,0	14,200	50
29 17 64		12		4	2		13,0			34,0	16,0	18,0	14,300	50
29 17 66		16		4	2		17,0			34,0	19,0	22,0	15,200	50
29 17 68		20		4	2		21,0			40,0	21,0	24,0	15,700	50
29 17 70	185	10	25	4	2	19	10,5	25,5	40	37,0	15,0	22,0	18,600	50
29 17 72		12		4	2		13,0			37,0	16,0	22,0	18,700	50
29 17 74		16		4	2		17,0			37,0	19,0	22,0	19,000	50
29 17 76		20		4	2		21,0			40,0	21,0	24,0	18,700	50
29 17 78	240	12	28	5	2	21,5	13,0	29	40	42,0	16,0	22,0	25,100	50
29 17 80		16		5	2		17,0			42,0	19,0	22,0	25,000	50
29 17 82		20		5	2		21,0			45,0	21,0	24,0	25,300	50

## Angled terminals 45° acc. to DIN 46235

- Material: 99,9% electrolytic copper
- Tube dimension acc. to DIN 46235
- Surface: tin-plated



**Cu**

Art. No.	CS	M	IF	Hexagonal crimp		d1	d2	d4	a	b	c1	c2	KG/100 pcs.	PU
				narrow	wide									
29 18 00	6	5	5	2		3,8	5,5	5,5	10	8,5	6,5	9,0	0,300	100
29 18 02		6		2			6,4			8,5	7,5	10,0	0,300	100
29 18 04	10	5	6	2		4,5	5,3	6	10	9,0	7,0	10,0	0,400	100
29 18 06		6		2			6,4			9,0	7,5	10,0	0,350	100
29 18 08		8		2			8,4			13,0	10,0	13,0	0,400	100
29 18 10	16	6	8	2	1	5,5	6,4	8,5	20	13,0	7,5	11,0	1,200	100
29 18 12		8		2	1		8,4			13,0	10,0	13,0	1,300	100
29 18 14		10		2	1		10,5			17,0	12,0	15,0	1,400	100
29 18 16		12		2	1		13,0			18,0	13,0	18,0	1,300	100
29 18 18	25	6	10	2	1	7	6,4	10	20	14,0	7,5	11,0	1,500	100
29 18 20		8		2	1		8,4			16,0	10,0	13,0	1,600	100
29 18 22		10		2	1		10,5			17,0	12,0	15,0	1,600	100
29 18 24		12		2	1		13,0			19,0	13,0	18,0	1,700	100
29 18 26	35	8		2	1	8,2	8,4	12,5	20	17,0	10,0	13,0	2,700	100
29 18 28		10		2	1		10,5			19,0	12,0	15,0	2,800	100
29 18 30		12		2	1		13,0			21,0	13,0	18,0	2,800	100
29 18 32	50	8	14	3	1	10	8,4	14,5	28	20,0	10,0	16,0	4,400	100
29 18 34		10		3	1		10,5			22,0	12,0	16,0	4,500	100
29 18 36		12		3	1		13,0			24,0	13,0	18,0	4,500	100
29 18 38		16		3	1		17,0			28,0	16,0	22,0	4,600	100
29 18 40	70	8	16	3	1	11,5	8,4	16,5	28	24,0	10,0	14,0	6,000	100
29 18 42		10		3	1		10,5			24,0	12,0	16,0	6,300	100
29 18 44		12		3	1		13,0			24,0	13,0	18,0	6,300	100
29 18 46		16		3	1		17,0			30,0	16,0	22,0	6,600	100
29 18 48	95	10	18	4	2	13,5	10,5	19	35	28,0	12,0	17,0	9,000	50
29 18 50		12		4	2		13,0			28,0	13,0	18,0	9,300	50
29 18 52		16		4	2		17,0			32,0	16,0	22,0	9,000	50
29 18 54	120	10	20	4	2	15,5	10,5	21	35	32,0	15,0	17,0	10,400	50
29 18 56		12		4	2		13,0			32,0	16,0	18,0	10,700	50
29 18 58		16		4	2		17,0			32,0	18,0	22,0	10,700	50
29 18 60		20		4	2		21,0			38,0	21,0	24,0	11,000	50
29 18 62	150	10	22	4	2	17	10,5	23,5	35	34,0	15,0	17,0	14,200	50
29 18 64		12		4	2		13,0			34,0	16,0	18,0	14,300	50
29 18 66		16		4	2		17,0			34,0	19,0	22,0	15,200	50
29 18 68		20		4	2		21,0			40,0	21,0	24,0	15,700	50
29 18 70	185	10	25	4	2	19	10,5	25,5	40	37,0	15,0	22,0	18,600	50
29 18 72		12		4	2		13,0			37,0	16,0	22,0	18,700	50
29 18 74		16		4	2		17,0			37,0	19,0	22,0	19,000	50
29 18 76		20		4	2		21,0			40,0	21,0	24,0	18,700	50
29 18 78	240	12	28	5	2	21,5	13,0	29	40	42,0	16,0	22,0	25,100	50
29 18 80		16		5	2		17,0			42,0	19,0	22,0	25,000	50
29 18 82		20		5	2		21,0			45,0	21,0	24,0	25,300	50

Processing tools starting  
at Page 29

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# Crimp connectors

## Crimp connector DIN 46267 Part 1

- Material: 99,9% electrolytic copper
- Surface: tin-plated



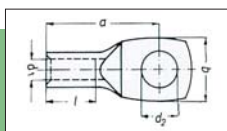
**Cu**

Art. No.	CS	IF	Hexagonal crimp		d1	d4	l	KG/100 pcs.	PU	Dealer Box
			narrow	wide						
29 15 21	6	5	2		3,8	5,5	30	0,300	100	1600
29 15 23	10	6	2		4,5	6	30	0,350	100	1000
29 15 25	16	8	2	1	5,5	8,5	50	1,450	50	300
29 15 27	25	10	2	1	7	10	50	1,800	50	300
29 15 29	35	12	2	1	8,2	12,5	50	2,900	50	200
29 15 31	50	14	3	1	10	14,5	56	4,300	25	100
29 15 33	70	16	3	1	11,5	16,5	56	5,400	25	100
29 15 35	95	18	4	2	13,5	19	70	8,600	25	50
29 15 37	120	20	4	2	15,5	21	70	9,700	25	50
29 15 39	150	22	4	2	17	23,5	80	14,500	15	30
29 15 41	185	25	4	2	19	25,5	85	17,000	5	30
29 15 43	240	28	5	2	21,5	29	90	23,400	5	20
29 15 45	300	32		2	24,5	32	100	29,250	5	10
29 15 47	400	38		3	27,5	38,5	150	74,300	3	6
29 15 49	500	42		3	31	42	160	89,000		8
29 15 51	625	44		3	34,5	44	160	79,000		6
29 15 53	800	52		3	40	52	200	151,000		6
29 15 55	1000	58		3	44	58	200	198,000		6

## Nickel terminals

### Tubular terminals, ring type, of pure nickel

- Material: nickel
- temperature resistant to 500° C

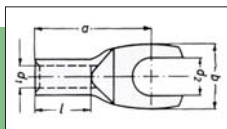


**Nickel**

Art. No.	CS	M	d1	d2	b	l	a	weight	PU
29 25 60	0,5 - 1	4	1,6	4,3	6,5	13	6	80	100
29 25 62		5	1,6	5,3	7,5	14	6	80	100
29 25 64	1,5 - 2,5	4	2,3	4,3	7	13	6	105	100
29 25 66		5	2,3	5,3	8,5	14	6	105	100
29 25 68		6	2,3	6,5	9,5	16	6	130	100
29 25 70	4 - 6	4	3,6	4,3	8,5	18	8	275	100
29 25 72		5	3,6	5,3	9,5	19	8	275	100
29 25 74		6	3,6	6,5	9,5	19	8	270	100

### Tubular terminals, forke type, of pure nickel

- Material: nickel
- temperature resistant to 500° C

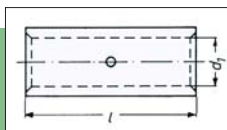


**Nickel**

Art. No.	CS	M	d1	d2	b	l	a	weight	PU
29 25 80	0,5 - 1	4	1,6	4,3	6,5	13	6	80	100
29 25 82		5	1,6	5,3	7,5	14	6	80	100
29 25 84	1,5 - 2,5	4	2,3	4,3	7	13	6	105	100
29 25 86		5	2,3	5,3	8,5	14	6	105	100
29 25 88		6	2,3	6,5	9,5	16	6	130	100
29 25 90	4 - 6	4	3,6	4,3	8,5	18	8	275	100
29 25 92		5	3,6	5,3	9,5	19	8	275	100

### Butt connectors, made from pure nickel

- Material: nickel
- temperature resistant to 500° C



**Nickel**

Art. No.	CS	d1	L	weight	PU
29 25 96	0,5 - 1	1,6	15	115	100
29 25 98	1,5 - 2,5	2,3	15	150	100
29 26 00	4 - 6	3,6	15	280	100

**Processing tools starting  
at Page 29**

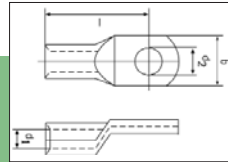
(art. 21 07 72, 21 07 74)

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## Al crimp terminal

- Material: Al conductor, design according to DIN 48201
- Surface: bare

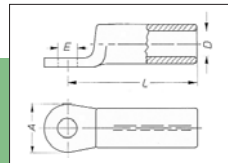


aluminium

Art. No.	CS mm <sup>2</sup> RM/SM	Nominal dimension mm <sup>2</sup>						Hexagon pressing		kg/100 pcs.	PU
		SE	FL	E	L	A	D Ø	IF	narrow		
29 29 04	16	8	12	4	2	5,8	8,5	18,0	52	1,400	100
29 29 06		10					10,5	18,0		1,400	100
29 29 08	25	8	12	4	2	6,8	8,5	18,0	60	1,400	100
29 29 10		10					10,5	18,0		1,500	100
29 29 12	35	10	14	5	2	8	10,5	21,0	67	2,100	75
29 29 14		12					13,0	21,0		2,100	75
29 29 16	50	10	16	5	2	9,8	10,5	25,0	72	2,700	50
29 29 18		12					13,0	25,0		2,750	50
29 29 20	70	10	18	6	3	11,2	10,5	28,0	86	4,400	40
29 29 22		12					13,0	28,0		4,300	40
29 29 24	95	10	22	6	3	13,2	10,5	32,0	90	7,400	24
29 29 26		12					13,0	32,0		7,500	24
29 29 28		16					17,0	34,0		7,300	24
29 29 30	120	12	22	6	3	14,7	13,0	32,0	91	6,700	20
29 29 32		16					17,0	34,0		6,400	20
29 29 34	150	12	25	6	3	16,3	13,0	35,0	103	9,600	20
29 29 36		16					17,0	35,0		9,200	20
29 29 38		20					21,0	41,0		9,400	20
29 29 40	185	12	28	6	3	18,3	13,0	40,0	106	12,600	15
29 29 42		16					17,0	40,0		12,000	15
29 29 44		20					21,0	40,0		13,100	15
29 29 46	240	12	32	8	3	21	13,0	45,0	116	18,300	10
29 29 48		16					17,0	45,0		17,600	10
29 29 50		20					21,0	45,0		17,300	10

## Al crimp terminal DIN 46329, longitudinally sealed

- extruded version
- Material: Al conductor, design according to DIN 48201
- Surface: bare



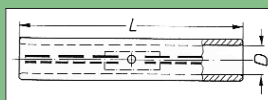
aluminium

Article number for tin-plated version e.g. 29 27 70/VZ

Art. No.	CS mm <sup>2</sup> RM/SM	Nominal dimension mm <sup>2</sup>						Hexagon pressing		kg/100 pcs.	PU	
		SE	FL	E	L	A	D Ø	IF	narrow			wide
29 27 70	35	50	10	10,5	62		8	14	5	3	2,25	50
29 27 72		50	12	13	62		8	14	5	3	2,20	50
29 27 74	50	70	10	10,5	62		9,8	16	5	3	2,70	50
29 27 76		70	12	13	62		9,8	16	5	3	2,60	50
29 27 78	70	95	10	10,5	72		11,2	18	6	3	4,10	50
29 27 80		95	12	13	72		11,2	18	6	3	4,00	50
29 27 82	95	120	10	10,5	75		13,2	22	6	3	6,70	25
29 27 84		120	12	13	75		13,2	22	6	3	6,50	25
29 27 86	120	150	12	13	80	30	14,7	22	6	3	6,40	25
29 27 88		150	16	17	80	30	14,7	22	6	3	6,30	25
29 27 90	150	185	10	10,5	90	30	16,3	25	7	3	8,00	25
29 27 92		185	12	13	90	30	16,3	25	7	3	7,80	25
29 27 94		185	16	17	90	30	16,3	25	7	3	7,70	15
29 27 96	185	240	10	10,5	91	30	18,3	28	7	3	11,30	15
29 27 98		240	12	13	91	30	18,3	28	7	3	10,60	15
29 28 00		240	16	17	91	30	18,3	28	7	3	9,80	15
29 28 02	240	300	12	13	103	38	21	32	8	3	16,20	10
29 28 04		300	16	17	103	38	21	32	8	3	15,50	10
29 28 06		300	20	21	103	38	21	32	8	3	14,70	10
29 28 08	300	-	12	13	103	38	23,3	34	8	3	18,00	8
29 28 10		-	16	17	103	38	23,3	34	8	3	17,60	8
29 28 12		-	20	21	103	38	23,3	34	8	3	17,30	8
29 28 14	400	-	12	13	116	38	26	38	-	4	40,80	4
29 28 16		-	16	17	116	38	26	38	-	4	40,40	4
29 28 18		-	20	21	116	38	26	38	-	4	40,00	4
29 28 20	500	-	12	13	122	44	29	44	-	4	43,60	4
29 28 22		-	16	17	155	44	29	44	-	4	43,20	4
29 28 24		-	20	21	122	44	29	44	-	4	42,80	4

## Al-Crimp connector DIN 46267 Part 2

- for connections with tension relief of Al conductors to DIN 48201, Page 5
- Material: Al 99,5%
- Surface: bare



**aluminium**

Art. No.	CS mm <sup>2</sup>		SE	D	L	crimp		weight	PU
	RM/SM					narrow	wide		
29 35 42	<b>25</b>		35	6,8	70	4/4	2/2	1500	150
29 35 44	<b>35</b>		50	8	85	5/5	2/2	2250	100
29 35 46	<b>50</b>		70	9,8	85	5/5	2/2	2950	50
29 35 48	<b>70</b>		95	11,2	105	6/6	3/3	5000	30
29 35 50	<b>95</b>		120	13,2	105	6/6	3/3	8200	25
29 35 52	<b>120</b>		150	14,7	105	6/6	3/3	8700	20
29 35 54	<b>150</b>		185	16,3	125	6/6	3/3	11800	20
29 35 56	<b>185</b>		240	18,3	125	6/6	3/3	13100	15
29 35 58	<b>240</b>		300	20,0	145	8/8	3/3	20600	10

Processing tools starting  
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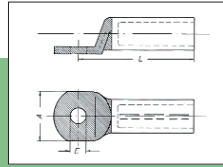
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# Terminals and connectors

## Al and Cu crimp terminals, longitudinally sealed

- for AL cables to DIN 48201 and cable conductors of AL to VDE 0295
- Material: AL 99,5% DIN 40501, E-CU DIN 40500
- Bare surface



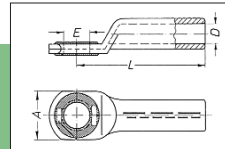
aluminium  
copper

Segmental conductors should be pressed so as to be circular with the corresponding insert

Art. No.	CS mm <sup>2</sup> RM/SM	SE	FL	E	L	A	D Ø	IF	Hexagon pressing		PU
									narrow	wide	
29 33 00	25	-	8	8,4	61	23	6,8	12	4	2	100
29 33 02		-	10	10,5	61	23	6,8	12	4	2	100
29 33 04		-	12	13	61	23	6,8	12	4	2	100
29 33 06	35	50	10	10,5	71	23	8	14	5	3	100
29 33 08		50	12	13	71	23	8	14	5	3	100
29 33 10	50	70	10	10,5	72	23	9,8	16	5	3	50
29 33 12		70	12	13	72	23	9,8	16	5	3	50
29 33 14	70	95	10	10,5	82	26	11,2	18	6	3	50
29 33 16		95	12	13	82	26	11,2	18	6	3	50
29 33 18	95	120	12	13	85	30	13,2	22	6	3	25
29 33 20		120	16	17	85	30	13,2	22	6	3	25
29 33 22	120	150	12	13	87	30	14,7	22	6	3	25
29 33 24		150	16	17	87	30	14,7	22	6	3	25
29 33 26	150	185	12	13	104	36	16,3	25	7	3	25
29 33 28		185	16	17	104	36	16,3	25	7	3	25
29 33 30	185	240	12	13	105	36	18,3	28	7	3	20
29 33 32		240	16	17	105	36	18,3	28	7	3	20
29 33 34	240	300	12	13	120	36	21	32	8	3	15
29 33 36		300	16	17	120	36	21	32	8	3	15

## Al and Cu crimp terminals

- for AL cables to DIN 48201 and cable conductors of AL to VDE 0295
- Material: AL 99,5% DIN 40501, E-CU DIN 40500
- Bare surface

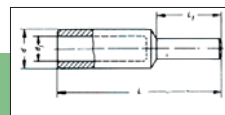


aluminium  
copper

Art. No.	RM/SM	SE	M	D	E	A	L	narrow	wide	weight	PU
29 39 10	25		8	6,8	8,5	22	60,5	4	2	2000	100
29 39 12	25	35	10	6,8	10,5	25	60,5	4	2	2100	100
29 39 14	35	50	10	8	10,5	26	67	5	3	3100	100
29 39 16		50	12	8	13	30	67	5	3	3100	100
29 39 18	50	70	10	10	10,5	27	70,5	5	3	3600	50
29 39 20		70	12	10	13	30	70,5	5	3	3800	50
29 39 22	70	95	10	11,5	10,5	29	81	6	3	5600	50
29 39 24		95	12	11,5	13	32	81	6	3	5700	50
29 39 28	95	120	12	13,5	13	35	93,5	6	3	9500	25
29 39 30		120	16	13,5	17	38	93,5	6	3	10000	25
29 39 32	120	150	12	15	13	35	91	6	3	8700	25
29 39 34		150	16	15	17	38	91	6	3	8800	25
29 39 36	150	185	12	16,5	13	35	108,5	6	3	12200	25
29 39 38		185	16	16,5	17	41	108,5	6	3	12300	25
29 39 40		185	20	16,5	21	44	108,5	6	3	12800	25
29 39 42	185	240	12	18,5	13	40	104	7	3	15000	20
29 39 44		240	16	18,5	17	42	106	7	3	15500	20
29 39 46		240	20	18,5	21	46	104	7	3	15500	20
29 39 48	240	300	12	21,5	13	45	115	7	3	20000	15
29 39 50		300	16	21,5	17	45	115	7	3	21000	15
29 39 52		300	20	21,5	21	49	115	7	3	22000	15
29 39 54	300		16	24,5	17	51	121	7	3	34000	10
29 39 56			20	24,5	21	51	121	7	3	35000	10

## Alu crimp connectors with Cu pins

- Material: AL 99,5% DIN 40501, E-CU DIN 40500
- Bare surface

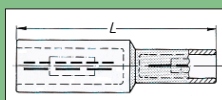


aluminium  
copper

Art. No.	CS mm <sup>2</sup> RM/SM	SE	Ø Bo	Ø Se	d Ø	d1 Ø	L1	L	weight	PU
29 39 60	25	35	6	6,3	12	6,8	20	58	1600	10
29 39 62	35	50	7	7,5	14	8	22	71	2500	10
29 39 64	50	70	8	9	16	10	25	74	3300	10
29 39 66	70	95	10	10,5	18,5	11,5	30	87	5400	10
29 39 68	95	120	12	12,5	23	13,5	33	91	8700	10
29 39 70	120	150	12	14	23	15	38	97	9000	10
29 39 72	150	185	12	15,8	25,5	16,5	38	108	10900	10
29 39 74	185	240	14	17,5	28,5	18,5	44	116	15700	10
29 39 76	240	300	16	20,3	32,5	21,5	44	128	21800	10
29 39 78	300	-	18	22,5	34,5	23,5	46	131	26700	10

## Al-Cu reducing connectors

- for connections with tension relief of Al/Cu conductors to DIN 28201
- Material: Al 99,5%, DIN 40501, E-Cu DIN 40500
- Surface: bare pickled



aluminium  
copper

Art. No.	Al		Cu		Ø Internal sleeve		IF Cu	IF Al	L	weight	PU
	RM/SM	SE	RM/SM	Al	Cu						
29 35 70	<b>25</b>	35	10	6,8	4,5		12	6	55	1400	10
29 35 72		35	16	6,8	5,5		12	8	61	1650	10
29 35 74		35	25	6,8	7,0		12	10	61	1900	10
29 35 76		35	50	6,8	10,0		12	12	72	3500	10
29 35 78	<b>25/4</b>	35re	16	7,6	5,5		12	8	61	1600	10
29 35 80		35re	25	7,6	7,0		12	10	61	1850	10
29 35 82	<b>35</b>	50	16	8	5,5		14	8	71	2500	10
29 35 84		50	25	8	7,0		14	10	71	2650	10
29 35 86		50	35	8	8,2		14	12	71	3300	10
29 35 88		50	50	8	10		14	14	80	3530	10
29 35 90	<b>35/6</b>	50re	16	9	5,5		14	8	71	2450	10
29 35 92		50re	25	9	7,0		14	10	71	2600	10
29 35 94		50re	35	9	8,2		14	12	71	3250	10
29 35 96	<b>50</b>	70	16	9,8	5,5		16	8	71,5	2850	10
29 35 98		70	25	9,8	7,0		16	10	71,5	3200	10
29 36 00		70	35	9,8	8,2		16	12	71,5	3800	10
29 36 02		70	50	9,8	10		16	14	77,5	4550	10
29 36 04	<b>70</b>	95	16	11,2	5,5		18	8	79	4100	10
29 36 06		95	25	11,2	7,0		18	10	79	3950	10
29 36 08		95	35	11,2	8,2		18	12	79	4900	10
29 36 10		95	50	11,2	10		18	14	85	5700	10
29 36 12		95	70	11,2	11,5		18	16	86	7250	10
29 36 14		95	95	11,2	13,5		18	18	95	9360	10
29 36 16		95	120	11,2	15,5		18	20	99	10540	10
29 36 18	<b>95</b>	120	16	13,2	5,5		22	8	79	6150	10
29 36 20		120	25	13,2	7,0		22	10	79	6300	10
29 36 22		120	35	13,2	8,2		22	12	79	6800	10
29 36 24		120	50	13,2	10		22	14	85	8050	10
29 36 26		120	70	13,2	11,5		22	16	87	8200	10
29 36 28		120	95	13,2	13,5		22	18	95	10350	10
29 36 30		120	120	13,2	15,5		22	20	95	11550	10
29 36 32	<b>120</b>	150	35	14,7	8,2		22	12	81	7600	10
29 36 34		150	50	14,7	10		22	14	87	7900	10
29 36 36		150	70	14,7	11,5		22	16	89	8500	10
29 36 38		150	95	14,7	13,5		22	18	97	11000	10
29 36 40		150	120	14,7	15,5		22	20	97	11900	10
29 36 42	<b>150</b>	185	16	16,3	5,5		25	8	91,5	7800	10
29 36 44		185	25	16,3	7,0		25	10	91,5	8000	10
29 36 46		185	35	16,3	8,2		25	12	91,5	8400	10
29 36 48		185	50	16,3	10		25	14	98,5	10200	10
29 36 50		185	70	16,3	11,5		25	16	99,5	10350	10
29 36 52		185	95	16,3	13,5		25	18	107,5	12650	10
29 36 54		185	120	16,3	15,5		25	20	107,5	13900	10
29 36 56		185	150	16,3	17,5		25	22	112,5	16700	10
29 36 58	<b>185</b>	240	50	18,3	10		28	24	99	12100	10
29 36 60		240	70	18,3	11,5		28	16	100	13000	10
29 36 62		240	95	18,3	13,5		28	18	108	14450	10
29 36 66		240	150	18,3	17		28	22	113	19550	10
29 36 68		240	185	18,3	19		28	25	116	21000	10
29 36 70	<b>240</b>	300	50	21,0	10		32	14	110	16500	10
29 36 72		300	70	21,0	11,5		32	16	111	18600	10
29 36 74		300	95	21,0	13,5		32	18	119	19000	10
29 36 76		300	120	21,0	15,5		32	20	119	20500	10
29 36 78		300	150	21,0	17		32	22	124	23300	10
29 36 80		300	185	21,0	19		32	25	127	25500	10
29 36 82		300	240	21,0	21,5		32	28	128	30100	10
29 36 84	<b>300</b>	-	120	23,3	15,5		34	20	119	27800	10
29 36 86		-	150	23,3	17		34	22	124	31100	10
29 36 88		-	185	23,3	19		34	25	128	32700	10
29 36 90		-	240	23,3	21,5		34	28	128	37500	10
29 36 92		-	300	23,3	24,5		34	32	134	47000	10

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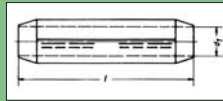
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## Crimp connector 10 - 30 KV

### Crimp connector, AL medium voltage 10-30 KV

- Material: AL 99,5%
- for tension relief connections of Al medium-voltage cables
- Bare surface

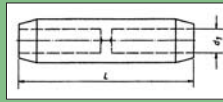


aluminium

Art. No.	CS	IF	crimping		d1	l	PU
			narrow	wide			
29 30 22	35	14	4/4	2/2	8	95	1
29 30 24	50	16	4/4	2/2	9,8	95	1
29 30 26	70	18	4/4	2/2	11,2	100	1
29 30 28	95	22	4/4	2/2	13,2	105	1
29 30 30	120	22	4/4	2/2	14,7	110	1
29 30 32	150	25	4/4	2/2	16,3	110	1
29 30 34	185	28	5/5	2/2	18,3	130	1
29 30 36	240	32	5/5	2/2	21	130	1
29 30 38	300	34	5/5	2/2	23,3	135	1
29 30 40	400	38	5/5	3/3	26	165	1

### Crimp connectors AL medium voltage 10-30 KV longitudinally sealed

- Material: AL 99,5%
- for tension relief connections of Al medium-voltage cables
- Bare surface • with separator

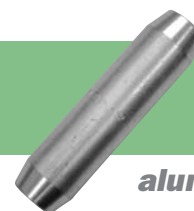
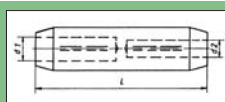


aluminium

Art. No.	CS	IF	crimping		d1	l	PU
			narrow	wide			
29 30 02	35	14	4/4	2/2	8,2	90	1
29 30 04	50	16	4/4	2/2	10	90	1
29 30 06	70	18	4/4	2/2	11,5	95	1
29 30 08	95	22	4/4	2/2	13,5	100	1
29 30 10	120	22	4/4	2/2	15	105	1
29 30 12	150	25	4/4	2/2	16,5	105	1
29 30 14	185	28	5/5	2/2	18,5	125	1
29 30 16	240	32	5/5	2/2	21,3	125	1
29 30 18	300	34	5/5	2/2	23,6	125	1
29 30 20	400	38	5/5	3/3	26,25	150	1

## Reducing crimp connector AL medium voltage 10-30 KV, longitudinally sealed

- Material: AL 99,5%
- for tension relief connections of Al medium-voltage cables
- Bare surface • with separator



aluminium

The separator achieves absolute oil sealing

Art. No.	CS	cross-section	IF	crimping		d1	d2	l	PU
				narrow	wide				
29 30 42	35	25	14	4/4	2/2	8	6,8	95	1
29 30 44	50	25	16	4/4	2/2	9,8	6,8	95	1
29 30 46		35	16	4/4	2/2	9,8	8	95	1
29 30 48	70	25	18	4/4	2/2	11,2	6,8	100	1
29 30 50		35	18	4/4	2/2	11,2	8	100	1
29 30 52		50	18	4/4	2/2	11,2	9,8	100	1
29 30 54	95	25	22	4/4	2/2	13,2	6,8	105	1
29 30 56		35	22	4/4	2/2	13,2	8	105	1
29 30 58		50	22	4/4	2/2	13,2	9,8	105	1
29 30 60		70	22	4/4	2/2	13,2	11,2	105	1
29 30 62	120	25	22	4/4	2/2	14,7	6,8	110	1
29 30 64		35	22	4/4	2/2	14,7	8	110	1
29 30 66		50	22	4/4	2/2	14,7	9,8	110	1
29 30 68		70	22	4/4	2/2	14,7	11,2	110	1
29 30 70		95	22	4/4	2/2	14,7	13,2	110	1
29 30 72	150	25	25	4/4	2/2	16,3	6,8	110	1
29 30 74		35	25	4/4	2/2	16,3	8	110	1
29 30 76		50	25	4/4	2/2	16,3	9,8	110	1
29 30 78		70	25	4/4	2/2	16,3	11,2	110	1
29 30 80		95	25	4/4	2/2	16,3	13,2	110	1
29 30 82		120	25	4/4	2/2	16,3	14,7	110	1
29 30 84	185	25	28	4/4	2/2	18,3	6,8	130	1
29 30 86		35	28	4/4	2/2	18,3	8	130	1
29 30 88		50	28	4/4	2/2	18,3	9,8	130	1
29 30 90		70	28	4/4	2/2	18,3	11,2	130	1
29 30 92		95	28	4/4	2/2	18,3	13,2	130	1
29 30 94		120	28	5/5	2/2	18,3	14,7	130	1
29 30 96		150	28	5/5	2/2	18,3	16,3	130	1
29 30 98	240	25	32	5/5	2/2	21	6,8	130	1
29 31 00		35	32	5/5	2/2	21	8	130	1
29 31 02		50	32	5/5	2/2	21	9,8	130	1
29 31 04		70	32	5/5	2/2	21	11,2	130	1
29 31 06		95	32	5/5	2/2	21	13,2	130	1
29 31 08		120	32	5/5	2/2	21	14,7	130	1
29 31 10		150	32	5/5	2/2	21	16,3	130	1
29 31 12		185	32	5/5	2/2	21	18,3	130	1
29 31 14	300	150	34	5/5	2/2	23,3	16,3	135	1
29 31 16		185	34	5/5	2/2	23,3	18,3	135	1
29 31 18		240	34	5/5	2/2	23,3	21	135	1
29 31 20	400	185	38	5/5	3/3	26	18,3	165	1
29 31 22		240	38	5/5	3/3	26	21	165	1
29 31 24		300	38	5/5	3/3	26	23,3	165	1

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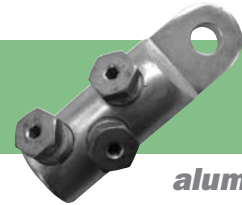
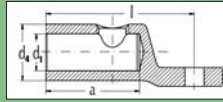
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# Screw terminals 10 - 30 KV

## AL screw terminals medium voltage 10-30 KV

- Material: AL 99,5%
- for tension relief connections of Al medium-voltage cables
- Tin-plated surface



aluminium

Art. No.	cross-section	M	screws	d1	d4	l	PU
29 31 40	16 - 95	12	1	12,5	24	60	1
29 31 42	50 - 150	12	1	15,5	30	79	1
29 31 44		16	1	15,5	30	79	1
29 31 46	95 - 240	12	2	20	33	95	1
29 31 48		16	2	20	33	95	1
29 31 50	120 - 300	12	2	25	38	100	1
29 31 52		16	2	25	38	100	1
29 31 54	185 - 400	12	3	26	42	115	1
29 31 56		16	3	26	42	115	1

## AL screw connectors medium voltage 10-30 KV

- Material: AL 99,5%
- Screws: Tin-galvanised brass
- Tin-plated surface



aluminium

Art. No.	cross-section	screws	d1	d4	l	PU
29 31 30	16 - 95	2	12,5	24	70	1
29 31 32	50 - 150	2	15,5	30	85	1
29 31 34	95 - 240	4	20	33	120	1
29 31 36	120 - 300	4	25	38	142	1
29 31 38	185 - 400	6	26	42	170	1

## Screw lugs and connectors

Screw connectors are a reliable and economic way of connecting identical or different conductor cross-sections. They can be used up to 36kV.

All lugs and connectors are fitted with torque-limited shear-off screws.

The actual cross-section of the cable does not need to be known, because each screw lug or connector covers many cable sizes. This results in simplified logistics, a small stock of lugs will cover a wide range of applications. Also, the tin-plated surface means that they can be used on both copper and aluminium cables.

### The principle of multiple tear-off screws

The screws of the Haupa screw lugs and connectors have a hexagon head and socket, which clamps the conductor cross-section with optimal clamping torque and therefore reduces assembly time. As the screw is tightened it will shear off when correct torque is reached and a good joint is made.

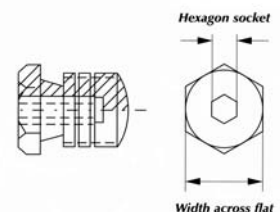
### Advantages of the tear-off screw

- simple assembly
- the screw head shears off when clamping torque is right
- no torque key required
- screw can be detached using the hexagon socket

1. The screw is fitted with several tear-off spots, with different shear-off torque, a hexagon head and socket.

2. The tear-off torques are defined in such a way that generally the biggest conductor cross-section is clamped with the biggest clamping torque and the smaller conductor cross-section with the smaller clamping torque. This happens by allocating hexagon head and socket.

3. Assembly is much simpler than with the telescopic screw, because each screw needs to be pulled and torn off only once.



Hexagon socket

Width across flat

## Assortment box

of steel plate, painted, without content

Art. No.	length	width	height	compart.	weight	PU
22 00 90	366	230	51	20	2400	1
22 00 91	350	170	46	5	2200	1
22 00 92	370	160	40	9	2300	1
22 00 93	400	250	50	13	2500	1



22 00 91



22 00 92



22 00 93



22 00 90

## Standard tube terminal assortment

in metal case, with pliers

Contents:

- 25 Tube terminals 6.0 mm<sup>2</sup>, Bolt M6
- 25 Tube terminals 6.0 mm<sup>2</sup>, Bolt M8
- 25 Tube terminals 10.0 mm<sup>2</sup>, Bolt M6
- 25 Tube terminals 10.0 mm<sup>2</sup>, Bolt M5
- 25 Tube terminals 16.0 mm<sup>2</sup>, Bolt M8
- 25 Tube terminals 16.0 mm<sup>2</sup>, Bolt M10
- 25 Tube terminals 25.0 mm<sup>2</sup>, Bolt M8
- 25 Tube terminals 25.0 mm<sup>2</sup>, Bolt M10
- 20 Tube terminals 36.0 mm<sup>2</sup>, Bolt M6
- 20 Tube terminals 35.0 mm<sup>2</sup>, Bolt M10
- 20 Tube terminals 50.0 mm<sup>2</sup>, Bolt M10
- 20 Tube terminals 50.0 mm<sup>2</sup>, Bolt M12
- 1 Crimping pliers (Art. 21 08 05), press range 6 - 50 mm<sup>2</sup>, standard hexagonal pressing
- 1 Metal case 400 x 250 x 50 mm



Art. No.	weight	PU
29 02 46	7000	1

## Crimp terminal assortment DIN

in metal case, with pliers

Contents:

- 25 Crimp terminals 6.0 mm<sup>2</sup>, Bolt M6
- 25 Crimp terminals 6.0 mm<sup>2</sup>, Bolt M8
- 25 Crimp terminals 10.0 mm<sup>2</sup>, Bolt M6
- 25 Crimp terminals 10.0 mm<sup>2</sup>, Bolt M8
- 25 Crimp terminals 16.0 mm<sup>2</sup>, Bolt M8
- 25 Crimp terminals 16.0 mm<sup>2</sup>, Bolt M10
- 15 Crimp terminals 25.0 mm<sup>2</sup>, Bolt M8
- 15 Crimp terminals 25.0 mm<sup>2</sup>, Bolt M10
- 15 Crimp terminals 35.0 mm<sup>2</sup>, Bolt M8
- 15 Crimp terminals 35.0 mm<sup>2</sup>, Bolt M10
- 10 Crimp terminals 50.0 mm<sup>2</sup>, Bolt M10
- 10 Crimp terminals 50.0 mm<sup>2</sup>, Bolt M12
- 1 Crimping pliers (Art. 21 08 05 K), press range 6 - 50 mm<sup>2</sup>, standard hexagonal pressing
- 1 Metal case 400 x 250 x 50 mm



Art. No.	weight	PU
26 20 41	7250	1

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