

SENSING CABLES

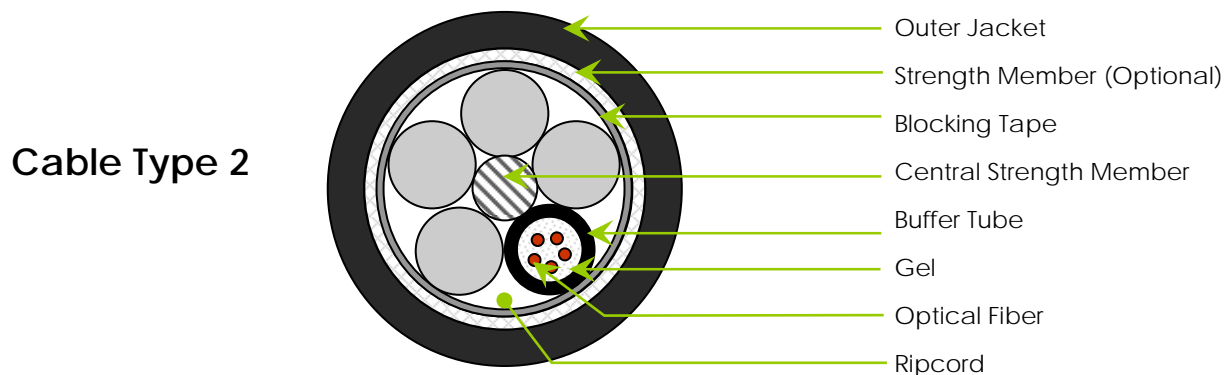
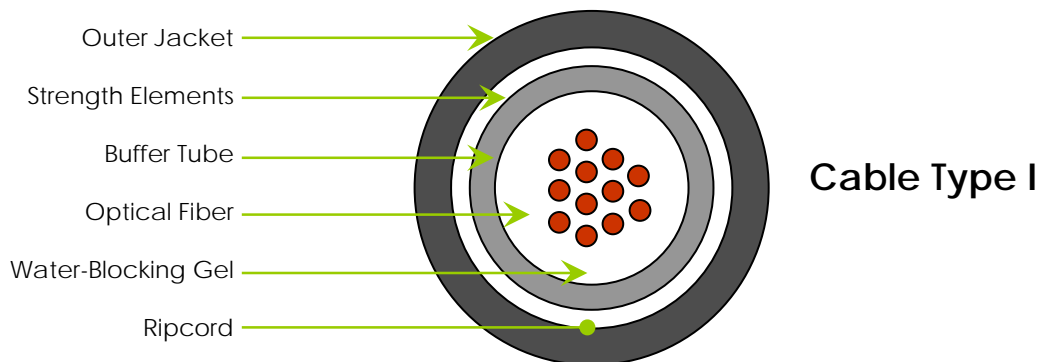
For Duct Monitoring



Companion Cables for SensorTran DTS Systems



The drawings below show the construction of two types of cables typically used in duct bank monitoring applications:





The cables typically used for duct bank monitoring are described as “loose tube” cables and can be constructed to hold up to 12 fibers. While the basic cable components (as shown on previous page) are standard, the thickness and material of the outer wall can be varied to yield a more robust or more flexible cable, depending the user requirements. Cables with thinner outer walls will have a smaller diameter and weigh less - meaning that longer lengths will fit on standard reels. The specifications are provided as ranges to encompass a variety of cables appropriate for duct bank monitoring applications.

Duct Bank Monitoring Optical Sensing Cables			
Optical Fiber	50/125µm graded index multimode	Short Term Max Tensile Load	600N (2670 lbs.)
Fiber Coating	Acrylate	Long Term Max Tensile Load	200N (890 lbs.)
Coating Diameter	245µm	Short Term Min Bend Radius*	16.0cm - 19.0cm (6.3" - 7.5")
Fiber Quantity	2-12	Long Term Min Bend Radius*	8.0cm - 9.5cm (3.1" - 3.7")
Cable Diameter	7.8mm - 9.3mm (0.310" - 0.366")	Operating Temperature	-40°C to +85°C (-40°F to +185°F)
Maximum Length	4050m - 8400m (13,300ft - 27,500ft)	Storage Temperature	-40°C to +85°C (-40°F to +185°F)
Cable Weight	50 - 65 kg/km (34 - 40 lbs/1000 ft.)	Installation Temperature	-30°C to +70°C (-22°F to +158°F)

* Note: The short term minimum bend radius is larger than the long term minimum bend radius because the short term bend radius specification is applicable when the cable is under tension while being deployed.



SENSORTRAN

Optical Conclusions

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