

28AWG Patch Cord Heating Measurement

Ron Tellas

March 6, 2018



Scope

- Measure heat rise of 28AWG category 6 and category 6A patch cord cabling in a bundle in air.
 - Compare to previous TIA 28AWG Patch Cord TG contribution.

Bundled Cable Heat Testing

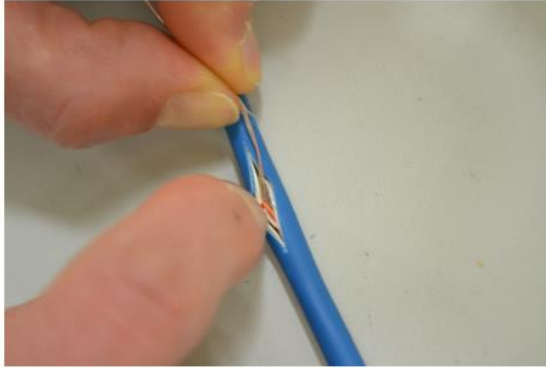
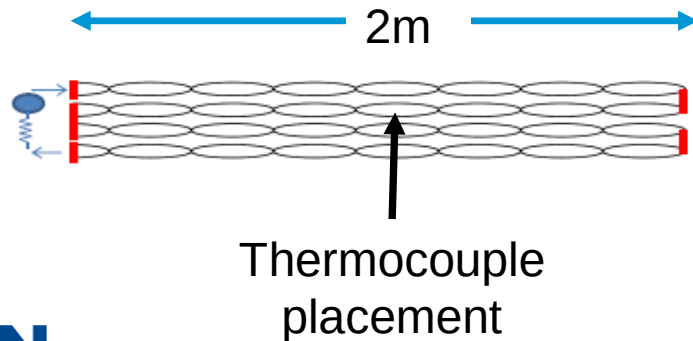


Figure C.1 - Placement of thermocouple.



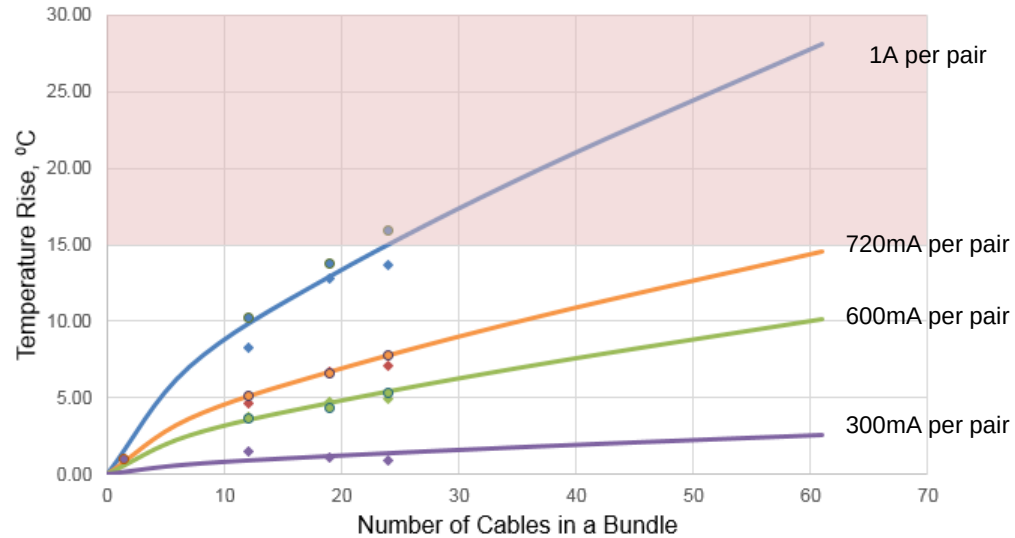
$$\Delta T(i, N) = (C_1 \cdot N + C_2 \cdot \sqrt{N}) \cdot i^2$$



Figure C.3 - Test set-up for cable bundles in air.

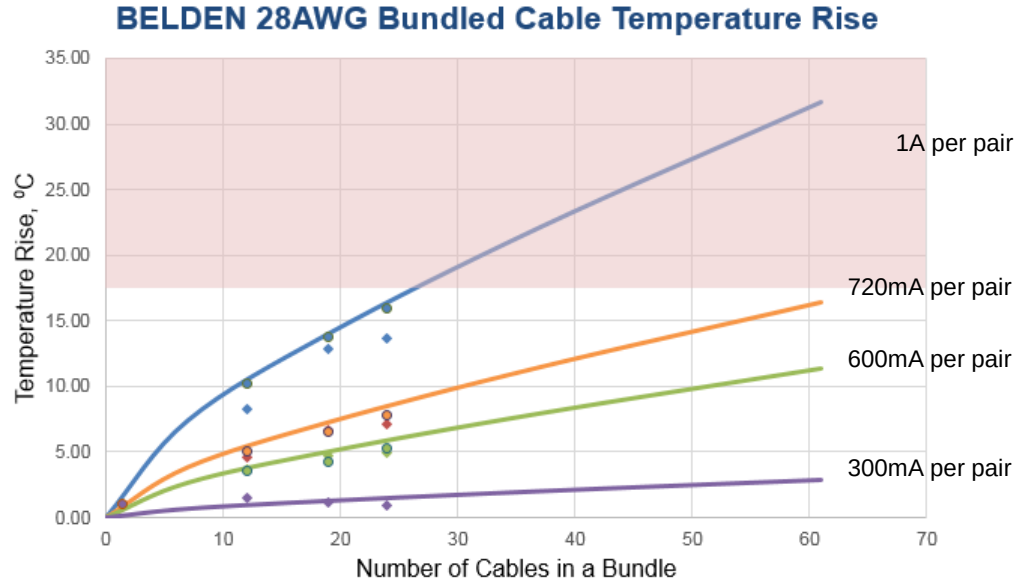
Results of Test

BELDEN 28AWG Bundled Cable Temperature Rise



	Coefficients in air	
Cable Type	C_1	C_2
28 AWG Cord Cable	0.183	2.162

Results using TSB-184-A Coefficients



Cable Type	Coefficients in air	
	C_1	C_2
28 AWG Cord Cable	0.243	2.159

Recommendations

- Belden data agrees with past contributions to TIA
- Utilize the following in TSB-184-A-1

	Coefficients in air	
Cable Type	C_1	C_2
28 AWG Cord Cable	0.243	2.159