

IEEE P802.3cg 10 Mb/s Single Twisted Pair Ethernet (10SPE)

Details for MDI discussion

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Hopefully a long list

MDI details

An optional uniform connector is beneficial for the plug and play functionality of the 10Mbit/s SPE.

Similar like the RJ45 connector is used for 2/4-pair Ethernet and usable with data rates from 10Mbit/s to 25/40Gbit/s also for the Single pair Ethernet (SPE) eco system one uniform connector system is needed.

The RJ45 is defined at IEC 60603-7... standard series.
If the new SPE connector will be defined as IEC standard, a reference at the IEEE802.3 SPE standards is the easiest way to define an optional MDI.

MDI details

See also presentation from Peter Jones:

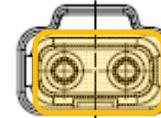
http://www.ieee802.org/3/cg/public/adhoc/8023cg_adhoc_optional_mdi.pdf

A defined and uniform connector is needed for a plug and play Single Pair Ethernet (SPE) eco system usable for 10 / 100 / 1000 /MultiGig BASE-T1.

At the IEC working group SC 48B the project IEC 48B/2530/NP is started to define such a uniform SPE connector eco system.

MDI details – IEC proposal

IP20 Version



IP65/67 versions

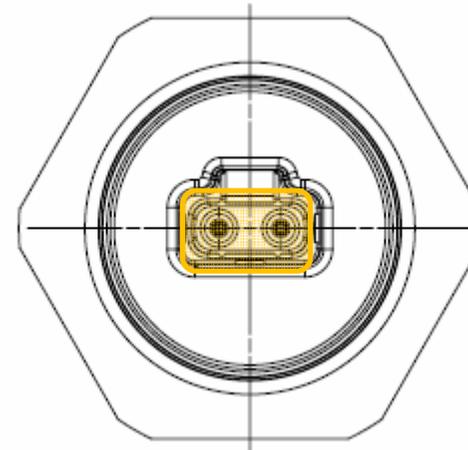
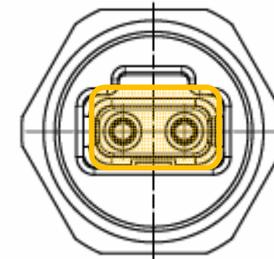
approx. 8 mm diameter

(usable with thin cable for short lengths)

or

12 mm diameter

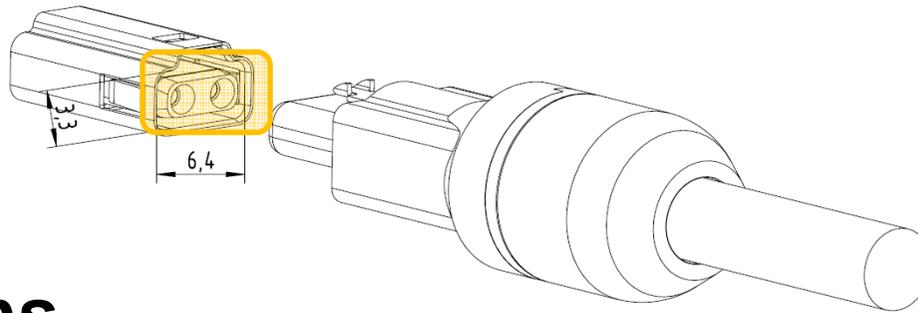
(usable with big cable for long lengths)



Always the same
mating face

MDI details – IEC proposal

IP20 Version

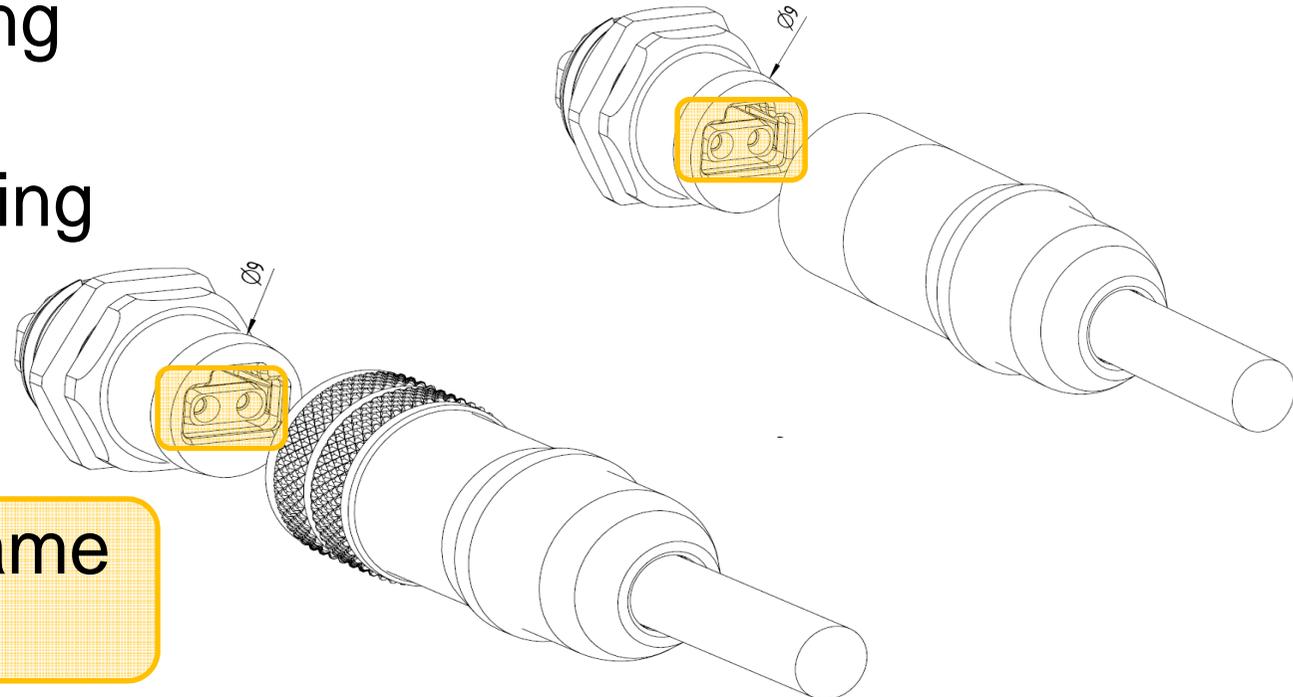


IP65/67 versions

Snap-In locking

or

PushPull locking



Always the same
mating face

MDI details – IEC proposal

Main specifications SPE connector:

- identical mating face for IP20 and IP 65/67
- ready for PoDL with 2A / 60 V DC
- crimp and IDC field termination
- shielding and robust locking system
- usable from 10BASE-T1 up to MultiGig BASE-T1

Questions?

Thank you!

MDI details

Annex:

Details of the IEC working group SC 48B
project IEC 48B/2530/NP:

48B/2530/NP Future IEC 61076-3-xxx Ed.1: Connectors for electronic equipment - Product requirements - Detail specification for 2-way, shielded, free and fixed connectors for data transmission up to 600MHz with current carrying capacity