

# OSC100





OSC Structured Cable



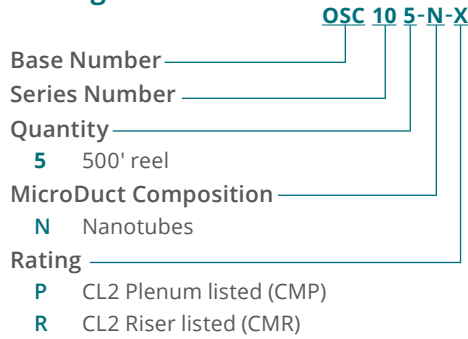
## OSC100 Structured Cable

The OSC Structured Cable (OSC) is composed of a hollow inner tube used to transport air sample packets, interlaced low voltage power and data communications conductors, and a protective outer sheath. It is primarily used between the Sensor Suite (SST) and its associated Air Data Routers (ADR) as the backbone for the Aircuity System and can also be used between the ADR and any test area location. The inner tube, known as MicroDuct<sup>®</sup>, is a technology breakthrough composed of a fluoropolymer resin and carbon nanotube blend. The patented design ensures the air sample packets remain uncontaminated and unrestricted as they travel throughout the Aircuity System. The MicroDuct is used for environments where carbon monoxide (CO), carbon dioxide (CO<sub>2</sub>), total volatile organic compounds (TVOCs), particle counts, and dewpoint may be monitored. The low voltage conductors allow discrete dry bulb temperature readings to be taken at the test area location in conjunction with an Aircuity probe having a resistance temperature detector (RTD). Without an RTD, calculated points including relative humidity, humidity ratio, and enthalpy are not available.

### Features

-  Carbon nanotube and fluoropolymer blend provides superior particle transport and chemical purity of the air sample.
-  OSC contains low voltage power and data communications conductors and MicroDuct for area-level discrete and virtual sensing.
-  No special tools or installation techniques are required. Similar to typical voice, data, and telecommunications network cables.
-  Two versions are available, Plenum and Riser rated for new and existing construction.

## Ordering Guide



## Cable/Tubing Compatibility Chart

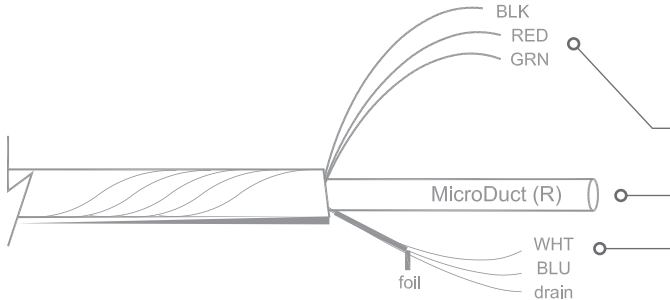
	RS200	AWP200	DPB200
OSC100	✓	✓ †	✓
MD100	X	✓ ††	✓ †
OT100	✓ †	✓ ††	✓ †*

\* Requires Enlarger Fitting (OT-E11) to interface with probe

† Tubing does not support probes with discrete temperature sensors

\* Probe does not feature discrete temperature sensor. Temperature and all calculated virtual points requiring temperature are not supported.

X Not Supported



## OSC Structured Cable

Conductor Set	# of Conductors	Color Code
18 AWG Triad	3	BLK/RED/GRN
MicroDuct®	0	GRN
22 AWG TSP w/drain	3	WHT/BLU/Drain

## Specifications

### Dimensions

	Plenum Rated Cable (CMP)	Riser Rated Cable (CMR)
Outer jacket nominal thickness	0.020" (0.05 cm)	0.020" (0.05 cm)
Maximum pull tension	100 lbf (444 N)	100 lbf (444 N)
Minimum bend radius	3.5" (8.89 cm)	2" (5.08 cm)
Cross sectional area	0.237 sq in (1.53 sq cm)	0.237 sq in (1.53 sq cm)
Printed running footage marking	2' (0.61 m)	2' (0.61 m)
Weight (approximate)	500' (152.4 m) reel: 50 lbs (22.5 kg)	500' (152.4 m) reel: 50 lbs (22.5 kg)
Dimensions	18"D (45.72 D cm), 10"W (25.4 W cm)	18 D (45.72 D cm), 10"W (25.4 W cm)

### Conductors

	Plenum Rated Cable (CMP)	Riser Rated Cable (CMR)
Communications	22ga twisted shield pair with drain wire	22ga twisted shield pair with drain wire
Low voltage power	18ga, 3 wire	18ga, 3 wire
MicroDuct	Fluoropolymer/carbon nanotubes	Fluoropolymer/carbon nanotubes

### Mechanical Characteristics

	Plenum Rated Cable (CMP)	Riser Rated Cable (CMR)
Operating temperature range	-4°-257°F (-20°-125°C)	-4°-257°F (-20°-125°C)
Overall nominal diameter	0.50" (1.27 cm)	0.50" (1.27 cm)

### Applicable Standards/ Regulatory Compliance

	Plenum Rated Cable (CMP)	Riser Rated Cable (CMR)
	CMP, NEC 800.51 (A) NFPA 262, UL-910 FC Part 15 Class A CE	CMR, NEC 800.51 (B) ANSI 1666, UL-1666 FC Part 15 Class A CE

### U.S. Patents

6,125,710; 7,216,556;  
7,360,461; 7,389,704

## Accessory Item for OSC Structured Cable

### OSC-C11 Coupler Kit

<b>Description</b>	<p>The OSC-C11 Coupler Kit is used to join two lengths of OSC together and/or make tight 90° turns. The Coupler Kit includes a double-gang metal box, both a straight union and a 90° elbow for joining the MicroDuct®, two Romex® connectors with sabertooth washers, and all the required wire crimp connectors for the electrical wires.</p> <p>Recommended order quantity is two for each 500' reel of OSC Structured Cable.</p>
<b>Features</b>	<ul style="list-style-type: none"> <li>• Push-fit technology</li> <li>• Superior flow characteristics</li> </ul>
<b>Ordering Guide</b>	<p>Order Number <a href="#">OSC-C11</a></p>
<b>Specifications</b>	<p><b>Kit Includes:</b></p> <ul style="list-style-type: none"> <li>• One straight union and one 90° elbow</li> <li>• One double-gang metal box</li> <li>• Eight Wire Nut connectors</li> <li>• Two Romex connectors with sabertooth washers</li> </ul> <p><b>Dimensions:</b> 4"x 4" (10.16 x 10.16 cm) double-gang metal box</p>

