

RDM-Net Modules - Electrical Specifications

Internal-Private buss section

Driver Load Units	0.250 Unit Loads (termination disabled)
Driver fault rating	60V protection from signal faults on bus lines.
Limiting	Short-circuit current-limiting and thermal shutdown
ESD	15kV ESD protection
Data Failsafe on input	Even when buss termination disabled
GDC buss termination	optionally - Jumper enabled on both ends of internal buss

If the internal buss termination is enabled - Maximum stress before damage

Delta V pin3 - 4	+ / - 7.5Vdc continuous
CMV referenced buss pin 2	+/-18Vdc.continuous

External - XLR driver section

Driver Load Units	0.160 Unit Loads (termination disabled)
Voltage fault rating	50V protection between lines on XLR connector.
XLR section isolation	500Vdc any pin to earth ground (for operational reasons- not to be relied on for life safety)
RAW driver isolation	2500 V ^{rms} for 1 minute per UL 1577
ESD withstanding	Test pending but unit should withstand 8kV air discharge
RDM termination	Jumper enabled / disabled on output modules
DMX termination	Jumper enabled / disabled on input modules
Data Failsafe on input	Even when DMX termination disabled



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RDM-Net - Figuring the Voltage Drop

To figure the approximate voltage drop in the power supply conductors you need to know the worst case current flowing in each run of power supply conductors. The voltage drop in any particular run of power supply wire is equal to:

The current in amps times the length of the cable in thousands of feet times the ohms per thousand feet.

For a 300-foot cable of 22 gauge wire, carrying a current of 250 milliamps, the drop is $.300 \times .250 \times 16.46 = 1.24$ volts.

This voltage drop occurs in both the supply wire and the common return wire. Therefore the effective power supply voltage has been reduced by 2.48 volts and the ground - the common mode voltage - has been increased by 1.24 volts. The voltage drop to the module farthest from the power supply is the sum of all the voltage drops in all of the runs between that module and the power supply.

On the next page is a module drilling guide.

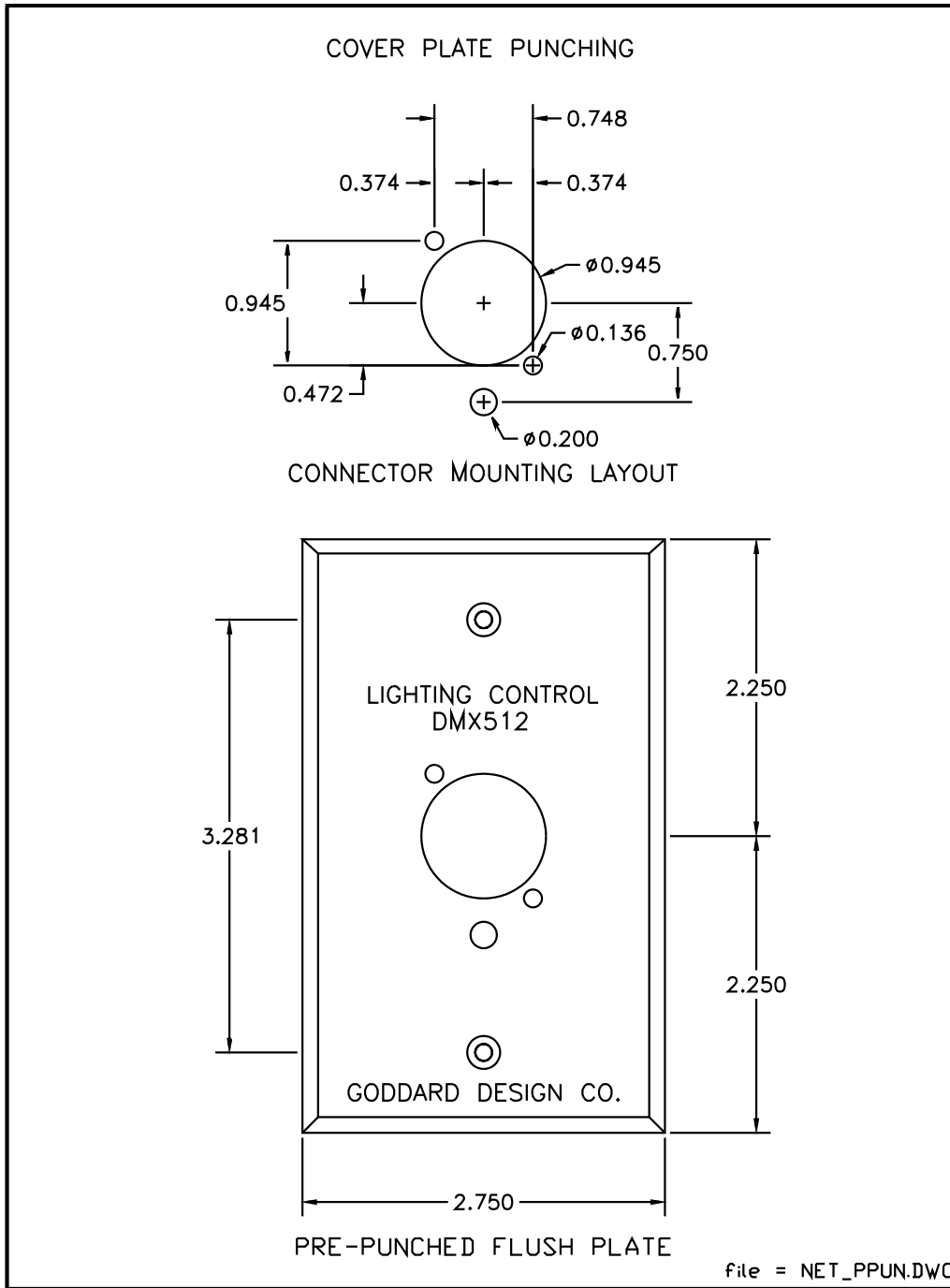
COPPER WIRE RESISTANCE TABLE	
WIRE GAUGE AWG	OHMS per thousand feet at 25 # C
26	41.62
24	26.17
22	16.46
20	10.35
18	6.51

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RDM-Net cover plate punching guide.



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