FAST MOVING TECHNOLOGY

Original MC4-Evo 2

Solarline | Connectors for renewable energy

EN



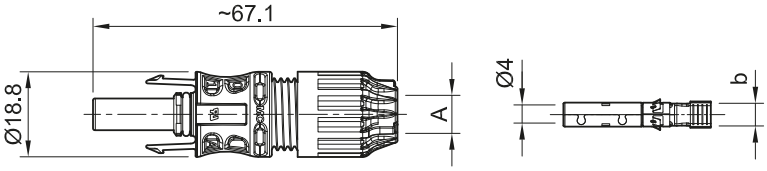
Female and male cable coupler MC4-Evo 2

Female and male cable coupler as individual part (including insulating part)

PV-KBT4-EVO 2A/...



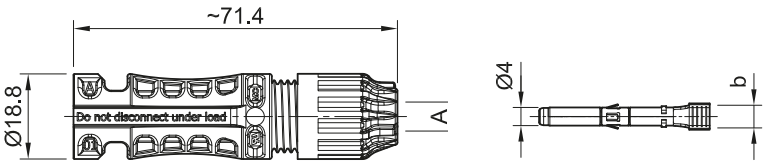




PV-KST4-EVO 2A/...







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MA

Assembly instructions MA298

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Internationally certified with IEC, UL, JET, cTÜVus. Approved for DC 1500 V (IEC, JET), DC 1500 V (UL) unrestricted access. MULTILAM Technology, has proven the quality and durability several 100 million times since 2004. Suited for all climatic environments due to UV resistance, ammonia and high IP class (IP68). Available as a field and preassembled connector, standard crimping tools can be used. Mating compatibility with MC4 connector family.

Technical data	
Connector system	Ø 4 mm
Ambient temperature range	-40 °C ... +85 °C (IEC/UL)
Transportation/storage temperature range	-30 °C/+60 °C
Transportation/storage relative humidity	< 70 %
Upper limiting temperature	115 °C (IEC)
Degree of protection, mated	IP65/IP68 (1 m, 1 h)
Degree of protection, unmated	IP2X
Overvoltage category/Pollution degree	CAT III/3
Contact resistance of plug connectors	< 0.2 mΩ
Locking system	Locking type
Safety class (IEC)	II
Contact system	MULTILAM
Type of termination	Crimping
Warning	Do not disconnect under load
Contact material	Copper, tin plated
Insulation material	PA
Flame class	UL94-V0
Ammonia resistance (TÜV Rheinland certified acc. to 2 PfG 1911/03.2011)	Q60139020-0001
TÜV-Rheinland certified according to IEC 62852:2014+Amd.1:2020	R 60127169
UL recognized component in accordance with UL6703	E343181
Maximum altitude above sea level for operation	5000 m
Temperature Level according to IEC TS 63126	Level 2

Female and male cable coupler MC4-Evo 2

Female and male cable coupler as individual part (including insulating part)

Order No.	Type	Socket	Plug	Outer diameter of cable	Width of crimp opening	IEC 62852			UL 6703			Approvals	
				A (mm)	b (mm)	mm^2	DC V	A	AWG	DC V	A	TÜV Rheinland	UR
32.0310P0001	PV-KBT4-EVO 2A/2.5I	x		4.7-6.4	4	2.5	1500	39				x	x
									14	1500	30		
32.0311P0001	PV-KST4-EVO 2A/2.5I		x	4.7-6.4	4	2.5	1500	39				x	x
									14	1500	30		
32.0312P0001	PV-KBT4-EVO 2A/2.5X	x		6.1-7.3	4	2.5	1500	39				x	x
									14	1500	30		
32.0313P0001	PV-KST4-EVO 2A/2.5X		x	6.1-7.3	4	2.5	1500	39				x	x
									14	1500	30		
32.0314P0001	PV-KBT4-EVO 2A/2.5II	x		6.4-8.4	4	2.5	1500	39				x	x
									14	1500	30		
32.0315P0001	PV-KST4-EVO 2A/2.5II		x	6.4-8.4	4	2.5	1500	39				x	x
									14	1500	30		
32.0316P0001	PV-KBT4-EVO 2A/6I	x		4.7-6.4	5.8	4	1500	45				x	x
						6	1500	53					
									12	1500	35		
									10	1500	50		
32.0317P0001	PV-KST4-EVO 2A/6I		x	4.7-6.4	5.8	4	1500	45				x	x
						6	1500	53					
									12	1500	35		
									10	1500	50		
32.0318P0001	PV-KBT4-EVO 2A/6X	x		6.1-7.3	5.8	4	1500	45				x	x
						6	1500	53					
									12	1500	35		
									10	1500	50		
32.0319P0001	PV-KST4-EVO 2A/6X		x	6.1-7.3	5.8	4	1500	45				x	x
						6	1500	53					
									12	1500	35		
									10	1500	50		

Note:

For detailed information concerning the suitable cable gland range, please consult MA298.

Order No.	Type	Socket	Plug	Outer diameter of cable	Width of crimp opening	IEC 62852			UL 6703			Approvals	
				A (mm)	b (mm)	mm^2	DC V	A	AWG	DC V	A	TÜV Rheinland	UR
32.0320P0001	PV-KBT4-EVO 2A/6II	x		6.4-8.4	5.8	4	1500	45				x	x
						6	1500	53					
									12	1500	35		
									10	1500	50		
32.0321P0001	PV-KST4-EVO 2A/6II		x	6.4-8.4	5.8	4	1500	45				x	x
						6	1500	53					
									12	1500	35		
									10	1500	50		
32.0322P0001	PV-KBT4-EVO 2A/10X	x		6.1-7.3	6.5	10	1500	69				x	x
									8	1500	70		
32.0323P0001	PV-KST4-EVO 2A/10X		x	6.1-7.3	6.5	10	1500	69				x	x
									8	1500	70		
32.0324P0001	PV-KBT4-EVO 2A/10II	x		6.4-8.4	6.5	10	1500	69				x	x
									8	1500	70		
32.0325P0001	PV-KST4-EVO 2A/10II		x	6.4-8.4	6.5	10	1500	69				x	x
									8	1500	70		

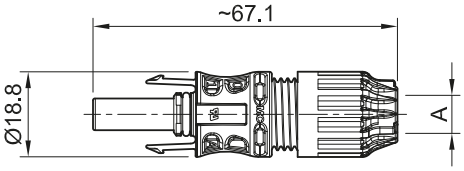
Female and male cable coupler MC4-Evo 2

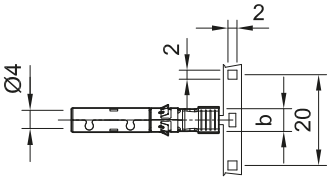
Contacts on carrier band (including insulating part)

PV-KBT4-EVO 2A/...





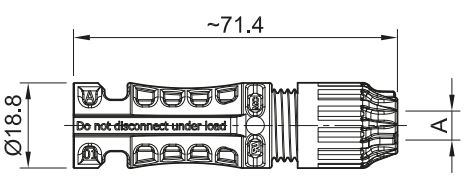


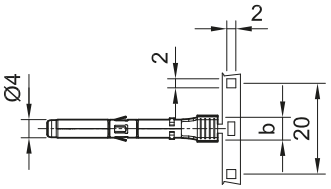


PV-KST4-EVO 2A/...

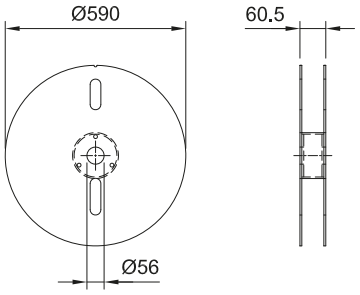












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MA

Assembly instructions MA298

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Ambient temperature range	-40 °C ... +85 °C (IEC) -40 °C ... +90 °C (UL)
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Transportation/storage relative humidity	< 70 %
Upper limiting temperature	115 °C
Degree of protection, mated	IP65/IP68 (1 m, 1 h)
Degree of protection, unmated	IP2X
Overvoltage category/Pollution degree	CAT III/3
Contact resistance of plug connectors	< 0.2 mΩ
Locking system	Locking type
Safety class (IEC)	II
Contact system	MULTILAM
Type of termination	Crimping
Warning	Do not disconnect under load
Contact material	Copper, tin plated
Insulation material	PA
Flame class	UL94-V0
Ammonia resistance (TÜV Rheinland certified acc. to 2 PfG 1911/03.2011)	Q60139020-0001
TÜV-Rheinland certified according to IEC 62852:2014+Amd.1:2020	R 60127169
UL recognized component in accordance with UL6703	E343181
Maximum altitude above sea level for operation	5000 m
Temperature Level according to IEC TS 63126	Level 2

Female and male cable coupler MC4-Evo 2

Contacts on carrier band (including insulating part)

Order No.	Type	Socket	Plug	Outer diameter of cable	Width of crimp opening	IEC 62852			UL 6703			Contacts per reel	Approvals	
				A (mm)	b (mm)	mm²	DC V	A	AWG	DC V	A		TÜV Rheinland	UR
32.0310P2000	PV-KBT4-EVO 2A/2.5I	x		4.7-6.4	4.0	2.5	1500	39				2000	x	x
									14	1500	30			
32.0311P2000	PV-KST4-EVO 2A/2.5I		x	4.7-6.4	4.0	2.5	1500	39				2000	x	x
									14	1500	30			
32.0312P2000	PV-KBT4-EVO 2A/2.5X	x		6.1-7.3	4.0	2.5	1500	39				2000	x	x
									14	1500	30			
32.0313P2000	PV-KST4-EVO 2A/2.5X		x	6.1-7.3	4.0	2.5	1500	39				2000	x	x
									14	1500	30			
32.0314P2000	PV-KBT4-EVO 2A/2.5II	x		6.4-8.4	4.0	2.5	1500	39				2000	x	x
									14	1500	30			
32.0315P2000	PV-KST4-EVO 2A/2.5II		x	6.4-8.4	4.0	2.5	1500	39				2000	x	x
									14	1500	30			
32.0316P2000	PV-KBT4-EVO 2A/6I	x		4.7-6.4	5.8	4	1500	45				2000	x	x
						6	1500	53						
									12	1500	35			
									10	1500	50			
32.0317P2000	PV-KST4-EVO 2A/6I		x	4.7-6.4	5.8	4	1500	45				2000	x	x
						6	1500	53						
									12	1500	35			
									10	1500	50			
32.0318P2000	PV-KBT4-EVO 2A/6X	x		6.1-7.3	5.8	4	1500	45				2000	x	x
						6	1500	53						
									12	1500	35			
									10	1500	50			
32.0319P2000	PV-KST4-EVO 2A/6X		x	6.1-7.3	5.8	4	1500	45				2000	x	x
						6	1500	53						
									12	1500	35			
									10	1500	50			

Note:

For more detailed information concerning the suitable cable gland range, please consult MA298.

Order No.	Type	Socket	Plug	Outer diameter of cable	Width of crimp opening	IEC 62852			UL 6703			Contacts per reel	Approvals	
				A (mm)	b (mm)	mm²	DC V	A	AWG	DC V	A		TÜV Rheinland	UR
32.0320P2000	PV-KBT4-EVO 2A/6II	x		6.4-8.4	5.8	4	1500	45				2000	x	x
						6	1500	53						
									12	1500	35			
									10	1500	50			
32.0321P2000	PV-KST4-EVO 2A/6II		x	6.4-8.4	5.8	4	1500	45				2000	x	x
						6	1500	53						
									12	1500	35			
									10	1500	50			
32.0322P1500	PV-KBT4-EVO 2A/10X	x		6.1-7.3	6.5	10	1500	69				1500	x	x
									8	1500	70			
32.0323P1500	PV-KST4-EVO 2A/10X		x	6.1-7.3	6.5	10	1500	69				1500	x	x
									8	1500	70			
32.0324P1500	PV-KBT4-EVO 2A/10II	x		6.4-8.4	6.5	10	1500	69				1500	x	x
									8	1500	70			
32.0325P1500	PV-KST4-EVO 2A/10II		x	6.4-8.4	6.5	10	1500	69				1500	x	x
									8	1500	70			

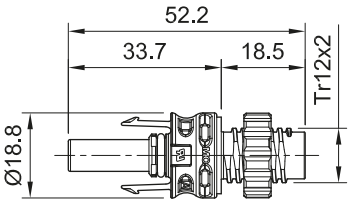
Female and male panel receptacle MC4-Evo 2

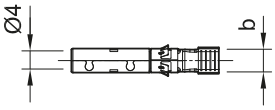
Female and male panel receptacles as individual part (including insulating part)

PV-ADB4-EVO 2A/...





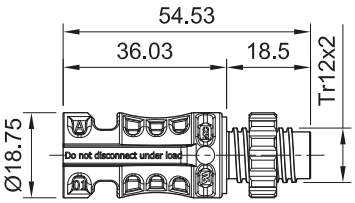


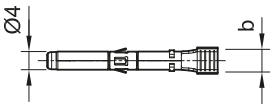


PV-ADS4-EVO 2A/...











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Assembly instructions MA299

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MC4-Evo 2 panel-receptacle connectors are the interface between the inverter or the distributor housing and string. Assembly directly via the threads or in the perforated plate with the plastic nut (contained in scope of delivery). Thanks to the D-shape thread the connection is secured against twisting. For 1500 DC V(IEC), 1500 DC V (UL) approved without constraints. Degree of protection IP68 (1 m, 1 h) guarantees highest connection safety. Fast and clean connection. Plug compatible with the original MC4 plug connector family. With preassembled flat seal.

Technical data	
Connector system	Ø 4 mm
Ambient temperature range	-40 °C...+85 °C (IEC) -40 °C...+90 °C (UL)
Upper limiting temperature	115 °C
Degree of protection, mated	IP65/IP68 (1 m, 1 h)
Degree of protection, unmated	IP2X
Overvoltage category/Pollution degree	CAT III/3
Locking system	Locking type
Contact system	MULTILAM
Type of termination	Crimping
Contact material	Copper, tin plated
Insulation material	PA
Flame class	UL94-V0
TÜV Rheinland certified according to IEC 62852:2014+Amd.1:2020	R 60127171
UL recognized component in accordance with UL6703	E343181
Maximum altitude above sea level for operation	5000 m
Temperature level according to IEC TS 63126	Level 2

Female and male panel receptacle MC4-Evo 2

Female and male panel receptacles as individual part (including insulating part)

Order No.	Type	Socket	Plug	Width of crimp opening	IEC 62852			UL 6703			Approvals	
				b (mm)	mm²	DC V	A	AWG	DC V	A	TÜV Rheinland	UR
32.0286P0001	PV-ADB4-EVO 2A/2.5	x		4.0	2.5	1500	32				x	x
								14	1500	30		
32.0287P0001	PV-ADS4-EVO 2A/2.5		x	4.0	2.5	1500	32				x	x
								14	1500	30		
32.0288P0001	PV-ADB4-EVO 2A/6	x		5.8	4	1500	42				x	x
					6	1500	47					
								12	1500	35		
								10	1500	50		
32.0289P0001	PV-ADS4-EVO 2A/6		x	5.8	4	1500	42				x	x
					6	1500	47					
								12	1500	35		
								10	1500	50		
32.0290P0001	PV-ADB4-EVO 2A/10	x		6.5	10	1500	62				x	x
								8	1500	70		
32.0291P0001	PV-ADS4-EVO 2A/10		x	6.5	10	1500	62				x	x
								8	1500	70		

Note:

For more detailed information concerning the suitable cable gland range, please consult MA299.

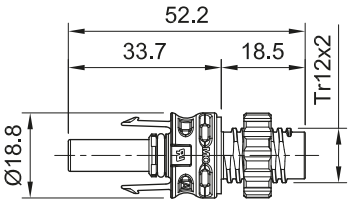
Female and male panel receptacle MC4-Evo 2

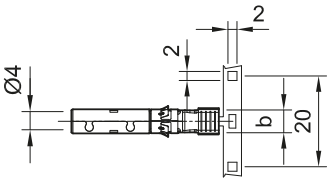
Contacts on carrier band (including insulating part)

PV-ADB4-EVO 2A/...





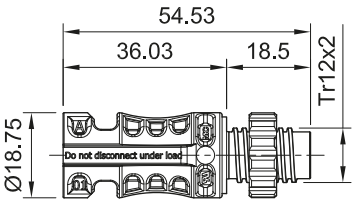


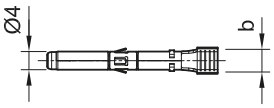


PV-ADS4-EVO 2A/...

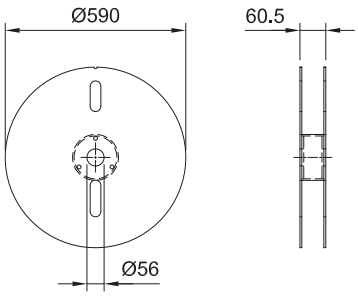












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Technical data	
Connector system	Ø 4 mm
Ambient temperature range	-40 °C...+85 °C (IEC) -40 °C...+90 °C (UL)
Upper limiting temperature	115 °C
Degree of protection, mated	IP65/IP68 (1 m, 1 h)
Degree of protection, unmated	IP2X
Overvoltage category/Pollution degree	CAT III/3
Locking system	Locking type
Contact system	MULTILAM
Type of termination	Crimping
Contact material	Copper, tin plated
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Maximum altitude above sea level for operation	5000 m
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Contacts on carrier band (including insulating part)

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32.0286P2000	PV-ADB4-EVO 2A/2.5	x		4.0	2.5	1500	32				2000	x	x
								14	1500	30			
32.0287P2000	PV-ADS4-EVO 2A/2.5		x	4.0	2.5	1500	32				2000	x	x
								14	1500	30			
32.0288P2000	PV-ADB4-EVO 2A/6	x		5.8	4	1500	42				2000	x	x
					6	1500	47						
								12	1500	35			
								10	1500	50			
32.0289P2000	PV-ADS4-EVO 2A/6		x	5.8	4	1500	42				2000	x	x
					6	1500	47						
								12	1500	35			
								10	1500	50			
32.0290P1500	PV-ADB4-EVO 2A/10	x		6.5	10	1500	62				1500	x	x
								8	1500	70			
32.0291P1500	PV-ADS4-EVO 2A/10		x	6.5	10	1500	62				1500	x	x
								8	1500	70			

Note:

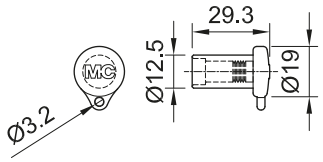
For more detailed information concerning the suitable cable gland range, please consult MA299.

Sealing caps

Sealing caps for tight sealing of unplugged MC4-Evo 2 connectors.

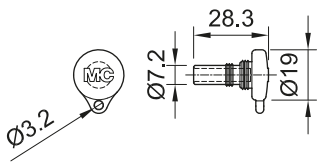
PV-BVK4





PV-SVK4





Order No	Type	Suitable for plug side	Suitable for socket side
32.0716	PV-BVK4		×
32.0717	PV-SVK4	×	

Technical data	
Material	TPE
Degree of protection, mated	IP67

Test plug MC4-Evo 2

This test plug is used to verify the correct location of the MC4-Evo 2 contact in the insulation.

PV-EVO-PST





Order No.	Type	MA Assembly instruction
32.6073	PV-EVO-PST	MA273

Crimping pliers for industrial use PV-CZM...

Only the tools stated below shall be used for the assembly of UL- and TÜV Rheinland approved products.

These are suited for the processing of high numbers of pieces and can be adjusted to the product with the help of changeable locators and crimp inserts.

PV-CZM...



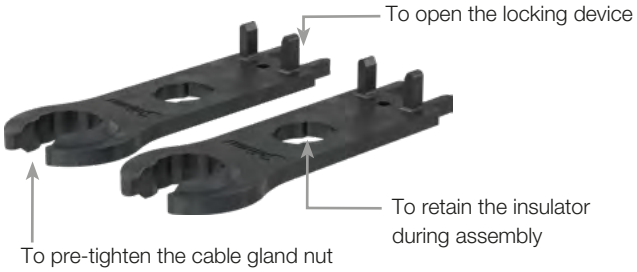
Order No.	Type	Designation	Crimp range		MA Assembly instruction
			mm²	AWG	
32.6020-40100	PV-CZM-40100	Crimping pliers incl. locator and insert	2.5; 4	16; 14; 12	MA251
32.6020-41100	PV-CZM-41100		2.5; 4; 6	14; 12; 10	MA251
32.6020-42100	PV-CZM-42100		4; 10	12; 8	MA251
Individual parts					
32.6021-40100	PV-ES-CZM-40100	Insert	2.5; 4	16; 14; 12	MA251
32.6021-41100	PV-ES-CZM-41100	Insert	2.5; 4; 6	14; 12; 10	MA251
32.6021-42100	PV-ES-CZM-42100	Insert	4; 10	12; 8	MA251
32.6056	PV-LOC-C	Locator	all sizes		MA251

Tools

Open-end spanner sets

To tighten and unscrew the cable gland and to open the locking device of the connection.

PV-MS



PV-MS-PLS



Order No.	Type	Designation	MA Assembly instruction
32.6024	PV-MS	Open-end spanner set (2 pcs.), plastic	MA298, MA299
32.6058	PV-MS-PLS	Open-end spanner set (2 pcs.), metal	MA298, MA299

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