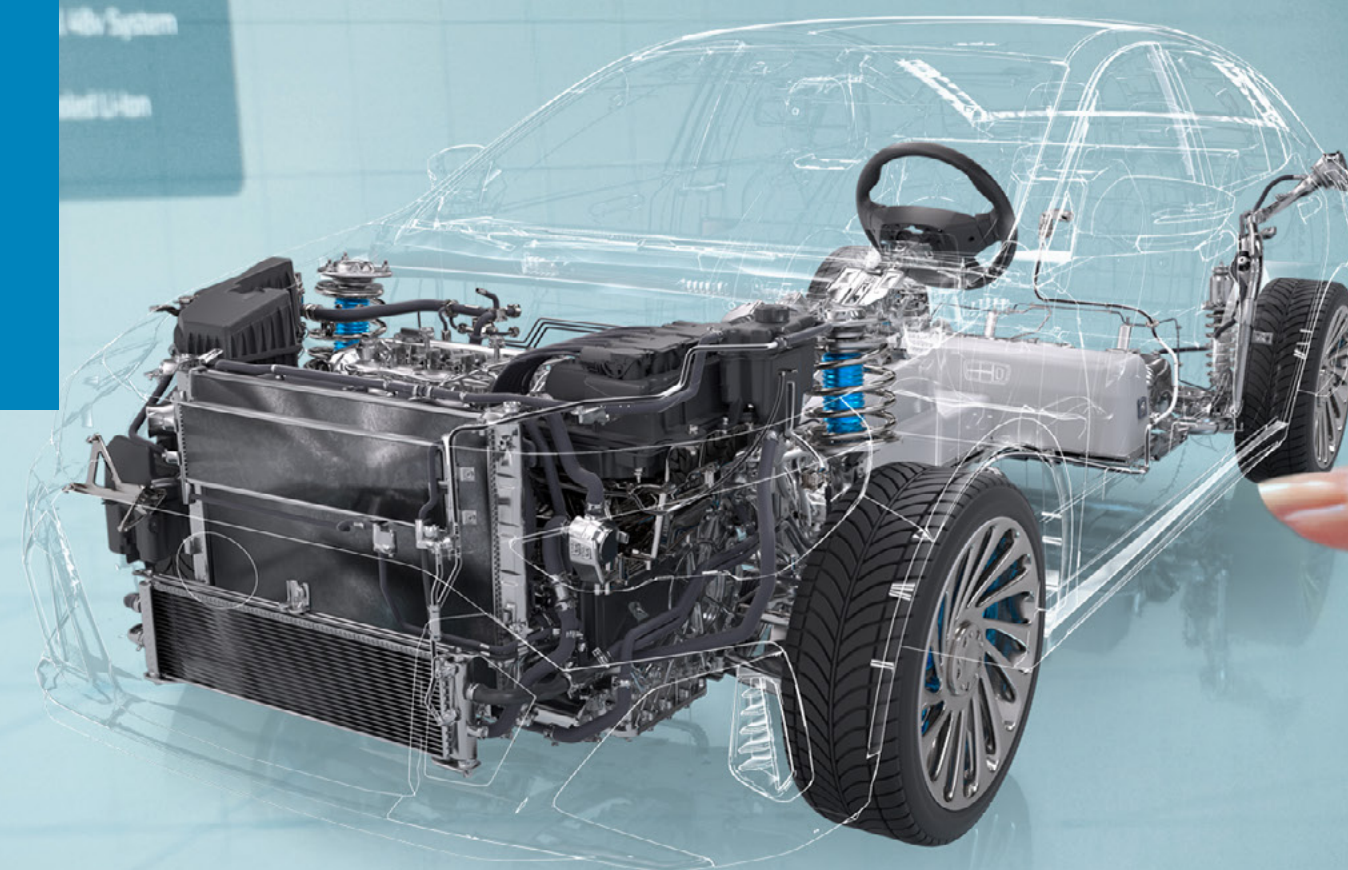


48 V CONNECTOR SYSTEMS

KOSTAL Connectors

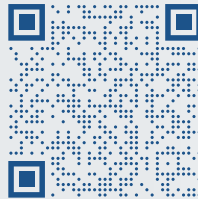


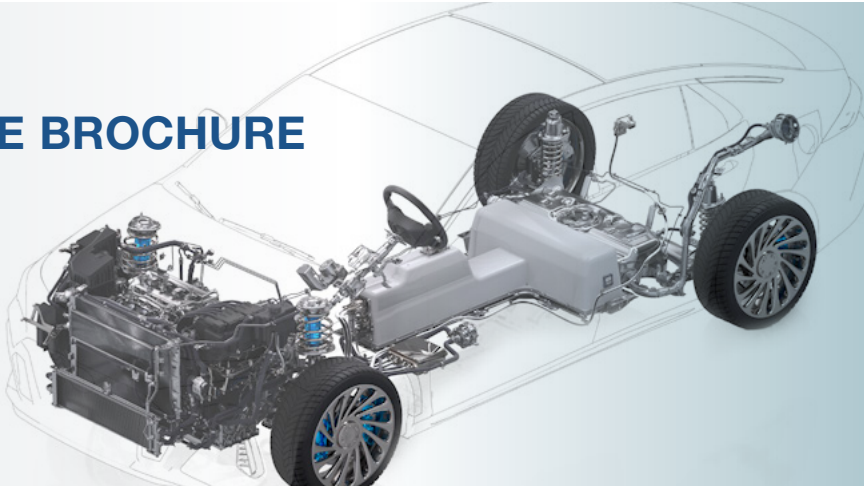
KOSTAL CONNECTORS 48 V PORTFOLIO

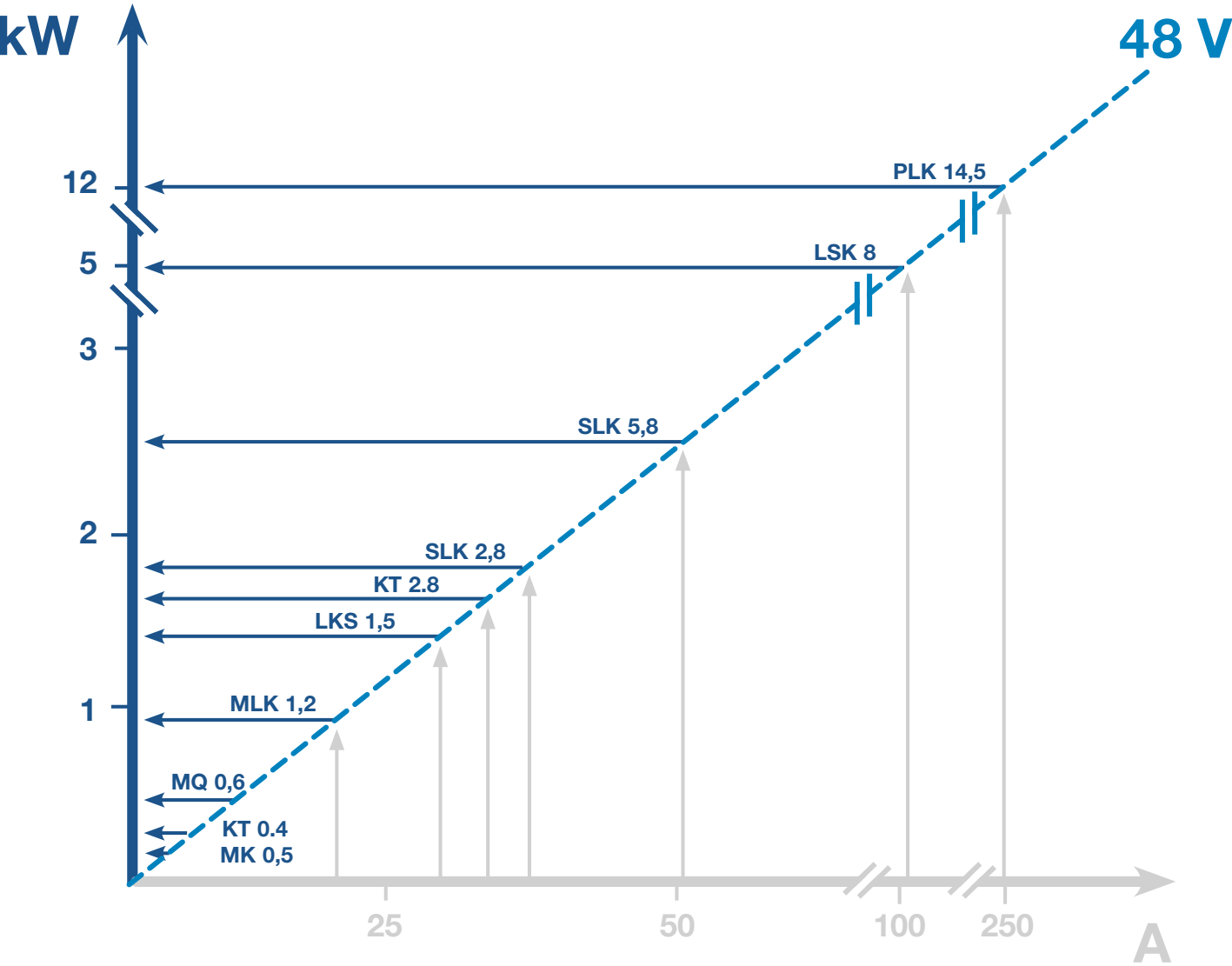
48 V power conversion for each terminal size



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48 V IMAGE BROCHURE







Terminal	Wire size (mm ²)	Current (A)*	kW* at 12 V	kW* at 48 V
PLK 14,5	50.0	250	3.0	12.0
LSK 8	16.0	105	1.26	5.04
SLK 5,8	6.0	53	0.636	2.544
SLK 2,8	4.0	37	0.444	1.776
KT 2.8	2.5	34	0.41	1.63
LKS 1,5	2.5	30	0.36	1.44
MLK 1,2	1.5	19	0.228	0.912
MQ 0,6	0.75	8	0.096	0.385
MK 0,5	0.35	3	0.036	0.144
KT 0.4	0.22	4	0.048	0.192

*permanent power at 80 °C

Please select terminal size according needed performance (kW).

KOSTAL CONNECTORS 48 V PORTFOLIO

Requirements and evaluation system: IEC 60664-1 and UL 840

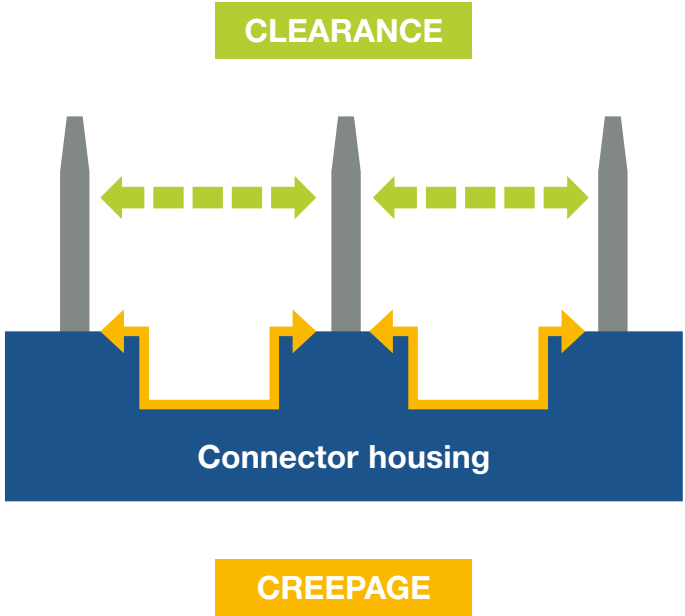
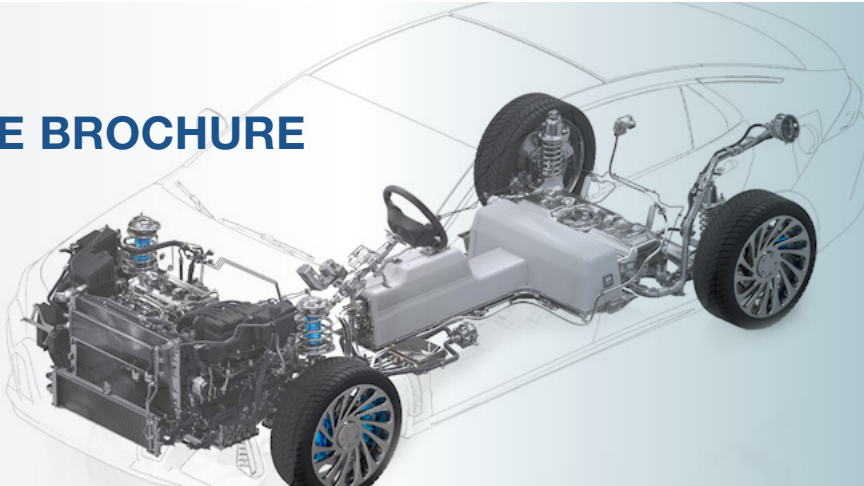
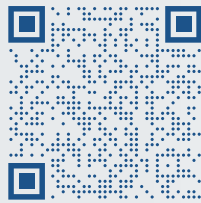


Although 48 V is classified as low voltage, there is still a risk of arcing. Therefore, 48 V connectors must comply with the creepage and clearance requirements up to 60 V outlined in IEC 60664-1 or UL 840.

Pollution degree	2		3		4	
Specification	IEC 60664-1	UL 840	IEC 60664-1	UL 840	IEC 60664-1	UL 840
Overvoltage category	II (Rated impulse voltage 0.8 kV)					
Clearance distance (5500 m above NN)	0.318 mm	0.2 mm	1.272 mm	0.8 mm	2.544 mm	1.6 mm
Creepage distance depending on material group	0.63 mm for material group I with $600 \leq \text{CTI}$ 0.9 mm for material group II with $400 \leq \text{CTI} < 600$ 1.25 mm for material group III a with $175 \leq \text{CTI} < 400$		1.6 mm for material group I with $600 \leq \text{CTI}$ 1.8 mm for material group II with $400 \leq \text{CTI} < 600$ 2 mm for material group III a with $175 \leq \text{CTI} < 400$		Please get in touch with us for further details: kks_portfolio@kostal.com	



VIEW OUR 48 V IMAGE BROCHURE



Creepage is the shortest distance along the surface of the insulator.

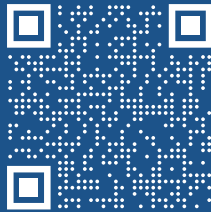
Clearance is the "line of sight" through air between conductors.

Environment and material properties

- Pollution degree (e.g. according to IEC 60664-1)
- CTI of the housing material (data sheet property)

KOSTAL CONNECTORS 48 V PORTFOLIO

MLK 1,2



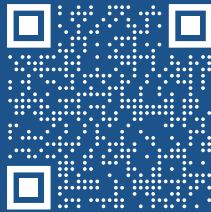
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Housing	MLK 1,2 2-way S140	MLK 1,2 3-way S140	MLK 1,2 4-way S140	MLK 1,2 5-way S140	MLK 1,2 6-way S140	MLK 1,2 6-way	8x MLK 1,2 + 3x SLK 2,8
Coding and part number	A 10108787 B 10094226 C 10094229	A 10095324 B 10099062 C 10099063 D 10099064 Z 10099065	A 10095331 B 10122108 C 10133751	A 10095335 B 10133752 C 10133753	A 10109328 B 10122157 C 10133754	A 10020195 B 10020196	A 10090636 B 10099713
Number of pins	2	3	4	5	6	6	8+3
Tightness	sealed	sealed	sealed	sealed	sealed	sealed	sealed
Pollution degree	3	3	3	3	3	3	3
Altitude (m)	5500	5500	5500	5500	5500	5500	5500
Interface 48 V capability	yes for pollution degree 3 with CTI ≥ 175	yes for pollution degree 3 with CTI ≥ 175	yes for pollution degree 3 with CTI ≥ 175	yes for pollution degree 3 with CTI ≥ 175	yes for pollution degree 3 with CTI ≥ 175	yes for pollution degree 3 with CTI ≥ 175	yes for pollution degree 3 with CTI ≥ 175
Counterpart				-	-	-	-
Coding and part number	A 09 3022 21 B 09 3022 22 C 09 3022 23	A 09 3022 31 B 09 3022 32 C 09 3022 33 D 09 3022 34	A 10013906 B 10013907 C 10013908				

Further variants/codings on request.

KOSTAL CONNECTORS 48 V PORTFOLIO

LKS 1,5



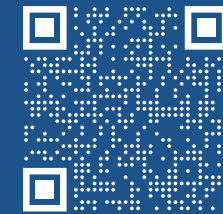
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Housing	4x LKS 1,5 + 3x RK 4	10x LKS 1,5 + 2x RK 4	10x LKS 1,5 + 2x RK 4	12x LKS 1,5	16x LKS 1,5	16x LKS 1,5	20x LKS 1,5	LKS 1,5 26-way
Coding and part number	10506526	10509045	on request	10124100	09 4300 10	10517102	A 09 4320 01 B 10103202	10108979
Number of pins	4+3	10+2	10+2	12	16	16	20	26
Tightness	Housing: sealed Counterpart: oil-tight	Housing: sealed Counterpart: oil-tight	Housing: sealed Counterpart: oil-tight	Housing: sealed Counterpart: oil-tight	Housing: sealed Counterpart: oil-tight	Housing: sealed Counterpart: oil-tight	Housing: sealed Counterpart: oil-tight	Housing: sealed Counterpart: oil-tight
Pollution degree	Housing: 2 Counterpart: 3	2	2	2	2	2	2	2
Altitude (m)	5500	5500	5500	5500	5500	5500	5500	5500
Counterpart	 pass through	 pass through	 pass through	 pass through	 pass through	 pass through	 pass through	 pass through
Coding and part number	10506527	Guide element on request + Pin housing on request	Guide element on request + Pin housing on request	10124102	09 3300 04	Guide element on request + Pin housing on request	A 09 3320 03 B 09 3320 05	10103844

Further variants/codings on request.

KOSTAL CONNECTORS 48 V PORTFOLIO

SLK 2,8



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Housing	SLK 2,8 2-way	SLK 2,8 2-way	SLK 2,8 2-way	SLK 2,8 2-way	SLK 2,8 3-way	SLK 2,8 3-way	SLK 2,8 4-way	SLK 2,8 4-way	SLK 2,8 5-way	SLK 2,8 6-way	6x SLK 2,8 + 1x SLK 5,8
Coding and part number	A 09 4412 34	B 09 4412 92	A 10103120	A 1 04 00 69257 1	A 09 4413 91 B 09 4413 92	A 09 4413 81 B 09 4413 82	A 09 4414 91 B 09 4414 92 Z 09 4414 99	A on request B on request	A 09 4415 31 B 09 4415 32	A on request B on request Z on request	A on request C on request Z on request
Number of pins	2	2	2	2	3	3	4	4	5	6	6+1
Tightness	sealed	sealed	sealed	unsealed	sealed	sealed	sealed	sealed	sealed	sealed	sealed
Pollution degree	Housing: 3 Counterpart: 2	Housing: 3 Counterpart: 2	3	3	3	3	Housing: 3 Counterpart: 2	3	3	2	3
Altitude (m)	5500	5500	5500	5500	5500	5500	5500	5500	5500	5500	5500
Interface 48 V capability	yes for pollution degree 3 with CTI ≥ 400	yes for pollution degree 3 with CTI ≥ 400	yes for pollution degree 3 with CTI ≥ 175	yes for pollution degree 3 with CTI ≥ 400	yes for pollution degree 3 with CTI ≥ 400	yes for pollution degree 3 with CTI ≥ 400	yes for pollution degree 3 with CTI ≥ 400	yes for pollution degree 3 with CTI ≥ 400	yes for pollution degree 3 with CTI ≥ 400	yes for pollution degree 3 with CTI ≥ 175	yes for pollution degree 3 with CTI ≥ 400
Counterpart				-	-	-			-	-	-
Coding and part number	A 10010059	B 10010891	A 10016448				A 10104725				

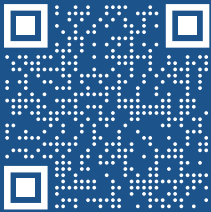
Further variants/codings on request.

SLK 2,8



Housing	SLK 2,8 8-way	SLK 2,8 10-way
Coding and part number	A on request B on request C on request D on request Z on request	A on request B on request
Number of pins	8	10
Tightness	unsealed	unsealed
Pollution degree	3	3
Altitude (m)	5500	5500
Interface 48 V capability	yes for pollution degree 3 with CTI ≥ 400	yes for pollution degree 3 with CTI ≥ 400
Counterpart	–	–
Coding and part number		

Further variants/codings on request.

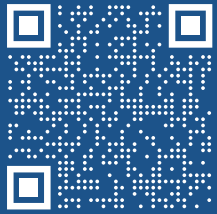


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KOSTAL CONNECTORS 48 V PORTFOLIO

SLK 5,8



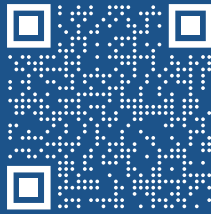
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Housing	SLK 5,8 1-way	SLK 5,8 1-way	SLK 5,8 1-way	SLK 5,8 2-way	SLK 5,8 3-way	2x SLK 5,8 + 1x SLK 2,8	SLK 5,8 3-way	1x SLK 5,8 + 2x SLK 2,8	SLK 5,8 4-way	2x SLK 5,8 + 2x SLK 2,8
Coding and part number	A 09 4091 91 B 09 4091 92 Z on request	A on request B on request	A on request B on request Z on request	A 09 4092 91 B 09 4092 92 C 09 4092 93 Z on request	A on request	A on request	A on request B on request Z on request	A 10134273	A on request B on request	A 10098866
Number of pins	1	1	1	2	3	2+1	3	3	4	4
Tightness	sealed	sealed	unsealed	sealed	sealed	sealed	unsealed	sealed	unsealed	sealed
Pollution degree	3	3	3	3	3	3	3	3	3	3
Altitude (m)	5500	5500	5500	5500	5500	5500	5500	5500	5500	5500
Interface 48 V capability	yes for pollution degree 3 with CTI ≥ 175	yes for pollution degree 3 with CTI ≥ 175	yes for pollution degree 3 with CTI ≥ 175	yes for pollution degree 3 with CTI ≥ 175	yes for pollution degree 3 with CTI ≥ 175	yes for pollution degree 3 with CTI ≥ 175	yes for pollution degree 3 with CTI ≥ 400	yes for pollution degree 3 with CTI ≥ 175	yes for pollution degree 3 with CTI ≥ 400	yes for pollution degree 3 with CTI ≥ 175
Counterpart					-	-	-	-	-	-
Coding and part number	A 1 04 00 73496 4 B 1 04 00 73496 5 Z on request	A 1 04 00 73496 4 B 1 04 00 73496 5	A on request B on request Z on request	A 1 04 00 73499 4 B on request C on request Z on request						

Further variants/codings on request.

KOSTAL CONNECTORS 48 V PORTFOLIO

LSK 8



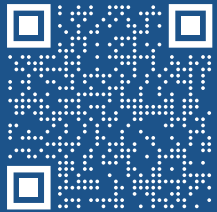
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Housing	LSK 8 1-way		LSK 8 1-way		LSK 8 1-way		LSK 8 1-way		LSK 8 2-way		LSK 8 2-way
Coding and part number	A 10099990		A 10099995		A 09 4491 01 B on request C on request Z on request		A 09 4461 91		A 1 04 00 68068 1 B 1 04 00 68068 2 Z on request		A on request B on request Z 10141811
Number of pins	1		1		1		1		2		2
Tightness	sealed		sealed		sealed		unsealed		sealed		unsealed
Pollution degree	3		3		3		3		3		3
Altitude (m)	5500		5500		5500		5500		5500		5500
Interface 48 V capability	yes for pollution degree 3 with CTI ≥ 175		yes for pollution degree 3 with CTI ≥ 175		yes for pollution degree 3 with CTI ≥ 175		yes for pollution degree 3 with CTI ≥ 175		yes for pollution degree 3 with CTI ≥ 175		yes for pollution degree 3 with CTI ≥ 175
Counterpart						-			-		
Coding and part number	90° A 10099508	180° A 10099591	90° A 10099508	180° A 10099591	A on request B on request C on request Z on request		A 1 04 00 68069 1 B 1 04 00 68069 2		A on request		

Further variants/codings on request.

KOSTAL CONNECTORS 48 V PORTFOLIO

LSK 8



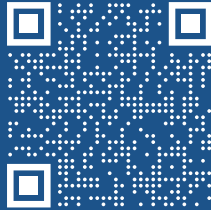
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Housing	LSK 8 2-way	LSK 8 3-way	LSK 8 3-way	2x LSK 8 + 1x SLK 2,8	2x LSK 8 + 1x SLK 2,8	2x LSK 8 + 2x SLK 2,8	2x LSK 8 + 2x SLK 2,8
Coding and part number	A 10118631 B 10118632 Z 10118505	B 10007829	A on request B on request C on request Z on request	A on request B on request Z on request	A 09 4424 81	A on request	A 09 4424 91
Number of pins	2	3	3	2+1	2+1	2+2	2+2
Tightness	unsealed	unsealed	unsealed	sealed	sealed	sealed	sealed
Pollution degree	3	3	3	3	3	3	3
Altitude (m)	5500	5500	5500	5500	5500	5500	5500
Interface 48 V capability	yes for pollution degree 3 with CTI ≥ 175	yes for pollution degree 3 with CTI ≥ 175	yes for pollution degree 3 with CTI ≥ 175	yes for pollution degree 3 with CTI ≥ 175	yes for pollution degree 3 with CTI ≥ 175	yes for pollution degree 3 with CTI ≥ 175	yes for pollution degree 3 with CTI ≥ 175
Counterpart	–	–	–		–		
Coding and part number				A on request B on request Z on request		A on request	A on request

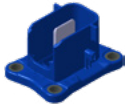
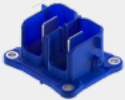
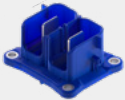
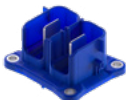
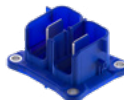
Further variants/codings on request.

KOSTAL CONNECTORS 48 V PORTFOLIO

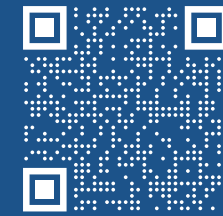
PLK 14,5



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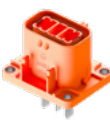
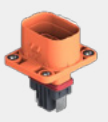
					
Housing	PLK 14,5 1-way 180°	PLK 14,5 1-way 180° inline	PLK 14,5 1-way 90°	PLK 14,5 2-way 90°	PLK 14,5 2-way 180°
Coding and part number	A 10532119	A 10540362	A 12171131 B 10543267 C 10543270	A 12223651	A 10508273
Number of pins	1	1	1	2	2
Tightness	sealed	sealed	sealed	sealed	sealed
Pollution degree	3	3	3	3	3
Altitude (m)	5500	5500	5500	5500	5500
Interface 48 V capability	yes for pollution degree 3 with CTI ≥ 175	yes for pollution degree 3 with CTI ≥ 175	yes for pollution degree 3 with CTI ≥ 175	yes for pollution degree 3 with CTI ≥ 175	yes for pollution degree 3 with CTI ≥ 175
Counterpart				 	 
Coding and part number	Bolt 180° A 10532125 B 10532754	A 10540102	Bolt 90° A 10543072 B 10543317 C 10543318	Bolt 180° A 10508214	Bolt 90° A 10509981

Further variants/codings on request.



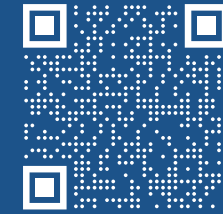
HV Connectors for 48 V applications



Housing	HV class 2 SLK 5,8 2-way with HVIL	HV class 2 SLK 5,8 2-way with HVIL			HV class 3 LSK 8 2-way with HVIL		HV class 3 LSK 8 5-way (optional with HVIL)	HV class 3 4x LSK 8 + 2x SLK 5,8 (optional with HVIL)		HV class 4 PLK 14,5 1-way with HVIL KHV 600	HV class 4 PLK 14,5 2-way with HVIL KHV 600	HV class 4 PLK 14,5 3-way with HVIL KHV 600
Coding and part number	A 10524634	A 10528386			A 10527190 B 10527193 C 10527196 D 10527199 Z 10527202		A 10526748	A 10531101		A 10022774	A 10019942	A 10019158
Number of pins	2+2	2+2			2		5	4+2		1+2	2+2	3+2
Tightness	sealed	sealed			sealed		sealed	sealed		sealed	sealed	sealed
Pollution degree*	3	3			3		3	3		3	3	3
Altitude* (m)	5500	5500			5500		5500	5500		5500	5500	5500
Interface* 48 V capability	yes for pollution degree 3 with CTI ≥ 175	yes for pollution degree 3 with CTI ≥ 175			yes for pollution degree 3 with CTI ≥ 175		yes for pollution degree 3 with CTI ≥ 175	yes for pollution degree 3 with CTI ≥ 175		yes for pollution degree 3 with CTI ≥ 175	yes for pollution degree 3 with CTI ≥ 175	yes for pollution degree 3 with CTI ≥ 175
Counterpart												
Coding and part number	A 10524642	Tab header A 10528380	Inline header A 10528362	Bolt header A 10528373	Tab header A 10527226 B 10527228 C 10527230 D 10527232 Z 10527234	Inline header A 10527209 B 10527212 C 10527215 D 10527218 Z 10527221	A 10526758	Tab header short A 12184826	Tab header long A 12185832	A 10136406	A 10338029	A 10022433

Further variants/codings on request. *In regards to 48 V requirements.

HV Connectors for 48 V applications



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Housing	HV class 4 PLK 14,5 3-way KHV 850		HV class 4 KS 22 1-way	HV class 4 KS 22 2-way with HVIL		HV class 5 KS 22 2-way with HVIL 90°	HV class 5 KS 22 2-way with HVIL 180°
Coding and part number	A on request		A 10506461 B 10508701	A 10520540		A 10509937	A 10530034
Number of pins	3		1	2+2		2+2	2+2
Tightness	unsealed		unsealed	sealed		sealed	sealed
Pollution degree*	3		3	3		3	3
Altitude* (m)	5500		5500	5500		5500	5500
Interface* 48 V capability	yes for pollution degree 3 with CTI ≥ 175		yes for pollution degree 3 with CTI ≥ 175	yes for pollution degree 3 with CTI ≥ 175		yes for pollution degree 3 with CTI ≥ 175	yes for pollution degree 3 with CTI ≥ 175
Counterpart							
Coding and part number	Tab header 90° A 10540523	Tab header 180° A 10540517	A 10537804 B 10538244	Tab header upper part A 10529957 + Tab header lower part screw A 10530073	Tab header upper part A 10529957 + Tab header lower part module connector A 10530088	Tab header upper part A 10530049 + Tab header lower part screw A 10530053	Tab header upper part A 10530049 + Tab header lower part screw A 10530053

Further variants/codings on request. *In regards to 48 V requirements.

KOSTAL

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