

# Distributed Sensing Cables

4 F, SMF-28® Ultra fibre, Single-mode (OS2)

CORNING

Corning distributed sensing cables provide optimized monitoring of your critical harsh environment infrastructure. Distributed sensing is a technology that enables continuous measurements along the entire length of a fibre optic cable. As a result, external stimuli on the cable, such as changes in temperature and pressure, sound, strain, and vibration can be detected and located at any position along the length of the cable. And because distributed sensing is performed in real time, potential problems can be identified and mitigated before they become real problems.

## Features and Benefits

### Tough, compact design

Highly robust cable design for deployment in many conditions such as direct buried, strapped, and aerial

### Class leading sensing performance

Innovative cable design enhances and amplifies the sensor signal delivering operational performance far above traditional telecom cable designs

### Flexible design options

Choice of materials for strength elements and fibre properties dependent on application requirements

### Lightweight and responsive

At 14.9 kg/km, these cables are light, tough, easy to deploy, and responds quickly to external stimuli

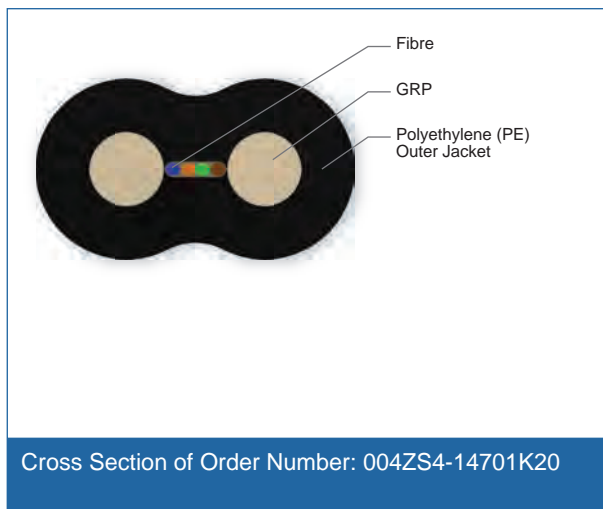
### Multiple packaging options and long lengths available (e.g. >10km)

The packaging and length may be chosen to suit a variety of installation methods

## Standards

### Approvals and Listings

UV-Resistance ICEA-717  
Environmental Stress Crack  
ICEA-717  
Moisture Resistance  
ICEA-717



# Distributed Sensing Cables

4 F, SMF-28® Ultra fibre, Single-mode (OS2)

CORNING

## Specifications

### General Specifications

Application	Direct Buried, Aerial
Product type	Self-Supporting
Fibre Category	SM (OS2)

### Temperature Range

Storage	-40 °C to 70 °C (-40 °F to 158 °F)
Installation and assembly	-30 °C to 70 °C (-22 °F to 158 °F)
Operation	-40 °C to 70 °C (-40 °F to 158 °F)

### Cable Design

Fibre count	4
Fibre colouring	Blue, orange, green, brown
Central element	Glass reinforced plastic (dielectric) or steel
Tensile strength elements and/or armouring	GRP (Dielectric)
Outer jacket material	Medium Density Polyethylene (MDPE)
Outer jacket colour	Black

### Mechanical Characteristics Cable

Weight	14.6 kg/km (9.81 lb/1000 ft)
Nominal Outer Diameter	5.4 mm x 3.0 mm (0.21 in x 0.12 in)
Min. Bend Radius Installation	63 mm (2.5 in)
Max. tensile strength for installation	1350 N
Max. Tensile Strength, Long-Term	400 N
Crush resistance (reversible)	1600 N/cm
Extra Fibre Length (EFL)	0 %
Fibre Tensile Rating	200 kpsi
Lifetime at Max Load & Strain	20 years
Acoustic Gain	15 dB
Strain Transfer Efficiency	> 93 %
Long Term Strain Limit (20yr)	0.4 % (up to 1.6 % available)
Short Term Strain Limit	1.0 %
Elastic Modulus	128 kN
Cycles at Max Strain	> 5

# Distributed Sensing Cables

4 F, SMF-28® Ultra fibre, Single-mode (OS2)

CORNING

## Chemical Characteristics

RoHS	Free of hazardous substances according to RoHS 2011/65/EU
------	---

## Fibre Specifications

### Optical Characteristics (cabled)

Wavelengths	1310 nm / 1550 nm
Typical attenuation	0.4 dB/km / 0.3 dB/km
Attenuation @ Max Crush	0.1 dB

## Ordering Information

Part Number	004ZS4-14701K20
Product Description	Distributed Sensing Cable, 4 F, SMF-28® Ultra fibre, Single-mode (OS2)



Corning Optical Communications GmbH & Co. KG · Leipziger Strasse 121 · 10117 Berlin, GERMANY

00 800 2676 4641 · FAX: +49 30 5303 2335 · [www.corning.com/opcomm/emea](http://www.corning.com/opcomm/emea)

A complete listing of the trademarks of Corning Optical Communications is available at [www.corning.com/opcomm/emea/trademarks](http://www.corning.com/opcomm/emea/trademarks). Corning Optical Communications is ISO 9001 and ISO 14001 certified.

© 2017 Corning Optical Communications. All rights reserved.

CORNING