

# The problem with Shared Sheath

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# Text from JTC1-SC25/3068/CD

In 6.6.3.5: Each conductor within a single pair cabling channel shall have a minimum DC current carrying capacity under continuous operation of 2,0 A at 60 °C.

A channel made from a combination of single pair and multi-pair cabling components may have a current capacity limited to 0,75 A. For additional information see Annex G.

And in 6.6.4: It can be possible to use a multipair cable (Channel) to supply more than one single-pair application. The use of multiple single-pair applications, within a common sheath is not assured.

# Take 6.6.4 first

- The text basically says, “you can do this, but the use is not guaranteed”. It is my opinion that this type of guidance isn’t good for your readers and will result in problems in the field. I can tell you that my company will advise against this as I’m the one that provides this guidance.

## 6.6.3.5

- This is another item I would STRONGLY guide against for my customers. The problem is the PSE can't know what kind of cabling is connected. Allowing a 0.75A option basically waters ALL options down to 0.75A – which is well below the current we need to deliver the power levels desired.
- I understand the desire to reuse cable, we do it with every subsequent standard – so long as the existing cable can satisfy the requirements. The 0.75A limit on 4P cable means it cannot fulfill the requirements of power over SPE.

## 6.6.3.5 continued

- I will further add that in my role as a member on the National Electrical Code CMP3, I would have a hard time defending this exception. I'd expect the members of 60364 would be similarly concerned that an exception allows cables with lower ampacity to be connected to PSE that can far exceed their rating.
- I also fear that other IEC groups would read this text and pick the lowest common denominator and write rules around 0.75A. This text has the possibility to block the 2.0A solution on any 11801-1 cabling