

Update standatization of MICE 2/3 MDI connector acc. to IEC 61076-3-125

comments #96 & #98



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MDI connector acc. IEC 61076-3-125 (project in IEC SC48B)



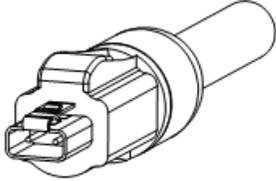
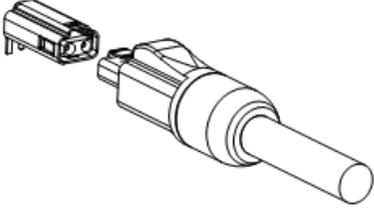
Status of IEC 61076-3-125

- The CDV of IEC 61076-3-125 is submitted to IEC in week 1 / 2019.
- Final standard are expected for Q3 / 2019.
- IEC 61076-3-125 specify the mating face all, mechanical, climatically and electric specification's of M2I2C2E2 and M3I3C3E3 SPE connectors up to 600MHz bandwidth. Higher frequencies are under evaluation.
- According to the industrial requirements are several versions with different locking mechanisms and cable diameters are specified.
- All this versions are based on the identical basic 2 pin mating (face similar like we have it for RJ45 with IP20 and IP65/67 version today).
- In addition to this range of 2-pin versions, also a 4 pin version with 2 additional power contacts usable up to 8A is inside IEC 61076-3-125.

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SPE Connector versions inside IEC 61076-3-125

IP20 basic version – this mating face is shown as example at IEEE802.3cg

Style	Description	Picture
2P-L-L	PLUG - Free 2-way IP20 connector with male contacts, latch locking 	
2J-L-L	JACK - Fixed 2-way IP20 connector with female contacts, latch locking, intended for PCB mounting 	

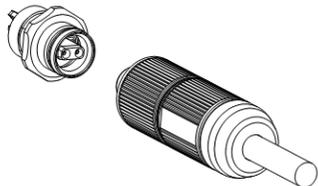
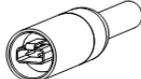
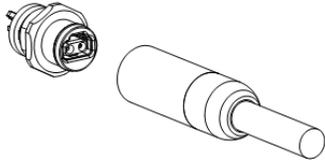
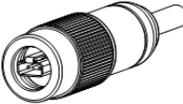
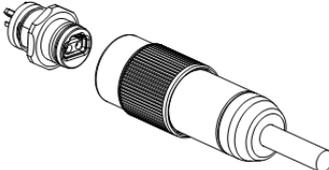
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SPE Connector versions inside IEC 61076-3-125

IP65/67 version (8 mm diameter)
for small cable diameters with:

- SnapIn locking
- M8 screw locking
- PushPull locking

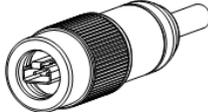
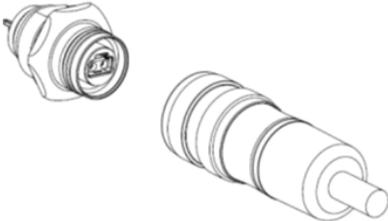
<p>6P-M8</p>	<p>PLUG - Free 2-way IP65/67 connector with male contacts, size 8, M8-screw locking</p> 		<p>6P-S8</p>	<p>PLUG - Free 2-way IP65/67 connector with male contacts, size 8, snap-in locking</p> 	
<p>6J-M8</p>	<p>JACK - Fixed 2-way IP65/67 connector with female contacts, size 8, M8 thread locking, intended for single hole mounting.</p> 		<p>6J-S8</p>	<p>JACK - Fixed 2-way IP65/67 connector with male contacts, size 8, snap-in locking, intended for single hole mounting.</p> 	
			<p>6P-P8</p>	<p>PLUG - Free 2-way IP65/67 connector with male contacts, size 8, push pull locking</p> 	
			<p>6J-P8</p>	<p>JACK - Fixed 2-way IP65/67 connector with female contacts, size 8, push pull locking, intended for single hole mounting</p> 	

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SPE Connector versions inside IEC 61076-3-125

IP65/67 version (12 mm diameter)
for small cable diameters with:

- M12 screw locking
- PushPull locking

6P-P12	PLUG - Free 2-way IP65/67 connector with male contacts, size 12, push pull locking 	
6P-M12	PLUG - Free 2-way IP65/67 connector with male contacts, size 12, M12 thread locking, intended for single hole mounting 	
6J-P12	JACK - Fixed 2-way IP65/67 connector with female contacts, size 12, push pull locking, intended for single hole mounting	
6J-M12	Identical to 6J-P12 but with M12 thread locking <u>instead</u> of push pull	
6J-C12	Combination of 6J-P12 and 6J-M12: With both, M12 thread <u>and</u> push pull locking. 	

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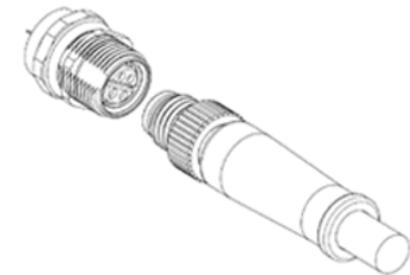


SPE Connector versions inside IEC 61076-3-125

Hybrid data + power IP65/67 version (8 mm diameter)
for small cable diameters with:

- M8 screw locking
- 2 additional power pins 8A / 60V

6P-M8C	Hybrid Data + Power (2x 8A) version PLUG - Free 4-way connector with male contacts, size 8, M8 thread locking
6J-M8C	JACK - Fixed 4-way connector with female contacts, size 8, M8 thread locking, intended for single hole mounting



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Summary

- At the IEEE 802.3cg and other IEEE 802.3 standards only references to the IEC connector standards are listed and not all drawings, variants and specification details from the IEC. This makes sense to avoid permanent update of the IEEE standards and the all the MDI connector details are not the scope of IEEE.
- Based on this standard different vendors develop a own product range with plugs (crimp and IDC field termination), jacks (with and without magnetics), bulkheads, cables, system cords – similar we have it today for RJ45.
- More details about the “Industrial Style” SPE connectors see also:
http://www.ieee802.org/3/cg/public/Sept2018/Fritsche_3cg_01a_0918.pdf and
http://www.ieee802.org/3/cg/public/Nov2018/Fritsche_3cg_01_1118.pdf



Pushing Performance



Thank you!