

M 12 Power



The compact and powerful power connector

M 12 Power



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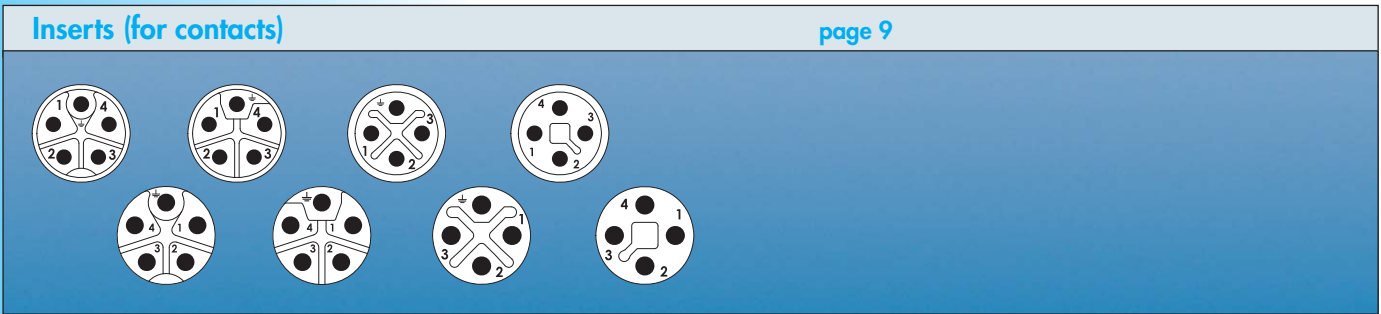
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M 12 goes Power

It is a major milestone in an age of miniaturization: the presentation of the M 12 Power Connector. This circular connector opens the door to entirely new applications and capabilities. Its high power transmission, the compact design and the large temperature range are the extraordinary features. The mechanical and electrical data of this compact power connector are convincing.

- Power transmission to 630V and 16A
- Temperature range to 125 degree Celsius
- K, L, S, T Coding
- EMC shielding in standard version
- Robust metal housing, optional stainless steel
- Protection IP 67 and IP 69K
- Compact designs
- Cable diameter range to 11 mm





Connectors M 12

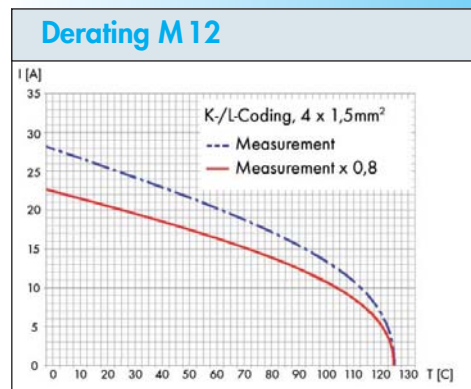
Mechanical Data	Materials and Technical Data
Housing	Copper-Zinc alloy / Die Cast INOX AISI 316 L TPU (moulded versions)
Housing surface	Nickel plated Black chrome-plated
Inserts (for contacts)	PBT Fire protection class V-0
Contacts	Copper alloy
Contact surface at point of contact	Gold plated
Minimum mating cycles	> 100
Seals / O-Rings	FKM / NBR
Temperature range	-40°C – 125°C (-40°F – 257°F)
Type of contacts	Crimp, screw
Protection	IP 67 / IP 69K
Cable diameter range	3 – 11 mm (.08 – .43")

Electrical Data	S	T	K	L
Coding	S	T	K	L
Colors	black	dark grey	blue	grey
Number of positions	4 (3 + PE)	4	5 (4 + PE)	5 (4 + PE)
AWG [mm ²]	0,5 – 1,5 AWG 20 – 16	0,5 – 1,5 AWG 20 – 16	0,75 – 2,5 AWG 18 – 14	0,75 – 2,5 AWG 18 – 14
Nominal current [A]	12	12	16	16
Nominal voltage [V~] <small>degree of protection 3</small>	630	63	630	63
Test voltage (Breakdown voltage) [V~]	6000	1500	6000	1500
Insulation resistance [MΩ]	> 10 ⁶	> 10 ⁶	> 10 ⁶	> 10 ⁶
Max. contact resistance [mΩ]	< 3	< 3	< 3	< 3

Technical Information

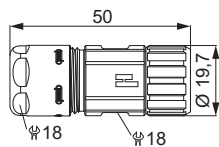
Nominal Current: Allowable current (Amp), that can be transmitted by each contact continuously and simultaneously. **Nominal Voltage:** Allowable voltage (Volt), that can be applied to each contact continuously and simultaneously. **Test Voltage:** Voltage which, under certain conditions, a connector can be exposed to without breakdown. **Degree of Protection:** Potential dirt accumulation of a disconnected connector in a certain environment.

Don't connect or disconnect HUMMEL Connectors under load.



Connectors M 12 / Housing

Straight Connector, Female Thread



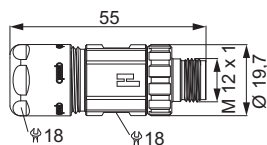
Cable-Ø	Coding	Part Number
---------	--------	-------------

3 – 6 mm (.11 – .23")	.....K, L	.....A712-7.K10.300.000
5 – 9 mm (.20 – .35")	.....K, L	.....A712-7.K10.400.000
8 – 11 mm (.31 – .43")	.....K, L	.....A712-7.K10.500.000

3 – 6 mm (.11 – .23")	.....S, T	.....A712-7.S10.300.000
5 – 9 mm (.20 – .35")	.....S, T	.....A712-7.S10.400.000
8 – 11 mm (.31 – .43")	.....S, T	.....A712-7.S10.500.000

Contacts and inserts page 9 • Assembly instructions page 12

Straight Connector, Male Thread



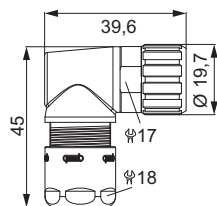
Cable-Ø	Coding	Part Number
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3 – 6 mm (.11 – .23")K, LA712-7.K20.300.000
5 – 9 mm (.20 – .35")K, LA712-7.K20.400.000
8 – 11 mm (.31 – .43")K, LA712-7.K20.500.000

3 – 6 mm (.11 – .23")	.....S, T	.....A712-7.S20.300.000
5 – 9 mm (.20 – .35")	.....S, T	.....A712-7.S20.400.000
8 – 11 mm (.31 – .43")	.....S, T	.....A712-7.S20.500.000

Contacts and inserts page 9 • Assembly instructions page 12

Right Angle Connector, Female Thread *

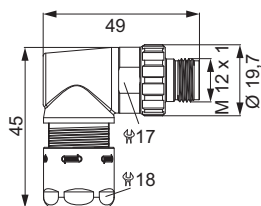


Cable-Ø	Coding	Part Number
---------	--------	-------------

3 – 6 mm (.11 – .23")	.....K, L	.....A712-7.K30.300.000
5 – 9 mm (.20 – .35")	.....K, L	.....A712-7.K30.400.000
8 – 11 mm (.31 – .43")	.....K, L	.....A712-7.K30.500.000

Contacts and inserts page 9 • Assembly instructions page 12

Right Angle Connector, Male Thread *



Cable-Ø	Coding	Part Number
---------	--------	-------------

3 – 6 mm (.11 – .23")	.....K, L	.....A712-7.K31.300.000
5 – 9 mm (.20 – .35")	.....K, L	.....A712-7.K31.400.000
8 – 11 mm (.31 – .43")	.....K, L	.....A712-7.K31.500.000

Contacts and inserts page 9 • Assembly instructions page 12

* Upon request


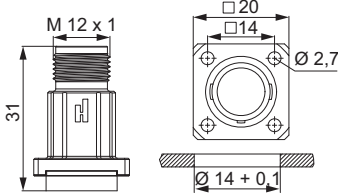
Mechanical Data	Materials	Coding	Straight Connector, Female Thread	
Cable sheath	PUR or PVC.....K, L, S, T			
Cable construction	4G1,5 shielded or unshielded .....S, T			
	5G0,75 / 5G1,5 / 5G2,5 shielded or unshieldedK, L			


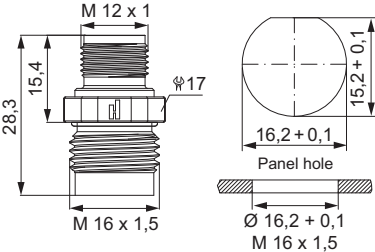
Mechanical Data	Materials	Coding	Straight Connector, Male Thread	
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Cable construction	4G1,5 shielded or unshieldedS, T			
	5G0,75 / 5G1,5 / 5G2,5 shielded or unshieldedK, L			

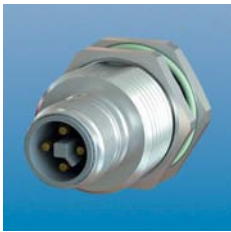
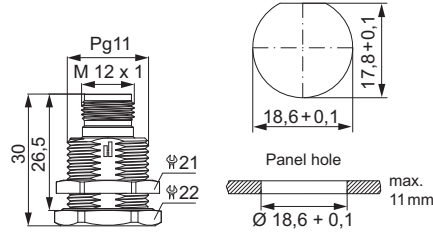
Mechanical Data	Materials	Coding	Right Angle Connector, Female Thread	
Cable sheath	PUR or PVC.....K, L, S, T			
Cable construction	4G1,5 shielded or unshielded .....S, T			
	5G0,75 / 5G1,5 / 5G2,5 shielded or unshielded .....K, L			


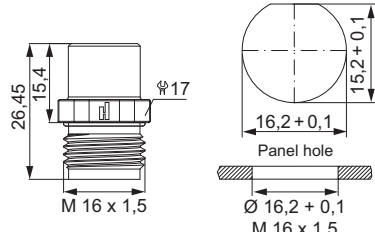
Mechanical Data	Materials	Coding	Right Angle Connector, Male Thread	
Cable sheath	PUR or PVC.....K, L, S, T			
Cable construction	4G1,5 shielded or unshielded .....S, T			
	5G0,75 / 5G1,5 / 5G2,5 shielded or unshielded .....K, L			

Panel Connectors M 12 / Housing

Panel Connector	Type	Part Number
	with flange	K, L .....A712-7.K40.000.000 S, T .....A712-7.S40.000.000
	Contacts and inserts page 9 • Assembly instructions page 13	

Panel Connector	Type	Part Number
	Front mounting, single hole mounted M16	K, L .....A712-7.K42.000.000
	Front mounting, single hole mounted M20	K, L .....A712-7.K42.100.000 S, T .....A712-7.S42.100.000
Contacts and inserts page 9 • Assembly instructions page 13		

Panel Connector	Type	Part Number
	Rear mounting, single hole mounted	K, L .....A712-7.K50.000.000 S, T .....A712-7.S50.000.000
	Contacts and inserts page 9 • Assembly instructions page 13	

Panel Connector	Type	Part Number
	with female thread M16	K, L .....A712-7.K44.000.000
	with female thread M20	K, L .....A712-7.K44.100.000 S, T .....A712-7.S44.100.000
Contacts and inserts page 9 • Assembly instructions page 13		

Type	Part Number	Inserts K
Crimp insert, pins, 4 + PE without contacts .....A712-7.K03.941.101 Required contacts: 4 x pins, 1 x socket PE		 Insert pin mating view
Crimp insert, sockets, 4 + PE without contacts .....A712-7.K03.941.102 Required contacts: 4 x sockets, 1 x pin		
Crimp contacts page 10		 Insert socket mating view




Type	Part Number	Inserts L
Crimp insert, pins, 4 + PE without contacts .....A712-7.L03.941.101 Required contacts: 4 x pins, 1 x socket PE		 Insert pin mating view
Crimp insert, sockets, 4 + PE without contacts .....A712-7.L03.941.102 Required contacts: 4 x sockets, 1 x pin		
Crimp contacts page 10		 Insert socket mating view

Type	Part Number	Inserts S*
Crimp pin 3 + PE contacts with screw termination ...A712-7.S05.931.101		 Insert pin mating view
Crimp socket 3 + PE contacts with screw termination ...A712-7.S05.931.102		
		 Insert socket mating view

Type	Part Number	Inserts T*
Crimp pin 4-pole contacts with screw termination ...A712-7.T05.904.101		 Insert pin mating view
Crimp socket 4-pole contacts with screw termination ...A712-7.T05.904.102		
		 Insert socket mating view

* Upon request

Connectors M 12 / Contacts

Contacts	Type	Crimp Range	Part Number
	Crimp pin 1,5 mm, machined	0,75 mm ²	A712-7.010.901.521*
	Crimp pin 1,5 mm, machined	1,5 mm ²	A712-7.010.901.531
	Crimp pin 1,5 mm, machined	2,5 mm ²	A712-7.010.901.541
	Crimp socket 1,5 mm, machined	0,75 mm ²	A712-7.010.901.522*
	Crimp socket 1,5 mm, machined	1,5 mm ²	A712-7.010.901.532
	Crimp socket 1,5 mm, machined	2,5 mm ²	A712-7.010.901.542
	Crimp socket 1,5 mm PE, machined	0,75 mm ²	A712-7.010.911.522*
	Crimp socket 1,5 mm PE, machined	1,5 mm ²	A712-7.010.911.532
	Crimp socket 1,5 mm PE, machined	2,5 mm ²	A712-7.010.911.542

* Upon request

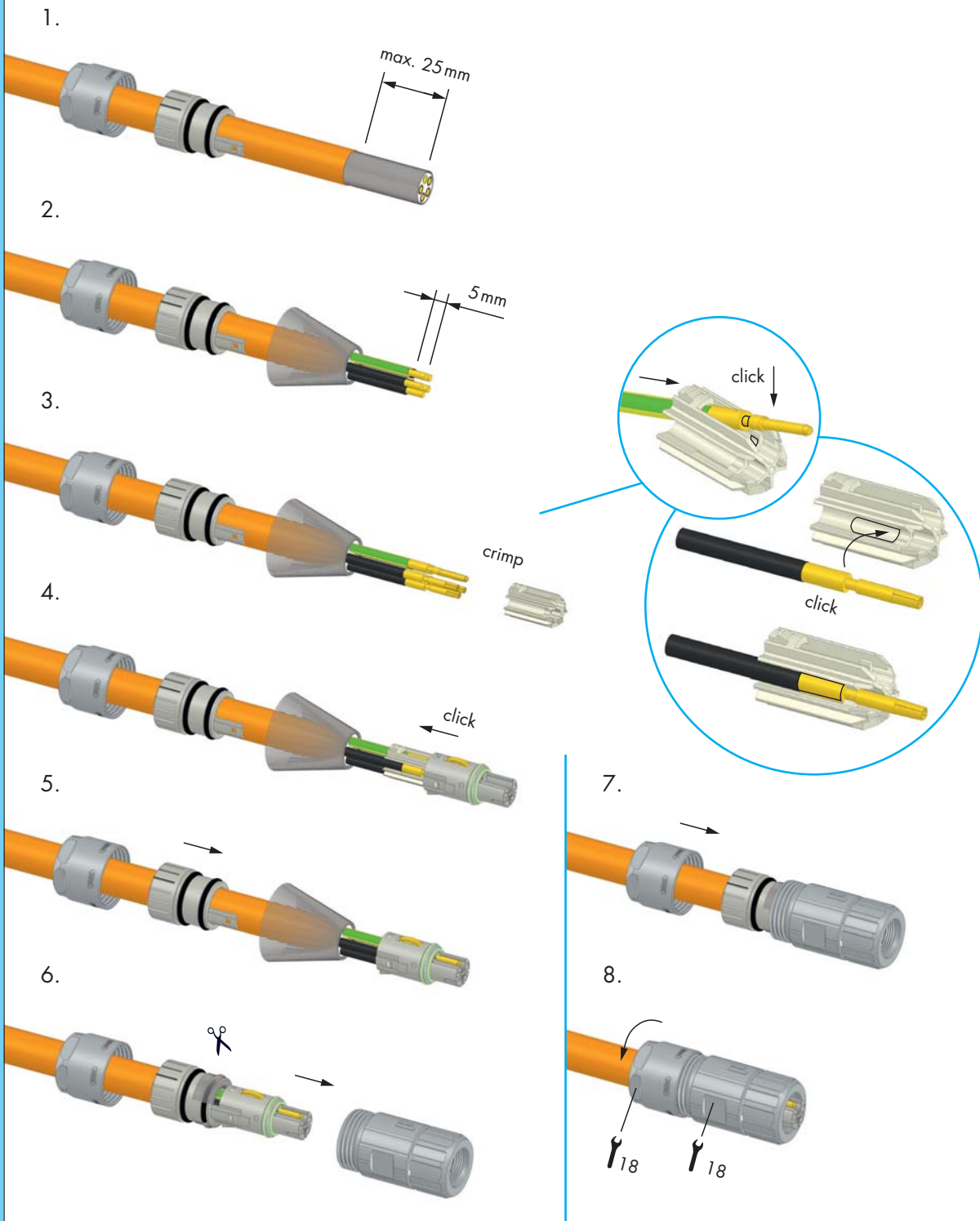
Crimp Tool Setting for HUMMEL Crimp Contacts (Crimp Tool 7.000.900.908)

Part Number	Crimp Contact	Cross Section (mm ²)	AWG	Crimp Tool Setting	Locator Setting
A712-7.010.901.531	Crimp pin 1,5 mm	1,5	16	1,45	P1
A712-7.010.901.541	Crimp pin 1,5 mm	2,5	14	1,70	P1
A712-7.010.901.532	Crimp socket 1,5 mm	1,5	16	1,45	P2
A712-7.010.901.542	Crimp socket 1,5 mm	2,5	14	1,70	P2
A712-7.010.911.532	Crimp socket 1,5 mm PE	1,5	16	1,45	P4
A712-7.010.911.542	Crimp socket 1,5 mm PE	2,5	14	1,70	P4

These values are only guidelines and actual conductor cross sections depend on manufacturer tolerances.

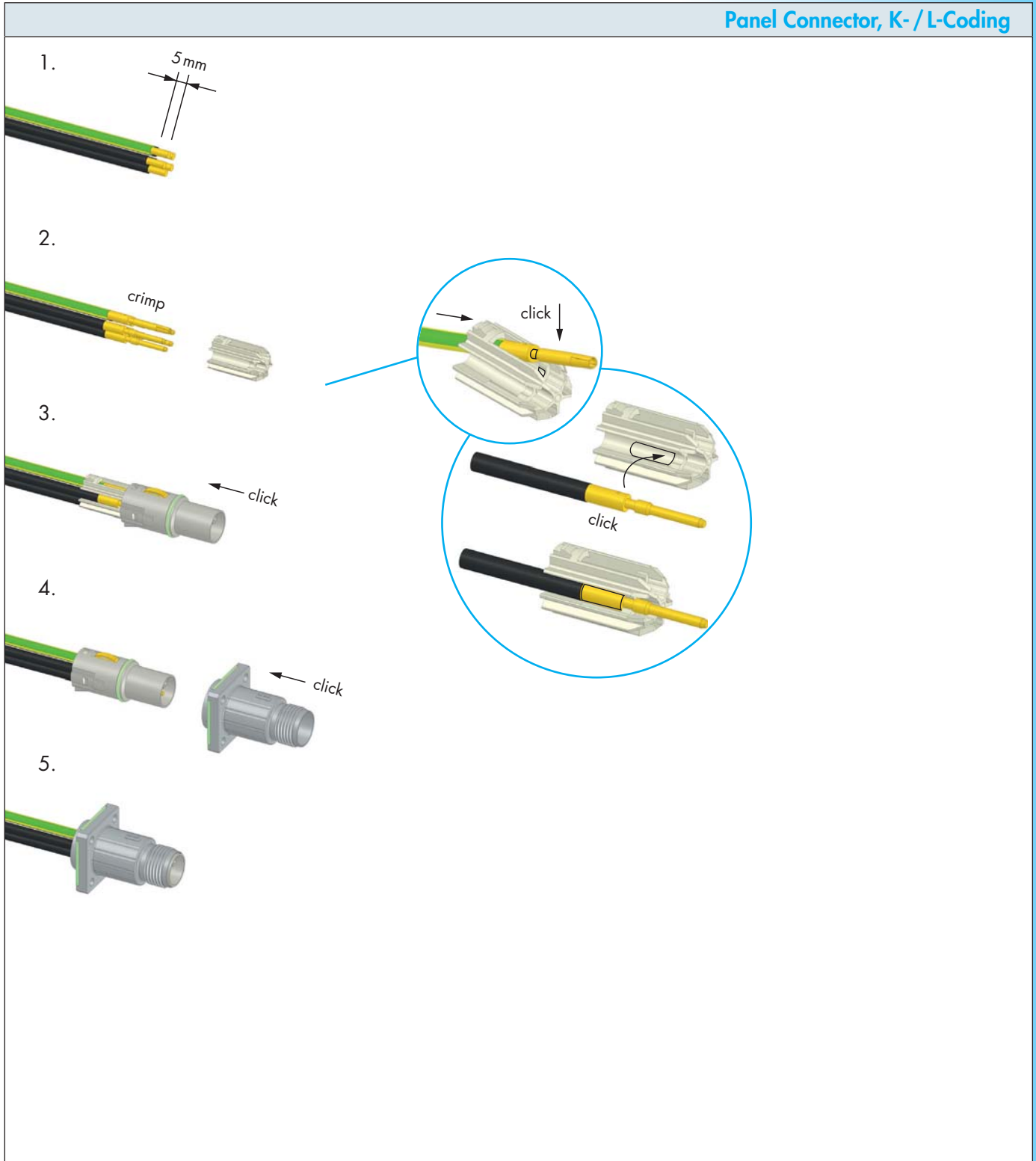
Type	Part Number	Accessories
Plastic protective cap for connectors with male thread.....A712-7.000.980.161 for connectors with female thread.....A712-7.000.980.162		
Brass protective cap for connectors with female thread.....A712-7.010.900.163		
Brass protective cap for connectors with male thread.....A712-7.010.900.162		
Brass protective cap with chain for connectors with female thread Length 70 mm.....A712-7.010.950.705		
Brass protective cap with chain for connectors with male thread Length 70 mm.....A712-7.010.950.704		
Crimp tool for manual crimping of machined crimp contacts for signal connectors M 12, M 16 and M 23 .....7.000.900.908		

Straight Connector Female / Male Thread, K- / L-Coding



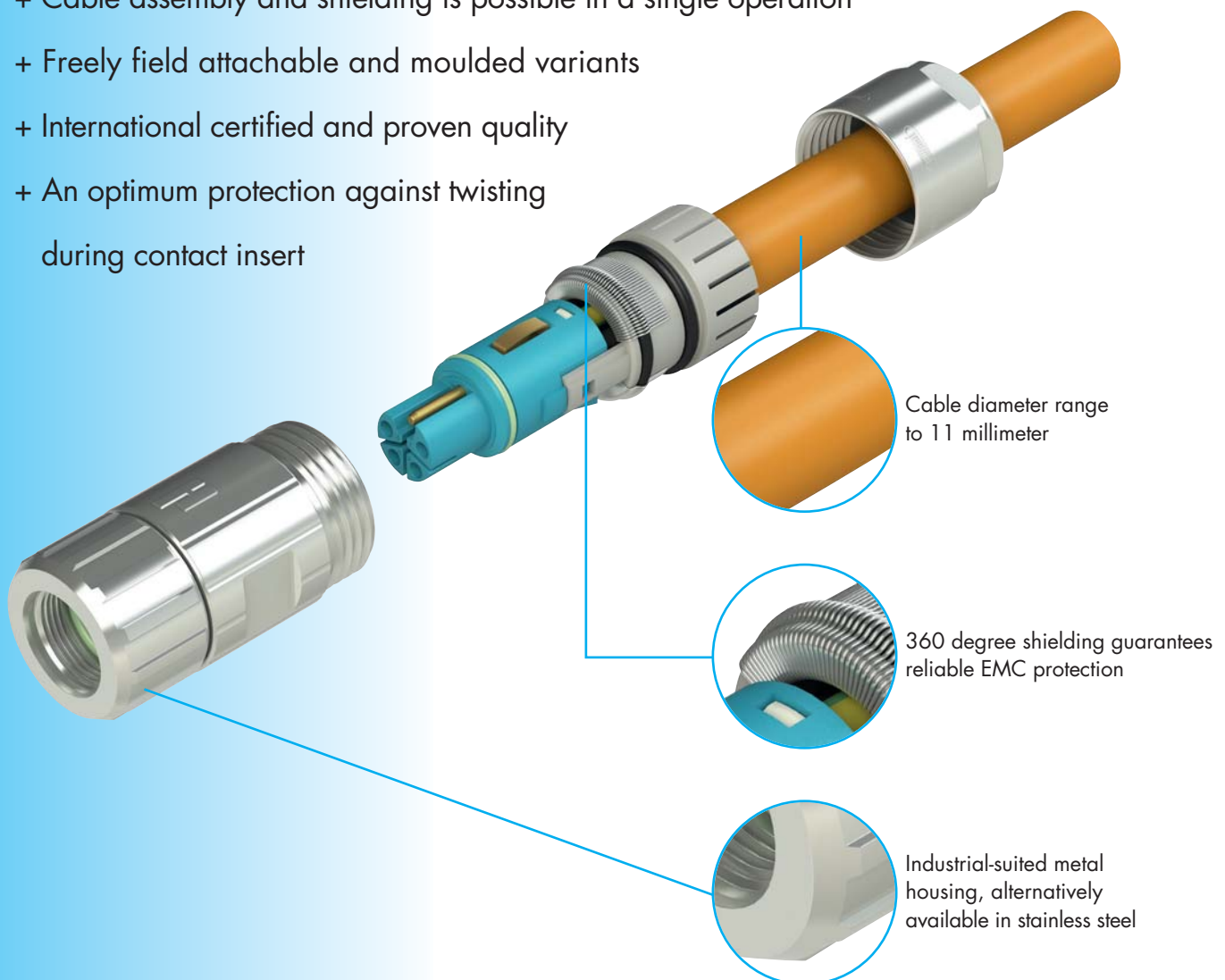
Connectors M 12 / Assembly Instructions

Panel Connector, K- / L-Coding

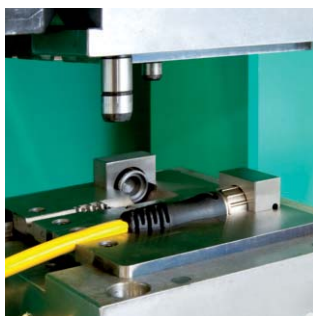


The benefits at a glance

- + Power transfer to 16A and 630V
- + Temperature resistance to 125 °C (257 °F)
- + Cable assembly and shielding is possible in a single operation
- + Freely field attachable and moulded variants
- + International certified and proven quality
- + An optimum protection against twisting during contact insert



HUMMEL AG



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