TESTAR a MARPOSS DIVISION

OptoCrown

...contactless gauging...

OptoCrown™ is an optical sensor, based on light reflection technology, for non-contact linear measurements. It uses fiber optics to transmit infrared light and receive the light reflected by the part to be measured.
The sensor, designed for standard ø=8 mm mounting, includes:
- a metallic body housing fiber optics
- a 1,5m long fiber optics cable
- an electronic interface box for direct connection to a DigiCrown™ network.

PRODUCT FEATURES

OPERATING PRINCIPLE: LIGHT REFLECTION

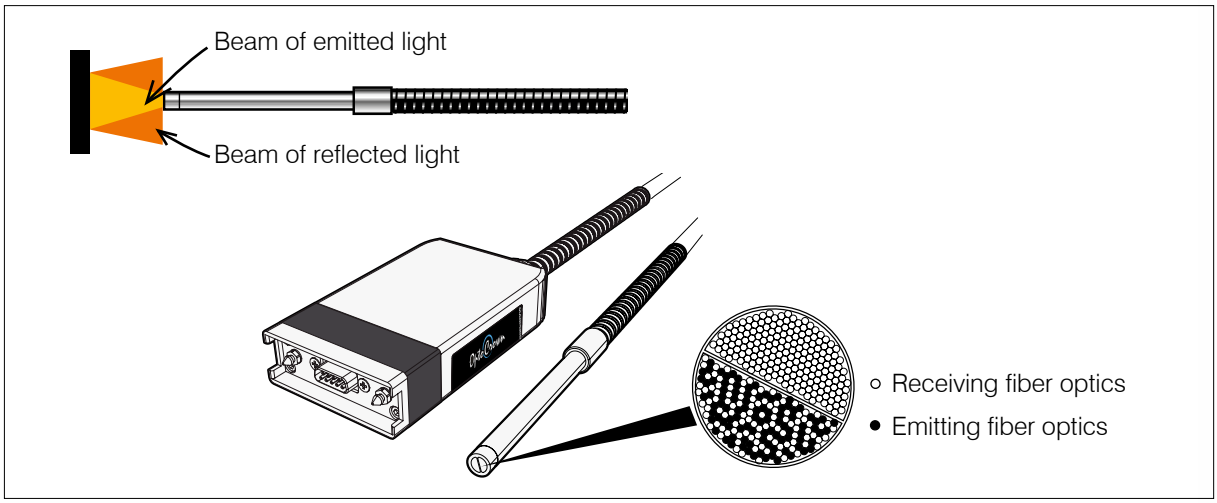
The sensor transmits a beam of light to the part through a fiber optics bundle and receives the light reflected back from the part through two separate fiber optics bundles, connected to two independent receivers.The distance between part surface and sensor is determined by the intensity of the reflected light.

CALIBRATION

With a specific calibration the sensor can work on almost any material.
Marposs can provide sensors already calibrated on the customer's material.

REFLECTANCE COMPENSATION

Thanks to the fiber optics layout, the sensor provides measurement values that are insensitive to variations in the reflectivity of the part surface.



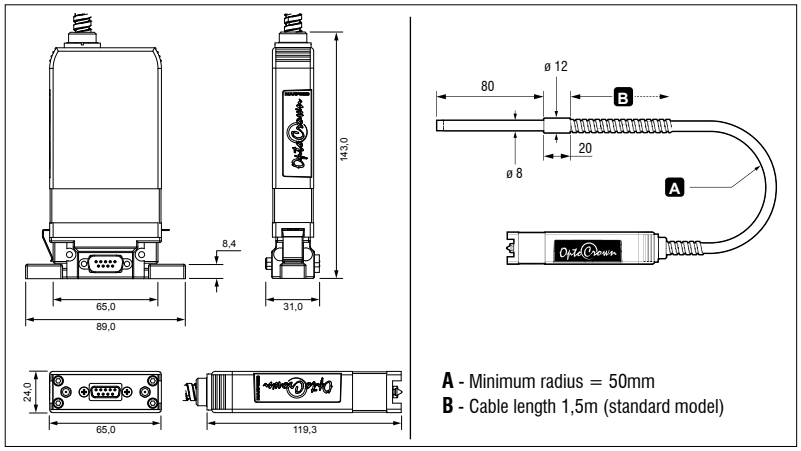
TECHNICAL SPECIFICATIONS

OptoCrown™ SENSOR SPECIFICATIONS (CODE 3PF0110000)	
Measuring range	10 mm
Standoff (central point of the measuring range)	6 mm
Resolution	1 μm
Repeatability (*) (**)	< 3 μm
Accuracy (**)	< 0,1% FS0
Protection rating	IP67 (tip) / IP43 (electronics)
Working temperature	0 - 100 °C (tip) / 0 - 50 °C (electronics)
Storage temperature	-20 - 70°C
Power supply voltage	+7,5 Vdc (-10% +30%)
Current absorption	190 mA
Warm-up time	5'
Ambient light compensation	Yes
Reflectance compensation	Yes
Calibration on material	Requested (each sensor can store up to 16 different calibrations)
Integration with Marposs data acquisition system	DigiCrown™
Integration with Marposs software	Quick SPC™, SDK™, Drivers Library™, Protocol Commands, Merlin™, Merlin Plus™

(*) 4σ
(**) These values are obtained under stable temperature conditions, measuring a flat, smooth and highly reflective surface, after calibration on it, and the sensor positioned perpendicular to this surface.

AMBIENT LIGHT COMPENSATION
With the optional ambient light compensation function, the sensor is not affected by variations in ambient light conditions.

APPLICATIONS
Non-contact measurement of substantially flat surfaces, such as glass, rubber and soft materials, that would be deformed or damaged using contact type sensors.



HOW TO ORDER

DESCRIPTION	REFLECTANCE COMPENSATION	AMBIENT LIGHT COMPENSATION	ORDER CODE
Opto Crown with Digi Crown Interface	YES	YES	3PF0110000
	YES	NO	3PF0120000
	NO	YES	3PF0130000
	NO	NO	3PF0140000

For a full list of address locations, please consult the Marposs official website

D6L01700G0 *- Edition 08/2015 - Specifications are subject to modifications*

Marposs has an integrated system to manage the Company quality, the environment and safety, attested by ISO 9001, ISO 14001 and OHSAS 18001 certifications. Marposs has further been qualified EAQF 94 and has obtained the Q1-Award.