Flexible connectors • Solderless terminals • Contact-systems

druseidt Elektrotechnik

Product-Information

Flexible power- and grounding connectors with welded contact areas “Made in Germany”

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Paul Druseidt
Elektrotechnische Spezialfabrik GmbH & Co. KG
Neuenkamper Str. 105
42855 Remscheid, Germany

Phone: +49 (21 91) 93 52-0
Telefax: +49 (21 91) 93 52-150
http: www.druseidt.de
E-Mail: info@druseidt.de

The measurements and technical information written in this catalogue have been determined with greatest care and are updated continuously in our documentation. The illustrations correspond to the status at the time of printing. We reserve us the right to make technical as well as changes of measurements, colours or formats after printing.
Our information, especially the values of possible current-loads are not binding, they are only approximate values under optimized conditions. The relation between conductor cross-section and current load fixed in national or international regulations are not cancelled through our information. Only the values in our written confirmations are binding for us.

Flexible current connectors and earthing tapes with welded contact areas

Flexible current connectors and earthing tapes made by druseidt electrotechnology are excellently suitable for the most diverse applications in the field of switchgear, switchbox and electrical control engineering. The welding process, used for the production process, allows a massive welding of contact areas, resulting in extremely flexible components with optimized electrical resistances and reduced power losses.

Also the welding of multilayer braids or braids with narrow connection areas, e.g. for the connection of compact switches, is easily possible. The use of various insulation materials offers the user a wide range of connections with different flexibility in different temperature ranges.

Main advantages:

High quality

- Massive, compact connection areas with lower electrical resistances as solderless crimped or dip-tinned designs
- Long-therm stability with improved electrical aging behavior since no moisture can enter into the contact areas
- Extremely flexible to absorb vibrations, to compensate rail offset and shocks in all directions

Different insulating materials for different applications

- PVC-extruded braids
  - 20 °C up to + 105 °C
- Silicone extruded braids
  - 50 °C up to + 180 °C
- Shrinking tube
  - 55 °C up to + 125 °C
- Silicone tube
  - 50 °C up to + 180 °C

In addition special insulation materials are available on request, tailored to your applications.

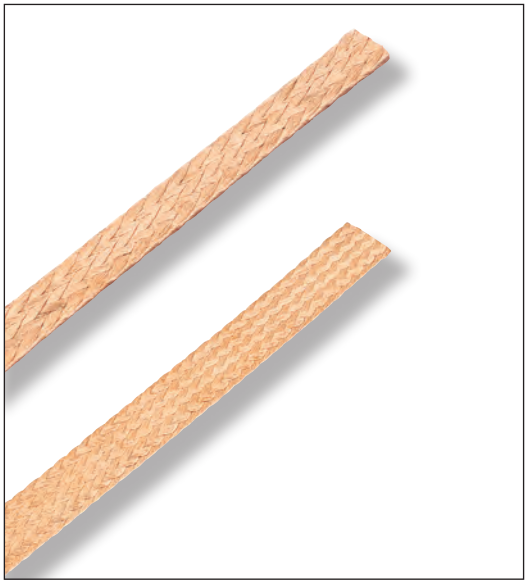
Varied designs

- As current- and earthing connectors
- As multilayer design for current up to 1000 A
- With especially narrow connections ends e.g. for connections of compact-switches up to 630 A
- As extremely flexible designs with cold- as well as heat resistant insulation materials

Non insulated, flexible, dimensionally stable copper braids 10-140 mm²

This copper braids are manufactured as flat rolled tubes. Caused by our special rolling process lower tolerances than with the conventionally used process can be achieved. This results in a relatively dimensionally stable design with pronounced edges.

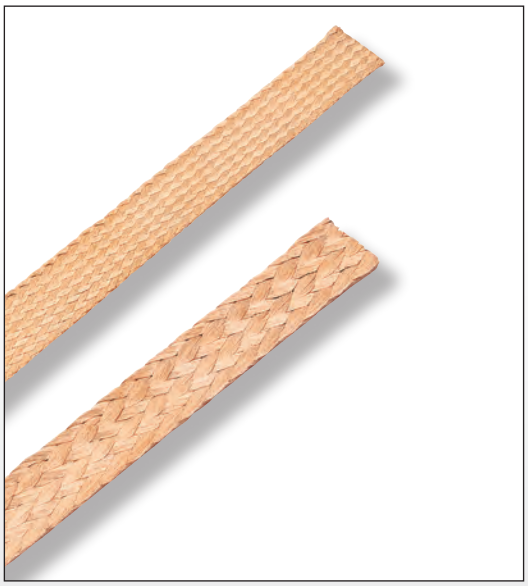
Such braids are better suited for automated processing than standard braids, e. g. for connectors in welded design. They therefore serve as base material for our below described flexible connectors with welded contact areas.



Part.-No.	Technical data				
	Cross-section mm²	Diameter and No. of wires	Width ca. mm	Thickness ca. mm	Weight kg/% m
02650	10	24 x 22 x 0,16	12	1,3	10,00
02651	16	36 x 15 x 0,20	15	1,6	16,00
02652	25	36 x 22 x 0,20	20	1,6	25,00
02653	25	36 x 22 x 0,20	25	1,3	25,00
02654	35	36 x 31 x 0,20	20	2,3	35,00
02655	35	36 x 31 x 0,20	25	2,1	35,00
02656	50	48 x 33 x 0,20	25	2,6	50,00
02657	50	48 x 33 x 0,20	30	2,4	50,00
02658	70	48 x 47 x 0,20	25	3,5	70,00
02659	70	48 x 47 x 0,20	30	3,3	70,00
02660	70	48 x 47 x 0,20	35	2,8	70,00
02661	100	48 x 68 x 0,20	40	3,5	100,00
02662	120	48 x 81 x 0,20	40	4,1	120,00
02663	140	48 x 95 x 0,20	40	4,8	140,00

Material: Soft annealed Cu-ETP1 wires acc. to DIN EN 13602 uncoated.
Tinned design on request.
Delivery: Optionally in rings, on spools or wooden drums

Narrow rolled, non insulated, dimensionally stable, flexible copper braids 25-240 mm²



Part.-No.	Technical data				
	Cross-section mm²	Diameter and No. of wires	Width ca. mm	Thickness ca. mm	Weight kg/% m
60140	25	24 x 60 x 0,15	12	4	25,00
60142	50	24 x 119 x 0,15	20	5	50,00
60144	70	24 x 166 x 0,15	20	7	70,00
60146	70	24 x 166 x 0,15	24	5,5	70,00
60148	100	24 x 237 x 0,15	24	7,5	100,00
60150	120	24 x 285 x 0,15	32	8	120,00
60152	185	2 x 24 x 219 x 0,15	32	12	185,00
60154	240	2 x 24 x 285 x 0,15	32	15	240,00

Material: Soft annealed Cu-ETP1 wires acc. to DIN EN 13602 uncoated.
Tinned design on request.
Delivery: Optionally in rings, on spools or wooden drums

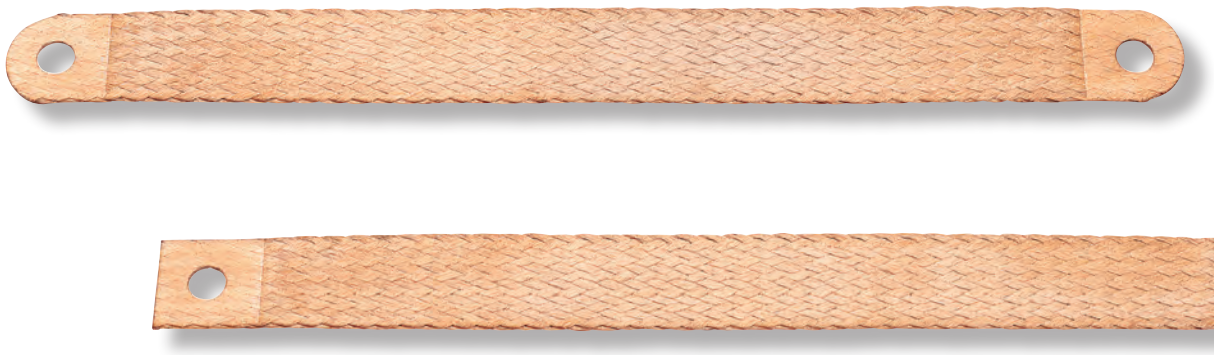
Flexible grounding- and current connectors 10-140 mm² with welded contact areas

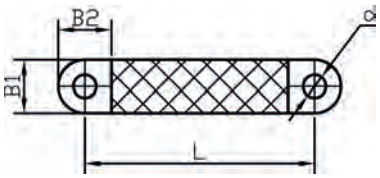
This grounding- and current connectors are technically innovative flexible electrical connection elements, which can be used for a variety of applications. The massively welded contact surfaces result in components with extremely low electrical resistance and good electrical aging behavior.

When used as earthing tapes braids have a much lower impedance than round stranded cables of the same cross-section. They are therefore also well suited for grounding applications in higher-frequency areas. We manufacture such connections in small and large series in lengths according to customer requirements.

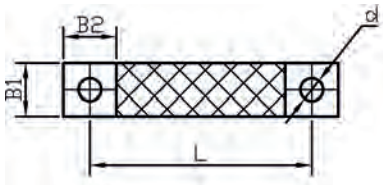
Technical data

- Copper braids out of Cu-ETP 1 wires acc. to DIN EN 13602
- Soft annealed, uncoated
- Single-wire-Ø 0,16 mm (10 mm²)
  Single-wire-Ø 0,20 mm (16-140 mm²)
- Contact areas welded

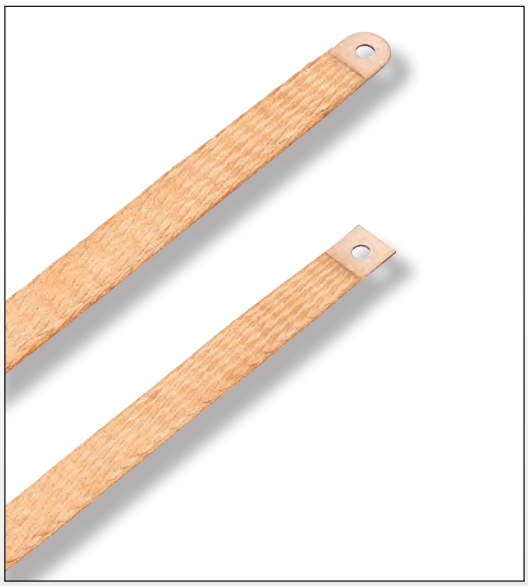




Design A



Design B



Part-No. Design A	Part-No. Design B	Technical data: Cross-section mm²	Current-load	Dimensions mm: B_1	B_2	ca. S	d	L
60300	60360	10	70-105 A	12	15	1,0	5,5	
60302	60362	16	100-150 A	15	15	1,2	6,5	
60304	60364	25	145-210 A	20	20	1,2	9	
60306	60366	25	145-210 A	25	25	1,0	11	
60308	60368	35	170-250 A	20	20	1,7	9	
60310	60370	35	170-250 A	25	25	1,5	11	
60312	60372	50	205-300 A	25	25	1,9	11	
60314	60374	50	215-310 A	30	30	1,9	11	
60316	60376	70	245-355 A	25	25	3,0	11	
60318	60378	70	245-355 A	30	30	2,6	11	
60320	60380	70	270-390 A	35	35	2,2	14	
60322	60382	100	325-470 A	40	40	2,8	14	
60324	60384	120	345-540 A	40	40	3,2	14	
60326	60386	140	405-580 A	40	40	3,8	14	

According to customer wishes

Remark: Designs with other hole-Ø on request. All information about current load are approximate values in consideration of the connector heat for single laying of air cooled connectors and ambient temperature + 35 °C. Minimum value = conductor temperature app. + 65 °C. Maximum value conductor temperature app. + 90 °C. The temperature of the conductor is in dependent of the installation, the application, the cooling, the ambient temperature and the heat removal option, so that, if necessary, reducing factors must be taken into account.

Flexible PVC-extruded braided copper tapes 10-210 mm² insulated by a black high quality vinyl compound

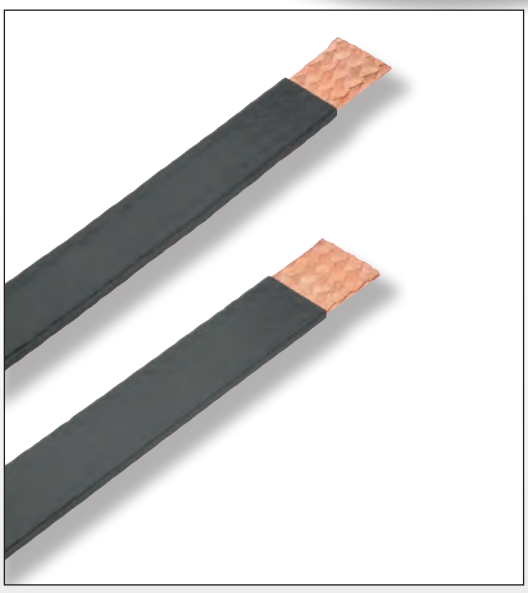
PVC extruded braided copper tapes consist out of uncoated, soft annealed Cu-ETP 1 wires and are insulated by a black high quality vinyl compound. The compound is hardly inflammable/ self extinguishing and free of lead. The as inner conductor used braid is manufactured as a flat rolled tube. The technical characteristics of the insulation material combined with a good flexibility offer multifarious applications inside of switch boxes, switch gears or control panel devices. By ordering an appropriate quantity it is also possible to manufacture other colours.

Technical data

Electrical conductor
- Copper braid made out of wires Cu-ETP 1 acc. to DIN EN 13602
- Soft annealed, uncoated
- Single wire-Ø 0,15 mm (10/16 mm²)
  Single wire-Ø 0,20 mm (25-210 mm²)

Insulation
- Special vinyl compound
- Black, free of lead
- Self-extinguishing acc. to UL 94 VO
- Elasticity 365 %
- Dielectric strength 20 kV/mm
- Operating voltage max. 1 kV AC/1,5 kV DC
- Operating temperature - 20 °C up to 105 °C

Delivery
- In rings or on spools



Part-No.	Technical data				
		Dimensions mm			
	Cross-section mm²	Braid		with insulation	
		width	thickness	width	thickness
16280	10	10	2	12	4
16281	16	16	2	18	4
16282	25	25	2	27	4
16283	35	25	3	27	5
16284	50	25	4	27,4	6,4
16285	50	30	3,3	32,4	5,7
16286	70	25	5,6	27,4	8
16287	70	35	4,3	37,4	6,4
16288	100	35	5,7	38,2	8,9
16289	120	40	6	43,2	9,2
16290	140	40	7	43,6	10,6
16291	210	40	10	46	14

Flexible current- and grounding connectors 10-210 mm² out of PVC-extruded braid with welded contact areas

This types of current- and grounding connectors consist out of PVC-extruded flat braids whose connection surfaces are welded solid. The result is a flexible connection with extremely low electrical resistance and good electrical aging behavior. The isolation is extruded, so that, in contrast to subsequently deferred hoses, it fits tightly against the braid. This is an advantage for the heat dissipation and also has a positive effect on the flexibility of the connections.

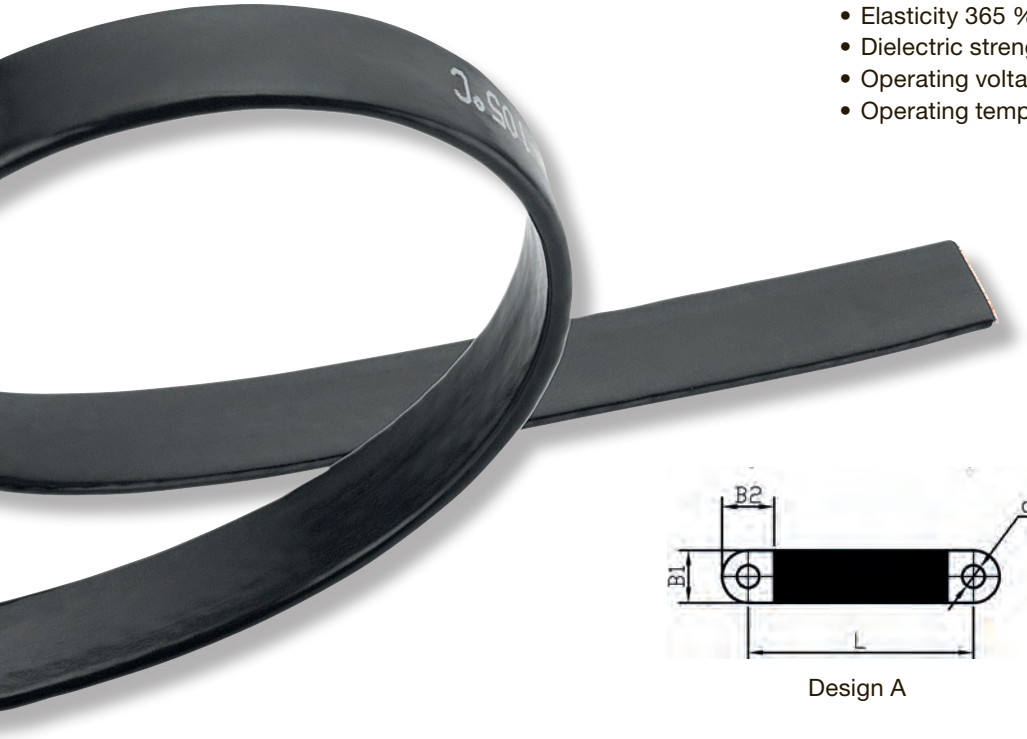
Technical data

Electrical conductor

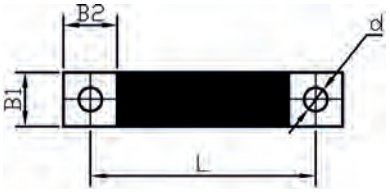
- Copper braid made out of wires Cu-ETP 1 acc. to DIN EN 13602
- Soft annealed, uncoated
- Single wire-Ø 0,15 mm (10/16 mm²)
  Single wire-Ø 0,20 mm (25-210 mm²)

Insulation

- Special vinyl compound
- Black, free of lead
- Self-extinguishing acc. to UL 94 VO
- Elasticity 365 %
- Dielectric strength 20 kV/mm
- Operating voltage max. 1 kV AC/1,5 kV DC
- Operating temperature - 20 °C up to 105 °C



Design A



Design B

Part-No. Design A	Part-No. Design B	Technical data: Cross-section mm²	Current-load	Dimensions mm: B_1	B_2	ca. S	d	L
60400	60460	10	70-105 A	12	15	1,0	5,5	
60402	60462	16	100-150 A	15	15	1,3	6,5	
60406	60466	25	145-210 A	25	25	1,5	11	
60410	60470	35	170-250 A	25	25	1,8	11	
60412	60472	50	205-300 A	25	25	2,3	11	
60414	60474	50	205-300 A	30	30	1,8	11	
60416	60476	70	245-355 A	25	25	2,9	11	
60418	60478	70	245-355 A	30	30	2,6	11	
60420	60480	70	270-390 A	35	35	2,4	14	
60422	60482	100	325-470 A	40	40	2,9	14	
60424	60484	120	345-540 A	40	40	3,5	14	
60426	60486	140	375-540 A	40	40	4,0	14	
60428	60488	210	405-580 A	40	40	5,9	14	

According to customer wishes

Remark: Designs with other hole-Ø on request. All information about current load are approximate values in consideration of the connector heat for single laying of air cooled connectors and ambient temperature + 35 °C. Minimum value = conductor temperature app. + 65 °C. Maximum value conductor temperature app. + 90 °C. The temperature of the conductor is in dependent of the installation, the application, the cooling, the ambient temperature and the heat removal option, so that, if necessary, reducing factors must be taken into account.

Highly flexible silicone-extruded braids 10-140 mm² free of halogen, black coloured

Highly flexible heat- and cold resistant insulated flat braids. The electrical conductors consist out of soft annealed Cu-ETP 1 wires which are extruded by a high quality halogen-free silicone compound. The used silicone material is extremely flexible and enables, above all in conjunction with our welded connection surfaces, the production of extremely flexible and universally applicable electrical connections. They are well suited within switchgear and plant construction as well as for applications where a high cold stability (up to - 50 °C) is required. In addition to the standard insulation with black colour are, on request and acceptance of relatively small minimum quantities, other colours such as yellow/green, red, orange or blue deliverable.

Technical data

Electrical conductor

- Copper braid out of Cu-ETP 1 wires acc. to DIN EN 13602
- Soft annealed, uncoated
- Single wire-Ø 0,16 mm (10 mm²)
  Single wire-Ø 0,20 mm (16-140 mm²)

Insulation

- Silicone rubber circa 60 shore A
- Colour black
- Free of halogen, chlorine content < 4 ppm
- Hardly inflammable and self extinguishing
- Operating voltage 1 kV AC/1,5 kV DC
- Testing voltage 9 kV (spark test)
- Dielectric strength 20 kV/mm
- Operating temperature - 50 °C up to + 180 °C

Delivery

- Optionally in rings, on spools or wooden drums

Part-No.	Technical data				
	Cross-section mm²	Dimensions mm			
		Braid		With insulation	
		width	thickness	width	thickness
16300	10	12	1,3	16	5,3
16301	16	15	1,6	19	5,6
16302	25	20	1,6	24	5,6
16303	25	25	1,3	29	5,3
16304	35	20	2,3	24	6,3
16305	35	25	2,6	29	6,1
16306	50	25	2,4	29	6,6
16307	50	30	2,4	34	6,4
16308	70	25	3,5	31	7,5
16309	70	30	3,3	36	7,3
16310	70	35	2,8	41	6,8
16311	100	40	3,5	46	7,5
16312	120	40	4,1	46	8,1
16313	140	40	4,8	46	8,8

Remark: If desired, coloured designs (small minimum quantities required) are also deliverable e. g. green/yellow, red, orange or blue colour.

Highly flexible current- and grounding connectors 10-140 mm² out of silicone extruded braids with welded contact areas

This highly flexible connectors consist out of silicone extruded braids whose connection surfaces are welded solid. The result is an extremely flexible electrical connection, characterized by both cold- and heat resistant insulation (- 50 °C up to + 180 °C). Ideally suited for electrical connections in applications where only a small amount of space is available or the connection needs to move.

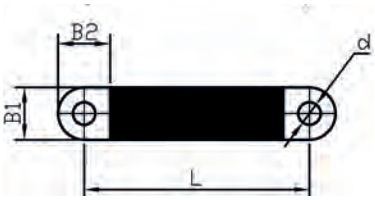
Technical data

Electrical conductor

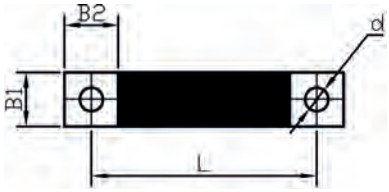
- Copper braid out of Cu-ETP 1 wires acc. to DIN EN 13602
- Soft annealed, uncoated
- Single wire-Ø 0,16 mm (10 mm²)
  Single wire-Ø 0,20 mm (16-140 mm²)

Insulation

- Silicone rubber circa 60 shore A
- Colour black
- Free of halogen, chlorine content < 4 ppm
- Hardly inflammable and self extinguishing
- Operating voltage 1 kV AC/1,5 kV DC
- Testing voltage 9 kV (spark test)
- Dielectric strength 20 kV/mm
- Operating temperature - 50 °C up to + 180 °C



Design A



Design B

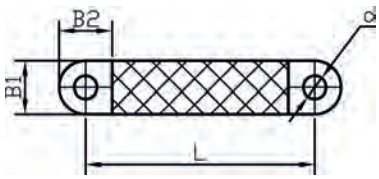
Part-No. Design A	Part-No. Design B	Technical data: Cross-section mm²	Current-load	Dimensions mm: B_1	B_2	ca. S	d	L
60500	60560	10	70-105 A	12	15	1,0	5,5	
60502	60562	16	100-150 A	15	15	1,2	6,5	
60504	60564	25	145-210 A	20	20	1,2	9	According to customers wishes
60506	60566	25	145-210 A	25	25	1,0	11	
60508	60568	35	170-250 A	20	20	1,7	9	
60510	60570	35	170-250 A	25	25	1,5	11	
60512	60572	50	205-300 A	25	25	1,9	11	
60514	60574	50	215-310 A	30	30	1,9	11	
60516	60576	70	245-355 A	25	25	3,0	11	
60518	60578	70	245-355 A	30	30	2,6	11	
60520	60580	70	270-390 A	35	35	2,2	14	
60522	60582	100	325-470 A	40	40	2,8	14	
60524	60584	120	345-540 A	40	40	3,2	14	
60526	60586	140	405-580 A	40	40	3,8	14	

Remark: Designs with other hole-Ø on request. All information about current load are approximate values in consideration of the connector heat for single laying of air cooled connectors and ambient temperature + 35 °C. Minimum value = conductor temperature app. + 65 °C. Maximum value conductor temperature app. + 90 °C. The temperature of the conductor is in dependent of the installation, the application, the cooling, the ambient temperature and the heat removal option, so that, if necessary, reducing factors must be taken into account.

Flexible current-connectors 25-240 mm²
with welded contact areas in narrowly shaped design

suitable for connection of compact switches

Flexible current connectors with, in relation to the cross-section, narrowly shaped design and solid welded contact areas. Therefore ideally suited for the connection of compact switches with narrow current outputs to busbar systems. The width of the connection surfaces are so designed that also supple bars can be replaced. Caused by the massively welded contact surfaces components with extremely low electrical resistance and excellent electrical aging behavior arise. As standard insulation subsequently mounted silicone- or shrinking hoses are available. In particular the silicone insulated design offers a very good flexibility and a large temperature range from - 50° C up to + 180° C.

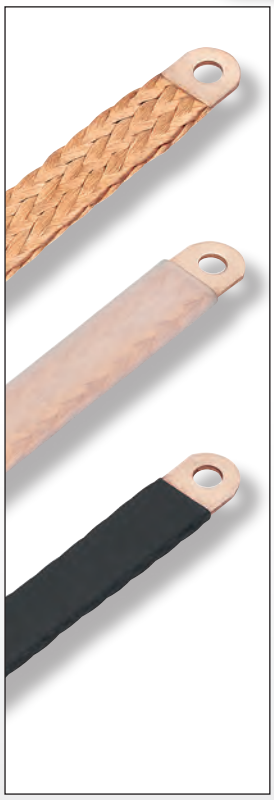


Technical data

Electrical conductor
- Copper braid out of Cu-ETP 1 wires acc. to DIN EN 13602
- Soft annealed, uncoated
- Single wire-Ø 0,15 mm

Insulation
Silicone tubing
- Silicone rubber circa 60 shore A
- Nature colour
- Free of halogen
- Hardly inflammable, self-extinguishing
- Dielectric strength > 18 kV/mm
- Thickness 1 mm
- Operating temperature - 50 °C up to + 180 °C

Heat shrinkable tubing
- Irradiated cross-linked polyolefin
- Black colour
- Self-extinguishing
- Dielectric strength 25 kV/mm
- Operating temperature - 55 °C up to + 125 °C

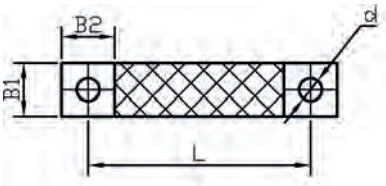


Part-No.			Technical data							
Without Insulation	Silicone insulated	Insulation shrinking tube	Cross-section mm²	Current-load	Suitable for switch-gear	Dimensions mm B_1	B_2	ca. S	d	L
60600	60600-SI	60600-SH	25	145-210 A	125/160 A	12	15	1,9	5,5	According to customers wishes
60602	60602-SI	60602-SH	50	205-300 A	250 A	20	20	2,4	9	
60604	60604-SI	60604-SH	70	245-355 A	300 A	20	20	3,5	9	
60606	60606-SI	60606-SH	70	245-355 A	300 A	24	25	3,1	11	
60608	60608-SI	60608-SH	100	325-470 A	350 A	24	25	4,8	11	
60610	60610-SI	60610-SH	120	375-540 A	400 A	32	35	3,8	11	
60612	60612-SI	60612-SH	120	375-540 A	400 A	32	35	3,8	14	
60614	60614-SI	60614-SH	185	400-550 A	500 A	32	35	6,5	11	
60616	60616-SI	60616-SH	185	400-550 A	500 A	32	35	6,5	14	
60618	60618-SI	60618-SH	240	550-680 A	630 A	32	35	7,4	11	
60620	60620-SI	60620-SH	240	550-680 A	630 A	32	35	7,4	14	

Remark: Insulations in other colours or materials as well as other fixing holes on request. All information about current load are approximate values in consideration of the connector heat for single laying of air cooled connectors and ambient temperature + 35 °C. Minimum value = connector temperature app. + 65 °C. Maximum value conductor temperature app. + 90 °C.
The temperature of the conductor is in dependent of the installation, the application, the cooling, the ambient temperature and the heat removal option, so that, if necessary, reducing factors must be taken into account.

Flexible power connectors 20-420 mm²
in multilayer design with welded contact areas

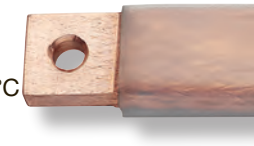
These multi-layered flexible power strips with welded connection surfaces allow the transmission of currents up to 1000 A via compact and relatively narrow connection surfaces.
They are therefore well suited for installation in confined spaces or to carry out movements with simultaneous flow of current.
The welding process used by us allows a compact and massive welding of both 2-layer and 3-layer power strips with a maximum total cross-section of 420 mm². As standard insulation subsequently mounted silicone- or shrinking hoses are available.
In particular the silicone insulated design offers a very good flexibility and a large temperature range from - 50 °C up to + 180 °C.



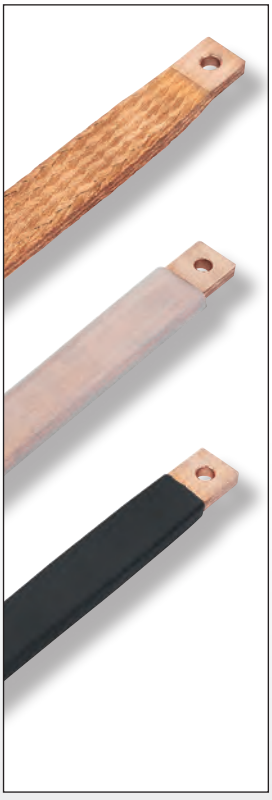
Technical data

Electrical conductor
- Copper braid out of Cu-ETP 1 wires acc. to DIN EN 13602
- Soft annealed, uncoated
- Single wire-Ø 0,16 mm (20/30 mm²)
  Single wire-Ø 0,20 mm (32-420 mm²)

Insulation
Silicone tubing
- Silicone rubber circa 60 shore A
- Nature colour
- Free of halogen
- Hardly inflammable, self-extinguishing
- Dielectric strength > 18 kV/mm
- Thickness 1 mm
- Operating temperature - 50 °C up to + 180 °C



Heat shrinkable tubing
- Irradiated cross-linked polyolefin
- Black colour
- Self-extinguishing
- Dielectric strength 25 kV/mm
- Operating temperature - 55 °C up to + 125 °C

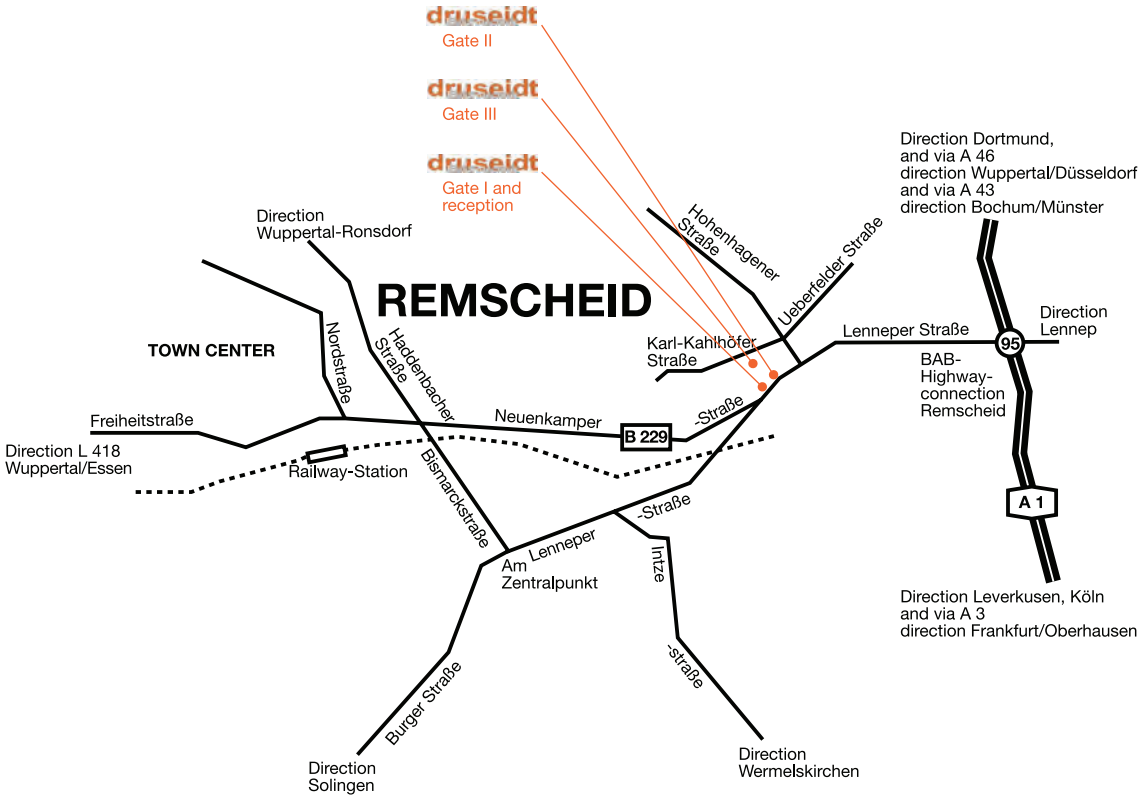


Part-No.			Technical data						
Without Insulation	Silicone insulated	Insulation shrinking tube	Cross-section mm²	Current-load	Dimensions mm B_1	B_2	ca. S	d	L
2-layer design									
60640	**60640-SI**	**60640-SH**	20	110- 160 A	12	15	1,9	5,5	
60642	**60642-SI**	**60642-SH**	32	140- 220 A	15	15	2,5	6,5	
60644	**60644-SI**	**60644-SH**	50	195- 290 A	20	20	3,0	9	
60646	**60646-SI**	**60646-SH**	50	205- 300 A	25	25	2,0	11	
60648	**60648-SI**	**60648-SH**	70	230- 340 A	20	20	2,6	9	
60650	**60650-SI**	**60650-SH**	100	290- 400 A	25	25	3,8	11	
60652	**60652-SI**	**60652-SH**	100	300- 410 A	30	30	3,4	11	
60654	**60654-SI**	**60654-SH**	140	385- 560 A	25	25	5,3	11	
60656	**60656-SI**	**60656-SH**	140	395- 570 A	30	30	5,2	11	
60658	**60658-SI**	**60658-SH**	140	405- 580 A	35	35	4,5	14	
60660	**60660-SI**	**60660-SH**	200	450- 650 A	40	40	5,5	14	
60662	**60662-SI**	**60662-SH**	240	550- 680 A	40	40	6,4	14	
60664	**60664-SI**	**60664-SH**	280	600- 800 A	40	40	7,7	14	
3-layer design									
60670	**60670-SI**	**60670-SH**	30	125- 205 A	12	12	2,3	5,5	
60672	**60672-SI**	**60672-SH**	48	180- 275 A	15	15	3,6	6,5	
60674	**60674-SI**	**60674-SH**	75	250- 360 A	20	20	3,9	9	
60676	**60676-SI**	**60676-SH**	75	250- 360 A	25	25	3,0	11	
60678	**60678-SI**	**60678-SH**	150	400- 575 A	25	25	5,8	11	
60680	**60680-SI**	**60680-SH**	150	400- 575 A	30	30	5,0	11	
60682	**60682-SI**	**60682-SH**	210	430- 630 A	25	25	8,3	11	
60684	**60684-SI**	**60684-SH**	210	440- 640 A	30	30	7,2	11	
60686	**60686-SI**	**60686-SH**	210	450- 650 A	35	35	6,6	14	
60688	**60688-SI**	**60688-SH**	300	630- 850 A	40	40	8,3	14	
60690	**60690-SI**	**60690-SH**	360	700- 900 A	40	40	9,6	14	
60692	**60692-SI**	**60692-SH**	420	800-1000 A	40	40	11,4	14	

According to customers wishes

According to customers wishes

Remark: Insulations in other colours or materials as well as with other fixing holes on request. All information about current load are approximate values in consideration of the connector heat for single laying of air cooled connectors and ambient temperature + 35 °C. Minimum value = connector temperature app. + 65 °C. Maximum value conductor temperature app. + 90 °C. The temperature of the conductor is in dependent of the installation, the application, the cooling, the ambient temperature and the heat removal option, so that, if necessary, reducing factors must be taken into account.



Paul Druseidt
Elektrotechnische Spezialfabrik GmbH & Co. KG

P.O. Box: 10 02 25
42802 Remscheid
Germany

Gate I: Neuenkamper Straße 105
Gate II: Lenneper Straße 131
Gate III: Karl-Kahlhöfer-Straße 9
42855 Remscheid
Germany

Phone: +49 (21 91) 93 52-0
Fax: +49 (21 91) 93 52-150
http: www.druseidt.de
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