

Tech Tips: Cable Bundle Wire Information for Module Solutions

Use the formula provided to calculate the maximum wire bundle diameter. From this formula, the table below offers a sampling of the maximum number of wires that will fit in the oblong bushing; for example the oblong bushing will hold a maximum of 516 Signal (20) wires OR 175 Coaxial (RG316) wires.

Wire bundle diameter (B) should not exceed the maximum oblong bushing effective diameter (A).

Formula to calculate approximate wire bundle diameter:

$$B = 1.2 \sqrt{(N_1 d_1^2 + N_2 d_2^2 + N_n d_n^2)}$$

B = Wire bundle diameter	N ₁ = Number of first wire type N ₂ = Number of second wire type N _n = Number of n th wire type	d ₁ = Outside Diameter of first wire type d ₂ = Outside Diameter of second wire type d _n = Outside Diameter of n th wire type
--------------------------	---	---

NOTE: If the wiring bundle is too small to secure with the adjustable bushing, remove the clamp assembly within the bushing by removing the two adjustment screws. Reverse the direction of the clamp assembly and secure with the two screws. This provides a reduced diameter within the bushing and allows smaller wire bundles to be held securely.

Oblong Bushing Effective Diameter* (A) = 1.55"

Wire Type	Outside Diameter	Number of Wires
20 AWG Signal- Teflon	.057	516
10 AWG Power - PVF	.142	83
RG316 Coaxial - 50 OHM	.098	175

* Oblong Opening Area Converted to Simple Diameter

NOTE: Addition of shrink tubing or braid will reduce maximum number of wires through bushing.

