

Displacement Sensor D-01

Description

The displacement sensor D-01 makes use of the intrinsic strain sensitivity of the FBG in order to measure displacements up to 8 cm. The sensor is foreseen of a sliding mechanism that allows the sensor tip to be displaced. The zero position of the sensor tip can be either inwards (to detect outward movements, away from the sensor housing) or outwards (inward movements, towards the sensor housing). The sensors are all standard equipped with a second FBG that is meant for temperature compensation.



Features

- Measurement of displacements in a range up to 8 cm.
- Displacement in both directions (inward or outward movement), depending on the sensor type.
- Temperature compensation by means of a second FBG.

Applications

The displacement sensor D-01 can be applied for various positioning measurements.

Standard specifications

Parameter	Unit	Value
Displacement accuracy ¹	-	1% FS
Displacement sensitivity	nm/FS	> 2
Displacement range	mm	20 / 50 / 80
Temperature range	°C	-10 to +60
FBG wavelength ²	nm	1510 to 1590
Housing material	-	SS316
Pigtail diameter	mm	3
Pigtail length ³	m	1.5
Pigtail material	-	LDPE
Connector type	-	FC/APC

¹ The sensor accuracy does not contain error sources originating from the read-out equipment.

² The FBG is in fact a Draw Tower Grating (DTG) i.e. written in the fibre while drawing it, see www.fbgs-technologies.com for further information.

³ Extended on request.

Ordering information

Example:

D	0	1	-	1	-	5	0	-	5	-	0	0	-	F	A
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

Product	
D01	Displacement Sensor

Displacement direction	
Standard	
1	Outward moving
2	Inward moving

Displacement Range	
Standard	
20	20 mm
50	50 mm
80	80 mm
Custom: Contact sales department	

Wavelength Range	
Standard	
1	1512 nm - 1517 nm
2	1522 nm - 1527 nm
3	1532 nm - 1537 nm
4	1542 nm - 1547 nm
5	1552 nm - 1557 nm
6	1562 nm - 1567 nm
7	1572 nm - 1577 nm
8	1582 nm - 1587 nm
Custom: Contact sales department	

Connector type	
Standard:	
FA	FC/APC
Custom: Contact sales department	

Pigtail length	
Standard:	
00	1.5 m
Custom: length in XX meters	

FOS&S BVBA reserves the right to make changes without further notice to any products herein. FOS&S makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose, nor does FOS&S BVBA assume any liability arising out of the application or use of any product, and specifically disclaims any and all liability, including without limitation consequential or incidental damages. Typical parameters that may be provided in FOS&S data sheets and/or specifications can and do vary in different applications and actual performance may vary over time. All operating parameters must be validated for each customer application by customer's technical experts. FOS&S BVBA does not convey any license under its patent rights nor the rights of others. FOS&S BVBA products are not designed, intended, or authorized for use as components in systems intended to support or sustain life, or for any other application in which the failure of the FOS&S product could create a situation where personal injury or death may occur. Should Buyer purchase or use FOS&S products for any such unintended or unauthorized application, Buyer shall indemnify and hold FOS&S BVBA and its officers, employees, subsidiaries, affiliates, and distributors harmless against all claims, costs, damages, and expenses, and reasonable attorney fees arising out of, directly or indirectly, any claim of personal injury or death associated with such unintended or unauthorized use, even if such claim alleges that FOS&S BVBA was negligent regarding the design or manufacture of the part.

FOS&S and the FOS&S logo are trademarks of FOS&S BVBA.
All other product or service names are the property of their respective owners.
FOS&S BVBA 2009. All rights reserved.