

PAVIRO EOL MODULE CABLE CAPACITANCE CHECK V1.7

PAVIRO - EOL module (PVA-1WEOL) cable capacitance check

This information can be used as capacitance check to see if EOL's work correct.

Explanation:

Each loudspeaker cable has a certain capacitance. The longer the cable, the higher the capacitance.

1-n topology systems face parallel loudspeaker cables increasing the total capacitance. To ensure correct operation of the EOL module it is important that the total capacitance is below the maximum C_g of the EOL module.

Below checks result in a clear indication with respect to correct operation using EOL's in combination with the used cable and cable lengths.

Information needed of used cable

- Cable capacitance C_g (nF/km) (= capacitance to shield, ground or return wire, depending the application)
- Cable length per loudspeaker line (meters)

Check 1 (Controller)

- Calculate the total cable length of connected loudspeaker lines (max 12 lines).
- Check if the intersection point in the graph between the mutual cable capacitance and total calculated length is in the green area.

Check 2A (for each Router)

- Calculate per router the total cable length of connected loudspeaker lines connected to the first 12 outputs (1-12).
- Check if the intersection point in the graph between the mutual cable capacitance and total calculated length is into the green area.

Check 2B (for each Router)

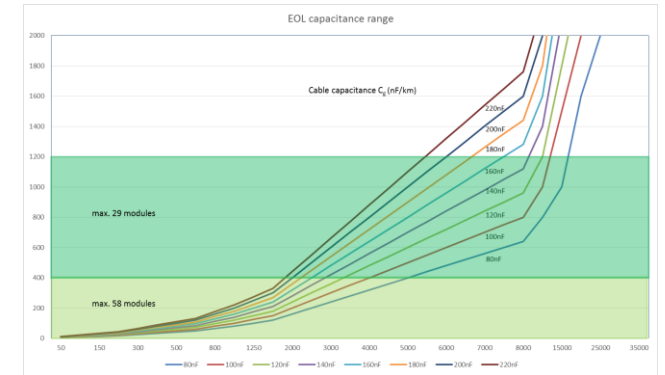
- Calculate per router the total cable length of connected loudspeaker lines connected to second 12 outputs (13-24).
- Check if the intersection point in the graph between the mutual cable capacitance and total calculated length is in the green area.

Check 3 (for each Amplifier)

- Calculate per amplifier channel the total cable length connected to loudspeaker lines (max 24 lines).
- Check if the intersection point in the graph between the mutual cable capacitance and total calculated length is in the green area.

For correct operation of the EOL all above checks needs to be within the green safe area!

For 1200nF usage, max. 29 modules can be used and even or odd addressing is required. If more than 29 modules are required, 400nF should be taken in account



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