

## PCB connection technology


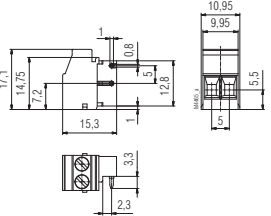


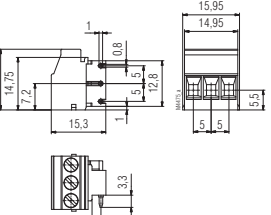


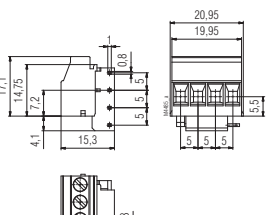

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# Screw terminals

## 2- , 3- and 4-pole

# Alignment right / left

Overview						
	Designation	Colour <sup>1)</sup>	Item number	Dimensions [mm] <sup>2)</sup>		Alignment
2-pole		KS4400-20.xx00	graphite black RAL 9011	0064275		right without coding
		KS4400-20.xx03	light grey RAL 7035	0065446		right without coding
		KS4400-21.xx00	graphite black RAL 9011	0064278		left without coding
		KS4400-21.xx03	light grey RAL 7035	0065447		left without coding
3-pole		KS4400-30.xxx00	graphite black RAL 9011	0064276		right without coding
		KS4400-30.xxx03	light grey RAL 7035	0065448		right without coding
		KS4400-31.xxx00	graphite black RAL 9011	0064279		left without coding
		KS4400-31.xxx03	light grey RAL 7035	0065449		left without coding
4-pole		KS4400-40.xxxx00	graphite black RAL 9011	0064277		right without coding
		KS4400-40.xxxx03	light grey RAL 7035	0065211		right without coding
		KS4400-41.xxxx00	graphite black RAL 9011	0064280		left without coding
		KS4400-41.xxxx03	light grey RAL 7035	0065212		left without coding

Cross section		
	mm <sup>2</sup>	AWG
rigid	0,34 ... 2,5	22 - 14
flexible	0,34 ... 2,5	22 - 14
flexible with multicore cable end	0,34 ... 2,5	-

Connection properties	
Stripping length / Sleeve length Screw terminal [mm]	7
Tightening torque [Nm]	0,5
Conductor attachment captive slotted screw	M2,5
max. contact through resistance to the PCB [mΩ]	10

Insulation coordination acc. to EN 60664-1	
Overvoltage category	III
Pollution degree	3
Rated current [A]	10
Rated insulation voltage [V]	250
Rated impulse voltage [kV]	4

Approval data (UL)			
Use-Group	B	-	D
Nominal voltage [V]	300	-	300
Nominal current [A]	10	-	10

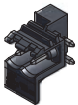
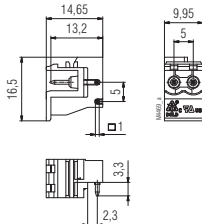
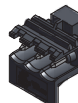
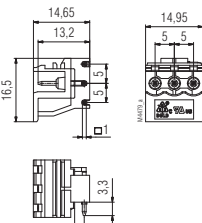
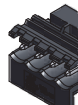
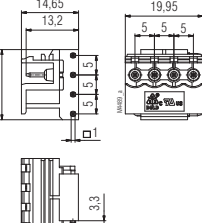
<sup>1)</sup> other colours on request

<sup>2)</sup> Dimensional drawings: Right alignment: the same dimensions apply to left alignment

# Connection blocks

## 2- , 3- and 4-pole

# Alignment right

Overview						
	Designation	Colour <sup>1)</sup>	Item number	Dimensions [mm]		Position Coding tab
2-pole		KS4400-22.xx00	graphite black RAL 9011	0064281		without coding
		KS4400-22.xx03	light grey RAL 7035	0065407		without coding
		KS4400-22.1x00	graphite black RAL 9011	0065408		1
		KS4400-22.x200	graphite black RAL 9011	0065409		2
		KS4400-22.1200	graphite black RAL 9011	0065410		1 + 2
3-pole		KS4400-32.xxx00	graphite black RAL 9011	0064282		without coding
		KS4400-32.xxx03	light grey RAL 7035	0065450		without coding
		KS4400-32.12x00	graphite black RAL 9011	0065358		1 + 2
		KS4400-32.1x300	graphite black RAL 9011	0065359		1 + 3
		KS4400-32.x2300	graphite black RAL 9011	0065360		2 + 3
KS4400-32.12300	graphite black RAL 9011	0065361	1 + 2 + 3			
4-pole		KS4400-42.xxxx00	graphite black RAL 9011	0064283		without coding
		KS4400-42.xxxx03	light grey RAL 7035	0065188		without coding
		KS4400-42.12xx00	graphite black RAL 9011	0065374		1 + 2
		KS4400-42.1x3x00	graphite black RAL 9011	0065375		1 + 3
		KS4400-42.x23x00	graphite black RAL 9011	0065376		2 + 3
		KS4400-42.1xx400	graphite black RAL 9011	0065377		1 + 4
		KS4400-42.x2x400	graphite black RAL 9011	0065378		2 + 4
		KS4400-42.xx3400	graphite black RAL 9011	0065379		3 + 4

Insulation coordination acc. to EN 60664-1	
Overvoltage category	III
Pollution degree	3
Rated current [A]	10
Rated insulation voltage [V]	250
Rated impulse voltage [kV]	4

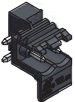
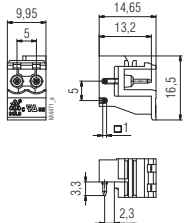
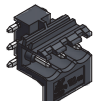
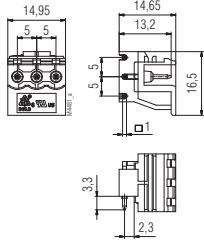
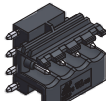
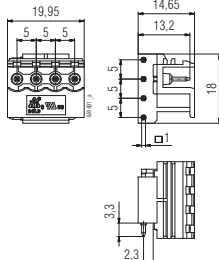
Approval data (UL)			
Use-Group	B	-	D
Nominal voltage [V]	300	-	300
Nominal current [A]	10	-	10

<sup>1)</sup> other colours on request

# Connection blocks

## 2- , 3- and 4-pole

# Alignment left

Overview						
	Designation	Colour <sup>1)</sup>	Item number	Dimensions [mm]		Position Coding tab
2-pole		KS4400-23.xx00	graphite black RAL 9011	0064284		without coding
		KS4400-23.xx03	light grey RAL 7035	0065411		without coding
		KS4400-23.1x00	graphite black RAL 9011	0065412		1
		KS4400-23.x200	graphite black RAL 9011	0065413		2
		KS4400-23.1200	graphite black RAL 9011	0065414		1 + 2
3-pole		KS4400-33.xxx00	graphite black RAL 9011	0064285		without coding
		KS4400-33.xxx03	light grey RAL 7035	0065451		without coding
		KS4400-33.12x00	graphite black RAL 9011	0065362		1 + 2
		KS4400-33.1x300	graphite black RAL 9011	0065363		1 + 3
		KS4400-33.x2300	graphite black RAL 9011	0065364		2 + 3
KS4400-33.12300	graphite black RAL 9011	0065365	1 + 2 + 3			
4-pole		KS4400-43.xxxx00	graphite black RAL 9011	0064286		without coding
		KS4400-43.xxxx03	light grey RAL 7035	0065189		without coding
		KS4400-43.12xx00	graphite black RAL 9011	0065380		1 + 2
		KS4400-43.1x3x00	graphite black RAL 9011	0065381		1 + 3
		KS4400-43.x23x00	graphite black RAL 9011	0065382		2 + 3
		KS4400-43.123x00	graphite black RAL 9011	0065383		1 + 2 + 3
		KS4400-43.1xx400	graphite black RAL 9011	0065384		1 + 4
		KS4400-43.x2x400	graphite black RAL 9011	0065385		2 + 4
		KS4400-43.12x400	graphite black RAL 9011	0065386		1 + 2 + 4
		KS4400-43.xx3400	graphite black RAL 9011	0065387		3 + 4
		KS4400-43.1x3400	graphite black RAL 9011	0065388		1 + 3 + 4
		KS4400-43.x23400	graphite black RAL 9011	0065389		2 + 3 + 4

Insulation coordination acc. to EN 60664-1	
Overvoltage category	III
Pollution degree	3
Rated current [A]	10
Rated insulation voltage [V]	250
Rated impulse voltage [kV]	4

Approval data (UL)			
Use-Group	B	-	D
Nominal voltage [V]	300	-	300
Nominal current [A]	10	-	10

<sup>1)</sup> other colours on request

# Pluggable screw terminals

## 2- , 3- and 4-pole

Overview						
	Designation	Colour <sup>1)</sup>	Item number	Dimensions [mm]		Position Coding tab
2-pole	KS4400-24.xx00	graphite black RAL 9011	0064287		without coding	
	KS4400-24.xx03	light grey RAL 7035	0065415		without coding	
	KS4400-24.1x00	graphite black RAL 9011	0065416		1	
	KS4400-24.x200	graphite black RAL 9011	0065417		2	
	KS4400-24.1200	graphite black RAL 9011	0065418		1 + 2	
3-pole	KS4400-34.xxx00	graphite black RAL 9011	0064288		without coding	
	KS4400-34.xxx03	light grey RAL 7035	0065452		without coding	
	KS4400-34.1x00	graphite black RAL 9011	0065366		1	
	KS4400-34.x200	graphite black RAL 9011	0065367		2	
	KS4400-34.xx300	graphite black RAL 9011	0065368		3	
	KS4400-34.12300	graphite black RAL 9011	0065369		1 + 2 + 3	
4-pole	KS4400-44.xxxx00	graphite black RAL 9011	0064289		without coding	
	KS4400-44.xxxx03	light grey RAL 7035	0065190		without coding	
	KS4400-44.1xxx00	graphite black RAL 9011	0065390		1	
	KS4400-44.x2xx00	graphite black RAL 9011	0065391		2	
	KS4400-44.12xx00	graphite black RAL 9011	0065392		1 + 2	
	KS4400-44.xx3x00	graphite black RAL 9011	0065393		3	
	KS4400-44.1x3x00	graphite black RAL 9011	0065394		1 + 3	
	KS4400-44.x23x00	graphite black RAL 9011	0065395		2 + 3	
	KS4400-44.1xx400	graphite black RAL 9011	0065396		1 + 4	
	KS4400-44.x2x400	graphite black RAL 9011	0065397		2 + 4	
	KS4400-44.xx3400	graphite black RAL 9011	0065398		3 + 4	

Cross section		
	mm <sup>2</sup>	AWG
rigid	0,34 ... 2,5	22 - 14
flexible	0,34 ... 2,5	22 - 14
flexible with multicore cable end	0,34 ... 2,5	-

Connection properties	
Stripping length / Sleeve length Screw terminal [mm]	7
Tightening torque [Nm]	0,5
Conductor attachment captive slotted screw	M2,5
max. contact through resistance to the PCB [mΩ]	10

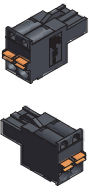
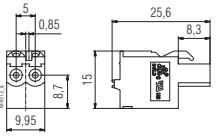
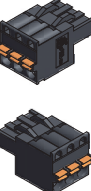
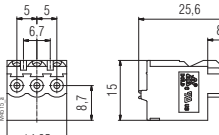
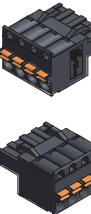
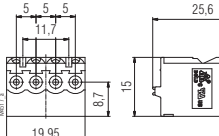
Insulation coordination acc. to EN 60664-1	
Overvoltage category	III
Pollution degree	3
Rated current [A]	10
Rated insulation voltage [V]	250
Rated impulse voltage [kV]	4

Approval data (UL)			
Use-Group	B	-	D
Nominal voltage [V]	300	-	300
Nominal current [A]	10	-	10

<sup>1)</sup> other colours on request

# Pluggable cage clamp terminals

## 2- , 3- and 4-pole

Overview		Designation	Colour <sup>1)</sup>	Item number	Dimensions [mm]	Position Coding tab
2-pole		KS4400-25.xx00	graphite black RAL 9011	0065423		without coding
		KS4400-25.xx03	light grey RAL 7035	0065419		without coding
		KS4400-25.1x00	graphite black RAL 9011	0065420		1
		KS4400-24.x200	graphite black RAL 9011	0065421		2
		KS4400-25.1200	graphite black RAL 9011	0065422		1 + 2
3-pole		KS4400-35.xxx00	graphite black RAL 9011	0065348		without coding
		KS4400-35.xxx03	light grey RAL 7035	0065453		without coding
		KS4400-35.1x00	graphite black RAL 9011	0065370		1
		KS4400-35.x200	graphite black RAL 9011	0065371		2
		KS4400-35.xx300	graphite black RAL 9011	0065372		3
KS4400-35.12300	graphite black RAL 9011	0065373	1 + 2 + 3			
4-pole		KS4400-45.xxxx00	graphite black RAL 9011	0065349		without coding
		KS4400-45.xxxx03	light grey RAL 7035	0065454		without coding
		KS4400-45.1xxx00	graphite black RAL 9011	0065399		1
		KS4400-45.12xx00	graphite black RAL 9011	0065400		1 + 2
		KS4400-45.xx3x00	graphite black RAL 9011	0065401		3
		KS4400-45.1x3x00	graphite black RAL 9011	0065402		1 + 3
		KS4400-45.x23x00	graphite black RAL 9011	0065403		2 + 3
		KS4400-45.1xx400	graphite black RAL 9011	0065404		1 + 4
		KS4400-45.x2x400	graphite black RAL 9011	0065405		2 + 4
		KS4400-45.xx3400	graphite black RAL 9011	0065406		3 + 4

Cross section		
	mm <sup>2</sup>	AWG
rigid	0,34 ... 4	22 - 12
flexible	0,34 ... 2,5	22 - 12
flexible with multicore cable end	0,34 ... 2,5	-

Connection properties	
Stripping length / Sleeve length Screw terminal [mm]	11
Tightening torque [Nm]	-
Conductor attachment Push-In with release button	+
max. contact through resistance to the PCB [mΩ]	10

Insulation coordination acc. to EN 60664-1	
Overvoltage category	III
Pollution degree	3
Rated current [A]	10
Rated insulation voltage [V]	250
Rated impulse voltage [kV]	4

Approval data (UL)			
Use-Group	B	-	D
Nominal voltage [V]	300	-	300
Nominal current [A]	10	-	10

<sup>1)</sup> other colours on request

# Pluggable screw and cage clamp terminals 2- to 12-pole

# Connection block for horizontal PCB 2- to 12-pole

Overview					
	Number of poles	Designation	Item number	Dimensions [mm]	L [mm]
2- to 12-pole <sup>3) 4)</sup>	2	KU4100-12.22	0060352		10
	3	KU4100-12.23	0060353		15
	4	KU4100-12.24	0060354		20
	5	KU4100-12.25	0060355		25
	6	KU4100-12.26	0060356		30
	7	KU4100-12.27	0060357		35
	8	KU4100-12.28	0060358		40
	9	KU4100-12.29	0060359		45
	10	KU4100-12.30	0060360		50
	11	KU4100-12.31	0060361		55
	12	KU4100-12.32	0060362		60
	2- to 12-pole <sup>3) 4)</sup>	2	KU4100-12.52		0066213
3		KU4100-12.53	0066214	15	
4		KU4100-12.54	on request	20	
5		KU4100-12.55	0066215	25	
6		KU4100-12.56	0066216	30	
7		KU4100-12.57	on request	35	
8		KU4100-12.58	on request	40	
9		KU4100-12.59	0066217	45	
10		KU4100-12.60	on request	50	
11		KU4100-12.61	on request	55	
12		KU4100-12.62	0066218	60	

Overview					
	Number of poles	Designation	Item number	L [mm]	
2- to 12-pole <sup>3) 4)</sup>	2	KU4100-12.2	0060341	10	
	3	KU4100-12.3	0060342	15	
	4	KU4100-12.4	0060343	20	
	5	KU4100-12.5	0060344	25	
	6	KU4100-12.6	0060345	30	
	7	KU4100-12.7	0060346	35	
	8	KU4100-12.8	0060347	40	
	9	KU4100-12.9	0060348	45	
	10	KU4100-12.10	0060349	50	
	11	KU4100-12.11	0060350	55	
	12	KU4100-12.12	0060351	60	
	Dimensions [mm]				

Cross section		
	mm <sup>2</sup>	AWG
rigid	0,34 ... 4	22 - 12
flexible	0,34 ... 2,5	22 - 12
flexible with multicore cable end	0,34 ... 2,5	-

Connection properties	
Stripping length / Sleeve length Screw terminal [mm]	7
Stripping length / Sleeve length Cage clamp terminal [mm]	11
Tightening torque [Nm]	0,5
Conductor attachment Push-In with release button / captive slotted screw	M2,5
max. contact through resistance to the PCB [mΩ]	10

Insulation coordination acc. to EN 60664-1	
Overvoltage category	III
Pollution degree	3
Rated current [A]	10
Rated insulation voltage [V]	250
Rated impulse voltage [kV]	4

Approval data (UL)			
Use-Group	B	-	D
Nominal voltage [V]	300	-	300
Nominal current [A] Connection block	12	-	-
Nominal current [A] Screw terminal	12	-	-
Nominal current [A] Cage clamp terminal	10	-	10

<sup>3)</sup> Coding on request  
<sup>4)</sup> recommended for enclosure series KU 4100 and KU 4500

# Screw terminals 2- to 12-pole

Overview				
	Number of poles	Designation	Item number	L [mm]
2- to 12-pole <sup>4)</sup>	2	KU4100-11.2	0065333	10,16
	3	KU4100-11.3	0065334	15,24
	4	KU4100-11.4	0065335	20,32
	5	KU4100-11.5	0065336	25,40
	6	KU4100-11.6	0065337	30,48
	7	KU4100-11.7	0065338	35,56
	8	KU4100-11.8	0065339	40,64
	9	KU4100-11.9	0065340	45,72
	10	KU4100-11.10	0065341	50,80
	11	KU4100-11.11	0065342	55,88
	12	KU4100-11.12	0065343	60,96

Dimensions [mm]	

Cross section		
	mm <sup>2</sup>	AWG
rigid	0,34 ... 4	24 - 12
flexible	0,34 ... 2,5	24 - 12
flexible with multicore cable end	0,34 ... 2,5	-

Connection properties	
Stripping length / Sleeve length Screw terminal [mm]	7
Tightening torque [Nm]	0,5
Conductor attachment captive slotted screw	M2,5
max. contact through resistance to the PCB [mΩ]	10

Insulation coordination acc. to EN 60664-1	
Overvoltage category	III
Pollution degree	3
Rated current [A]	10
Rated insulation voltage [V]	250
Rated impulse voltage [kV]	4

Approval data (UL)			
Use-Group	B	-	D
Nominal voltage [V]	300	-	300
Nominal current [A]	20	-	10

# Cage clamp terminals Grid 5,08 mm 4-, 6-, 8- and 10-poles

Overview				
	Number of poles	Designation	Item number	L [mm]
4- to 10-pole <sup>8)</sup>	4	KL4000-010-0400	0068700	19,44
	6	KL4000-010-0600	0068701	29,60
	8	KL4000-010-0800	0068813	39,76
	10	KL4000-010-1000	0068702	49,92

Dimensions [mm]	

Cross section		
	mm <sup>2</sup>	AWG
rigid	0,14 ... 1,5	28 - 14
flexible	0,14 ... 1,5	28 - 14
flexible with multicore cable end	0,25 ... 1,0	-

Connection properties	
Stripping length / Sleeve length Screw terminal [mm]	8 ... 9
Conductor mounting Push-In with release button	•
max. contact through resistance to the PCB [mΩ]	10

Insulation coordination acc. to EN 60664-1	
Overvoltage category	III
Pollution degree	2
Rated current [A]	17,5
Rated insulation voltage [V]	320
Rated impulse voltage [kV]	4

Approval data (UL)			
Use-Group	B	-	D
Nominal voltage [V]	300	-	300
Nominal current [A]	12	-	12

<sup>3)</sup> Coding on request  
<sup>4)</sup> recommended for enclosure series KU 4100 and KU 4500



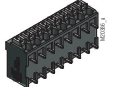
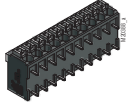
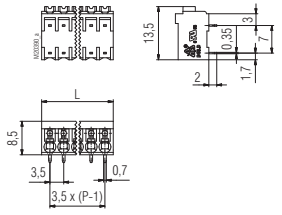
<sup>8)</sup> Connection technology suitable for Reflow soldering process



# Cage clamp terminals

## Grid 3,5 mm

### 4-, 6-, 8- and 10-poles

Overview					
	Number of poles	Designation	Item number	L [mm]	
4 to 10-poles <sup>9)</sup>		4	KL4000-000-0400	0068697	14,70
		6	KL4000-000-0600	0068698	21,70
		8	KL4000-000-0800	0068312	28,70
		10	KL4000-000-1000	0068700	35,70
Dimensions [mm]					

Cross section		
	mm <sup>2</sup>	AWG
rigid	0,14 ... 1,5	28 - 16
flexible	0,14 ... 1,5	28 - 16
flexible with multicore cable end	0,25 ... 1,0	-

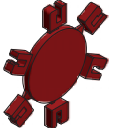
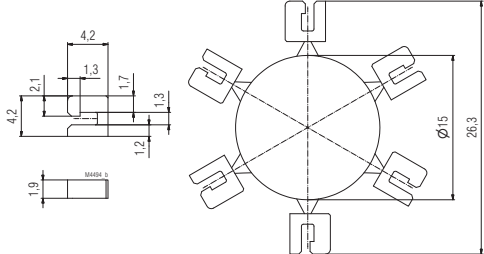
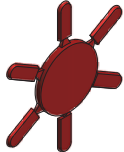
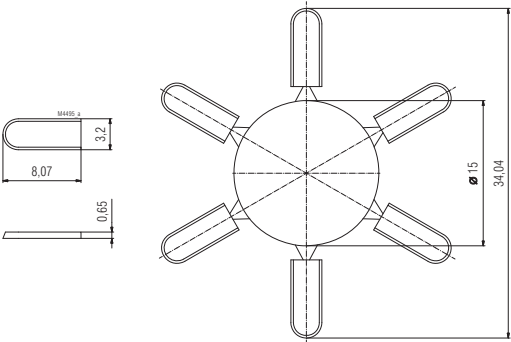
Connection properties	
Stripping length / Sleeve length Screw terminal [mm]	8 ... 9
Conductor mounting Push-In with release button	•
max. contact through resistance to the PCB [mΩ]	10

Insulation coordination acc. to EN 60664-1	
Overvoltage category	III
Pollution degree	2
Rated current [A]	17,5
Rated insulation voltage [V]	160
Rated impulse voltage [kV]	4

Approval data (UL)			
Use-Group	B	-	D
Nominal voltage [V]	300	-	300
Nominal current [A]	12	-	12

# Accessories

## Coding tab / Coding profile

Overview				
	Designation	Item number	Dimensions [mm]	
Coding tab		KS4400-9-1	0065213	
Coding profile		KS4400-10-1	0065214	

<sup>9)</sup> Connection technology suitable for Reflow soldering process



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## It all depends on the right enclosure!

Electronic enclosures not only serve to package your electronics, they also offer much more. Modern tool concepts make off-the-shelf solutions a thing of the past. Due to high flexibility in design, colour and function, our enclosure systems can be easily adapted to your requirements and application.

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We would be pleased to inform you about further product solutions from our company.



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With various modular enclosure series in common widths, assembly-friendly electronic modules are created from assembled printed circuit boards. This means that the right enclosure solution is always available for future-oriented automation devices. Benefit from enclosure systems with graduated sizes, variable connection technology and optional DIN rail bus system.



### Distribution enclosures

The distribution enclosures meet all requirements in the field of modern building automation. They cover all common construction widths and installation depths and offer plenty of space for your electronics. With a large variety of variants, your individual tasks can be easily solved.



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As the competence leader for safety relays with forcibly guided contacts, PCB and miniature relays, we offer technically and high-quality solutions for the safe switching of electrical currents with minimum dimensions.



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