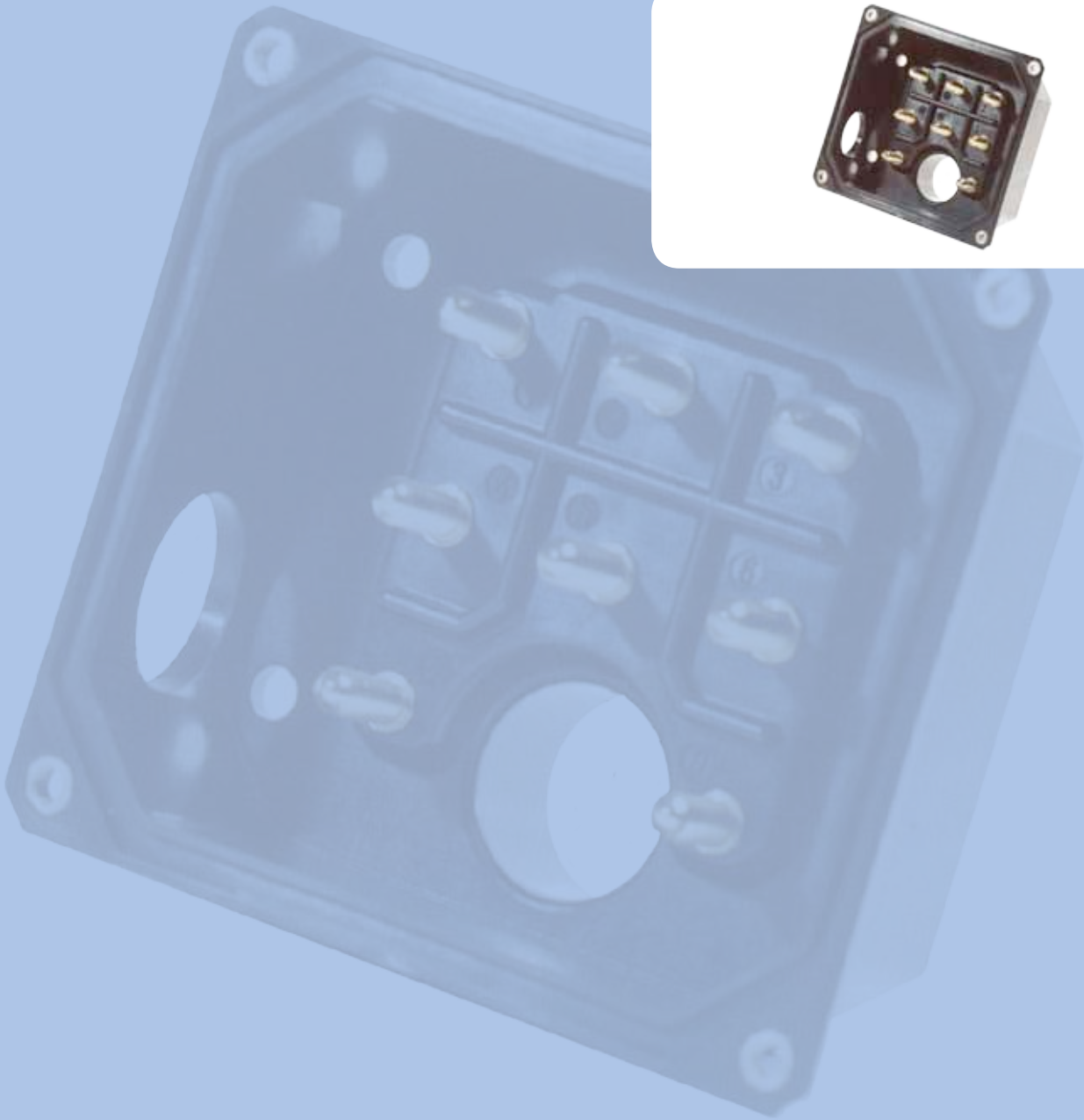


Terminal Blocks





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Terminal Blocks

General Information

Glass fiber reinforced Polyester compression moulded components with pins.

Terminal blocks suited to a wide variety of applications used for AC/DC motors in electric grid connection of components, conductive jumpers in different dimensions and bolt sizes (M3-M16, rated voltage from 440 to 2000 V).

Terminal blocks are generally supplied without nuts, washers and links or delivered assembled on request.

Appr. 200 different types, some of them are explosion-proof to 690 V and are suitable for motor lead sizes from 2.5 mm² to 25 mm².

The most frequently used UL certified moulding materials:
PF31, UL804, UL3415, UL4385
which are also controlled by MPA Darmstadt.

Certificates:

ISO 9001:2008
ATEX

Inquiry form to terminal blocks:

- length
- width
- height
- distance of bolts
- distance of fixing hole
- bolt sizes (diameter and length)
- max. voltage
- permanent current (A)/bolt



Technical data

Physical Properties

Material	Density	Flexural Strength	Impact Strength	Notched Impact Strength	Water Absorption	Heat Deflection Temperature	Surface Resistivity	Volume Resistivity	Dielectric Loss Factor	Relative permittivity	Electric strength	Flammability UL94	Proof tracking index
	g/cm ³	MPa	KJ/m ²	KJ/m ²	mg	°C	Ohm	Ohm*cm	100 Hz	100 Hz	kV/mm	class	stage
PF3I	1,41	100	7	1,5	65	120	1E+11	1E+11	0,3	10,5	23,5	V-1	PTI 125
UP804	2,04	90	6,5	4	20	190	1E+13	1E+13	0,02	5		V-0	PTI 600
UP3415	2,00	105	8,5	4,5	20	210	1E+13	1E+13	0,02	5	29	V-0	PTI 600
UP4385	2,10	80-100	5,1	2,5-3,5	≤35	>200	10 ¹³ - 10 ¹⁴	10 ¹⁴ - 10 ¹⁵	0,01-0,03	4,5	25-35	V-0	CTI 600

4.5 Creepage distances

4.5.1 The required values of creepage distance are dependent on the working voltage, the resistance to tracking of the electrical insulating material and its surface profile.

Table 2 gives the grouping of electrical insulating materials according to the comparative tracking index (CTI) determined in accordance with IEC 60112. Inorganic insulating materials, for example glass and ceramics, do not track and need not therefore be subjected to the determination of the CTI. They are conventionally classified in material group I.

The grouping given in table 2 is applied to insulating parts without ribs or grooves. If there are ribs or grooves in accordance with 4.5.3 the minimum permissible creepage distances for working voltages up to 1 100 V shall be based on the next highest material group, for example material group I instead of material group II.

NOTE 1. The material groups are identical with those given in IEC 60664-1.

NOTE 2. Transient overvoltages are ignored as they do not normally influence tracking phenomena. However, temporary and functional overvoltages may have to be considered, depending upon the duration and frequency of occurrence (see IEC 60664-1 for additional information).

Table 2 - Tracking resistance of insulating materials

Material group	Comparative tracking index (CTI)
I	600 ≤ CTI
II	400 ≤ CTI ≤ 600
IIIa	175 ≤ CTI ≤ 400

Design:

- .../A naked, without fittings
- .../B nuts and washers loosely attached
- .../BV nuts, washers and links loosely attached
- .../C mounted with nuts and washers
- .../CV mounted with nuts, washers and links

Maximum current and maximum torque acc. to DIN 46200				The moulded bolts are form-closed secured against twisting with a torque of
Allowable Permanent Current (Amps)	Bolt		Stall Torque Nm	
	Thread (dia)	Material*		Nm
10	M3	CuZn37F45 CuZn39P6	0,8	1,2
16	M4		1,2	2
25	M5		2	3,2
63	M6		3	4
100	M8		6	10
160	M10		10	20
250	M12		15,5	25
315	M16		30	36
*as well as other electrical and mechanical materials				

4.5.2 Creepage distances between bare conductive parts at different potentials shall be as given in table I, with a minimum value for external connections of 3mm, and shall be determined as a function of the working voltage specified by the manufacturer of the apparatus.

NOTE. For requirements for lamps with screws, see 5.3.3.1.4

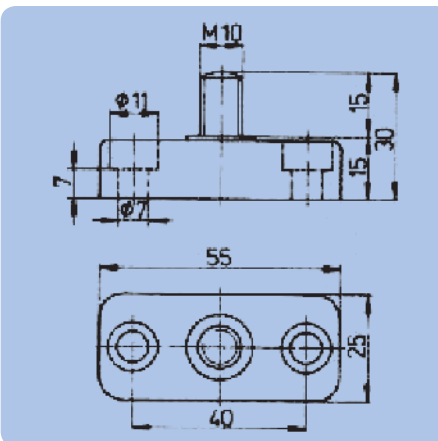
Table I - Creepage distances and clearances

Material (see note 1) <i>Ur.m.s. a.c. or d.c.</i> V	Minimum creepage distance mm			Minimum clearance mm
	Material group			
	I	II	IIIa	
10 (see note 3)	1,6	1,6	1,6	1,6
12,5	1,6	1,6	1,6	1,6
16	1,6	1,6	1,6	1,6
20	1,6	1,6	1,6	1,6
25	1,7	1,7	1,7	1,7
32	1,8	1,8	1,8	1,8
40	1,9	2,4	3,0	1,9
50	2,1	2,6	3,4	2,1
63	2,1	2,6	3,4	2,1
80	2,2	2,8	3,6	2,2
100	2,4	3,0	3,8	2,4
125	2,5	3,2	4	2,5
160	3,2	4	5	3,2
200	4,0	5,0	6,3	4,0
250	5	6,3	8	5
320	6,3	8,0	10,0	6,0
400	8	10	12,5	6
500	10,0	12,5	16,0	8,0
630	12,0	16,0	20,0	10
800	16,0	20,0	25,0	12
1000	20	25	32	14
1250	22	26	32	18
1600	23	27	32	20
2000	25	28	32	23
2500	32	36	40	29
3200	40	45	50	36
4000	50	56	63	44
5000	63	71	80	50
6300	80	90	100	60
8000	100	110	125	80
10000	125	140	160	100

NOTE 1. Voltages shown are derived from IEC 60664-1. The working voltage may exceed by 10% the voltage level given in the table. This is based on the rationalization of supply voltages given in table 3b of IEC 60664-1.

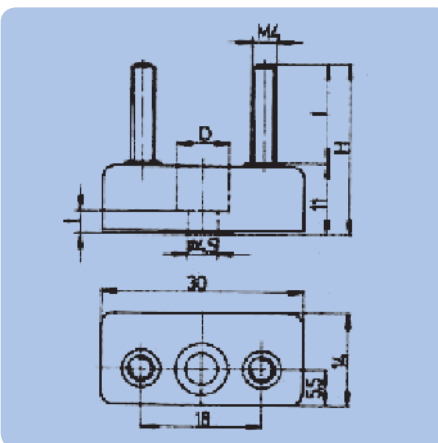
NOTE 2. The creepage distance and clearance values shown are based on a maximum supply voltage tolerance of $\pm 10\%$

NOTE 3. At 10 V and below, the value of CTI is not relevant and materials not meeting the requirement for material group IIIa may be acceptable.



KL 175
Id. No
I 100629

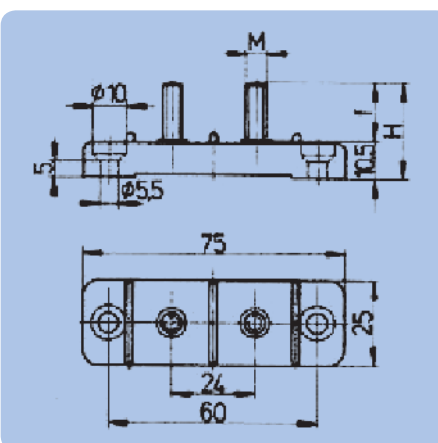
1 pole



KL 52...

2 poles

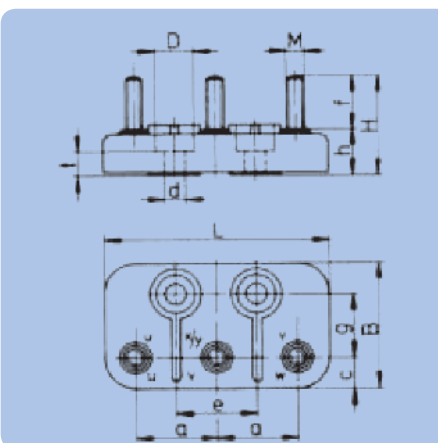
Article No.	Identity No.	H	f	dia	t
KL 52	I098292	23	12	7,8	3,5
KL 52/1	I098306			8,5	4,5
KL 52/2	I098314	26	15	7,8	3,5



KL 53...

2 poles

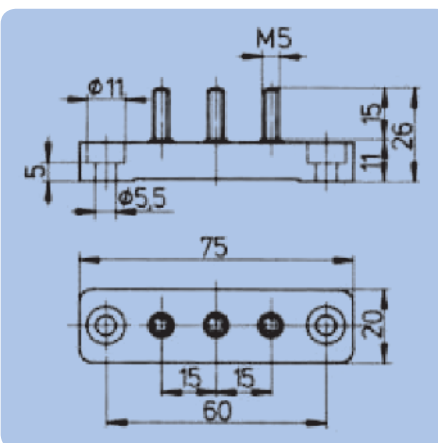
Article No.	Identity No.	M	H	f
KL 53	I098322	6	27,5	17
KL 53/1	I098330	8	28,5	18
KL 53/3	I412248		40,5	30



KL 22
KL 33

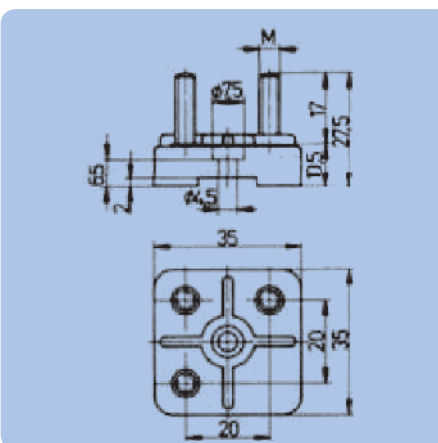
3 poles

Article No.	Identity No.	L	B	M	H	h	f	a	e	c	g	dia. D	dia. d.	t	Markings	Connector
KL 23	1096990	70	40	6	31,5	14,5	17	25	25	10	20	12	6,5	8	UX/YV	KV 101
KL 22	1096982	84	44	8	36,5		22	30	30	12				9	UVW	KV 684



KL 238
Id. No.
1380290

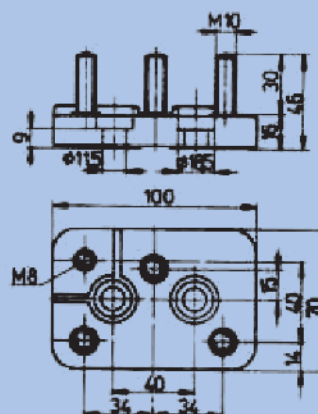
3 poles



KL 129
KL 133

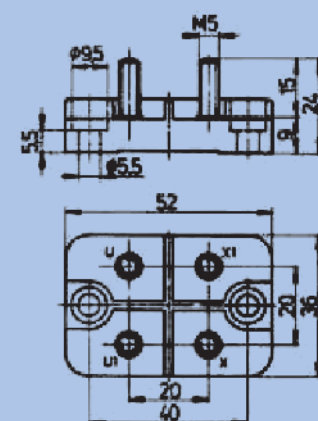
3 poles

Article No.	Identity No.	M	markings	bridging link
KL 129	1099817	4	-	KV 490
KL 133	1099833	5	-	KV 336



KL 21
Id No.
I096974

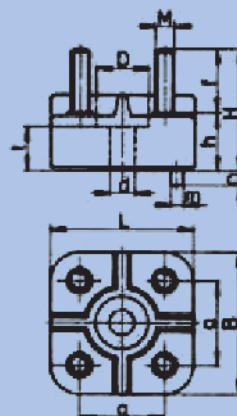
4 poles



S KL 38
Id. No.
I097679

Bringing Link KV 336

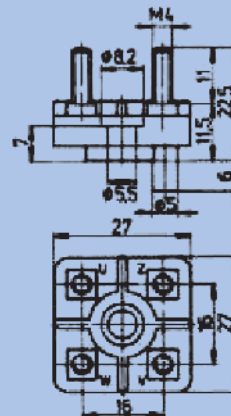
4 poles



KL 136
KL 139/2

4 poles

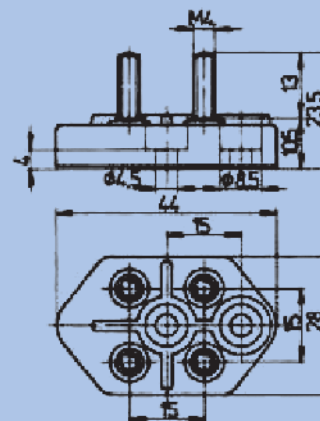
Article No.	Identity No.	L	B	M	H	h	f	a	dia. D	dia. d.	t	m	n	Markings	bridging links
KL 136	1099876	27	27	4	23	11	12	16	10	4,5	8,5	-	-	-	KV 437
KL 136/2	1099892				29		18							-	
KL136	1099914				23		12		-						
KL 139/2	1099981				21,5	9,5	8		4,5	8	5	6	-		



KL 140
Id. No.
1099990

Bridging
Link KV
437

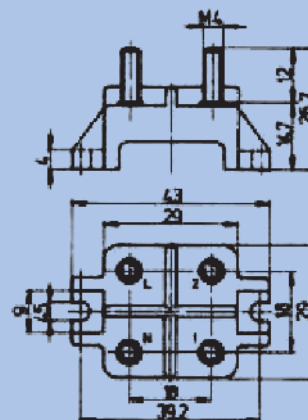
4 poles



KL 130
Id. No.
1099825

Bridging
Link KV
562

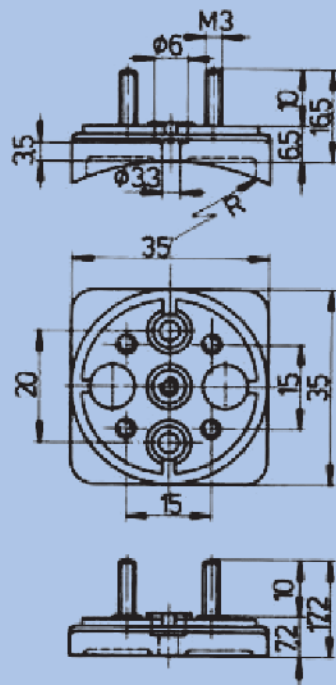
4 poles



KL 252
Id. No.
1406310

Bridging
Link KV
490

4 poles

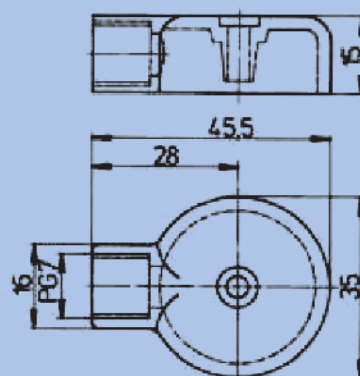


KL 39...

KL 39/9

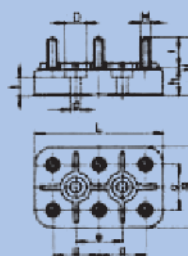
4 poles

Article No.	Identity No.	R	markings	bridging links
KL 39	I097709	40	1 2 3 4	KV 559
KL 39/3	I097733	69,5	-	
KL39/5	I097750	51	-	
KL39/6	I097768	62,5	-	
KL39/9	I097792	-	-	

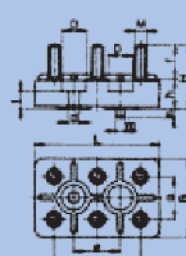


**IP 135
caps for
KL 39...**

Article No.	Identity No.	Material
IP 135 design 1	I443682	Noryl black
IP 135 design 2	I443690	Noryl grey



design 1
2-hole mounting



design 2
1-hole mounting

KL...K

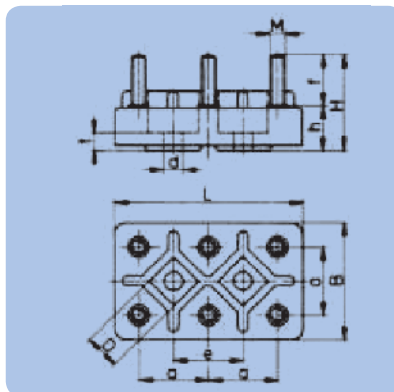
6 poles

Design 1 - 2 - hole mounting

Article No.	Identity No.	L	B	M	H	h	f	a	e	dia. D	dia. d.	t	Markings	bridging links
KL 0K	I094890	40	25	3	20,5	10,5	10	15	15	8,2	4,5	7	W2 U2 V2 U1 V1 W1	KV 98
KL 0K/7	I094963			4	22,5		12					5		KV 312
KL 0K/23	I437550			3	20,5		10					4		KV 98
KL 29/5	I493469	43	27	4	22,5	10	12	16	16	8,3	4,5	5,5		KV 437
KL 29/6	I494759				22,5		15					4		KV 562
KL 31	I097270	44	28	4	22	11,5	12	15	15	8	4,5	5,5		KV 312
KL 31/51	I642723				25		11					4		KV 382
KL 31/Wi	I378767				22,5		12					5,5		KV 99
KL 1 K	I095153	50	32	5	25,5	11	15	18	18	8	4,5	6		KV 336
KL 1 K/40	I495062				34,5		13,5					8,5		KV 490
KL 1 K/37	I411047				24		12					5		KV 336
KL 92/5	I250965	54	34	4	24	11,5	12	18	19	8	4,5	7		KV 100
KL 12 K/3	I096877		35	4	24		12					5		KV 101
KL 9 K	I096761	56	36	5	26,5	12,5	15	20	20	9,5	5,5	8		KV 103
KL 2 K	I095455				31,5							6,6		KV 684
KL 2K/8	I095528				26,5							7		KV 104
KL 2K/29	I095730	64	40	6	27,5	14	17	23	23	11,5	7	8		-
KL 8K	I096710				27,5							5,5		KV 105
KL 11 K	I096826				27,5							5,5		KV 658
KL 3 K	I095749	70	45	6	31	14	17	25	25	11	7	8,5		KV 219
KL 3 K/8	I095820				36		22					12		
KL 3 K/20	I170929				34		20					10,5		
KL 5K	I095870	82	52	8	32,5	15,5	17	30	30	12	8,5	9		
KL 5K/5	I095927				37,5		22					11		
KL 5K/21	I170503				43,5		28					13		
KL 6K	I096427	95	60	10	39	19	22	35	35	15	8,5	9		
KL 6K/22	I404830				45		28					11		
KL 6K/29	I495054				49		30					13		
KL 7K	I096575	114	70	12	41	20,5	22	44	44	12	7,5	9		
KL 7K/2	I096591				41		22					11		
KL 7K/4	I096613				41		22					13		

Design 1 - 2 - hole mounting

Article No.	Identity No.	L	B	M	H	h	f	a	e	dia. D	dia. d.	t	m	n	Markings	bridging links
KL 31/40	I295861	44	28	4	22,5	10,5	12	15	16	8,5	4,5	6	3	2	W2 U2 V2 U1 V1 W1	KV 562
KL 31/41	I296078				22	10			15			5,5				
KL 0K/29	I273876	40	25	5	22,5	10,5	15	20	20	8,2	7	7	3	3		KV 312
KL 2K/32	I273884	56	36	5	26,5	11,5	15	20	20	9,5	5,5	7	3	3		KV 336



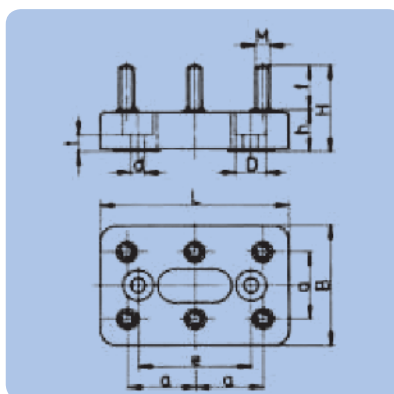
K I M ...

**DIN 46294
moulding
compound type
804**

**KM (not according
to DIN) moulding
compound type 3 I**

6 poles

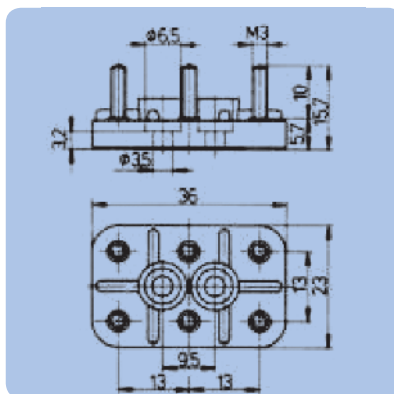
Article No.	Identity No.	L	B	M	H	h	f	a	e	dia. D	dia. d.	t	Markings	bridging links
K I M5	I163434	54	34	4	28	13	15	20	20	10	5,5	5	W2 U2 V2 UI VI WI	KV 490
K I M5	I163078	64	40	5	32	13	19	23	23					KV 100
K I M6	I170635	78	48	6	40	16	24	28	28	11	6,6	6		KV 683
K I M8	I168495	96	60	8	46	18	28	35	35	15	9	8		KV 104
K I M10	I414828	120	75	10	56	22	34	45	45	18	11	10		KV 609
KM 4	I101625	54	34	4	28	13	15	20	20	10	5,5	5		KV 490
KM 5	I101730	64	40	5	32	13	19	23	23					KV 100
KM 6	I101790	78	48	6	40	16	24	28	28	11	6,6	6		KV 683
KM 8	I101889	96	60	8	46	18	28	35	35	15	9	8		KV 104
KM 10	I101960	120	75	10	56	22	34	45	45	18	11	10		KV 609
KM 12	I101277	150	95	12	65,5	25,5	40	55	55	18,8	11,5	17,5		KV 689
KM 16	I101323	160	100	16	93	28	65	60	60	20	14	19		KV 870



KL 0 ...

6 poles

Article No.	Identity No.	L	B	M	H	h	f	a	e	dia. D	dia. d.	t	Markings	bridging links
KL 00	I094459	40	25	3	20,5	10,5	10	15	30	6,3	3,4	5	W2 U2 V2 U1 V1 W1	KV 98 or KV 559
KL 01	I094491	50	32	4	23	11	12	18		8	4,5	4,5		KV 382
KL 01/2	I094505			5	26		15			9,5	5,5			KV 99
KL 02	I094572	56	36	6	25,5	10,5	20	32	10,5	6,5	4	KV 336		
KL 03	I094726	70	45		29,5	12,5	17	25			50	5		KV 101
KL 05	I094793	82	52	8	31	14		30	65	12	7	7		KV 103
KL 06	I093959	95	60		37	15	22	35	70			6,5		KV 104
KL 07	I094840	114	70		40	18		44	87			7,5		KV 105

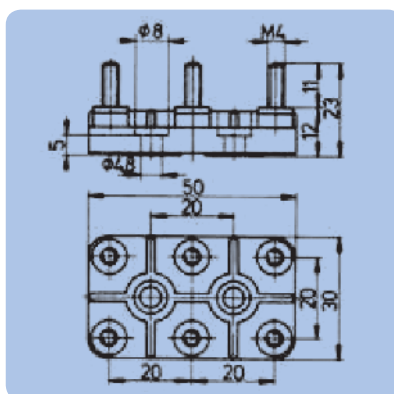


KL 10 K

Id. No. 1096800

**Bridging Link
KV 636**

6 poles

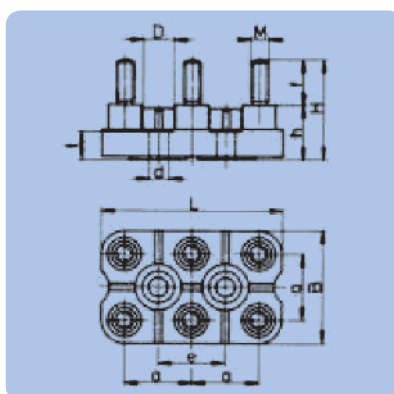


KL 236

Id. No. 1310437

**Bridging Link
KV 490**

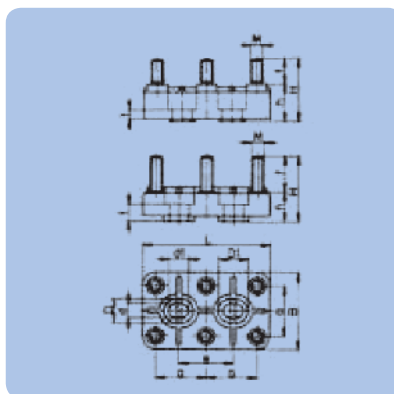
6 poles



**KL 35
KL 36...**

6 poles

Article No.	Identity No.	L	B	M	H	h	f	a	e	dia. D	dia. d.	t	Markings	bridging links
KL 36	1102079	43	27	4	24	13	11	16	16	7,5	4,5	6,5	W2 U2 V2	KV 437
KL 35	1097610	60	40	5	28,5	13,5	15	20	20	10	5,5	5,5	U1 V1 W1	KV 336

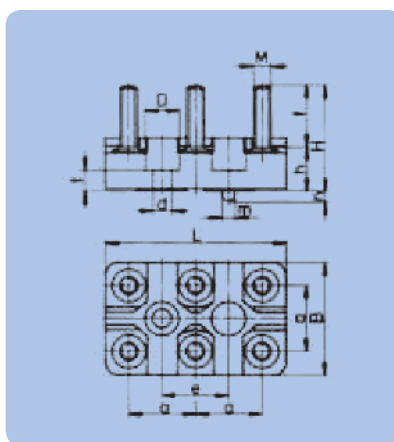


KL ...

6 poles

Terminal Boards with variable hole distance

Article No.	Identity No.	L	B	M	H	h	f	a	e	D	DI	d	dI	t	Markings	bridging links
KL 92/4	I108719	54	34	5	33	13	20	20	19	10,5	11,5	5,5	6,5	4	W2 U2 V2 U1 V1 W1	KV 336
KL 28/1	I379038	72	44	6	42	17	25	28	30	12	14	7	9	9		KV 683
KL 5 K/2	I095897	82	52		35,5	15,5	20	30						11		
KL 25	I097016				42	17	25							12		
KL 188/1	I417509	88	54	8	37,5	18,5	19	32	32	16	19	9	10	6,5		KV 905
KL 19	I096966	92	56		45	18	27	36	39				12	10		KV 595
KL 26/2	I379054	106	64	10	55	25	30	42	45	20	23,5	11,5	15	15		KV 609
KL 189	I100807	114	70		47	24	23	40	40	16	21	9	14	10		



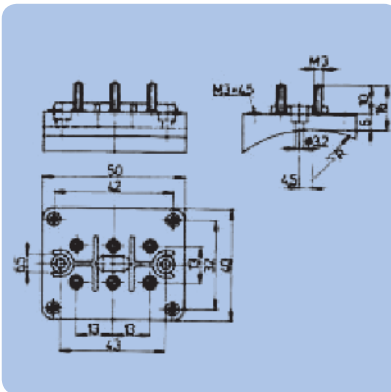
KL ...

6 poles

Terminal Boards for connecting washers as per DIN 46288

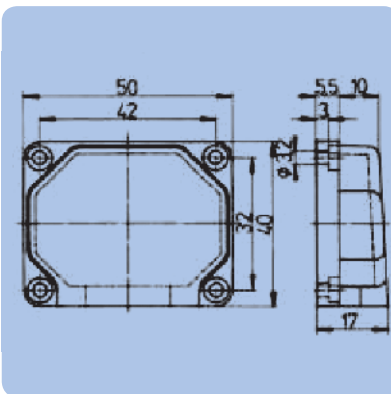
Article No.	Identity No.	L	B	M	H	h	f	a	e	dia. D	dia. d.	t	m	n	Markings	bridging links	
KL 204 ^I	I100890	43	27	4	25,5	10,5	15	16	16	8,3	4,5	5	3	2,5	W2 U2 V2 U1 V1 W1	KV 437	
KL 204/8 ^I	I416456								15			8					4,5
KL 240	I437682								16								
KL 240/4	I650165						16		15	9,5		5,5	7	4			3
KL 241	I386816	54	34	5	31,5	19	20										
KL 241/I	I429248				28,5	16	23										
KL 242	I437690	78	48	6	39,5	15,5	24	28	28	13	6,6	6	5	4		KV 683	
KL 91	I099280	54	34	4	25	10	15	20	20	10,3	5,8	5,5	4	3		KV 490	
KL 205 ^I	I100904	56										5		4			
KL 231	I219880	64	40	5	32	13	19	23	23	11	5,3	5,5		4		3	KV 100
KL 231/I	I412426				30	11			20	10,3	5,8						

¹ terminal block for nominal voltage 500 V DC/AC - design with 8 or 9 poles on request

**KL 81**

6 poles

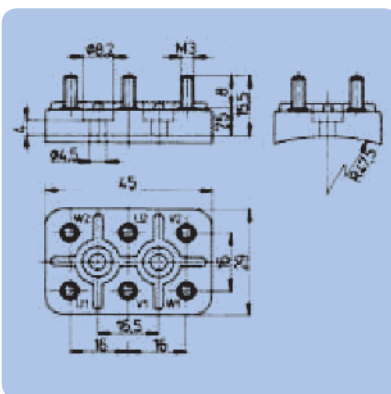
Article No.	Identity No.	R	markings	bridging links
KL 8I	I099078	34,5	W2 U2 V2	KV 559
KL 8I/I	I099086	39,5	U1 V1 W1	



IP 211

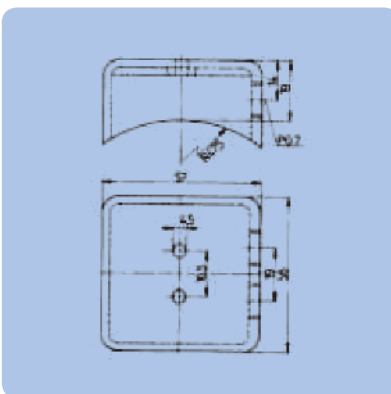
Id. No.
1169548

cap for
KL 81...

**KL 37/I**

Id. No.
I097644

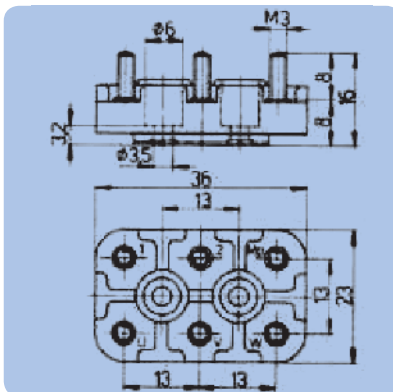
**Bridging
Link KV
418
6 poles**



IP 194

Id. No.
I417514

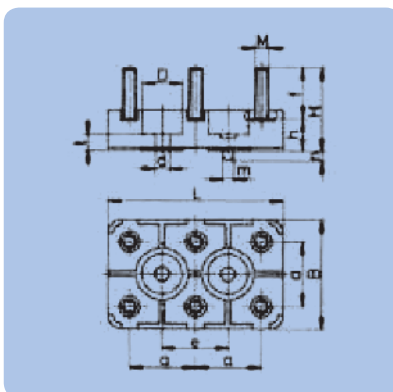
cap for
KL 37/I

**KL 206/6**

Id. No.
I380109

Bridging Link KV 636

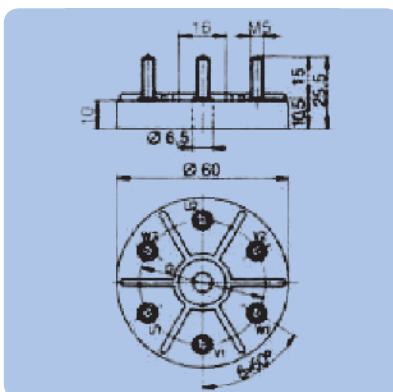
6 poles



KL 245
KL 248

6 poles

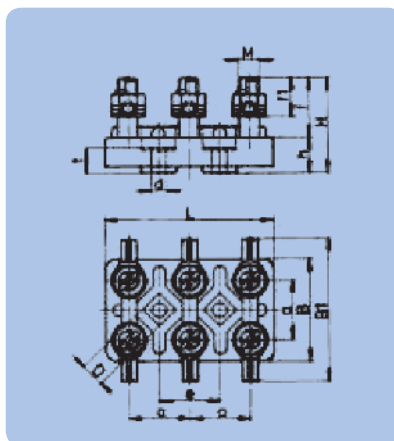
Article No.	Identity No.	L	B	M	H	h	f	a	e	dia. D	dia. d.	t	m	n	Markings	bridging links
KL 248	1411071	60	40	5	30,5	11,5	19	24	24	15	5,5	6	4	4	W2 U2 V2	KV 100
KL 245	1411080	80	56	6	40,5	16,5	24	30	30	16	7	10	-	-	U1 V1 W1	KV 103

**KL 109**

Id. No.
I 09953 I

Bridging Link KV 100

6 poles



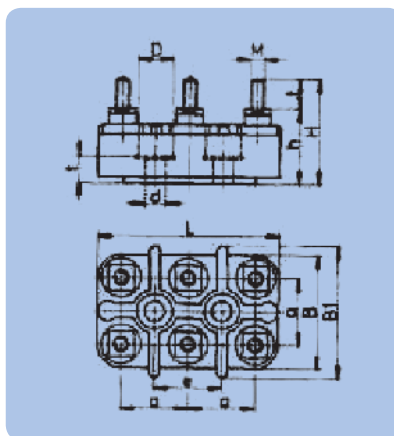
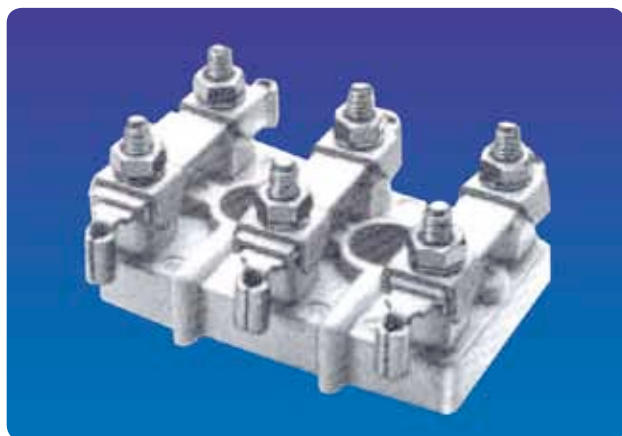
**KS DIN
46295
explosion proof**

6 poles

+ due to a revision of the standard, these terminal blocks are outdated
I design as per "C"-generation - measuring voltage max. 750 V

Article No.	Identity No.	L	B	M	H	h	f	fl	a	e	D	dia. d.	t	Markings	bridging links
+KS7	1102001	54	34	S7 x D	35	15	20	13	20	20	SW 10,3	5,8	9	W2 U2 V2 U1 V1 W1	CuZn
+KS8	1102036	64	40	S8xI	42	16	26	15	23	23	12,3	6,3	11		
+KS10	1102052	78	48	S10xI	45	17	28	18	28	28		7	12		
KS 7A ^I	1102010	60	37	S7x0,8	38	15	20	13	23	20	10	5,5	8		X12Cr MoSi7
KS 8A ^I	1102044	64	40	S8xI	42	16	26	15	24	23			10		
KS 10A ^I	1170937	78	48	S10xI	45	17	28	18	28	28	11	6,6	12		CuZn
KS 14A ^I	1101234	96	60	S14xI,25	57	24	33	26	35	35	15	9	15		
KS 18A ^I	1101242	120	75	S18xI,5	73	30	43	34	45	45	18	11	19		
+KL 232	1267728	60	37	S7x0,8	35	15	20	13	23	20	10	5,5	8		
+KL 233	1273728	64	40	S8xI	42	16	26	15	24	23			10		

KS7A is available with angular cable connector

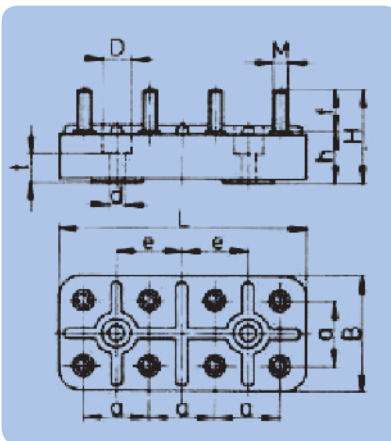


**KL 154B
KL 155
KL 253
explosion proof**

6 poles

^I design as per "C"- generation

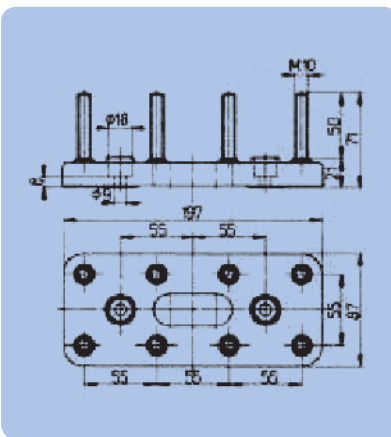
Article No.	Identity No.	L	B	BI	M	H	h	f	a	e	D	dia. d.	t	Markings	bridging links
KL 154B ^I	1100297	54	34	-	4	32	23	9	20	20	10,5	5,8	8	W2 U2 V2 U1 V1 W1	KV 854
KL 253 ^I	1446827	56		40		35		22	23				6		KV 925
KL 155 ^I	1170058	64	40	46	5				23	23	10	5,5	8		KV 855



KL 50
KL 51/I

8 poles

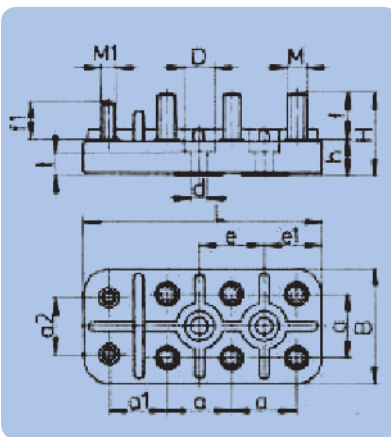
Article No.	Identity No.	L	B	M	H	h	f	a	e	dia. D	dia. d.	t	Markings	bridging links						
KL 51/I	I098160	58	28	4	24	12	12	16	16	8,2	4,5	6	Z Z I V V I W I W U I U	KV 437						
KL 50	I098063	68	32		23,5	11,5		17	18	18		8	5,5	-	KV 490					
KL 50/I	I098071			5	26,5		15								18	18	8	5,5	-	KV 99
KL 50/2	I098080				31,5															



KL 55
Id. No. 1101374

Bridging Link KV 869

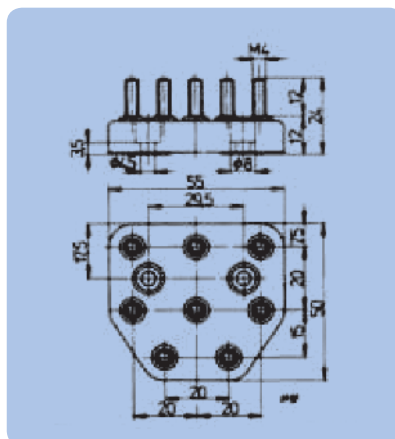
8 poles



KL 85
KL 88/3
KL 89

8 poles

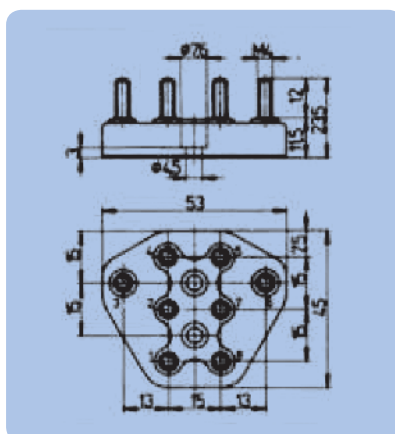
Article No.	Identity No.	L	B	M	MI	H	h	f	fl	a	a1	a2	e	e1	dia. D	dia. d.	t	Markings	bridging links
KL 88/3	1380753	74	36	5	5	26	11	15	15	20	18	18	20	18	9,5	5,5	7	B W2 U2 V2 Bl U1 V1 W1	KV 336 u. KV 99
KL 85	1099167	92	45	6		30	13	17		25	22	20	25	22	10,5	6,5	9,5		KV 101 u. KV 100
KL 89	1099256	116	60	5		38	16	22		35	27	25	35	30	12	7	12		KV 104 u. KV 101



**KL 98 Id.
No. 1099418**

**Bridging
Link KV 490**

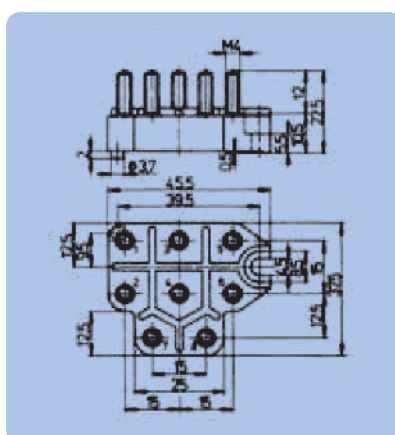
8 poles



**KL 99 Id.
No. 1099426**

**Bridging
Link KV 562**

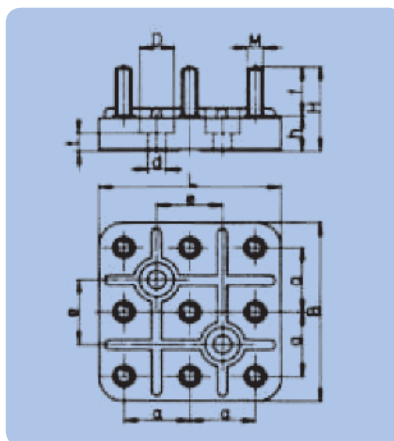
8 poles



**KL 183/2
Id. No.
1100742**

**Bridging
Link KV 562**

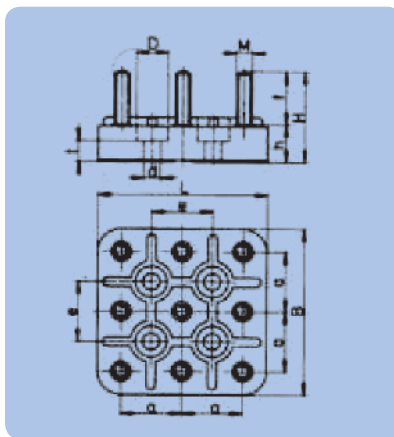
8 poles



**KL 60...
KL 63...
KL 65...
KL 68...**

9 poles

Article No.	Identity No.	L	B	M	H	h	f	a	e	dia. D	dia. d.	t	Markings	bridging links		
KL 68	1098900	40	40	3	21	11	10	15	15	8	4,5	7,5	-	KV 559		
KL 68/2	1098926			4	23		12							KV 562		
KL 63	1098594	56	56	5	26		15	20	20	10,5	5,5	5,5		KV 336		
KL 63/5	1098640						20									
KL 65	1098730	70	70	6	31	14	17	25	25	12	7	8		KV 101		
KL 60/3 A	1098500	80	80		39	17	22	30	30				12	7	8	KV 103
KL 60/3 B	1435019				45		28									
KL 60/1	1098489			8	39		22			W2 U2 V2 U1 V1 W1	KV 684					
KL 60/2	1098497			10	41		24					-				

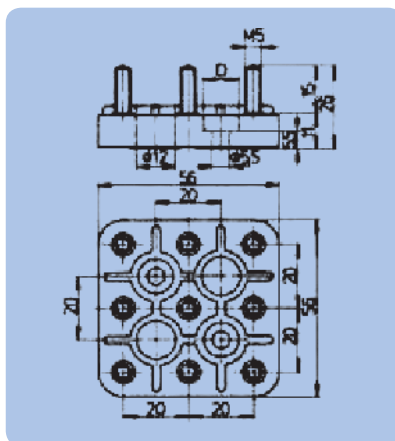


**KL 67...
KL 83
KL 86
KL 87
KL 257**

9 poles

Article No.	Identity No.	L	B	M	H	h	f	a	e	dia. D	dia. d.	t	Markings	bridging links
KL 67	1098802	44	44	4	24,5	12,5	12	15	15	7,5	4,2	4	W2 U2 V2 U1 V1 W1 -	KV 562
KL 83	1099132	56	56	5	30,5		18	20	20	10,5	5,5	7		KV 336
KL 86	1099205	80	80	6	45	17	28	30	30	12	7	8		KV 103
KL 87	1099213			8	47		30							KV 684
KL 257 #	€ 464922	108	108	10	56	21	35	40	42	18/21	11/14	12,5	-	-

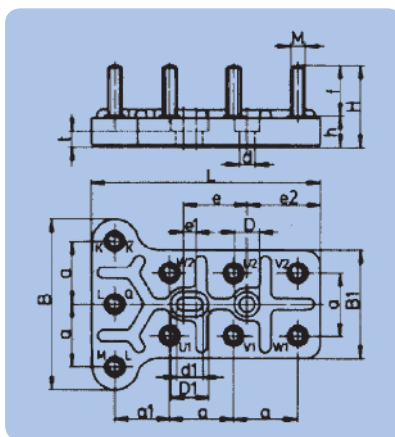
without stems, with slots, at 45° aligned



KL 66

9 poles

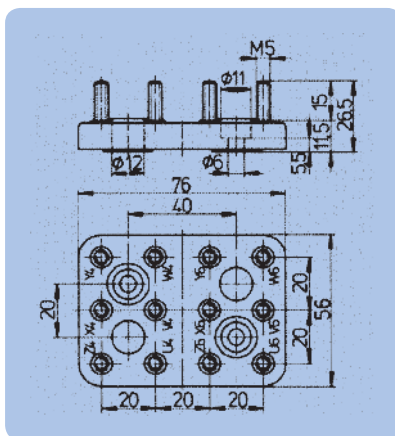
Article No.	Identity No.	dia. D	markings	bridging links
KL 66	1098764	10	-	KV 336
KL 66/I	1098772	11	-	



**KL 126/I
KL 237**

9 poles

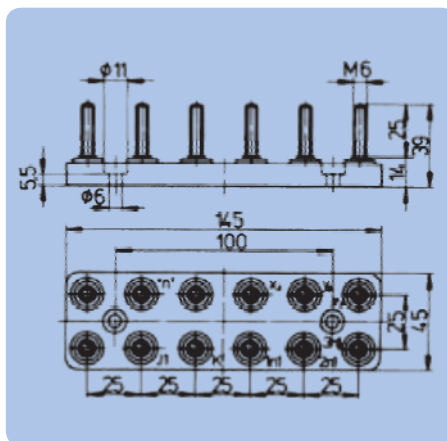
Article No.	Identity No.	L	B	BI	M	H	h	f	a	al	e	el	e2	D	DI	dia. D	dI	t	bridging links
KL 126/I	1254146	84	64	40	5	27,5	12,5	15	23	20	23	3	22	11	14	6,2	9,2	6	KV 100
KL 237	1310488	125	95	60	8	45	17	28	35	30	35	7	40	14	21	8,5	15,5	9	KV 104



**KL 69 Id.
No. 1098934**

**Bridging Link KV
336**

12 poles

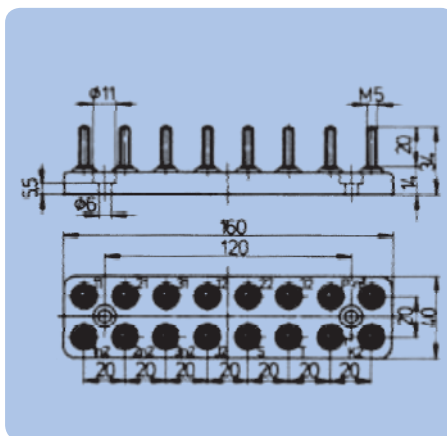
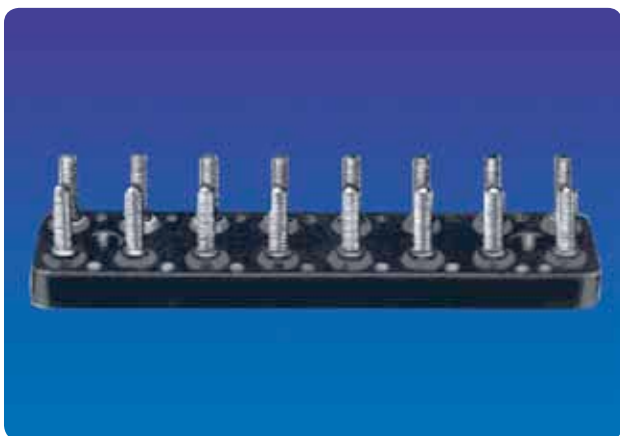


KL 48

**Id. No.
I480987**

**Bridging
Link KV 101**

12 poles

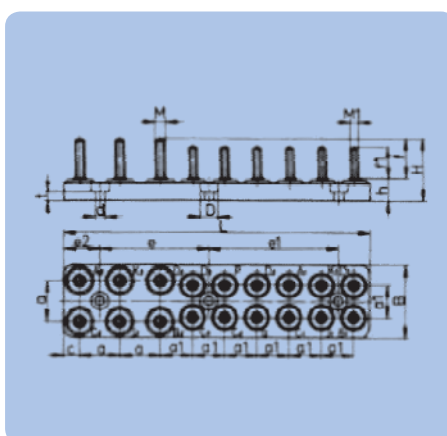
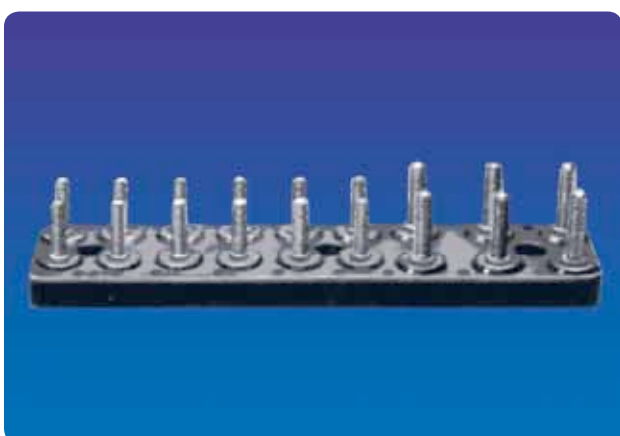


KL 47

**Id. No.
I097970**

**Bridging
Link KV 336**

16 poles

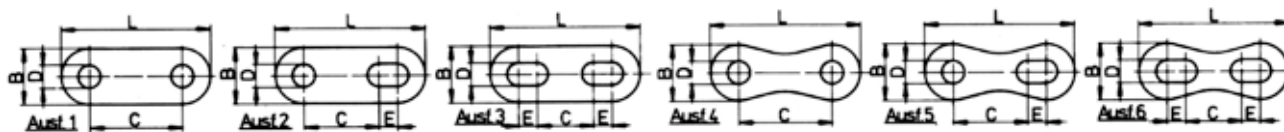


**KL 58
KL 59**

18 poles

Article No.	Identity No.	L	B	M	MI	H	h	f	fl	a	al	e	el	e2	dia. D	dia. d	t	bridging links
KL 58	I098462	190	45	6	5	39	14	25	20	25	20	67,5	80	22,5	11	6	5,5	KV 101 u. KV 336KV
KL 59	I098470	243	60	8	6	47	17	30	25	35	25	90	100	30	12	7	6	KV 104 u. KV 101

Links



Article No.	Identity No.	measurements					thickness	material	execution				
		D	C	E	L	B							
KV 636	I413139	3,5	13	2	22	7	0,5	E-Cu	5				
KV 98	I251058		14		24	8		CuZn	2				
KV 559	I251490		14,5	1	22,5	7			5				
KV 418	I251651		16	-	23				1				
KV 634	I251511	4,2	15	5	32	8	1	CuZn	3				
KV 218	I251040	4,5	13,5		26,5		0,6		2				
KV 562	I251465		14,5	1	23,5	8	0,5		5				
KV 585	I251503				24,5				6				
KV 851	I251376		15	-	22	7	0,5	CuZn	4				
KV 312	I251686				23	8			1				
KV 858	I251546			1	24	0,75	St	2					
KV 892	I251260					24,5	7,5		0,5	E-Cu			
KV 437	I251163		15,5	-	26	8	0,5	CuZn		1			
KV 382	I251660		18	2	28				8	0,8	St	2	
KV 490	I251023			-	38,5	0,5	CuZn	2					
KV 809	I251554		20	-	39	10			0,8	CuZn	2		
KV 693	I251600	29,5	1	29	0,5								
KV 805	I250795	5,2	20	9	39	9	0,8	E-Cu	1				
KV 99	I250779	5,5	17	2	29		1						
KV 336	I251074		19,5	1	30	10	0,5	CuZn	2				
KV 884	I251252		20	-	34					9	0,6		
KV 313	I251678			4	32	0,8							
KV 100	I250760	21	2	46	12	0,75	E-Cu			2			
KV 915	I403206	23	4	42		1							
KV 101	I250744	25	9	51		0,8							
KV 102	I250337	28	2	46		1							
KV 837	I250728	6,5	29,5	1	72	16	0,8	CuZn	2				
KV 683	I251171						2			51	1		
KV 103	I250710		35	2			52			1,5	CuZn	2	
KV 594	I251180												60
KV 106	I251708	8,4	29,7	5,3	51	20	2	E-Cu	2				
KV 905	I251104		30	-	46		1,2						
KV 684	I251597		40	5	65		2			CuZn	2		
KV 104	I251716											35	2
KV 595	I251082	10,5	40	6	65	20	1	E-Cu	2				
KV 105	I251147						5			65	2		
KV 913	I420356		40	6			65			20	1,2	E-Cu	2
KV 219	I251139										6		
KV 910	I408550	10,5	40	6	65	20	1,5	E-Cu	2				
KV 609	I251244						2			65	2		