



TCI Compliance Interface Definition (Clause 169)

Michael Paul

analog.com

TCl Voltage / Current Interface for Clause 169

Until the January comment review cycle, TC3 was specified as the power interface (PI) for Clause 169 compliance.

Efforts are being made to specify compliance at TC1 and TC2 and remove the TC3 interface from both Clause 168 and Clause 169.

- Goals
 - Specify measurement planes for MPSEs and MPDs
 - Keep values positive when possible
 - Clarify direction of current flow for each port TC1 and TC2
 - Define current flow to MPSE / MPD as a function of current at TC1 and TC2

MPSE TCI Definition

“MPSE TCI” text goes in after subsection 169.4.2

Change subsection 169.4.3 to 169.4.4

Insert Text:

169.4.3 MPSE TCI

MPSEs supply power to the mixing segment.

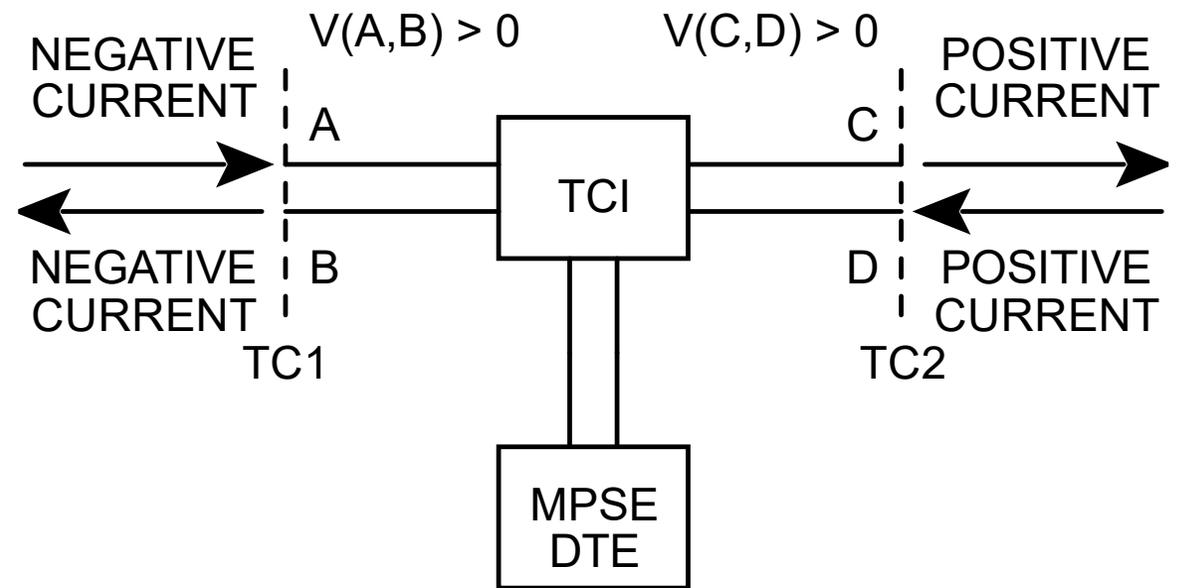
Current at an MPSE TCI is defined as positive when current flows out of the higher voltage pin of the TC1 or TC2 interface and flows into the lower voltage pin of the same interface TC1 or TC2, respectively.

Current at an MPSE TCI is defined as negative when current flows into the higher voltage pin of the TC1 or TC2 interface and flows out of the lower voltage pin of the same interface TC1 or TC2, respectively.

For compliance, MPSE current is measured as the sum of TCI currents, TC1+TC2. Current shall be measured as the sum of both higher voltage pins on TC1 and TC2, or both lower voltage pins on TC1 and TC2.

For compliance, voltage specifications shall be met at both TC1 and TC2 independently.

Insert Figure:



MPD TCI Definition

“MPD TCI” goes in section 169.5.2

Insert Text after “Table 169-6–MPD pinout”:

MPDs draw power from the mixing segment. MPDs are current sinks.

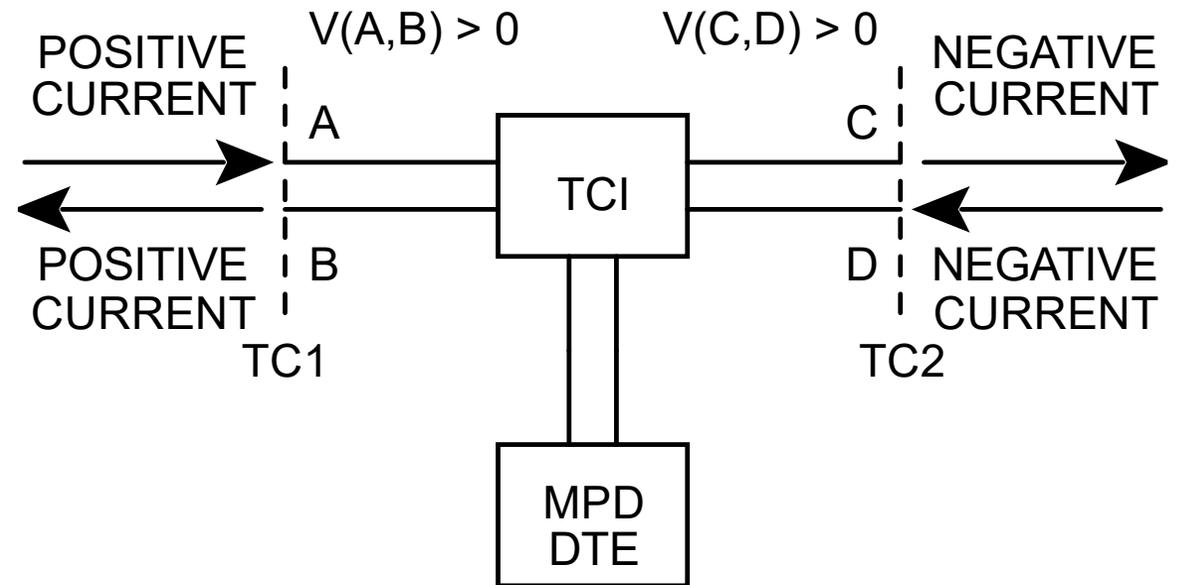
Current at an MPD TCI is defined as positive when current flows into the higher voltage pin of the TC1 or TC2 interface and flows out of the lower voltage pin of the same interface TC1 or TC2, respectively.

Current at an MPD TCI is defined as negative when current flows out of the higher voltage pin of the TC1 or TC2 interface and flows into the lower voltage pin of the same interface TC1 or TC2, respectively.

For compliance, MPD current is measured as the sum of TCI currents, TC1+TC2. Current shall be measured as the sum of both higher voltage pins on TC1 and TC2, or both lower voltage pins on TC1 and TC2.

For compliance, voltage specifications shall be met at both TC1 and TC2 independently.

Insert Figure:



Thank You