

# 6-Axis F/T Sensor

## HEX-70-CE-2000N

### Description:

OptoForce 6 axis F/T sensors provide 6 degrees of freedom force and torque measurement. Our sensors are designed to fit most of the currently used industrial robot arms. Integration with the various available interfaces is simple. Common applications are **force control** devices, **teach in activities**, and **crash detection**, but the sensors can be used next to **end effectors** in case of **grinding**, **polishing** or **deburring** tools. High durability and an unlimited number of custom opportunities resemble all of our sensor types.

We offer these sensors mostly for **system integrators**, **robot arm manufacturers** and **contract manufacturing** companies.

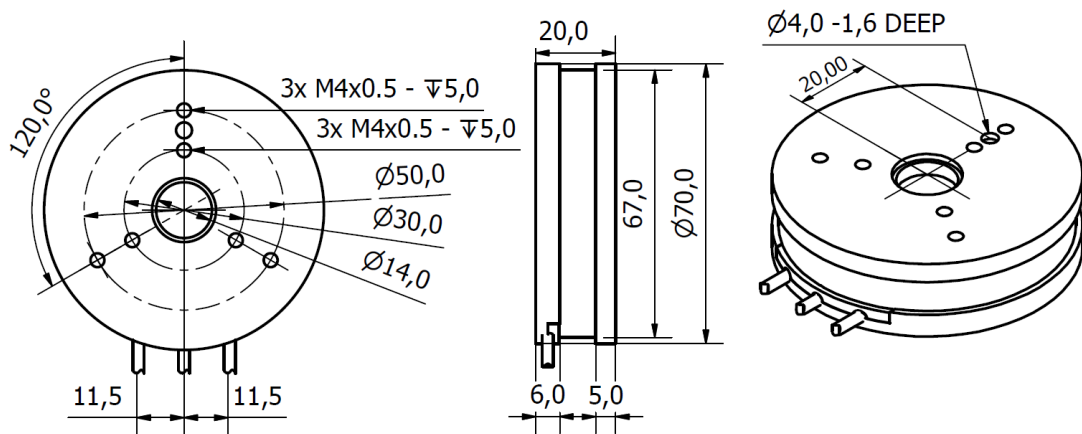
### Benefits:

- Multi axis force measurement
- High resolution
- Highly adaptable product design
- Dust and water proof (IP65)
- High overload range
- Mechanical shock resistant
- Cost efficient solution
- Easy integration

	Nominal Capacity	Deformation (Deflection)
Fxy	± 300 N	± 1.8 mm
Fz – compression	2000 N	1.2 mm
Fz – tension	800 N	1.2 mm
Txy	± 15 Nm	(± 2 °)
Tz	± 10 Nm	(± 5 °)



Top/Bottom side



## SPECIFICATIONS

Sensor Type	6 Axis Force Sensor				
Dimensions	Height x diameter			20 x 70 mm	
Weight	With 1 m cable (without)			165 g (130 g)	
	Fz Compression	Fz Tension	Fxy	Txy	Tz
Nominal Capacity (N.C)	2000 N	800 N	300 N	15 Nm	10 Nm
Single axis overload	200 %	200 %	200 %	200 %	200 %
Full scale nonlinearity	2 %	2 %	2 %	2 %	3 %
Resolution	250 mN	250 mN	± 28.5 mN	± 1.8 mNm	± 1.11 mNm
Single axis deformation at N.C	1.2 mm	1.2 mm	± 1.8 mm	± 2 °	± 5 °
Crosstalk (typical)	< 5 %				
Hysteresis (measured on Fz axis , typical)	< 2 %				
Working temperature range	-40 °C - +80 °C				
Power requirement	In continuous operation			30 mA	

## INTERFACE TYPES

USB	CAN	UART	Ethernet TCP/UDP
Maximum sampling frequency 1000 Hz			
Supported systems Windows; Linux; ROS; UR			